Vegetation Inventory and Botanical Resource Assessment for the Portion of Bandon State Natural Area under Potential Land Exchange Consideration

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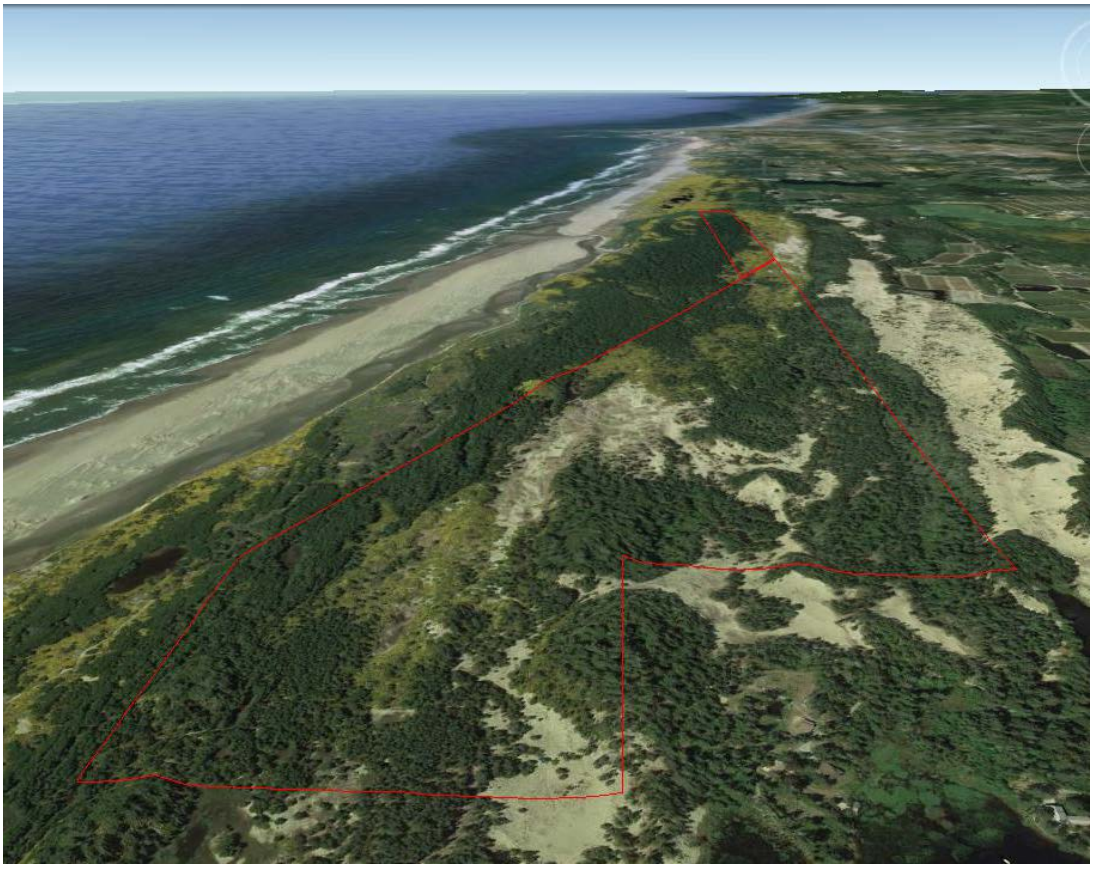


Table of Contents

Table of Figures

Introduction

An inventory of the vegetation of a portion of Bandon State Natural Area was done to provide information on the habitats present within an area being considered for potential land exchange with Bandon Biota. The potential area of exchange (hereafter referred to as the "study area") was assessed for plant communities, wetlands, state and federally-listed plant species, and habitat quality.

OPRD Vegetation inventories typically involve:

1) review of published or archived biological data for the site
2) field inventory and mapping of plant associations
3) identification and mapping of significant habitat
4) identification and mapping of any rare plant or animal species known or found
5) assessment of condition, successional status, and conservation ranking of plant communities present at the site.

In the case of this particular property, both highly significant natural habitats and areas highly degraded by invasive species are widespread in the study area. One plant species listed as threatened under Oregon's Endangered Species Act is present in a portion of the study area. Several rare and sensitive, but unlisted, species are also present. Deterioration of habitat condition and ecological function is due primarily to weed infestation and subsequent stabilization of formerly significant sparsely vegetated sand and dynamic dunal habitats that provide a vanishing habitat niche for a number of declining species of plants and wildlife.

This report revises and supplements John Christy's 2007 vegetation inventory described under the heading of "Past Work and Existing Data, below.

Past Work and Existing Data

The study area was previously assessed in 2007 by John Christy under contract with Michael Keizer. The study was done at a relatively coarse level, due in part to the difficulty of access through dense gorse and forest vegetation. The report is title, "Biological Assessment: Twomile Creek property and southern Bandon State Natural Area, Coos County, Oregon". Because of the coarseness and age of this previous work, OPRD undertook the current assessment as a supplement and revision.

Additional background on the property and its botanical environment was available from several sources. These sources include:

- 1954 aerial photography from the Bureau of Land Management (BLM).
- A 1964 pictorial monitoring document also from the BLM
- Oregon Biodiversity Information Center (ORBIC) rare species Geographic Information System (GIS) data.

Description of the Bandon State Natural Area Study Area

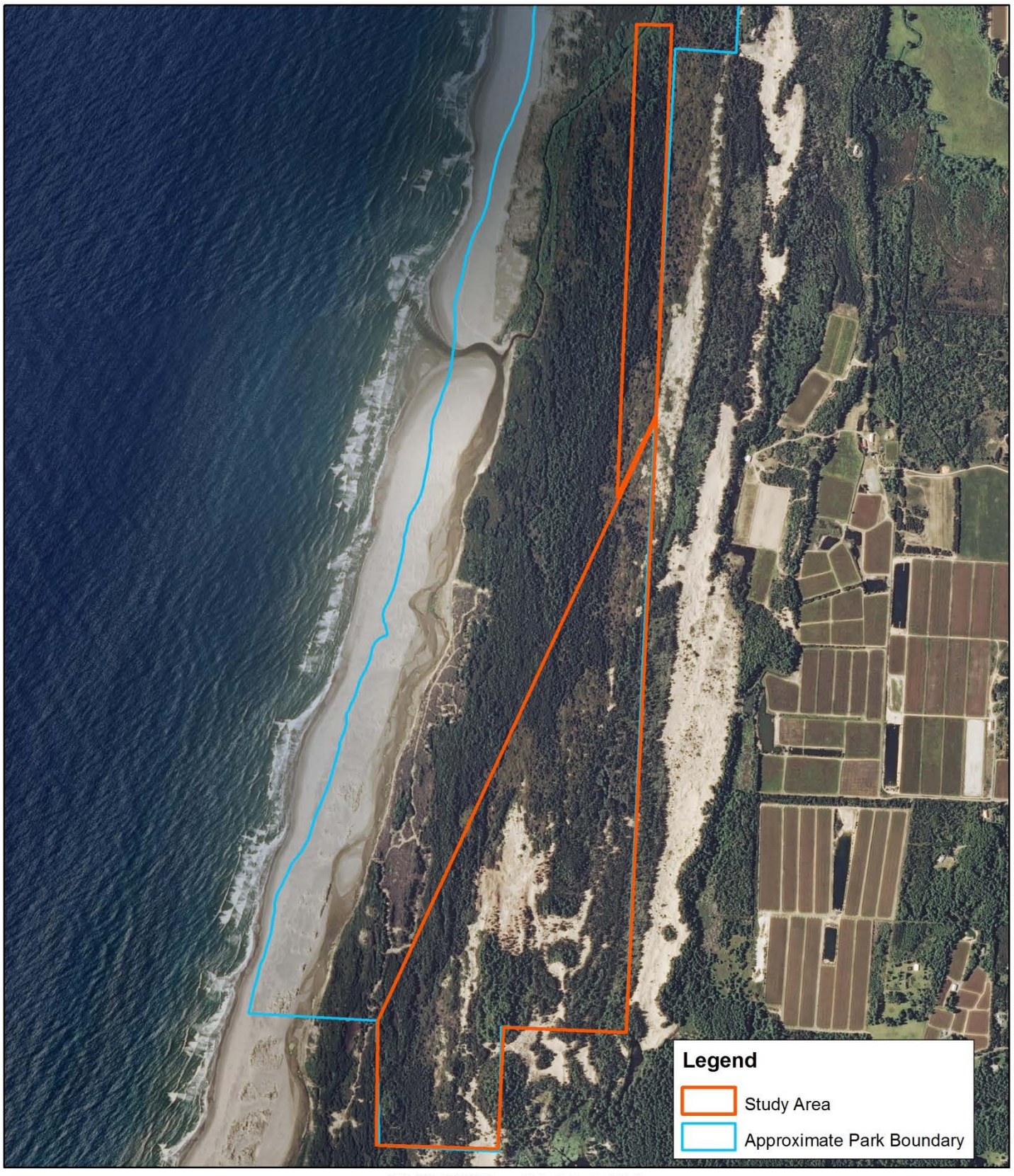
The general qualities and history of the study area are described in some detail in Christy, 2007. For further detail see that report. For general description purposes, some key passages are reproduced below:

> *"The target area is composed of stabilized and unstabilized sand dunes forming two ridges parallel to the beach, separated by seasonally-flooded wetlands in the trough between the dunes. The Twomile Creek floodplain, estuary, and old deflation plain just east of the creek were not included in the project area. Stabilized dunes and the old deflation plain are covered with either dense stands of conifers and shrubs of various ages or dense stands of European beachgrass and gorse. Less stabilized dunes are covered by native grasses, European beachgrass, or are nearly devoid of vegetation. Most of the trough between the dune ridges is covered by dense conifers or shrubs. Small to extensive seasonal wetlands occur throughout the target area, but the only permanent water is along Twomile Creek. The highest dunes have expansive views of the New River area to the south and the Pacific Ocean to the west, with limited views east to foothills of the Klamath Mountains."*

> *"Geomorphology. The target area is part of the Coos Bay dune sheet that extends 60 miles from Cape Blanco to Florence. The sand originated from sediments transported to the coast by major rivers draining the interior of the region, as well as ongoing erosion and deposition along the immediate coastline. Sand is transported along the coast by seasonal ocean currents and prevailing winds. Elevations in the target area range from about 20 to 90 feet above sea level. Twomile Creek is the only stream in the vicinity that cuts across the dune sheet to the beach. East of the dune sheet is an ancient marine terrace extending 4-6 miles inland and forming a level surface. The marine terrace is ideal for growing cranberries and the Bandon area is the epicenter of cranberry cultivation on the Pacific Coast of North America. The terrace is bounded on the east by the foothills of the Klamath Mountains."*

> *"Land Use. The target area in the dunes is remote and nearly surrounded by private land. The only public access to the south half of Bandon State Natural Area is through the New River ACEC or along the beach from the north or south. Consequently, most use of the area is limited to infrequent recreational entry by the public and adjoining landowners. Observed uses include off-road vehicle (ORV) riding, horseback riding, hunting, hiking, skeet shooting, and wildlife viewing. An old fence line on the Keiser property recently exposed by shifting dunes indicates that the area was once suitable for livestock grazing. Immediately east of the Kaiser property much of the marine terrace has been intensively developed for commercial cranberry production.*
> *The Bandon area is destined to change from agricultural, forestry, and rural residential use to suburban land use as the Oregon coast continues to attract settlement and development. Most of the area east of the target properties will infill with commercial cranberry bogs and residential development. Properties with views of the ocean will be in high demand."*

Figure 1. Vegetation Study Area



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Historic Vegetation and Change

Historic vegetation was addressed in Christy, 2007. This text is reproduced below:

> *"Historical vegetation for the Twomile Creek area was mapped by Hawes et al. (2004) using the earliest land survey notes as a point of reference (Figure 2). The target area was surveyed by Daniel and Mathew Murphy in July 1857. In their general description of the township they described the target area as "poor sandy barrens...There is however a strip of good grass land bordering on the ocean in the southwest corner of the township and extending north for about 2 miles and about a half mile wide. The timber is scrubby pine and spruce." Heading north along the survey line between sections 25 and 26, they surveyed through "pine openings" (savanna) and entered pine forest with spruce, huckleberry, and salal. Between sections 23 and 24 they left the pine and spruce forest and entered "sandy barrens." Just south of Twomile Creek they entered "rolling prairie." Today's tall foredune and adjacent deflation plain are largely an artifact of European beachgrass and may not have existed in their present form when the area was first surveyed (Christy et al. 1998). The west half of Bandon State Natural Area is still sand dunes but part of the area mapped as open sand in 1857 is now dunes covered with trees. The pine savanna in the southeastern quarter of Bandon State Natural Area and a small part of the Keiser property would have contained pockets of dune grassland. The northeastern part of the target area was mapped as pine forest but the survey records indicate that Douglas fir, Sitka spruce, western hemlock, madrone, Port Orford cedar, and chinquapin were also present. These vegetation types would have developed on stabilized sand and probably looked very similar to types seen today in the area, except for the presence of gorse. The "rolling prairie" near Twomile Creek was probably stabilized sand dunes with a sod of beach fescue and possibly tufted hairgrass.*

Review of aerial photography and ground photographs taken in the 1950's and 1960's indicates that radical change in vegetation has taken place since these photographs were taken. European beachgrass and gorse have spread dramatically across the landscape, and the stabilized sand has in many places become forested. Topography may also have been altered over time, especially in areas that were formerly characterized by open sand and sparse native grasses. These areas have likely built up vertically due to the sand-catching and stabilizing effect of both European beachgrass and gorse. The presence of a thick forested strip of vegetation between the beach/littoral strand areas outside the study area and the interior dunal habitat has likely changed the wind dynamics of the area, further accelerating the stabilization and succession to shrubland and forest types from historic, previously more open and dynamic shifting dunal types. The succession of the forested strip itself was likely accelerated by the deflation plain effect that accompanies foredune formation due to European beachgrass invasion. This deflation plain formation would have lowered the surface elevation of the sand to just above the water table and made it possible for vegetation to take over and rapidly transition to forest.

Figure 2. Historic Vegetation (from *Hawes et al. (2004))*

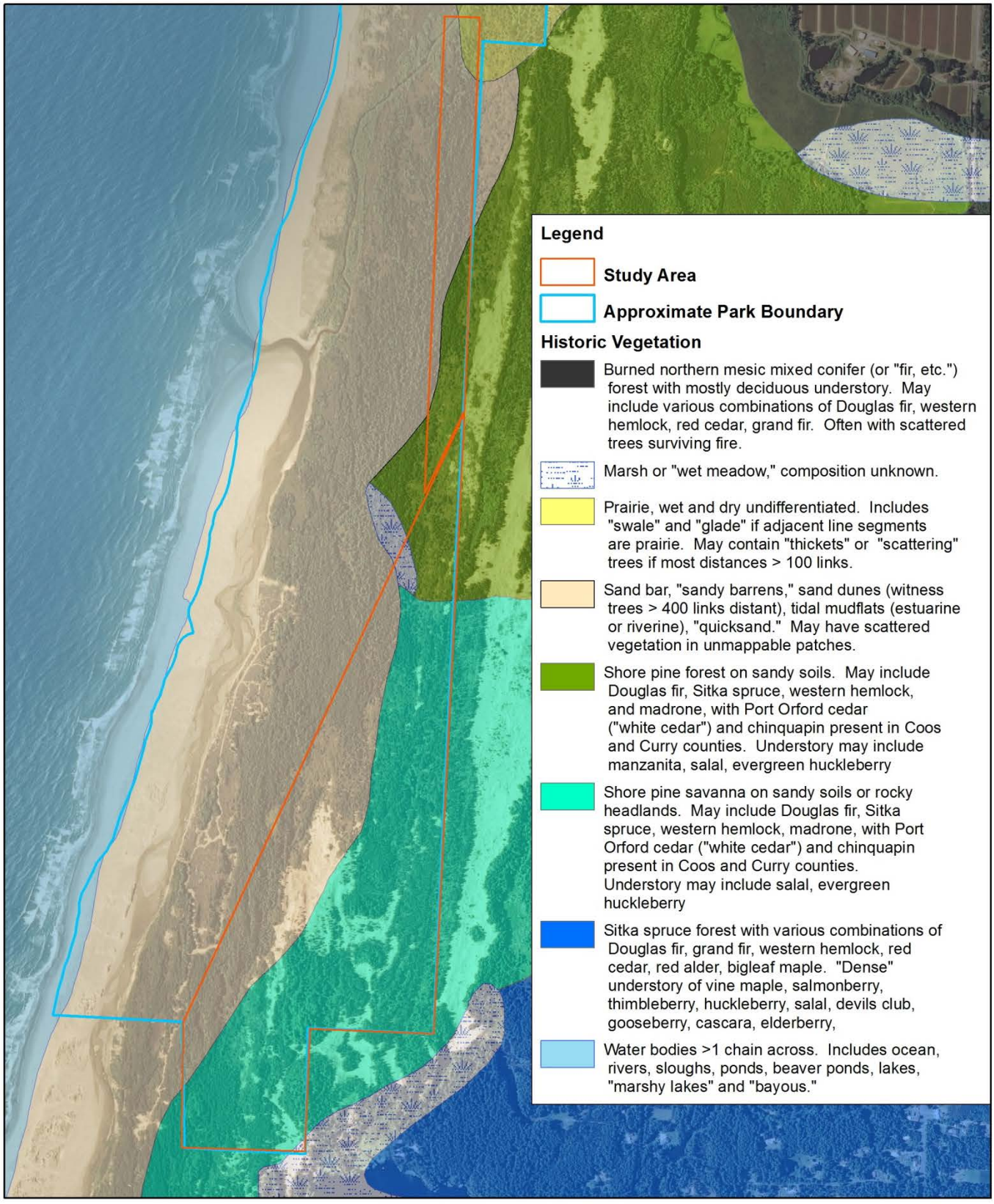
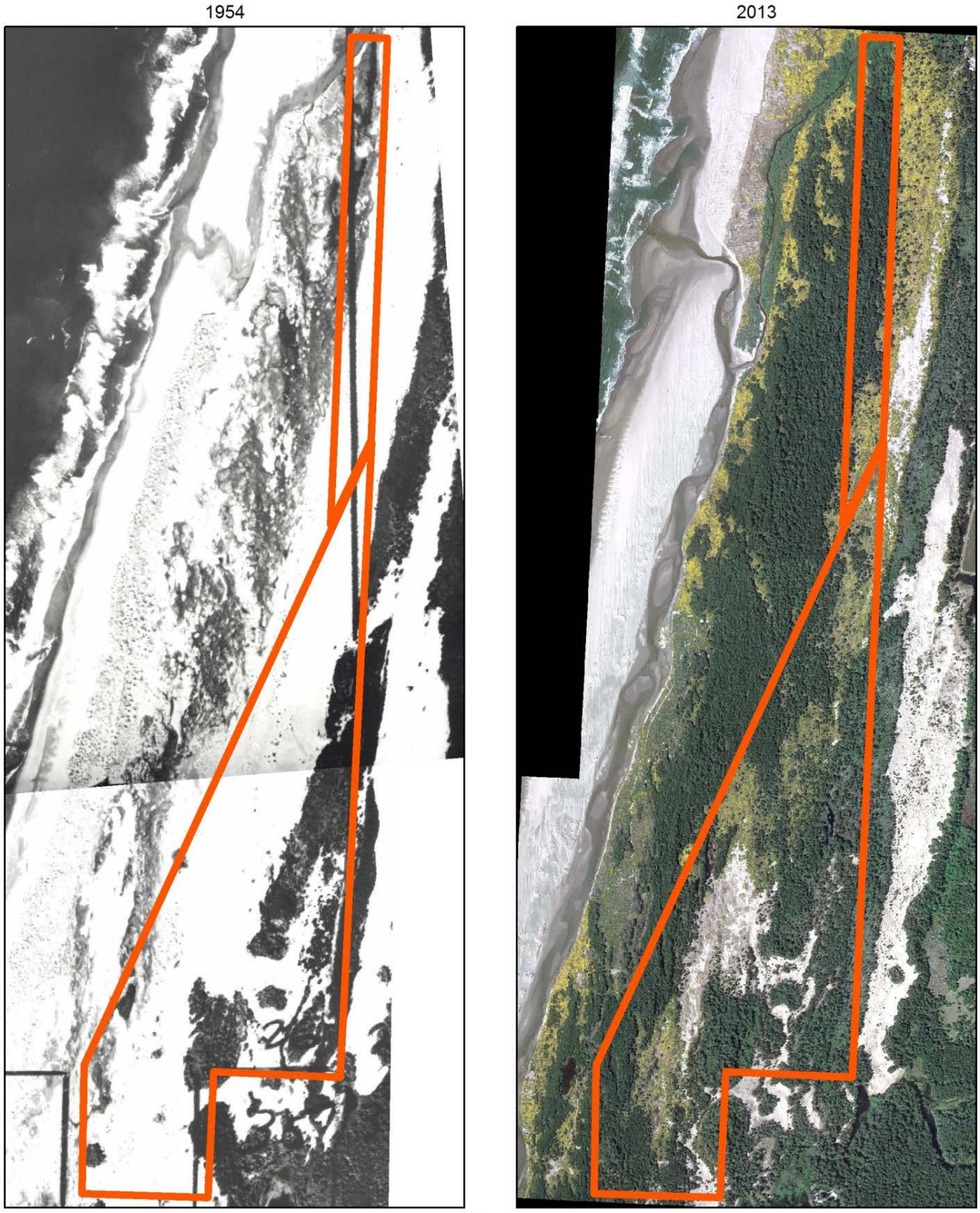


Figure 3. Vegetation Change Since 1954



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Methods

Plant community mapping and description was completed using a 2-phase process. The first phase was identification of rough plant community boundaries on an aerial photograph, and setting survey priorities. This work was very important given the impassability of much of the terrain due to gorse and forest vegetation density. The second phase consisted of ground-truthing and refining these boundaries while collecting plant community composition data. Visitation targets marked on field maps before starting fieldwork were guides to travel routes, but discoveries made in the course of fieldwork added additional targets and routes to the work plan.

Field data collection was conducted at a higher resolution than is generally useful or desirable for general habitat description. Data was described in sufficient detail to allow for later consolidation of similar polygons into the lower resolution polygons needed for coarser characterization. These lower resolution polygons are depicted in Figure 4. The more detailed resolution mapping is included in Appendix 1. The field data collection process involved 1) delineating and describing all distinct plant communities that were clearly discernible on the aerial photographs, and 2) approximately delineating all plant communities that were roughly feasible, but whose edges were not clearly visible on the aerials.

Due to the size and often impenetrable nature of some of the portions of the study area, some areas mapped in this inventory are mapped based on the characteristics of similar sites visited in person. Patterns of vegetation composition recur fairly predictably across the landscape, and the coarse-level mapping of areas not physically visited is believed to be reasonably accurate.

Using the field-delineated mapping and vegetation releve plots collected at points across the study area, land cover was digitized in the office into a GIS shapefile using the following OPRD criteria:

1. Scientific name for each plant association.
2. Common name for each plant association.
3. Species code acronym for each native plant association;
4. Equivalent or closest plant association(s) in the published literature.
5. Habitat type for each native plant association. Abbreviated as “F”=forest, “S”=shrubland, “W”=woodland, “H”=herb/forb-land. In many cases these habitats were recorded as hybrid types – for example, “H/S” was used in areas that were predominantly herbaceous, but which contain scattered or sporadic groupings of shrubs.
6. Age class code for each forest or woodland association polygon: A = old, B = mature, C = mid-aged, D = young. Age class is recorded relative to the characteristic tree species for the polygon. This is important in that shore pine is often classed as mature at 40 years old according to its lifespan; but, Sitka spruce would be mid aged at the same number of years old because of the much longer lifespan of the species and the habitats associated with the species.
7. Conservation rank. This code is ascribed to a plant community based on the ORBIC “Classification of Native Vegetation of Oregon”. Where plant communities are

represented exactly in the Classification, the conservation rank code is copied directly. Where a plant community is similar but not completely equal to a community in the Classification, it is preceded by a "~". When a community is not represented at all in the Classification, but is deemed somewhat rare, it is given a rank based on best professional judgment. These cases are identifiable in the data by text format, being "~S?", where "?" will be a particular number depending on the polygon. Note that they do not have the "G?" portion of the code that those communities that are represented in the Classification have. The numbers (1 through 5) following either G or S in the code represent conservation status of each native association, based on ORNHIC ranking criteria. The number "1" represents types that are endangered throughout their range, and "5" represents types that are demonstrably secure. A description of how this ranking system works is included online at: http://www.natureserve.org/explorer/ranking.htm.

8. OPRD condition rating representing the condition of each plant association delineated as a discrete polygon will be rated using the codes below:
   - *Condition "E" (excellent)*: Pristine or near pristine native plant community. Exotic plants typically have a significant presence in the species composition over less than 10 percent of the polygon.
   - *Condition "G" (good)*: Native plant community generally of good vigor and condition. Exotic plants typically have a significant presence in the species composition over 10 to 30 percent of the polygon. Condition may be downgraded by factors other than invasive species presence – i.e. trampling, fire, windthrow, erosion, etc.
   - *Condition "M" (marginal)*: Native plant community substantially degraded by intrusion of exotic plants or human disturbance. Exotic plants typically have a significant presence in the species composition over 30 to 70 percent of the polygon. Condition may also be downgraded by factors other than invasive species presence – i.e. trampling, fire, windthrow, erosion, etc.
   - *Condition "P" (poor)*: Native plant community highly degraded or replaced by exotic plants. Exotic plants typically have a significant presence in the species composition over more than 70 percent of the polygon**.** Condition may be downgraded by factors other than invasive species presence – i.e. trampling, fire, windthrow, erosion, etc.
9. Wetland polygon indicator, representing wetland plant association types and other surface water features ("yes"/"possibly"/"partially" field). The "possibly" value is used in cases where formal determination plots would be necessary to accurately indicate whether the polygon is wetland or not. The "partially" value is used in cases where a polygon contains wetland and non-wetland that are not mappable without formal wetland delineation plots and methodology.
10. Botanical Resource Value rating. These values quantify the conservation value of each plant community habitat polygon in the study area.

    Ratings are numeric and range from 1 to 4, based on the value assignment decision matrices included below. Due to the importance of age class in determination of value of forested and woodland habitats, a matrix that factors in age is needed for forest and woodland. A separate matrix without age class parameter is used for herbaceous and shrubland habitats.

The value 1 denotes highest resource value and conservation priority – usually a legally protected allocation due to species presence, conservation easement, natural area registration, etc. A value of 2 denotes very high natural resource value and conservation priority – but without legal protection. A value of 3 denotes habitats that are either degraded, extremely common, or semi-artificial – but with some significant natural resource value remaining. A value of 4 denotes a habitat that is severely degraded and of low natural resource value.

Table 1. Botanical Resource Value Determination For Non-Forested Habitats

	Condition E	Condition G	Condition M	Condition P
Special designation*	1	1	1	1
Occupied listed plant species habitat	1	1	1	1
High probability inconclusively surveyed listed species habitat	2	2	2	2
Other at-risk plant species occupied or high probability habitat	2	2	2	2
Priority Habitats[A]	2	2	**Restoration Feasibility[B]** / **Resource Value** High 3(2) Med 3(2) Low 3	**Restoration Feasibility[B]** / **Resource Value** High 3(2) Med 3(2) Low 3
Conservation rank S1	2	2	**Restoration Feasibility[B]** / **Resource Value** High 2 Med 2 Low 3(2)	**Restoration Feasibility[B]** / **Resource Value** High 3(2) Med 3(2) Low 3
Conservation rank S2	2	2	**Restoration Feasibility[B]** / **Resource Value** High 2 Med 3(2) Low 3	**Restoration Feasibility[B]** / **Resource Value** High 3(2) Med 3 Low 3
Conservation rank S3	2	2	**Restoration Feasibility[B]** / **Resource Value** High 3(2) Med 3(2) Low 3	**Restoration Feasibility[B]** / **Resource Value** High 3(2) Med 3(2) Low 3
Conservation rank NA or >S3	2	3	4	4
Developed or agricultural	4	4	4	4
Definite wetlands	2	2	2	2
Possible wetlands	2 if <=S3 3 if >S3	2 if <=S3 3 if >S3	3	3

Table 2. Botanical Resource Value Determination for Forested Habitats (including woodlands)

	Relative value index	Condition E	Condition G	Condition M	Condition P
Special designation*	10	1	1	1	1
Occupied listed plant species habitat	10	1	1	1	1
High probability listed species habitat	9	2	2	2	2
Other at-risk plant species populations or habitat with high probability of presence or necessary future dispersal	8	2	2	2	2
Priority Habitats[A]	8	2	2	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 2 / 3(2) / 3(2) moderate: 2 / 2 / 3(2) / 3(2) low: 2 / 3(2) / 3 / 3	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 2 / 3(2 / 3(2) moderate: 2 / 3 / 3(2 / 3 low: 3 / 3 / 3 / 3
Conservation rank S1	7	2 if age class A,B,C 3(2) if age class D	2 if age class A,B,C 3(2) if age class D	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 2 / 3(2) / 3(2) moderate: 2 / 2 / 3(2) / 3(2) low: 2 / 3(2) / 3 / 3	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 2 / 3(2) / 3(2) moderate: 2 / 2 / 3(2) / 3(2) low: 2 / 3 / 3 / 3
Conservation rank S2	6	2 if age A,B,C 3(2) if age D	2 if age A,B,C 3(2) if age D	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 2 / 3(2) / 3(2) moderate: 2 / 2 / 3(2) / 3(2) low: 2 / 2 / 3 / 3	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 3(2) / 3(2) / 3(2) moderate: 2 / 3(2) / 3(2) / 3(2) low: 2 / 3 / 3 / 3
Conservation rank S3	5	2 if age A,B 3(2) if age C,D	2 if age A,B 3(2) if age C, 3 if Age D	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 2 / 3(2) / 3(2) / 3(2) moderate: 2 / 3(2) / 3(2) / 3(2) low: 2 / 3(2) / 3 / 3	**Restoration Feasibilty[B]** / **Age Class** A / B / C / D high: 3(2) / 3(2) / 3 / 3 moderate: 3(2) / 3(2) / 3 / 3 low: 3 / 3 / 3 / 3
Natural or semi-natural Communities with Conservation rank NA or >S3	4	2 if age A,B 3 if age C,D	2 if age A 3 if age B,C,D	3 if age A,B,C Otherwise 4	3 if age A,B Otherwise 4
Definite wetlands	8	2	2	2	2
Possible wetlands	7	2 if <=S3 3(2) if >S3	2 if <=S3 3(2) if >S3	3(2)	3(2)
Developed or artificial	1	4	4	4	4

** for the purposes of this matrix, "special designation" means that the polygon is part of a conservation area such as a State Natural Area Reserve, a Research Natural Area, an Area of Critical Environmental Concern, a designated Wilderness, a conservation easement, or a Habitat Conservation Plan.*

11. Field for other comments that are pertinent to the purpose of this work scope.

12. Priority habitat identification field – either those habitats that are existing investments or commitments; or, those that are of local, regional, or statewide concern.
13. Field for feasibility of restoration. Rated as high, medium, or low.

Current Vegetation and Habitats

A variety of forest, woodland, herbaceous, and shrubland habitats ranging from wetland to upland are present in the study area. Relatively fine-scale habitat types are depicted in Figure 4. Fully detailed plant community information is presented in Appendix 1/Figure 8. The Broad habitat groupings of Forest, Woodland, Shrubland, and Herbaceous are described briefly below:

Forested communities

Forested communities are abundant and common in the study area and range from dry ridgetop types dominated by madrone and douglas-fir to wet shore pine swamps. The vast majority of the forest within the study area is characterized by high abundance of shore pine. Sitka spruce is common in many of the forested areas as well, but reaches its highest abundance topographically low-lying areas. Douglas fir and madrone occur primarily on higher topography. Port Orford cedar types occur only in the south east of the study area – encompassing both wet and dry sub-types. White fir is a substantial component of forests in two relatively sheltered, inland locations, where it occurs with a mix of other conifers. Some of the forests have their stand origin prior to 1954, but the majorities have become established more recently as a result of dune stabilization and succession. Upland forest types typically have very dense shrub understories characterized by evergreen huckleberry, waxmyrtle, salal, gorse, hairy manzanita, and silktassel in varying amounts according to topographic position and canopy comoposition/density. Forb layers in upland forests within the study area are often sparse. Where forests are wetland, the understory shrub layer becomes sparser, and slough sedge is dominant.

Woodland communities

Woodland communities are primarily transitional in nature, particularly now that historic dynamic disturbance process related to dune movement have essentially been halted. Most woodland within the study area is dominated by shore pine. Where gorse has not achieved dominance, kinnikinnik and hairy manzanita are common and abundant in the understory. Some areas of woodland are transitional between European beachgrass or red fescue/seashore bluegrass dunes and shore pine/waxmyrtle-evergreen huckleberry-salal – skipping over the normal shorepine/kinnikinnik and shore pine/ hairy manzanita intermediate steps in the successional pathway.

Shrubland Communities

Shrubland communities are of two main groupings: gorse dominated non-native associations, and native upland and wetlands types. Gorse dominated associations are usually characterized by very dense cover of gorse, with lesser amounts of European beachgrass, red fescue, seashore bluegrass, a nd bracken fern. Native wetland types usually center on hooker willow, evergreen huckleberry, cascara, crabapple, salmonberry, or black twinberry. Upland shrubfields are often dominated by silktassel, hairy manzanita, evergreen huckleberry, and waxmyrtle.

Herbaceous Communities

Herbaceous communities fall into both wetland and upland categories. Most of the herbaceous wetland communities are dominated by slough sedge, salt rush, or beaked sedge. Pacific silverweed is common in these associations. Upland herbaceous communities are dunal in natures and are composed of varying amounts of European beachgrass, red fescue, seashore bluegrass, salt rush, beach sagewort, hairgrasses, hairy cats-ear, lesser hawkbit, seashore lupine, spiny sandmat, and other less abundant sand-dwelling species.

Each of the broad habitat groups described above can be further subdivided into "plant associations". Plant associations are communities of plants that occur together due to similarity of their individual habitat requirements. Habitat types are usually more easily described in terms of the species they contain than in terms of the underlying, causal environmental gradients (such as sun exposure, soil moisture, soil fertility, wind exposure, salt exposure, etc) that determine which species occur where. Although these underlying causal gradients are useful as predictors of habitat species composition, they are nearly meaningless as habitat descriptors in-and-of themselves. Plant associations are the primary, intuitively-understandable descriptors of habitat and land cover, and they can in fact indicate aspects of past disturbance, ecological condition, wetland status, and future composition that the causal gradients often can't.

Ecological assessment of OPRD properties begins with documentation and inventory of habitat types present in the study area by means of mapping coherent, often recurrent, groups of species across the landscape. The mapping presented in this section of this report spatially catalogs the distribution of plant communities (as descriptors of habitat) across the study area. This plant community mapping, in turn, provides the ability to produce subsidiary analyses including the mapping of wetlands, weed infestations, changes over time, community rarity, species rarity, and threats. These subsidiary analyses are presented in other sections of this report.

Because the concept of plant associations is so important to understanding ecology and provides a common language for ecologists to be able to compare, contrast, and share information, ecologists have worked together to organize data on plant associations into databases that provide information on distribution and rarity. Using these data, it is possible to define areas of highest conservation priority based on rarity and distribution. In each of the descriptions of plant communities below, rarity and distribution data are presented in the field "conservation rank" by means of locating the published equivalent plant community in the "Classification of Native Vegetation of Oregon"(Kagan et al 2004) and assigning its conservation rank to the equivalent plant association mapped in the study area. These published equivalents are reported in the field "published equivalent(s)" in the descriptions below. Because of mapping scale and the complicated intermingling of habitats that often occur across the landscape, it is often possible to have multiple published equivalents for a mapped community. For example, hummocky ground often contains wetland associations in the troughs and upland vegetation on the higher ground. If these variations occur in patches less than 10-20 meters across, they: 1) do not show up on maps produced at a property-level scale; and 2) are often not feasible to map due to time limitations in situations where the intermixing is frequent and complicated. These habitats that contain multiple equivalents are usually referred to as plant community mosaics.

The information presented below corresponds to the mapcodes that label the polygons in Figure 4. The plant community structural notation is as follows: "/" denotes a change in canopy level, "-" separates species co-occurring in a canopy level. Items in parenthese "( )" are patchy or sparse. When more than one unmappable distinct plant community type occurs within the overall map polygon, the distinct communities or canopy layers that compose the mosaic community are denote by square brackets "[ ]". Comments on the polygon follow plant community composition codes. Equivalent published and ranked plant communities that make up part of the polygon's mosaic community are listed under "Published Equivalent(s)". The conservation rankings of these communities are listed under "Conservation rank". These ranks are defined as follows (from Kagan, 2004) :

> ***Rank*** *is a code identifying the conservation status of the plant association. It is composed of a global rank ("G") followed by a state rank ("S"). 1 = Critically imperiled because of extreme rarity, with 5 or fewer occurrences or very few remaining acres. 2 = Imperiled because of rarity, with 6-20 occurrences or few remaining acres. 3 = Either very rare and local throughout its range or found locally in a restricted range; uncommon, with 21-100 occurrences. 4 =Apparently secure, though it may be quite rare in parts of its range, especially at the periphery; many occurrences. 5 = Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery; ineradicable under present conditions. These standardized ranks are used by all natural heritage programs and conservation data centers throughout North America. They are based on the best available information.*

Mapping Units from Figure 4:

1 ***Alnus rubra / Rubus spectabilis - Myrica californica / Carex obnupta - Athyrium filix-femina***

red alder / salmonberry - waxmyrtle / slough sedge - common ladyfern

Published equivalent(s): ALNRUB / RUBSPE / CAROBN - LYSAME

Conservation Rank: G4S4

This community occurs only at the northern end of the study area near Twomile Creek. It is wetland type. Overstory composition is dominated by red alder, but cascara is patchy as well. The shrub layer is dominated by salmonberry and waxmyrtle, with lesser quantities of evergreen huckleberry and salal. The forb layer is dominated by slough sedge and lady fern.

2 ***Alnus rubra / Rubus spectabilis / Carex obnupta - Lysichiton americanus***

red alder / salmonberry / slough sedge - skunkcabbage

Published equivalent(s): ALNRUB / RUBSPE / CAROBN - LYSAME

Conservation Rank: G4S4

This community occurs only at the north end of the study area near Twomile Creek. It is characterized by an overstory dominated by red alder and lesser amounts of shore pine and sitka spruce, underlain by hooker willow, black twinberry, salmonberry, waxmyrtle, slough sedge, small-fruited bulrush, skunkcabbage, and lesser amounts of reed canarygrass, lady fern, and water parsley. The community is wetland and forms the trasition zone between the herbaceous community to the west and the interior forest swamp to the east.

3 ***Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components***

European beachgrass with possible remnant red fescue or seashore

bluegrass community components

Published equivalent(s): AMMARE; Remnant FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation Rank: NA;G1S1;G2S1

This community type is approximate and represents isolated patches of grassland in a gorse matrix. The isolated patches often contain some vestiges of previous native plant communities such as those dominated by red fescue or seashore bluegrass. European beachgrass is the current dominant.

4 ***Ammophila arenaria with remnant Juncus lesueurii community components***

European beachgrass with remnant salt rush community components

Published equivalent(s): AMMARE;JUNLES

Conservation Rank: NA;G3S3

This community type is transitional between invading European beachgrass community and the native salt rush community. Species present in clude European beachgrass, salt rush, beach knotweed, hairy cat's-ear and red fescue.

5 ***Ammophila arenaria* with remnant *Poa macrantha* and / or *Festuca rubra* community components**

European beachgrass with remnant seashore bluegrass and / or red fescue community components

Published equivalent(s): AMMARE; FESRUB-PTEAQU

Conservation Rank: NA; G3S3

Plant communities falling under theis aggregated grouping are dominated over most of their area by European beachgrass, but contain vestiges of the seashore bluegrass and/or red fescue dunal associations. Associated species include: European beachgrass, red, fescue, seashore bluegrass, beach knotweed, seashore lupine, beach sagewort, bracken fern, salt rush, spiny sandmat, beach evening primrose, beach silvertop, and hairy cat's ear in various quantities..

6 ***Carex obnupta - Argentina egedii***

slough sedge - Pacific silverweed

Published equivalent(s): CAROBN-ARGEGE

Conservation Rank: G4S4

This wetland association is assicated with topographic depressions that hold water well into the growing season. Slough sedge and Pacific silverweed dominate the interior of these associations, with lesser amounts of bentgrass, saltrush, skullcap speedwell, falcate rush, and sometimes other sedges sometimes also being significant components. The edges of these wetlands often have hooker willow, gorse, and/or shore pine.

7 ***Carex obnupta - Juncus lesueurii***

slough sedge - salt rush

Published equivalent(s): CAROBN; JUNLES

Conservation Rank: G4S4; G3S3

This degraded wetland community is characterized primarily by slough sedge and salt rush. It was formerly covered partially by gorse, but this was mulched down in recent years. Seedling and sapling

slough sedge and shore pine atre present. Other associated herbs include lesser hawkbit, cudweed, European beachgrass, and silver hairgrass. The hydrology of this site is somewhat drier than most of the similar wetlands in the study area, and wetland status is not definite over the whole polygon.

8 ***Chamaecyparis lawsoniana / Vaccinium ovatum***

Port Orford cedar / evergreen huckleberry

Published equivalent(s): CHALAW/VACOVA

Conservation Rank: G1S1

This community grouping is variable. Overstory species species always include Port Orford cedar, but the other trees species present vary by stand. Other tree species occurring with Port Orford cedar in this grouping include: douglas-fir, shore pine, red alder, and madrone. Evergreen huckleberry is always present in the shrub layer, but the presence of salal, waxmyrtle, and hairy manzanita are less constant. Forb layer species include brackenfern, California sweet grass, rattlesnake plantain, kinnikinnik, training blackberry, yerba Buena, and honeysuckle.

9 ***Chamaecyparis lawsoniana / Vaccinium ovatum wetland variant***

Port Orford cedar / evergreen huckleberry wetland variant

Published equivalent(s): NA; CHALAW-VAOV

Conservation Rank: G1S1

This forested wetland community occurs in a swale in the southeast corner of the study area. It is a variant on the classic Port Orford cedar/ Evergreen huckleberry association. Tree species present include shore pine, sitka spruce, Port Orford cedar, white fir, red alder, and cascara. The shrub layer usually contains waxmyrtle, evergreen huckleberry, salal, and salmonberry. Other shrubs that are patchily present include black twinberry, crabapple, and hooker willow. Herb layer species present include slough sedge, trailing blackberry, swordfern, and soft rush.

10 ***Festuca rubra dune community with emerging Ammophila arenaria community characteristics***

red fescue dune community with emerging European beachgrass community characteristics

Published equivalent(s): FESRUB DUNE COMMUNITY WITH EMERGING AMMARE COMMUNITY CHARACTERISTICS

Conservation Rank: NA; G1S1

This community is a remnant of the important red fescue dunal community that is starting to be invaded by European beachgrass. Species present include European beachgrass, red fescue, beach knotweed, beach sagewort, seashore lupine, beach evening primrose, salt rush, and beach silvertop. This is the best remaining example of this community in the study area. It contains a single plant of the state-listed threatened plant species silvery phacelia, and hundreds of individuals of the rare species beach sagewort.

11 ***mulched gorse: Ulex europaeus / weeds***

mulched gorse: gorse / weeds

Published equivalent(s): MULCHED GORSE: ULEU/WEEDS

Conservation Rank: NA

This association was either monoculture gorse or dense gorse with sparse European beachgrass and native grass remants prior to recent mechanical mulching and spraying. The community still contains

some larger living gorse plants and millions of seedlings. The underlying sald is variably covered with a blanket of ground gorse. Weeds such as ragworts, groundsels, European beachgrass, hairy-cat's-ear, etc are the primary colonizers of the disturbed ground.

12 ***Phalaris arundinacea - Scirpus micranthus - Carex obnupta (- Typha latifolia) / water***

reed canarygrass - smallfruit bulrush - slough sedge (- cattail) / water

Published equivalent(s): CAROBN,SCIMIC

Conservation Rank: ~G4S4

This wetland community occurs along the banks of Twomile Creek at the extreme north of the study area. Reed canarygrass, small-fruited bulrush, slough sedge, and cattail dominate. Beaver activity is prolific and there are several beaver dams in the vicinity of this polygon.

13 ***Picea sitchensis - Pinus contorta - Alnus rubra / Rubus spectabilis - Salix hookeriana - Myrica californica / Carex obnupta - Lysichiton americanus***

Sitka spruce - shore pine - red alder / salmonberry - hooker willow - waxmyrtle / slough sedge - skunkcabbage

Published equivalent(s): PINCON/CAROBN & PICSIT/CAROBN-LYSAME & PICSIT-PINCONC/GAUSHA-VAOV

Conservation Rank: G1S1,G3S1,G3S3

This forested swamp community occurs in the northern half of the study area at the edge of the transition from forest to the herblands adjacent to Twomile Creek. The tree layer is characterized by sitka spruce, shore pine, and red alder, with rare patches of western redcedar. The shrub layer is composed of salmonberry, hooker willow, and waxmyrtle. The herb layer is dominated by slough sedge, skunk cabbage, water parsley, and lady fern. There are areas of patchy or sparse swordfern. This community is a young example of what will probably develop into classic sitka spruce/ slough sedge-skunkcabbage swamp – a plant community with the highest conservation ranking.

14 ***Picea sitchensis / Garrya elliptica - Vaccinium ovatum - Gaultheria shallon / Calamagrostis nutkaensis - Maianthemum dilatatum - Hierochloe occidentalis***

Sitka spruce / wavyleaf silktassel - evergreen huckleberry - salal / Pacific reedgrass - false lily of the valley - California sweetgrass

Published equivalent(s): ~PICSIT/VACOVA

Conservation Rank: ~S2

This very interesting plant community is found in the southwest corner of the study area on a forested mound (stabilized dune). The overstory is dominated by sitka spruce. Shub layer associates include silktassel, evergreen huckleberry, and salal. The herb layer differentiates this community from other dune-top communities along with the absence of douglas-fir and madrone. Herb layer compoenents are California sweetgrass, nootka reedgrass, and false lily of the valley. This community also hosts two rare lichen species: *Niebla cephalota* and *Heterodermia leucomelos.*

15 ***Picea sitchensis / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)***

Sitka spruce / waxmyrtle - evergreen huckleberry - salal / (slough sedge)

Published equivalent(s): PICSIT/VACOVA

Conservation Rank: G3S3

This forested community occurs in a single location near the center of the southern portion of the study area. It is centered on a depression to the north of a forested dune ridge, but it extends upslope on the south and west sides.. The overstory is dominated by sitka spruce. Shrub components are waxmyrtle, evergreen huckleberry, and salal. Slough sedge is patchy in the lowest-lying areas, which often wetlands.

16 ***Picea sitchensis (- Pinus contorta - Pseudotsuga menziesii) / Ulex europaeus - Garrya elliptica - Vaccinium ovatum***

Sitka spruce (- shore pine - Douglas-fir) / gorse - wavyleaf silktassel - evergreen huckleberry

Published equivalent(s): NA

Conservation Rank: NA

This community occurs on the west flank of a forested dune ridge. It is severely degraded by gorse. Native shrubs present include silktassel and evergreen huckleberry. The tree layer is dominated by sitka spruce, but douglas-fir and shore pine are also present.

17 ***Pinus contorta - Picea sitchensis - Alnus rubra / Myrica californica - Vaccinium ovatum - Gaultheria shallon / Carex obnupta (- Lysichiton americanus)***

shore pine - Sitka spruce - red alder / waxmyrtle - evergreen huckleberry - salal / slough sedge (- skunkcabbage)

Published equivalent(s): PINCONC / CAROBN

Conservation Rank: G1S1

This forested swamp community occurs in the northern half of the study area. The tree layer is characterized by sitka spruce, shore pine, and red alder, with rare patches of western redcedar. The shrub layer is composed of waxmyrtle, evergreen huckleberry, and salal. The herb layer is dominated by slough sedge, and patchy skunk cabbage. This community is a young example of what will probably develop into classic sitka spruce/ slough sedge-skunkcabbage swamp – a plant community with the highest conservation ranking.

18 ***Pinus contorta - Picea sitchensis / mulched Ulex europaeus / Ammophila arenaria***

shore pine - Sitka spruce / mulched gorse / European beachgrass

Published equivalent(s): NA

Conservation Rank: NA

This association was previously characterized as scattered sitka spruce and shore pine underlain by dense gorse and European beachgrass prior to recent mechanical mulching and spraying. The community still contains some larger living gorse plants and millions of seedlings. The underlying sald is variably covered with a blanket of ground gorse. Weeds such as ragworts, groundsels, European beachgrass, coastal burnweed, hairy-cat's-ear, etc are the primary colonizers of the disturbed ground.

19 ***Pinus contorta - Picea sitchensis / Ulex europaeus***

shore pine - Sitka spruce / gorse

Published equivalent(s): PINCON-PICSIT/ULEEUR

Conservation Rank: NA

This association is essentially shorepine underlain by gorse. There are patches of remnant native species such as waxmyrtle,cascara, and evergreen huckleberry. Wetter topographic positions have sparse slough sedge and salmonberry holding out agains the invading gorse.

20 ***Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)***

shore pine - Sitka spruce / gorse (- evergreen huckleberry) (- waxmyrtle)

Published equivalent(s): SERIOUSLY DEGRADED PICSIT-PINCON/GAUSHA-VACOVA

Conservation Rank: NA;G3S3

This association is essentially shorepine and sitka spruce woodland underlain by gorse. There are some patches of remnant native species such as waxmyrtle,cascara, evergreen huckleberry, and salal. European beachgrass is sometimes present. Some areas were planted decades ago with either knobcone pine or Monterey pine which is now large and dominant.

21 ***Pinus contorta - Pseudotsuga menziesii - Arbutus menziesii (- Picea sitchensis) / Garrya elliptica - Vaccinium ovatum (- Myrica californica)***

shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf silktassel - evergreen huckleberry (- waxmyrtle)

Published equivalent(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA

Conservation Rank: NA; ~S1

This important plant community occurs on forested dunes, ridges, and higher/drier topography. This community has not previously been described in the ecological literature. Madrone and silktassel are the main indicators of the association. Dunal communities of this composition appear to be confined to inland dunes in the Bandon and Coos Bay dune sheets – roughly stretching between Floras Lake and the John Dellenback trailhead and day use area near Reedsport. Rare madrone-douglas fir/ salal and madrone-douglas fir/ evergreen huckleberry associations have been described in the San Juan islands of Washington, but these do not quite match. Vegetation composition: trees: madone, douglas-fir, shore pine, sitka spruce; shrubs predominantly evergreen huckleberry, silktassel, and less constant waxmyrtle and hairy manzanita; herb layer variably populated by yerba Buena, hairy honeysuckle, bracken forn, rattlesnake plantain, California sweetgrass, and swordfern. Because of the apparent rarity of this association, it was given a conservation ranking of S1 – the highest ranking, on par with the shore pine/hairy manzanita association, with which it intergrades.

22 ***Pinus contorta - Pseudotsuga menziesii - Picea sitchensis / Ulex europaeus***

shore pine - Douglas-fir - Sitka spruce / gorse

Published equivalent(s): NA

Conservation Rank: NA

This association is essentially shorepine, sitka spruce, and douglas-fir woodland underlain by gorse. There are some patches of remnant native species such as waxmyrtle,cascara, evergreen huckleberry, and salal. European beachgrass is sometimes present. Some areas were planted decades ago with either knobcone pine or Monterey pine which is now large and dominant.

23 ***Pinus contorta - Pseudotsuga menziesii / Garrya elliptica - Vaccinium ovatum - Arctostaphylos columbiana / Pteridium aquilinum***

shore pine - Douglas-fir / wavyleaf silktassel - evergreen huckleberry -

hairy manzanita / brackenfern

Published equivalent(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA

Conservation Rank: ~S1

This plant community is eseentially the same as the shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf silktassel - evergreen huckleberry (- waxmyrtle) association, but without the madrone. The abundance of hairy manzanita suggests that it may be transitional with the shorepine/hairy manzanita association.

24 ***Pinus contorta - Pseudotsuga menziesii / Myrica californica - Vaccinium ovatum***

shore pine - Douglas-fir / waxmyrtle - evergreen huckleberry

Published equivalent(s): PINCON-PSEMEN/MYRCAL-VACOVA

Conservation Rank: G3S3

This community occurs primarily along low ridges. The overstory composition is predominantly shore pine and douglas-fir, although madrone is occasionally present. Understory shrubs include waxmyrtle, evergreen huckleberry, and salal. Brackenfern is the primary herb, although European beachgrass is sometimes present, particularly along edges with more open associations.

25 ***Pinus contorta / Ammophila arenaria - Juncus lesueurii - Polygonum paronychia - Hypochaeris radicata - Festuca rubra***

shore pine / European beachgrass - salt rush - beach knotweed - hairy catsear - red fescue

Published equivalent(s): REMNANT FESRUB COMMUNITY SUCCEEDING TO PICO/AMAR

Conservation Rank: NA;G1S1

This community occurs in the soth of the study area on the edge of a higher quality red fescue remnant dunal community. The tree layer is composed of shore pine. Herbaceous components are split between remnants and invaders. Species include: European beachgrass, salt rush, beach knotweed, hairy cat's ear, and red fescue. Intact red fescue communities have the highest conservation ranking.

26 ***Pinus contorta / Arctostaphylos columbiana***

shore pine / hairy manzanita

Published equivalent(s): PINCON/ARCCOL -> PINCON-PSEMEN/MYRCAL-VACOVA

Conservation Rank: G1S1;G3S3

This plant community occurs mainly on relatively open woodland flats and toe slopes in the southern portion of the study area. The tree layers is predominantly shore pine. Douglas fir and madrone can be minor compoenents in some areas, particularly at interfaces with communities in which they are dominants. Understory shrubs include hairy manzanita, waxmyrtle, evergreen huckleberry, gorse, and sometimes coyotebrush. Herb and subshrub layer components include kinnnikinnik, bracken fern, European beachgrass, red fescue, and salt rush. The shore pine/hairy manzanita plant association has the highest conservation ranking, G1S1, and is considered a conservation priority habitat. Some examples of this community within the study area are significantly degraded by gorse, and many are transitioning to the more common and lower ranked communities shore pine/waxmyrtle-evergreen huckleberry-salal or shore pine-douglas fir/waxmyrtle-evergreen huckleberry.

27 ***Pinus contorta / Arctostaphylos uva-ursi***

shore pine / kinnikinnick

Published equivalent(s): PINCON/ARCUVA

Conservation Rank: G1S1

This plant community occurs mainly on relatively open woodland flats and toe slopes in the southern portion of the study area. The tree layers is predominantly shore pine. Douglas fir and madrone can be minor compoenents in some areas, particularly at interfaces with communities in which they are dominants. Understory shrubs include waxmyrtle, evergreen huckleberry, and gorse.. Herb and subshrub layer components include kinnnikinnik, bracken fern, European beachgrass, red fescue, seashore lupine, beach knotweed , spiny sandmat, hairy cats ear, lesser hawkbit, seashore bluegrass, and salt rush. The shore pine/kinnikinnik plant association has the highest conservation ranking, G1S1, and is considered a conservation priority habitat. Some examples of this community within the study area are significantly degraded by gorse, and many are transitioning to the equally highly rated shore pine/hairy manzanita or more common and lower ranked communities shore pine/waxmyrtle-evergreen huckleberry-salal or shore pine-douglas fir/waxmyrtle-evergreen huckleberry.

28 ***Pinus contorta / Carex obnupta***

shore pine / slough sedge

Published equivalent(s): PINCON/CAROBN

Conservation Rank: G1S1

This forest swamp community occurs in depressions and low plains. The overstory is comprised of shore pine. Understory shrubs are general sparse in the centers of these units, and may include waxmyrtle, evergreen huckleberry, and salal. Edges with more upland communities generally have high cover of these shrub species. The herb layer is dominated by slough sedge. Bracken fern, rattlesnake plantain, bentgrass, rushes, skullcap speedwell, and /or swordefern are sometimes present. This community has the huighest conservation ranking, G1S1.

29 ***Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon***

shore pine / waxmyrtle - evergreen huckleberry - salal

Published equivalent(s): NA; ~PICSIT-PINCON/GAUSHA-VACOVA

Conservation Rank: NA

This community is really widespread across the study area, but is usually mapped as a mosaic community with shore pine/slough sedge community – i.e., as shore pine/waxmyrtle-evergreen huckleberry, salal/(slough sedge). If the slough sedge pockets (which tend to be small and unamappable) were laregr and more easily defined, much of the area mapped under the later name would actually be in this type. Much of the shore pine hairy manzanita and shore pine/kinnikinnik habuitat is transitioning to this type as the canopy closes and the stands mature. The tree cover of this community is dominated by shore pine. The shrub cover is dominated by evergreen h=uckleberry, waxmyrtle, and salal. Rhododendron, crabapple, and hairy manzanitat are occasional in some locations. The herb layer is non-existent to vestigial due to the density of the tree and shrub cover. Some of these stands are very difficult to move through. This plant community will likely become colonized by either Sitka spruce or douglas-fir, transitioning it to either the sitka spruce/evergreen huckleberry or the douglas-fir-shore pine/waxmyrtle-evergreen huckleberry communities.

30 ***Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon - Ulex europaeus / Carex obnupta***

shore pine / waxmyrtle - evergreen huckleberry - salal - gorse / slough

sedge

Published equivalent(s): PICSIT-PINCON/GAUSHA-VACOVA

Conservation Rank: G3S3

This is degraded form of the shore pine / waxmyrtle - evergreen huckleberry - salal / (slough sedge) community. Degradation is due to gorse invasion. In a situation where this community might occur over a large area or where it is adjav=cent to closed canopy forest, the gorse might be expected to decrease in abundance as the tree and taller shrub canopy closes. In the case of this particular polygon, the community is narrow and flanked by dense gorse – a situation that will not likely allow sufficient canopy closure to cause gorse to drop due to competition for light.

31 ***Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)***

shore pine / waxmyrtle - evergreen huckleberry - salal / (slough sedge)

Published equivalent(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN

Conservation Rank: G3S3;G1S1

This community represents a mosaic habitat in which the shore pine/waxmyrtle-evergreen huckleberry-salal community and the shore pine/slough sedge community are unmappably intermixed or in which they intergrade in transitional areas. This is one of the most widespread and abundant mapping units in the southern portion of the study area. Tree layer composition is dominated by shore pine, but Sitka spruce is often present and douglas-fir is sometimes present. There are areas along the western boundary of the study area in which knobcone or Monterey pine are abundant due to dune stabilization plantings more than 40 years ago. Where the community is drier or topographically elevated, the shrub layer is dense with waxmyrtle, evergreen huckleberry, and often salal. The herb layer in these situations is usually very sparse due to shrub density, but bracken fern and kinnikinnik are sometime present. Wetter areas usually contain these shrubs at lower densities, and have an herb layer dominated by slough sedge. Gorse is sometimes significant, particularly along edges with more abundant sunlight penetration and in transition zones with polygons dominated by gorse. Some of these gorse-infested zone approach the shore pine/gorse(-waxmyrtle)(-evergreen huckleberry) association.

32 ***Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / Carex obnupta***

shore pine / waxmyrtle - evergreen huckleberry - salal / slough sedge

Published equivalent(s): PINCON/CAOB WITH AREAS TRENDING TOWARD PINCON-PICSIT/GAUSHA-VACOVA

Conservation Rank: G1S1;G3S3

This community represents a mosaic habitat in which the shore pine/waxmyrtle-evergreen huckleberry-salal community and the shore pine/slough sedge community are unmappably intermixed or in which they intergrade in transitional areas. Slough sedge is much more abundant in this mapping unit than in the shore pine / waxmyrtle - evergreen huckleberry - salal / (slough sedge) community and the community's affinities are much more allied with the published shore pine/slough sedge community than with the sitka spruce-shore pine/salal-evergreen huckleberry community.

33 ***Pinus contorta / Ulex europaeus***

shore pine / gorse

Published equivalent(s): PINCON/ULEEUR

Conservation Rank: NA

This highly degraded community is characterized by an overstory tree layer dominated by shorepine,

underlain by dense and nearly impenetrable gorse. Sitka spruce is sometimes present. Sometimes sparse waxmyrtle is present with the gorse in the shub layer. When an herb layer is present it sometimes contains European beachgrass in drier locations. One location in the north of the study area near Twomile Creek has vestigial hooker willow, salmonberry, and slough sedge. This shore pine gorse community has a broad range of possible habitat that it can over take: everything from bare sand to shore pine/slough sedge communities at the drier end of its hydrology range.

34 ***Pinus contorta / Ulex europaeus / Ammophila arenaria***

shore pine / gorse / European beachgrass

Published equivalent(s): NA

Conservation Rank: NA

This highly degraded community is characterized by an overstory tree layer dominated by shorepine, underlain by the invasive species gorse and European beachgrass. Gorse may be patchy in tall and dense, nearly impenetrable patches interspersed with European beachgrass sandy habitat, or gorse may be more widely spread and smaller. European beachgrass areas may contain vestiges of native dunal communities contraining red fescue, salt rush, or seashore blue grass, but these are infrequent and barely, if at all, present over most of the coverage of this mapping unit. Bracken fern, salt rush, pearly everlasting, rattlesnake plantain, lesser hawkbit, hair cat's-ear, and/or yellow hairgrass can occur with eurpoean beachgrass where gorse is not overly dense.

35 ***Pinus contorta / Ulex europaeus / Ammophila arenaria - Festuca rubra - Juncus lesueurii***

shore pine / gorse / European beachgrass - red fescue - salt rush

Published equivalent(s): REMNANT FESRUB-JUNLES COMMUNITY

Conservation Rank: NA;G3S3

This highly degraded community is characterized by an overstory tree layer dominated by shorepine that is underlain by the invasive species gorse and European beachgrass. The community contains vestiges of the native red fescue-salt rush community. Other associated species include hair cat's-ear, silver hairgrass, and yellow hairgrass.

36 ***Pinus contorta / Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components***

shore pine / gorse / European beachgrass with possible remnant red fescue or seashore bluegrass community components

Published equivalent(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation Rank: NA; G1S1; G2S1

This highly degraded community is characterized by sparse scattered shorepine, underlain by the invasive species gorse and European beachgrass. Gorse is interspersed with European beachgrass sandy habitat. European beachgrass areas may contain vestiges of native dunal communities contraining red fescue, salt rush, or seashore blue grass.

37 ***Pinus contorta / Ulex europaeus / Ammophila arenaria with remnant Festuca rubra dune community components***

shore pine / gorse / European beachgrass with remnant red fescue dune community components

Published equivalent(s): AMMARE WITH REMNANT FESRUB DUNE COMMUNITY COMPONENTS

Conservation Rank: NA;G1S1

This degraded community is characterized by scattered shorepine, underlain by the European beachgrass and some gorse. Gorse is sporadically interspersed with European beachgrass sandy habitat. European beachgrass areas contain vestiges of the native red fescue dunal community, which has the highest conservation ranking. Besides European beachgrass and red fescue, other herbs present include beach knotweed, seashore lupine, hairy cat's-ear, and seashore bluegrass.

38 ***Pinus contorta / Ulex europaeus / Poa macrantha - Festuca rubra***

shore pine / gorse / seashore bluegrass - red fescue

Published equivalent(s): REMNANT FESRUB-PTEAQU COMMUNITY SUCCEEDING TO FOREST

Conservation Rank: (G3S3)

This community is transitional between the open, sandy red fescue-bracken fern community and a currently undifferentiable shore pine forest type. Gorse is the major shrub present. Herbs present include European beachgrass, seashore bluegrass, and red fescue. The standard successional pathway from sandy grassland, to shore pine/kinnikinnik to shore pine/waxmyrtle-evergreen huckleberry-salal has been interrupted in this case by invasion of gorse and European beachgrass. Without these species kinnikinnik would likely colonize.

39 ***Pinus contorta / Ulex europaeus (- Myrica californica) (- Vaccinium ovatum) / (Carex obnupta)***

shore pine / gorse (- waxmyrtle) (- evergreen huckleberry) / (slough sedge)

Published equivalent(s): PINCON/CAROBN?

Conservation Rank: NA;G1S1

This association is essentially shorepine underlain by gorse. There are patches of the remnant native species waxmyrtle and evergreen huckleberry. Wetter topographic positions contain slough sedge.

40 ***Pseudotsuga menziesii - Abies concolor - Picea sitchensis / Vaccinium ovatum - Garrya elliptica - Gaultheria shallon / Satureja douglasii - Polystichum munitum - Hierochloe occidentalis***

Douglas-fir - white fir - Sitka spruce / evergreen huckleberry - wavyleaf silktassel - salal / yerba buena - western swordfern - California sweetgrass

Published equivalent(s): NA; ~PICSIT/VACOVA TRANSITIONAL WITH UNDESCRIBED COMMUNITY ABOVE AND COMPLICATED BY UNUSUAL ABCO PRESENCE.

Conservation Rank: ~S1

This important plant community occurs on eastern side of a forested dune ridge in a single locaton in the southern portion of the study area. This community has not previously been described in the ecological literature. White fir and silktassel are the main indicators of the association. Vegetation composition: trees: douglas-fir, white fir, sitka spruce; shrubs predominantly evergreen huckleberry, silktassel, and salal and hairy manzanita; herb layer variably populated by yerba Buena, swordfern, California sweetgrass, hairy honeysuckle, bracken fern, rattlesnake plantain, sweet-scented bedstraw, poisonoak, and white flowered hawkweed. This is the only location is which poison oak was observed in the study area. The presence of white fir in Oregon dunal systems is significant, especially in that the species was not present at all in the inventory of the Oregon DunesNational Recreation Area. Because of the apparent rarity of this association, it was given a conservation ranking of S1 – the highest ranking, on par with the shore pine - Douglas-fir - madrone (- Sitka

spruce) / wavyleaf silktassel - evergreen huckleberry (- waxmyrtle) association, with which it intergrades nearer the top of the dune ridge.

41 ***Pseudotsuga menziesii - Pinus contorta - Arbutus menziesii - Picea sitchensis / Vaccinium ovatum - Myrica californica - Gaultheria shallon***

Douglas-fir - shore pine - madrone - Sitka spruce / evergreen huckleberry - waxmyrtle - salal

Published equivalent(s): PINCON-PSEMEN/MYRCAL-VACOVA

Conservation Rank: G3S3

This plant community occurs on eastern side of a forested dune ridge in a single location in the southern portion of the study area. It is essentially a variant on the shore pine-douglas fir/waxmyrtle-evergreen huckleberry association. Overstory trees are dominated by douglas-fir, shore pine, madrone, and lesser amounts of sitka spruce. The shrub layer is thick with waxmyrtle, evergreen huckleberry, and salal. Very little herbaceous vegetation is present due to the density of the shrub layer.

42 ***Pseudotsuga menziesii - Pinus contorta - Picea sitchensis (- Arbutus menziesii) / Garrya elliptica - Myrica californica - Ulex europaeus - Vaccinium ovatum / Hierochloe occidentalis***

Douglas-fir - shore pine - Sitka spruce (- madrone) / wavyleaf silktassel - waxmyrtle - gorse - evergreen huckleberry / California sweetgrass

Published equivalent(s): NA; UNDESCRIBED GARRYA VARIANT ON PINCON-PSEMEN/MYRCAL-VACOVA

Conservation Rank: ~S1

This community was noted in a single location in the south of the study area on a forested dune ridge. The vegetation appears to be similar to the nearby ridge to the northwest, but moderately to highly degraded by gorse, at least on the western face. Access to the ridge top was not possible from OPRD property, but the tree and shrub composition could be observed from below to a large extent.

43 ***Salix hookeriana / Carex obnupta - Argentina egedii***

hooker willow / slough sedge - Pacific silverweed

Published equivalent(s): SALHOO / (ARGEGE) - CAROBN

Conservation Rank: G4S4

This wetland plant community is widespread in lower topographic positions and concavities within the study area. It is characterized by a shrub layer dominated by hooker willow and and herb layer dominated by slough sedge and pacific silverweed. Other shrubs that are sometime present include waxmyrtle, evergreen huckleberry, salal and gorse. These species tend to be around the edges rather than in the interior of this wet habitat. Shore pine is occasional in some locations. Other herbs sometimes present include skullcap speedwell, lesser hawkbit, and bentgrass.

44 ***Salix hookeriana / Carex obnupta - Argentina egedii; Vaccinium uliginosum / Carex obnupta***

hooker willow / slough sedge - Pacific silverweed; bog blueberry / slough sedge

Published equivalent(s): SALHOO / (ARGEGE) - CAROBN; VACULI/CAROBN

Conservation Rank: G4S4; G2S2

This very important wetland community occurs in a single location along the eastern edge of the study area. Portions of the mapping unit are identical to the hooker willow / slough sedge - Pacific silverweed associations, but there are also small, unmappable inclusions of the bog blueberry/slough sedge association. Deeper water portions of this mosaic habitat are captured under mapping unit 46: hooker willow / beaked sedge - slough sedge - Pacific silverweed. This mosaic habitat was assigned the conservation rank of the rare bog blueberry/slough sedge association, G2S2. Other herbaceous species present in this mosaic include bentgrass, witchgrass, marsh violet, creeping spikerush, northern bugleweed, and skullcap speedwell.

45 ***Salix hookeriana / Carex obnupta – Sphagnum sp.***

hooker willow / slough sedge - sphagnum

Published equivalent(s): PINCON/CAROBN; SALHOO / (ARGEGE) - CAROBN

Conservation Rank: G1S1

This wetland community occurs in one small and isolated location in the study area. Although partially degraded by gorse, it is important because of the present of Sphagnum. Sphagnum wetlands are increasingly rare and are of high conservation concern. The Sphagnum species was not identified. Shore pine trees are present within this mapping unit. The shrub layer contains hooker willow and gorse. The herb layer is almost completely dominated by slough sedge.

46 ***Salix hookeriana / Carex utriculata - Carex obnupta - Argentina egedii***

hooker willow / beaked sedge - slough sedge - Pacific silverweed

Published equivalent(s): SALHOO / (ARGEGE) - CAROBN

Conservation Rank: G4S4; G5S4

This wetland community occurs in areas that are inundated more deeply and for a longer time than most of the wetlands in the study area. It occurs in the midst of the hooker willow / slough sedge - Pacific silverweed; bog blueberry / slough sedge association. Hooker willow is patchy within this mapping unit. When Douglas spiraea is present it mostly occurs in the understory of the hooker willow clumps. The herb layer is variable according to water depth, but beaked sedge, slough sedge, and Pacific silverweed are fairly constant. Muddier areas (which indicate longer and deeper inundation) contain the additional species of northern water startwort and creeping spikerush. A vegetative violet (believed to be Marsh violet in the absence of flowers, which are necessary for conclusive identification) is patchy, and very abundant in some portions of the mapping unit.

47 ***Ulex europaeus***

gorse

Published equivalent(s): NA

Conservation Rank: NA

This community is essentially a gorse monoculture.

48 ***Ulex europaeus / Ammophila arenaria***

gorse / European beachgrass

Published equivalent(s): AMMARE; JUNLES

Conservation Rank: NA;G3S3

This community is primarily composed of gorse and European beachgrass. There are some areas with significant saltrush, hairy cat's ear, and/or yellow hairgrass presence. Shore pine is around the edges or sparsely present in the interior of these mapping units. At least some of the area covered by this mapping unit was likely of the saltrush association prior to invasion by gorse and European beachgrass.

49 ***Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components***

gorse / European beachgrass with possible remnant red fescue or seashore bluegrass community components

Published equivalent(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation Rank: NA;G1S1;G2S1

This highly degraded community is characterized by the invasive species gorse and European beachgrass. Gorse is interspersed with European beachgrass sandy habitat. European beachgrass areas may contain vestiges of native dunal communities contraining red fescue, salt rush, or seashore blue grass. Herbaceous species present include Europewan beachgrass, red fescue, seashore bluegrass, beach knotweed, hairy cat's ear, yellow and silver hairgrasses, lesser hawkbit, beach evening primrose, cottonbatting plant, and cudweed.

50 ***Ulex europaeus / Ammophila arenaria with remnant Festuca rubra dune community components***

gorse / European beachgrass with remnant red fescue dune community components

Published equivalent(s): AMMARE WITH REMNANT FESRUB DUNE COMMUNITY COMPONENTS

Conservation Rank: NA; G1S1

This degraded community is characterized by gorse sporadically interspersed with European beachgrass in sandy habitat. Areas with reduced cover of gorse and beachgrass areas contain vestiges of the native red fescue dunal community, which has the highest conservation ranking. Besides European beachgrass and red fescue, other herbs present include seashore bluegrass, beach knotweed, hairy cat's-ear, yellow hairgrass, silver hairgrass, beach evening primrose, and cottonbatting plant.

51 ***Ulex europaeus / Ammophila arenaria with remnant Festuca rubra or Poa macrantha community components***

gorse / European beachgrass with remnant red fescue or seashore bluegrass community components

Published equivalent(s): AMMARE WITH REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation Rank: NA;G1S1;G2S1

This degraded community is characterized by gorse sporadically interspersed with European beachgrass in sandy habitat. Shore pine is present around the edges of on instance of this mapping unit. Areas with reduced cover of gorse and beachgrass areas contain vestiges of the native red fescue dunal community or the seashore bluegrass community, which have the highest conservation ranking. Herbs present include European beachgrass, red fescue, seashore bluegrass, beach knotweed, and hairy cat's-ear.

52 ***Salix hookeriana / Phalaris arundinacea –Cirsium arvense – heracleum lanatum (-Carex obnupta)***

hooker willow / reed canarygrass - canada thistle - cow parsnip (- slough sedge)

Published equivalent(s): SALHOO / (ARGEGE) - CAROBN

Conservation Rank: G4S4

This wetland community occurs on both banks of Twomile Creek at the northern extreme of the study area. It is significantly degraded by both reed canarygrass and Canada thistle. Elk and beaver use are very high and contribute to the poor condition of this mapping unit. Much of the hooker willow is removed by beaver along the shore and for up to 30 feet back from the bank. The ground is riddled over much of the area with channels hidden beneath the surface of the vegetation. Slough sedge was probably a historic dominant in this area, but the cover of reed canarygrass and thistle, and cow parsnip has largely swamped this species now. Tufted hairgrass may also have historically been present. Giant vetch is very abundant in this community as well. Small-fruited bulrush is patchy, and mostly present on the southern side of Twomile Creek.

53 ***Salix hookeriana / Carex obnupta - Scirpus microcarpus - Phalaris arundinacea***

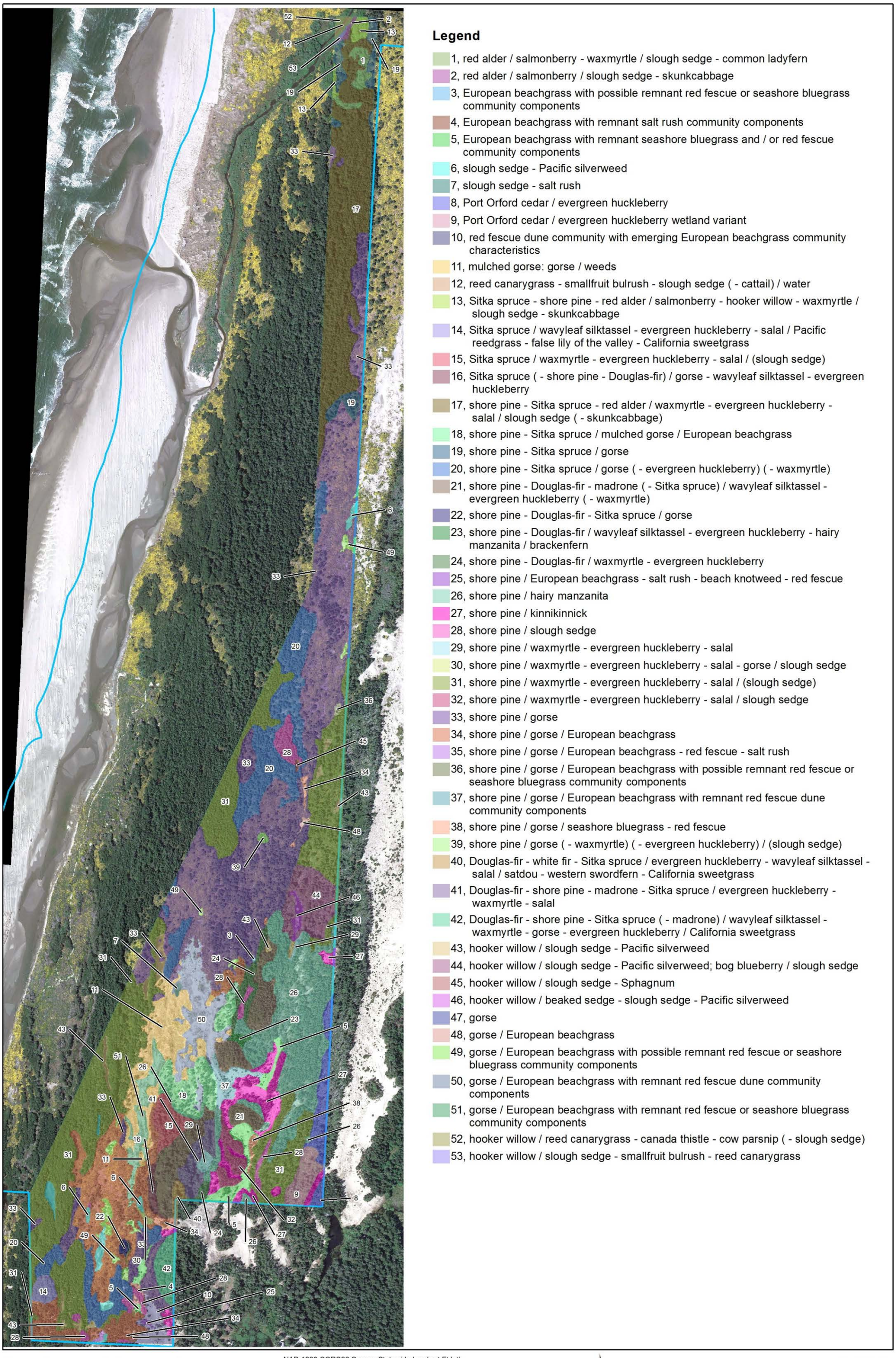
hooker willow / slough sedge - smallfruit bulrush - reed canarygrass

Published equivalent(s): SALHOO / (ARGEGE) - CAROBN

Conservation Rank: G4S4

This wetland community occurs in a deeper swale between the south bank of TwomileCreek and the shubland and forested swamp areas adjacent to the south. Due to deposition of sediment during flood events, there is a low natural levy along the bank of Twomile Creek that is slightly higher than the swamp further away from the creek. This levy is within mapping unit 52, the hooker willow / reed canarygrass - canada thistle - cow parsnip (- slough sedge) community. The deeper swale south of this levy is characterized by a shrub layer of hooker willow, and an herb layer of slough sedge, small-fruited bulrush, reed carygrass, and giant vetch.

Figure 4. Current Vegetation/Habitats



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

NAD 1983 CORS96 Oregon Statewide Lambert Ft Intl

Feet: 0 400 800 1,600

Miles: 0 0.05 0.1 0.2 0.3 0.4

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Wetlands

A variety of wetland types occur across the study area. The distribution of wetlands is depicted in Figure 5, below.

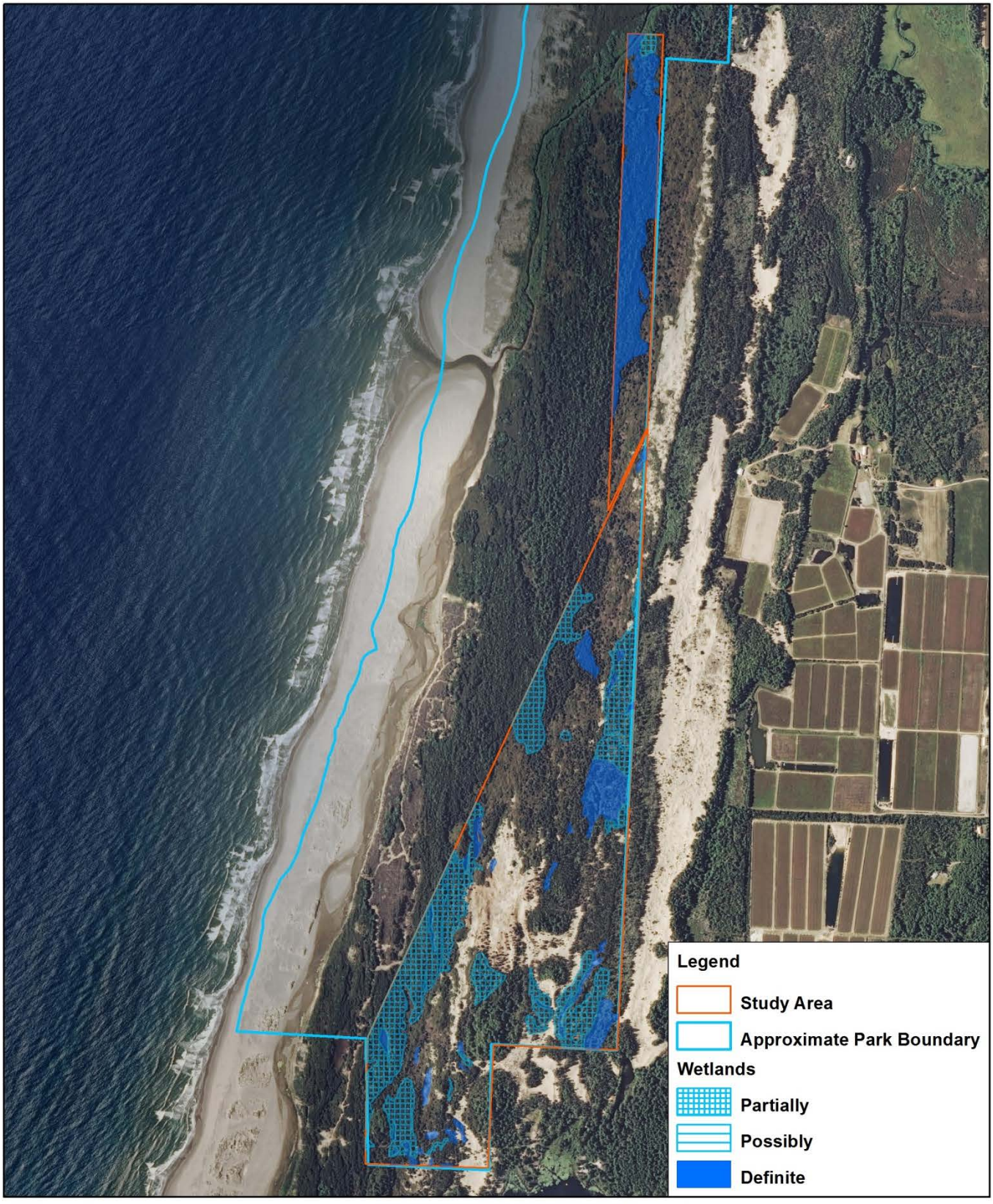
Topographically low-lying or concave portions of the study area are usually at least partially wetland. No instances of perched wetlands were encountered in the study area, due primarily to the fact that the soils are essentially sand over all of the higher, rolling ground. Wetland habitat types include forested swamps, sedge meadows, and shrub swamps. The majority of the wetlands within the study area are characterized by abundance of slough sedge, hooker willow, and/or Pacific silverweed. There are, however, some prominent wetland types characterized by abundance of bog huckleberry, small-fruited bulrush, reed canarygrass, and beaked sedge.

No formal delineation was done in the course of this study. All assessment of potential wetlands was based on above ground indicators. True wetland and water feature extents are often smaller than those depicted in Figure 5, especially in areas mapped as "partially", or "possibly" wetlands. These extent issues arise for three reasons:

1) wetlands and non-wetlands often intermingle in unmappable mosaics of habitat. This patchwork is often made up of small patches of upland within an area predominantly wetland, or the converse – small wetlands in a matrix of upland. In many cases, hummocky ground is wet in the troughs and dry on the tops of the hummocks and minor ridges. *In this assessment, when true wetland extents are not mappable for reasons of habitat complications or "mosaicing", the extent of the upland/wetland mosaics are mapped.*
2) Wetlands mapped on the subjective basis of surface indicators do not take all wetland indicators into consideration. Soil and subsurface hydrology characteristics must also be assessed in the process of formal wetland determination and delineation. In some cases, features mapped as wetlands based on surface vegetation are not actually wetlands when subjected to the full range of subsurface tests. In other cases, an area that is actually wetland might not be mapped as such based on vegetation alone because characteristic vegetation was absent due to deep shade under a forest canopy. This assessment intended to conservatively map potential wetlands – opting to err on the side of including rather than excluding potential wetlands. Potential wetlands and areas that include wetlands (but for which boundaries are imprecise) are mapped as "possible" and "partial" wetlands. Those features that are indubitably wet or that show a preponderance of obligate wetland vegetation are mapped as wetlands without these qualifying labels.

Because of the limited scope and detail of this assessment's treatment of wetlands, any use of the wetland features mapped in this assessment should only be for general planning purposes. Specific construction designs that overlap with or closely approach these areas will need official wetland determination and delineation, leading up to Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE) wetland permits.

Figure 5. Wetlands.



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Invasive Plants/Weeds

Invasive Plant Species (or weeds) are extremely pervasive in portions of the study area. The primary weeds of concern are gorse (*Ulex europaeus*) and European beachgrass (*Ammophila arenaria*). These speacies are very dense and competitive colonizers in this environment. Their biomass and density can reach levels high enough to completely displace all other species and radically change the structure, composition, and function of the habitats they invade. Invasive species that can take over to this extent are often referred to as "system-modifying weeds". In the case of the proliferation of gorse and European beachgrass within the study area and in the larger Bandon State Natural Area as a whole, the effects of the species go beyond simply displacing vegetation. As sand stabilizers, these species have strongly contributed to the recently altered topography and hydrology of the study area – having replaced low, rolling, actively moving dunes with higher, stabilized dunes (see Historic Vegetation and Change, above).

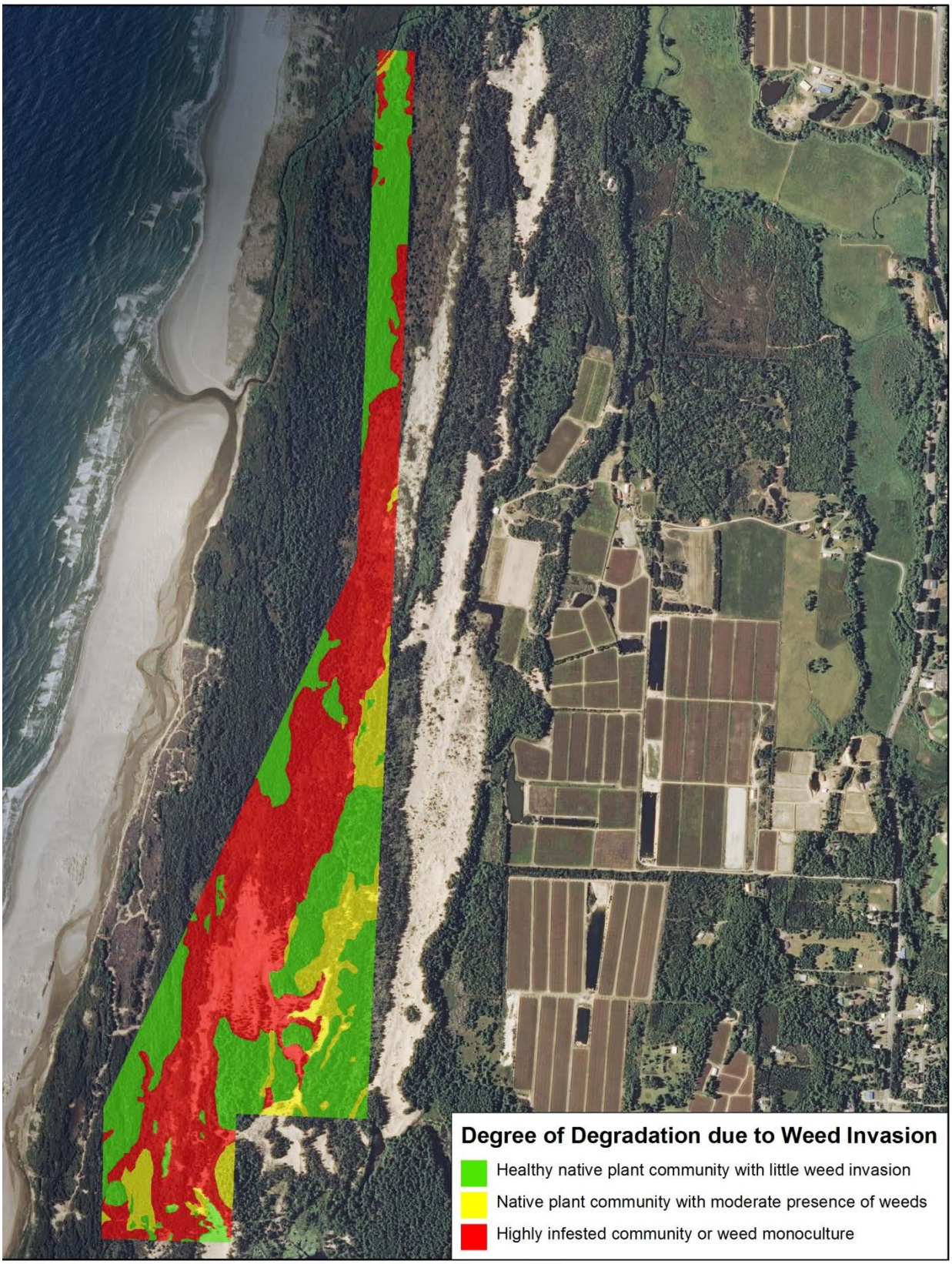
Several other species are very widespread and prominent in the study area, but do not generally cause significant risk of loss of native habitat types. These species are not system-modifying in the way that dense colonizers like gorse and European beachgrass are, and they usually occur sporadically and sparsely in open habitats in the study area. Species in this group include, hairy cat's ear (*Hypochaeris radicata*), Lesser hawkbit (*Leontodon taraxacoides*), yellow hairgrass (*Aira praecox*), and silver hairgrass (*Aira caryophyllea*).

Gorse and European beachgrass are rapidly replacing rare native dunal habitats of high conservation priority in the southern portion of the study area. OPRD has mulched and sprayed large areas of gorse to reclaim dunal habitat in recent years. Biomass on the ground and germinating gorse seed are still abundant and many more years of control will be necessary to restore these habitats to native dunal conditions.

Under a relatively dense forest canopy, gorse and European beachgrass are not able to attain or maintain system-modifying densities. In these situations, the species are not as detrimental to habitat quality and function. This fact suggests the possibility of afforestation as a means of control in those areas that are either already completely lost and not feasible to restore, or in areas with no access by machine. Open, dunal habitat is a vanishing habitat of very high conservation priority, and afforestation should not be considered as a means of control where there is still some dunal function in place and where restoration is feasible.

At the extreme north end of the study area, the shores of Twomile Creek are densely colonized by reed canarygrass – another system-modifying weed. This degraded habitat extends well outside of the study area on adjacent Bandon State Natural Area lands flanking the creek. The habitat still contains substantial native plant abundance intermixed with the reed canarygrass. Restoration feasibility is low in this area.

Figure 6. Habitat Degradation Due To Weeds



Rare and Endangered Plant Species

Survey of the study area for rare plant species has resulted in documentation of a substantial number of sites of rare plant and lichen species. The rare species discovered are relatively localized. See Figure 7.

Systematic and focused rare plant surveys that have been completed up to the date of this report have been primarily for vascular plant species in dunal habitats. Lichen and bryophyte surveys of the area have not been exhaustive, and it is expected that further survey for lichen and bryophyte species would result in new sightings.

Focused rare plant surveys conducted in 2013 targeted all accessible potential habitat for plant species listed under the state or federal Endangered Species Acts (see Figure 8). These surveys were conducted by Sherri Laier (OPRD Southwest Oregon Natural Resource Specialist) and Noel Bacheller (OPRD Botanist) in October, 2013. Areas targeted for survey were informed by both aerial photo reconnaissance and past knowledge of rare species occurrence in the study area. All accessible habitat was surveyed completely by meandering the habitat.

Keith Saylor, a local amateur lichenologist and naturalist, independently found one location within the study area containing two rare lichen species and reported these sites to Sherri Laier and Noel Bacheller. The sites of each of the species were visited and verified *in situ* by Noel Bacheller in October 2013.

Four species of rare plants and lichens have been documented in the study area. These species are silvery phacelia (*Phacelia argentea*), beach sagewort (*Artemisia pycnocephala*), the lichen *Niebla cephalota*, and the lichen *Heterodermia leucomelos*. These species are briefly described below:

Silvery phacelia (*Phacelia argentea*)
Silvery phacelia occurs from California to the central Oregon Coast. It is listed as threatened under Oregon's Endangered Species Act and is protected by that law on state-owned land. It is protected as a sensitive species on federal lands in Oregon. The species occurs in unstabilized and semi-stabilized dunes and on bluffs and grasslands on the immediate coast. The species is threatened by development and habitat loss. The proliferation of invasive non-native plant species (especially European beachgrass, gorse, and broom species) is a major source of habitat loss not directly resulting from habitat conversion to developed uses. Two remaining populations of silvery phacelia are known to occur in the still relatively open sand areas of the southeast portion of study area.

Beach sagewort (*Artemisia pycnocephala*)
This species occurs at between four and six sites along the Oregon coast. Although not listed under the State or Federal Endangered Species Acts, populations of this species occur much less frequently along the Oregon Coast than do the listed species silvery phacelia. Beach sagewort is protected as a sensitive species on federally owned lands in Oregon. The species is threatened by development and habitat loss. The proliferation of invasive non-native plant species

(especially European beachgrass, gorse, and broom species) is a major source of habitat loss not directly resulting from habitat conversion to developed uses. Beach sagewort occurs in the southeast portion of the study area.

Heterodermia leucomelos

This species of lichen occurs sporadically in a restricted ecological niche of the coastal fog belt along the Pacific Ocean. It is known from a variety of locations around the world, but is rare in Oregon. It is protected as a sensitive species on federal lands in Oregon. The species is currently known only from the summit of one forested dune in the south of the study area. Threats include habitat loss, changes in oceanically influenced microclimate, and possibly air pollution.

Niebla Cephalota

Like *Heterodermia leucomelos*, this species of lichen occurs sporadically in a restricted ecological niche of the coastal fog belt along the Pacific Ocean from Mexico to Alaska. It is protected as a sensitive species on federal lands in Oregon. The species is currently known only from the summit of one forested dune in the south of the study area. Threats include habitat loss, changes in oceanically influenced microclimate, and possibly air pollution.

Potential Habitat for Other Rare Species

Potential habitat is present for a number of other rare species. This report will not address the wide range of potential sensitive species that could occur in the study area, but will instead focus on listed species that are protected by law on state lands. The full list of rare species known from the coast range ecoregion of Coos and Curry Counties, Oregon is presented in Appendix 2.

Table 3. State –listed species of the Coos and Curry County Coast

Scientific Name	Common Name	Heritage Global Rank	Heritage State Rank	Federal Status	State Status	Heritage List
Abronia umbellata ssp. breviflora	Pink sandverbena	G4G5T2	S1	SOC	LE	1
Lilium occidentale	Western lily	G1	S1	LE	LE	1
Oenothera wolfii	Wolf's evening-primrose	G1	S1	SOC	LT	1
Phacelia argentea	Silvery phacelia	G2	S2	SOC	LT	1

Abronia umbellata ssp. umbellata:

This species is known to occur along the shoreline of Bandon State Natural Area, but has not been found within the study area despite thorough survey of all open, sandy habitat suitable to the species in 2013. The open sandy habitats of the study area may be too far inland to be considered likely or suitable habitat. Figure 7b depicts broadly potential habitat that was surveyed for the species in 2013.

Lilium occidentale:
Possible, but not likely, habitat for this species occurs in shrub-dominated and open wetland areas within the study area. The Oregon Department of Agriculture characterizes western lily habitat as:

> "..near the ocean in freshwater fens and on the edges of bogs, in coastal prairie and scrub, and in transition zones between these communities. The species also occurs in spruce forest, but plants in this habitat are stunted and do not produce flowers."

The most likely potential habitat for the species is found along the south-eastern boundary in shrub and herbaceous wetlands characterized by Either port Orford cedar and dense shrubs, or in the wetlands in and around the shore pine/bog blueberry-slough sedge community further north. This potential habitat is depicted in Figure 6b. No *Lilium* of any species was found in these habitats, but they cannot be definitively ruled out as potential due to season of survey and difficulty of access. Some of the species normally associated with *Lilium occidentale* are present in the mapped potential habitat, but the full suite is not present. Noticeably absent are *Ledum glandulosum* and fen and bog species such as *Tofieldia glutinosa, Trientalis artica, Gentiana sceptrum, and Sisynchium californicum*. Species occurring in these wetlands are only an approximate indicator of suitable habitat, but they do not definitively indicate whether the species could be present. Western lily has been found in habitats without any of the common associates, especially in cases where weeds have replaced the original native plant community or where the lilies remain because of longevity and despite of habitat changes that have shifted the rest of the community toward another vegetative community. Apart from the apparently most suitable habitat mapped in Figure 7b, there are many other wetlands in the study area that are not thought to provide suitable habitat for western lily due to obviously well-drained soils (sand below highest winter water table) and monotonous *Carex obnupta-Potentilla anserina* habitat. Refinement of potential habitat through further study would be more difficult and cumbersome than thoroughly surveying the habitat for *Lilium occidentale* during the flowering period, and further illumination of the subject of lily presence should focus on the question of whether western lily does occur – not whether it could occur.

Oenothera wolfii, Wolf's evening primrose:
The Oregon Department of Agriculture's Plant Conservation Program describes wolf's evening primrose habitat as:

> "Well-drained sandy soil in coastal strands, roadsides and coastal bluffs. Native species associated with Wolf's evening primrose include *Abronia latifolia, Abronia umbellata* ssp. *breviflora, Achillea millefolium, Anaphalis margaritacea, Baccharis pilularis, Elymus mollis, Equisetum arvense, Fragaria chiloensis, Garrya elliptica, Gaultheria shallon, Lonicera involucrata, Lupinus* sp., *Mimulus guttatus, Phacelia argentea, Picea sitchensis, Polygonum paronychia, Pteridium aquilinum, Rubus spectabilis,* and *Salix hookeriana*. Non-native species found in Wolf's evening primrose habitat include *Ammophila arenaria, Cytisus scoparius, Daucus carota,* and *Lotus corniculatus*".

This habitat is present within the study area, but no wolf's evening primrose was discovered in the course of surveys. As for *Abronia umbellata ssp. umbellata,* the sandy and bluff-like habitat of the study area may be too far inland to be considered likely or suitable habitat. Figure 7b depicts broadly potential habitat that was surveyed for the species in 2013.

Figure 7. Known Rare Plant Species Distribution. 2011 NAIP aerial imagery.

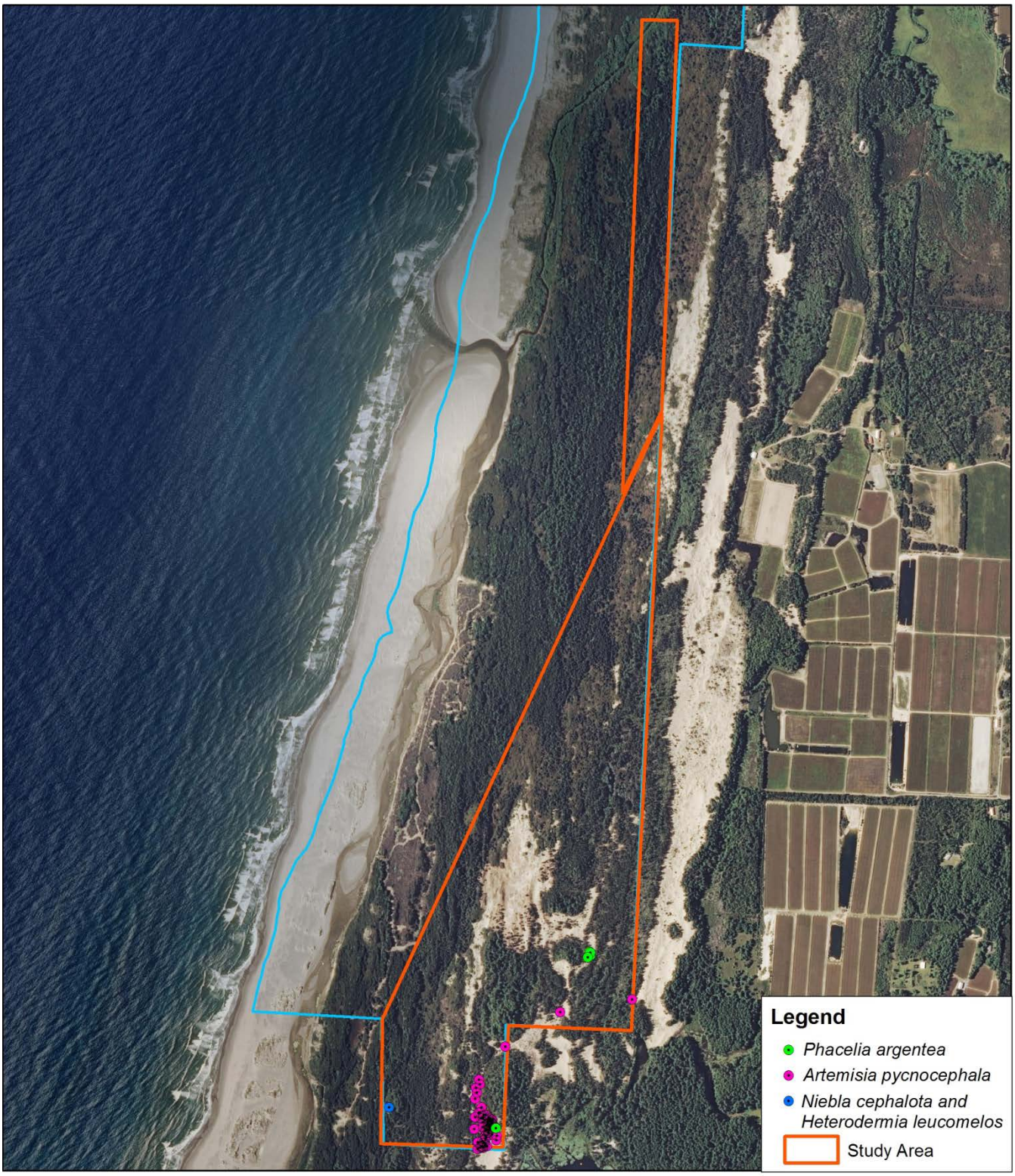
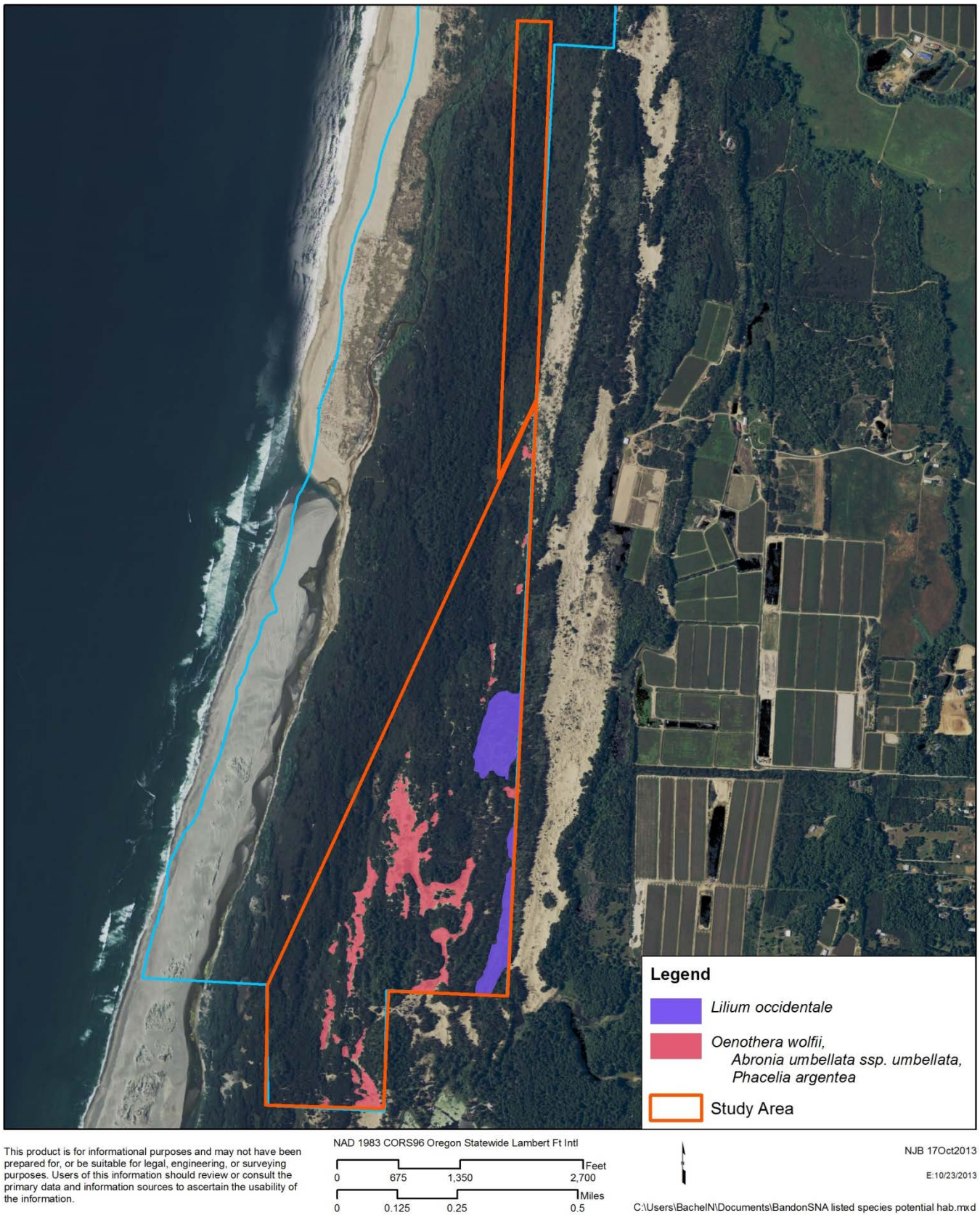


Figure 7b. Potential Habitat for Listed Species. The habitat depicted here is perhaps overly generous. The areas shown as potential habitat for *Abronia*, *Oenothera*, and *Phacelia* were surveyed in 2013. Only sites of Phacelia were encountered (see Figure 6). Aerial imagery NAIP 2009 open sands before removal of gorse.



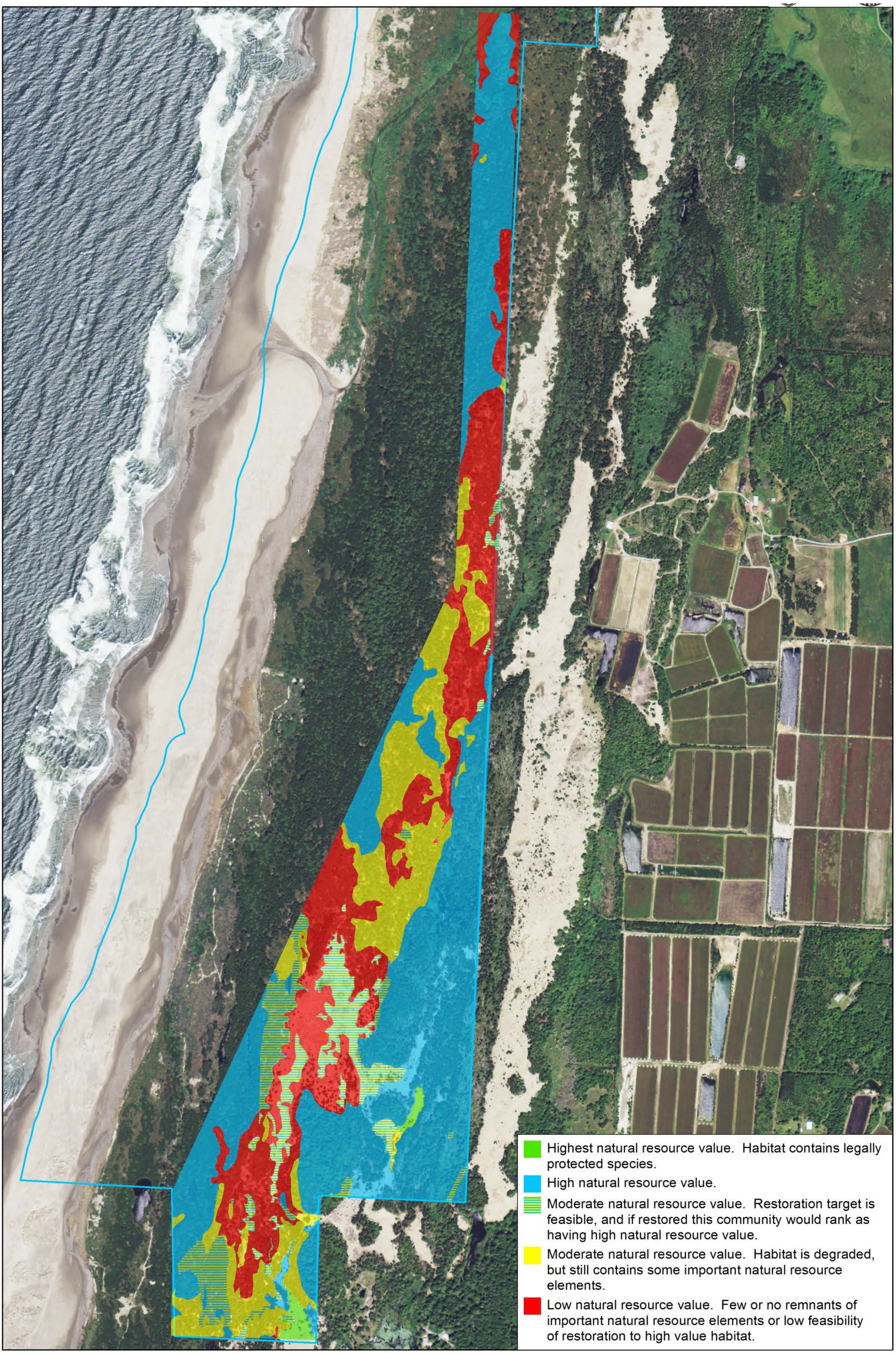
Botanical Resource Value Ratings

Botanical Resource Value is a ranking of ecological importance of a habitat in a landscape and global conservation context. It is assessed by jointly assessing seven environmental characteristics of each plant community/habitat type present in the study area. The ecological parameters used are: conservation ranking, condition, restoration priority, restoration feasibility, wetland status, age class (for forested communities), and rare species presence. The interaction of these parameters in assignment of a Botanical Resource Value rating is described in detail in the "Methods" section of this report. Botanical Resource Value captures information about plant communities, their ecological condition, and relative value for preservation. Generally speaking, the higher the Botanical Resource Value class number is, the lower value the site is *from a vegetative habitat and wetlands perspective*. In typical OPRD planning, Botanical Resource Value is just one factor in later determination of a composite suitability rating that factors in historical, cultural, wildlife, and other types of restrictions and opportunities. Composite suitability determinations are typically made in the course of Master Planning process, when all resource and land-use-related variables are assessed together.

Botanical Resource Value ratings for the study area are depicted in Figure 8, below.

Calculation of Botanical Resource Value was accomplished using a computer program (VB Script) in an ArcGIS environment that performs the decision tree (matrix) described in the methods section. The parameters needed for performing these calculations are fields within the GIS polygon attribute table for vegetation cover.

Figure 8. Botanical Resource Value Ratings.



Management Recommendations

Inventory and assessment of the composition and resource value of habitats within the study area makes it possible to develop concepts for natural resource management, allocation of preserves, ecological restoration, and enhancement from a natural resource perspective. The natural resource perspective is normally factored in with other resource perspectives and needs from areas of interest such as scenic values, recreation needs, cultural and historic resource preservation or enhancement needs, economic pressures, and political demands. The concepts represented in this section represent only the vegetation and habitat ecology aspect of this decision network.

Considering the property's natural resource values on their own merit and without consideration of other proposed land uses, several potential conservation and restoration actions are apparent. These potential natural resource trajectories are based on concepts of "desired future condition" and feasibility of restoration to natural habitat. Desired future conditions are commonly devised through consideration of historical vegetation, the habitat needs of at-risk species present, feasibility of attaining goals, and compromises between what is ideal and what is practical with limited resources. Once desired future condition goals are formulated, the actions necessary to begin work toward those goals can be prescribed.

The following desired future conditions and general concepts for natural area management appear to be reasonably practical, attainable, and benficial for conservation of natural resource values within the study area.

1. All existing forest should remain forest. Clearing recently established forest to restore open sand and dunal enviroments is not feasible given the intense invasion pressure from gorse and European beachgrass. Additionally, having been forested for so long, the soils in these areas have fundamentally changed by means of addition of organic matter. Areas containing only shore pine in mesic to wet locations could be underplanted with spruce where spruce is not significantly present, as these stands may start to die off from old age in 20 years. Having spruce in the understory prior to the unraveling of the pine will allow a seamless transition. Port Orford cedar forest should be managed for development of late seral structure.
2. Existing shore pine/kinnikiinik or shore pine/hairy manzanita habitat should remain as such. These are rare communities with very high conservation value. Gorse invasion into these areas should be prevented and gorse currently present should be removed. It will probably be necessary to thin these stands to maintain the habitat as woodland, as the tendency of these stands is to become forest. Thinning should generally favor the younger to mid aged trees. Shrub control will also be necessary. Perpertual maintenance of these early to mid seral communities is warranted due to the extremely rare type and the fact that it is vanishing from Oregon very rapidly due to absence of disturbance processes that maintained them in the past.
3. Existing dunal grasslands that are either dominated by native species or that retain significant native species composition should remain as such. Gorse and European beachgrass should be removed and kept from re-invading these very important remnant

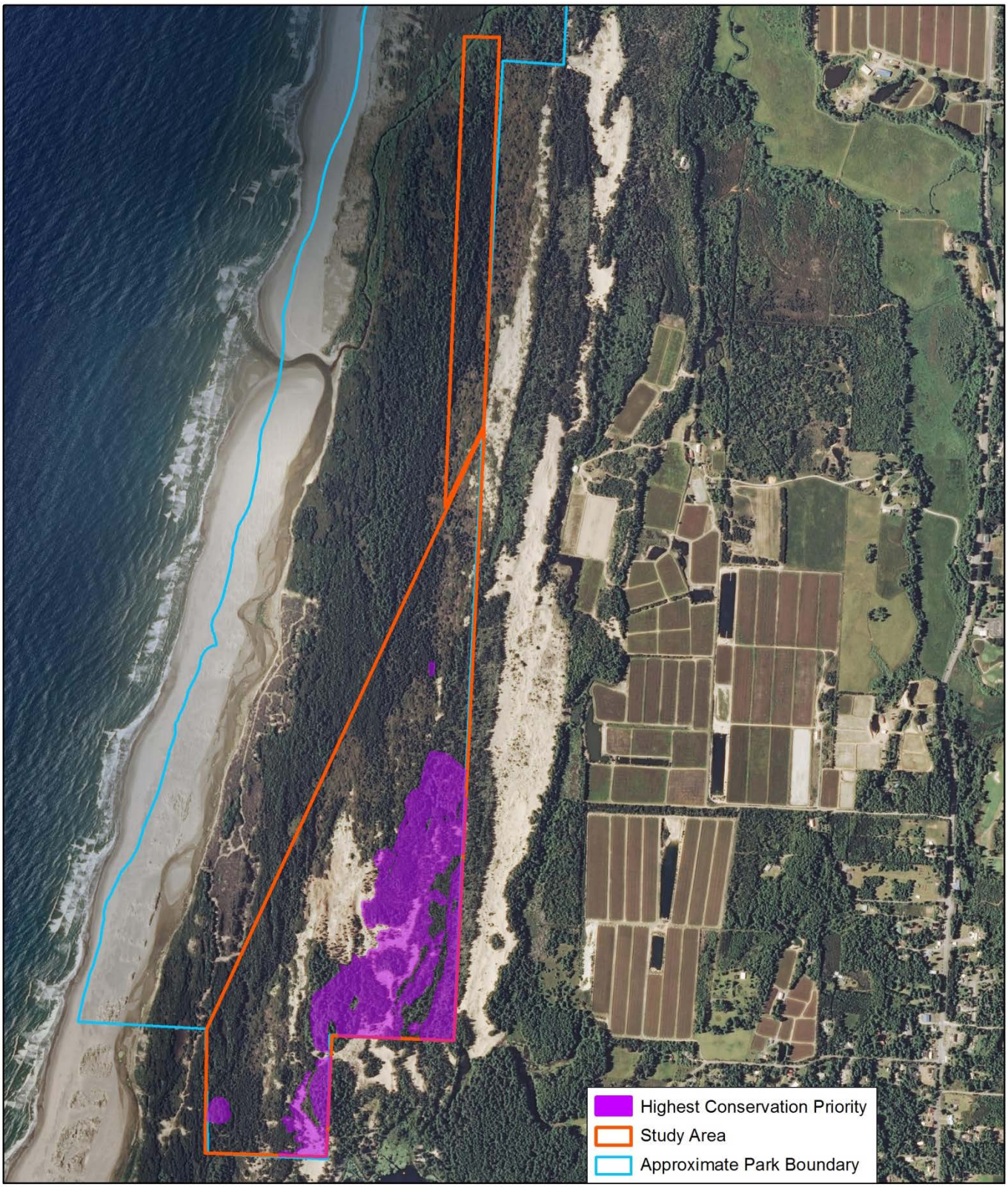
habitats. Beach sagewort and silvery phacelia populations should be monitored and managed for persistence.

4. Existing European beachgrass-dominated habitat with no native composition should be shelved for later action - time and funding allowing. Gorse should be removed and kept from reinvading. If resources allow, these areas could benefit from bulldozing and seeding with native dunal species after European beachgrass is controlled. This would be resource-intensive work and would be a lower priority action. Beachgrass should be prevented from spreading into relatively uninfested native environments.
5. Existing forested dune summits and slopes with madrone and/or silktassel should remain as such. These are rare communities with very high conservation ranking. Very little action is needed to restore these associations, except where gorse is present. It is unclear at present how quickly these will transition to later seral types of lower conservation concern. They may be relatively stabile due to excessively well drained sandy soils. If conifer density increases to the point of suppressing and killing madrone, thinning via dropping-and-leaving would preserve the rare dunal character. Extracting cut trees would probably be too damaging to soils and understory vegetation to be considered beneficial
6. Existing forest that is partially-invaded by gorse should be restored by removal of gorse. If gorse cover is sporadic and controllable, this would be beneficial. If gorse is more than sporadic, restoration via active gorse control would be very difficult and resource-intensive.
7. Existing heavily gorse-invaded forest or woodland should be managed for tree canopy development unless the forest or woodland is of one of the types described above under items 2 or 5. Gorse does poorly under a dense forest canopy. As the gorse begins to drop out of the understory composition it would be benficial to establish native shrubs such as waxmyrtle and evergreen huckleberry to fill in.
8. Existing monoculture gorse duneland should at a minimum be prevented from spreading. Ideally these areas could be muched down and the resprouting and germinating gorse could be controlled. These mulched areas appear difficult to restore to the open sandy habitat that was present before infestation, but establishment of competitive vegetation such as trees or tall grass would be feasible. Bulldozing, piling, and burning gorse debris might allow for better restoration than mulching in-place, if other resource concerns such as cultural resources allow. Areas of gorse control will require many years of maintenance applications of herbicide or mowing to allow competive vegetation to become dominant.
9. Existing native herbaceous or shrub wetland should be allowed to develop naturally. The bog blueberry wetland is of high conservation ranking. Hydrologic modification to existing wetlands should be avoided.

Natural Area Reserve Concepts

All areas mapped as shore pine/kinnikinnik, shore pine/hairy manzanita, dunal summits and ridgetops, Port Orford Cedar forest, bog blueberry/slough sedge wetland, and hooker willow/slough sedge-sphagnum are of very high conservation priority (Figure 9). These would be appropriately conserved in “Reserve” areas.

Figure 9. Highest Priority Conservation Areas based on community rarity and integrity. This figure does not factor in areas whose conservation is directed by wetland protection regulations.



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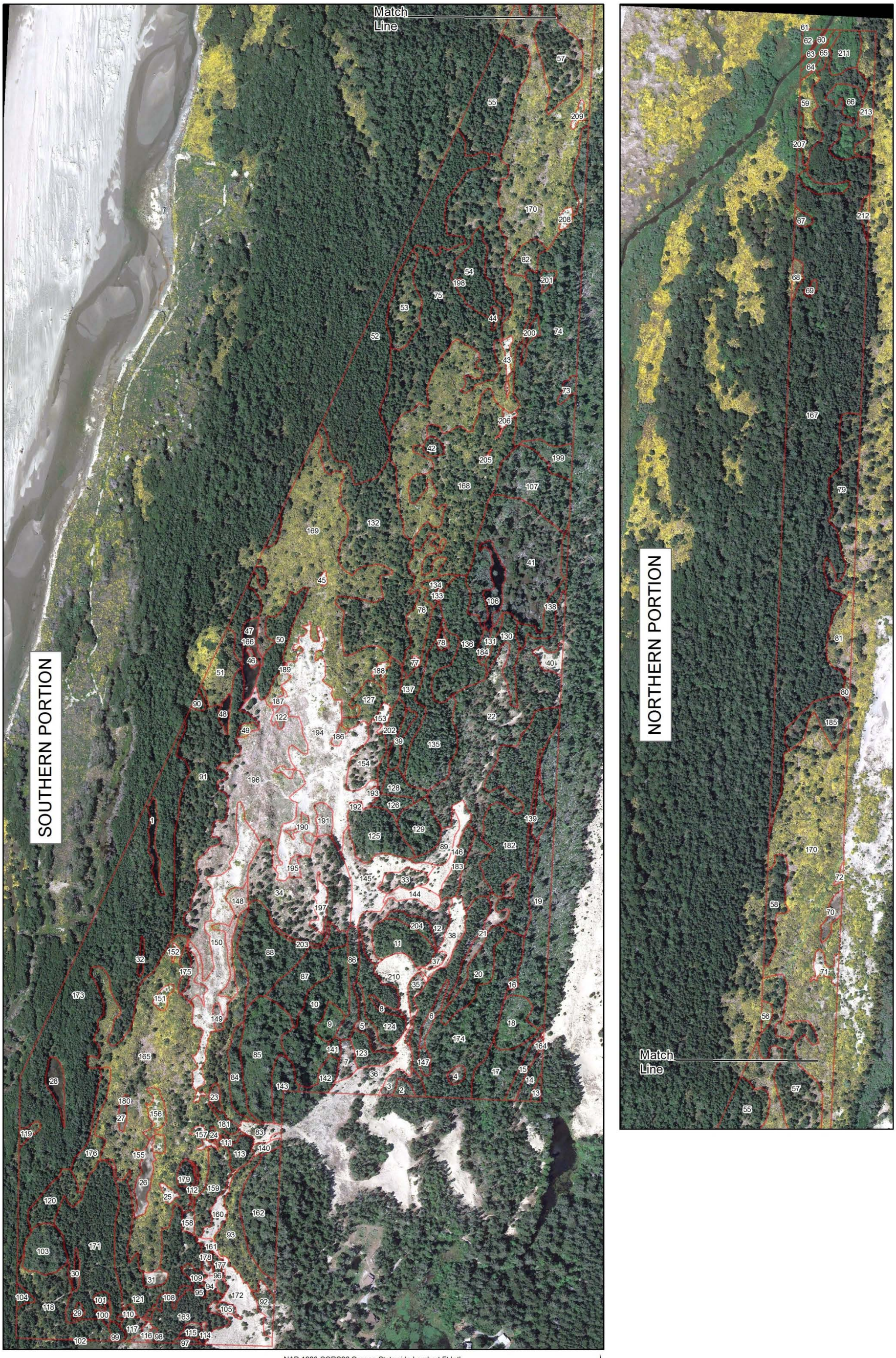
Appendix 1A. Detailed Vegetation Mapping. The numbers associated with the polygons in this figure cross reference with numbered plant communities in the text of Appendix 1B in the report.



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

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Appendix 1B. Detailed Vegetation Data.

The information presented below corresponds to the mapcodes that label the polygons in the figure shown in Appendix 1A. The plant community structural notation is as follows: "/" denotes a change in canopy level, "-" separates species co-occurring in a canopy level. Items in parenthese "( )" are patchy or sparse. When more than one unmappable distinct plant community type occurs within the overall map polygon, the distinct communities or canopy layers that compose the mosaic community are denote by square brackets "[ ]". Comments on the polygon follow plant community composition codes. Equivalent published and ranked plant communities that make up part of the polygon's mosaic community are listed under "Published Equivalent(s)". The conservation rankings of these communities are listed under "Conservation rank". These ranks are defined as follows:

> ***Rank*** *is a code identifying the conservation status of the plant association. It is composed of a global rank ("G") followed by a state rank ("S"). 1 = Critically imperiled because of extreme rarity, with 5 or fewer occurrences or very few remaining acres. 2 = Imperiled because of rarity, with 6-20 occurrences or few remaining acres. 3 = Either very rare and local throughout its range or found locally in a restricted range; uncommon, with 21-100 occurrences. 4 =Apparently secure, though it may be quite rare in parts of its range, especially at the periphery; many occurrences. 5 = Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery; ineradicable under present conditions. These standardized ranks are used by all natural heritage programs and conservation data centers throughout North America. They are based on the best available information.*

1 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii
Mapping code from figure 4 : 43
Field data: *Salix hookeriana/Carex obnupta-Potentilla anserina-Agrostis sp/Veronica scutellata*
Condition: E
Age class:
Comments:
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

2 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana
Mapping code from figure 4 : 26
Field data: *Pinus contorta(-Pseudotsuga menziesii)(-Arbutus menziesii)/Arctostaphylos columbiana-Vaccinium ovatum-Gaultheria shallon(-Myrica californica)(-Baccharis pilularis)/Arctostaphylos uva-ursi-Pteridium aquilinum*
Condition: G
Age class: B
Comments:
Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

3 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi
Mapping code from figure 4 : 27

Field data: *Pinus contorta/Arctostaphylos uva-ursi-Ammophila arenaria-Festuca rubra-Pteridium aquilinum-Hypochaeris radicata-Leontodon*

Condition: M
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

4 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Juncus lesueurii-Arctostaphylos uva-ursi*

Condition: M
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PICO/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

5 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/(Myrica californica)(Vaccinium ovatum)(Gaultheria shallon)/Juncus lesueurii-Arctostaphylos uva-ursi(-Cardionema ramosissimum-Hypochaeris radicata-Leontodon taraxacoides)*

Condition: G
Age class: B(pine)
Comments: TRANSITIONAL: JUNLES->PICO/ARUV -> PICO-PISI/GAUSHA-VAOV

Equivalent published habitat type(s): PINCON/ARCUVA; JUNLES
Conservation rank: G1S1; G3S3
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

6 Vegetation group: shore pine / slough sedge
Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon-Salix hookeriana/Carex obnupta*

Condition: E
Age class: B(pine)
Comments: SUCCEEDING TO PICSIT/PINCON/GAUSHA-VACOVA AROUND EDGES.

Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

7 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ulex europaeus(-Arctostaphylos columbiana)(-Myrica californica)(-Vaccinium ovatum)/Arctostaphylos uva-ursi-Ammophila arenaria-Juncus lesueurii-Pteridium aquilinum(-Festuca rubra)(-Hypochaeris radicata)*

Condition: P

Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

8 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon/Carex obnupta-Arctostaphylos uva-ursi*

Condition: G
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PICO/ARCUVA; PICO/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

9 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon

Mapping code from figure 4 : 29

Field data: *(Pinus contorta)/Vaccinium ovatum-Myrica californica-Gaultheria shallon(-Rhododendron macrophyllum)(-Malus fusca)*

Condition: E
Age class: B
Comments: INCOHERENT COMMUNITY OF SMALL SIZE IN AN ECOTONE

Equivalent published habitat type(s): NA; ~PICSIT/PINCON/GAUSHA-VACOVA
Conservation rank: NA
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

10 Vegetation group: Douglas-fir - shore pine - madrone - Sitka spruce / evergreen
Pseudotsuga menziesii - Pinus contorta - Arbutus menziesii - Picea sitchensis / Vaccinium ovatum - Myrica californica - Gaultheria shallon

Mapping code from figure 4 : 41

Field data: *Pseudotsuga menziesii-Pinus contorta-Arbutus menziesii-Picea sitchensis/Vaccinium ovatum-Myrica californica-Gaultheria shallon*

Condition: E
Age class: B
Comments: SOME TRANSITIONAL ASPECTS TOWARD THE UNDESCRIBED ARME/GARELL COMMUNITY PRESENT.

Equivalent published habitat type(s): PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

11 Vegetation group: shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf
Pinus contorta - Pseudotsuga menziesii - Arbutus menziesii (- Picea sitchensis) / Garrya elliptica - Vaccinium ovatum (- Myrica californica)

Mapping code from figure 4 : 21

Field data: *Pinus contorta-Pseudotsuga menziesii(-Arbutus menziesii)/Vaccinium ovatum-Garrya elliptica-Arctostaphylos columbiana/Satureja douglasii*

Condition: E
Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO BE UNDESCRIBED. THE INDICATORS

OF ARBUTUS AND GARRYA ARE SIGNIFICANT

Equivalent published habitat type(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: NA; ~S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

12 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ulex europaeus-Vaccinium ovatum/Arctostaphylos uva-ursi-Pteridium aquilinum-Ammophila arenaria-Festuca rubra*

Condition: M TO P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

13 Vegetation group: Port Orford cedar / evergreen huckleberry
Chamaecyparis lawsoniana / Vaccinium ovatum

Mapping code from figure 4 : 8

Field data: *Arbutus menziesii-Pseudotsuga menziesii-Chamaecyparis lawsoniana/Vaccinium ovatum-Gaultheria shallon-Myrica californica/Pteridium aquilinum-Hierochloe occidentalis-Lonicera hispidula-Goodyera oblongifolia-Satureja douglasii(-Rubus ursinus)*

Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): CHALAW/VACOVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

14 Vegetation group: Port Orford cedar / evergreen huckleberry
Chamaecyparis lawsoniana / Vaccinium ovatum

Mapping code from figure 4 : 8

Field data: *Pinus contorta-Chamaecyparis lawsoniana-Pseudotsuga menziesii-Arbutus menziesii/Vaccinium ovatum(-Arctostaphylos columbiana)(-Gaultheria shallon)/Hierochloe occidentalis-Pteridium aquilinum(-Arctostaphylos uva-ursi)(-Rubus ursinus)(-Goodyera oblongifolia)*

Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): CHALAW/VACOVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

15 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta(-Pseudotsuga menziesii)(-Picea sitchensis)(-Chamaecyparis lawsoniana)/Vaccinium ovatum(-Gaultheria shallon)(-Myrica californica)(-Garrya elliptica)/Arctostaphylos uva-ursi-Pteridium aquilinum-(Juncus lesueurii)(-Anaphalis margaritacea)(-Hypochaeris radicata)(-Rubus ursinus)(-Goodyera oblongifolia)*

Condition: M

Age class: C
Comments: VEGETATION TRANSITION ZONE BETWEEN MORE DISTINCTIVE TYPES. CONTAINS ELEMENTS OF SUCCESSION AND ECOTONE.

Equivalent published habitat type(s): PICO/ARCUVA -> CHALAW/VACOVA
Conservation rank: G1S1
Botanical Resource Value Rating: 3(2) Priority habitat?:Y
Restoration feasibility: Med

16 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta-Pseudotsuga menziesii-Picea sitchensis/Myrica californica-Vaccinium ovatum-Arctostaphylos columbiana(-Ulex europaeus)/Arctostaphylos uva-ursi-Juncus lesueurii-Carex obnupta*

Condition: M
Age class: C
Comments:

Equivalent published habitat type(s): PINCOIN/ARCUVA -> PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: (w)/3(2) Priority habitat?:Y
Restoration feasibility: Med

17 Vegetation group: Port Orford cedar / evergreen huckleberry wetland variant
Chamaecyparis lawsoniana / Vaccinium ovatum wetland variant

Mapping code from figure 4 : 9

Field data: *Pinus contorta-Picea sitchensis-Chamaecyparis lawsoniana-Abies concolor(-Alnus rubra)(-Rhamnus purshiana)/Myrica californica-Lonicera involucrata-Rubus spectabilis-Vaccinium ovatum-Gaultheria shallon(-Malus fusca)(-Salix hookeriana)/(Carex obnupta)(Polystichum munitum)(Rubus ursinus)*

Condition: E
Age class: B
Comments: THIS IS A COMMUNITY NOT PREVIOUSLY DESCRIBED IN THE ECOLOGICAL LITERATURE. IT COULD BE CONSIDERED A WETLAND VARIANT OF THE THIS IS A WETLAND VARIANT OF THE CHALAW-VACOVA ASSOCIATION, BUT THIS IS SUBSTANTIALLY DIFFERENT.

Equivalent published habitat type(s): NA; CHALAW-VAOV
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

18 Vegetation group: Port Orford cedar / evergreen huckleberry wetland variant
Chamaecyparis lawsoniana / Vaccinium ovatum wetland variant

Mapping code from figure 4 : 9

Field data: *Pinus contorta-Chamaecyparis lawsoniana-Abies concolor-Alnus rubra-Picea sitchensis/Myrica californica-Vaccinium ovatum-Gaultheria shallon-Rubus spectabilis-Lonicera involucrata(-Arctostaphylos columbiana)/Carex obnupta(-Juncus effusus)-Rubus ursinus-Polystichum munitum*

Condition: E
Age class: B
Comments: THIS IS A COMMUNITY NOT PREVIOUSLY DESCRIBED IN THE ECOLOGICAL LITERATURE. IT COULD BE CONSIDERED A WETLAND VARIANT OF THE THIS IS A WETLAND VARIANT OF THE CHALAW-VACOVA ASSOCIATION, BUT THIS IS SUBSTANTIALLY DIFFERENT.

Equivalent published habitat type(s): NA; CHALAW-VAOV
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

19 Vegetation group: Port Orford cedar / evergreen huckleberry
Chamaecyparis lawsoniana / Vaccinium ovatum

Mapping code from figure 4 : 8

Field data: *Pinus contorta-Chamaecyparis lawsoniana-Alnus rubra(-Picea sitchensis)/Myrica californica-Vaccinium ovatum-Gaultheria shallon*

Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): CHALAW/VACOVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

20 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta-Arbutus menziesii-Abies concolor-Picea sitchensis-Pseudotsuga menziesii/Myrica californica-Vaccinium ovatum-Arctostaphylos columbiana-Gaultheria shallon/Arctostaphylos uva-ursi*

Condition: G
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL; PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

21 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta(-Arbutus menziesii)/Arctostaphylos columbiana-Myrica californica(-Vaccinium ovatum)(-Gaultheria shallon)(-Ulex europaeus)/Arctostaphylos uva-ursi-Hypochaeris radicata-Juncus lesueurii-Aira praecox-Hieracium albiflorum(-Festuca rubra)(-Carex obnupta)*

Condition: M
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL; PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

22 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta/Arctostaphylos columbiana-Myrica californica-Vaccinium ovatum(-Ulex europaeus)/Arctostaphylos uva-ursi-Juncus lesueurii(-Festuca rubra)*

Condition: M TO G
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1

Botanical Resource Value Rating: 2 Priority habitat?: Y
Restoration feasibility: High

23 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii

Mapping code from figure 4 : 6

Field data: *Carex obnupta-Potentilla anserina-Veronica scutellata*

Condition: E
Age class:
Comments:

Equivalent published habitat type(s): CAROBN - ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

24 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii

Mapping code from figure 4 : 6

Field data: *Carex obnupta-Potentilla anserina-Agrostis sp*

Condition: G
Age class:
Comments:

Equivalent published habitat type(s): CAROBN - ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

25 Vegetation group: gorse / European beachgrass with possible remnant red fescue or
Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49

Field data: *Ulex europaeus/Ammophila arenaria(-Festuca rubra)(-Poa macrantha)(-WEEDS)*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

26 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii

Mapping code from figure 4 : 6

Field data: *Carex obnupta-Potentilla anserina-Agrostis sp-Veronica scutellata*

Condition: G
Age class:
Comments:

Equivalent published habitat type(s): CAROBN-ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

27 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii

Mapping code from figure 4 : 6

Field data: *Carex obnupta-Potentilla anserina-Agrostis sp-Veronica scutellata*
Condition: G
Age class: B(pine)
Comments:
Equivalent published habitat type(s): CAROBN-ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

28 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii
Mapping code from figure 4 : 6
Field data: *Carex obnupta-Potentilla anserina-Agrostis sp-Veronica scutellata*
Condition: E
Age class:
Comments:
Equivalent published habitat type(s): CAROBN-ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

29 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii
Mapping code from figure 4 : 43
Field data: *Salix hookeriana/Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: G
Age class:
Comments:
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

30 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii
Mapping code from figure 4 : 43
Field data: *Salix hookeriana/Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: E
Age class:
Comments:
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

31 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii
Mapping code from figure 4 : 6
Field data: *Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: G
Age class:
Comments:
Equivalent published habitat type(s): CAROBN-ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

32 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii

Mapping code from figure 4 : 6

Field data: *Carex obnupta-Potentilla anserina-Agrostis sp-Veronica scutellata*

Condition: E
Age class:
Comments:

Equivalent published habitat type(s): CAROBN-ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

33 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ulex europaeus(-Myrica californica)(-Vaccinium ovatum)/Ammophila arenaria-Juncus lesueurii(-Arctostaphylos uva-ursi)*

Condition: P
Age class: B(pine)
Comments: CONDITION IS SO POOR THIS COMMUNITY IS ESSENTIALLY PINCON/ULEU/AMAR - BUT THERE IS A SPARK OF PINCON/ARCUVA REMAINING

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 3(2) Priority habitat?:Y
Restoration feasibility: Med

34 Vegetation group: shore pine - Sitka spruce / mulched gorse / European beachgrass
Pinus contorta - Picea sitchensis / mulched Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 18

Field data: *Picea sitchensis-Pinus contorta/Ulex europaeus/Ammophila arenaria-WEEDS*

Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

35 Vegetation group: shore pine / gorse / seashore bluegrass - red fescue
Pinus contorta / Ulex europaeus / Poa macrantha - Festuca rubra

Mapping code from figure 4 : 38

Field data: *Pinus contorta/Ammophila arenaria-Poa macrantha-Festuca rubra*

Condition: P
Age class: C
Comments: DEGRADING TO PICO/ULEU/AMMARE

Equivalent published habitat type(s): REMNANT FESRUB-PTEAQU COMMUNITY SUCCEEDING TO FOREST
Conservation rank: (G3S3)
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: High

36 Vegetation group: European beachgrass with remnant seashore bluegrass and / or red
Ammophila arenaria with remnant Poa macrantha and / or Festuca rubra
community components

Mapping code from figure 4 : 5

Field data: *(Pinus contorta)/Ammophila arenaria-Poa macrantha(-Festuca rubra-Artemisia pycnocephala-Juncus lesueurii-Cardionema ramosissimum-Pteridium aquilinum-Polygonum paronychia-Arctostaphylos uva-ursi-Lupinus littoralis-Hypochaeris radicata-Leontodon taraxacoides)*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT POAMAC AND FESRUB COMMUNITY COMPONENTS

Conservation rank: NA;G2S1

Botanical Resource Value Rating: 2 Priority habitat?:

Restoration feasibility: Med

37 Vegetation group: shore pine / hairy manzanita

Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta/Arctostaphylos columbiana-Myrica californica(-Vaccinium ovatum)(-Ulex europaeus)/Arctostaphylos uva-ursi-Ammophila arenaria-Pteridium aquilinum(-Festuca rubra)*

Condition: M

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ARCCOL

Conservation rank: G1S1

Botanical Resource Value Rating: 1 Priority habitat?:Y

Restoration feasibility: Med

38 Vegetation group: shore pine / kinnikinnick

Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ulex europaeus(-Myrica californica)(-Vaccinium ovatum)/Arctostaphylos uva-ursi-Festuca rubra-Poa macrantha-Pteridium aquilinum-Polygonum paronychia-Lupinus littoralis-Cardionema ramosissimum-Hypochaeris radicata-Leontodon taraxacoides(-Juncus lesueurii)(-Ammophila arenaria)*

Condition: M

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ARCUVA; REMNANT FESRUB-PTEAQU COMMUNITY COMPONENTS

Conservation rank: G1S1; G3S3

Botanical Resource Value Rating: 1 Priority habitat?:Y

Restoration feasibility: Med

39 Vegetation group: shore pine / slough sedge

Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta(-Salix scouleriana)/Vaccinium ovatum-Myrica californica(-Salix hookeriana)/Carex obnupta-Pteridium aquilinum*

Condition: E

Age class: B

Comments:

Equivalent published habitat type(s): PINCON/CAROBN

Conservation rank: G1S1

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

40 Vegetation group: shore pine / kinnikinnick

Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Arctostaphylos columbiana/Arctostaphylos uva-ursi*

Condition: M

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ARCUVA

Conservation rank: G1S1

Botanical Resource Value Rating: 2 Priority habitat?:Y

Restoration feasibility: Med

41 Vegetation group: hooker willow / slough sedge - Pacific silverweed; bog blueberry / Salix hookeriana / Carex obnupta - Argentina egedii; Vaccinium uliginosum / Carex obnupta

Mapping code from figure 4 : 44

Field data: *Salix hookeriana-Spiraea douglasii/Carex obnupta-Potentilla anserina-Vaccinium uliginosum-Agrostis sp-Dichanthelium acuminatum var. fasciculatum-Viola sp (palustris)-Eleocharis palustris(-Lycopus uniflorus)(-Veronica scutellata)*

Condition: E

Age class:

Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN; VACULI/CAROBN

Conservation rank: G4S4; G2S2

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

42 Vegetation group: shore pine / gorse (- waxmyrtle) (- evergreen huckleberry) / (slough Pinus contorta / Ulex europaeus (- Myrica californica) (- Vaccinium ovatum) / (Carex obnupta)

Mapping code from figure 4 : 39

Field data: *Pinus contorta/Ulex europaeus(-Vaccinium ovatum)/(Juncus lesueurii)(-Carex obnupta)*

Condition: P

Age class: B(pine)

Comments: TOPOGRAPHY SUGGEST POSSIBILITY OF PICO/CAOB, BUT SITE NOT PHYSICALLY VERIFIED.

Equivalent published habitat type(s): PINCON/CAROBN?

Conservation rank: NA;G1S1

Botanical Resource Value Rating: (w)/3(2) Priority habitat?:

Restoration feasibility: Med

43 Vegetation group: shore pine / gorse / European beachgrass Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Hypochaeris radicata-Aira praecox*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): AMMARE

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

44 Vegetation group: hooker willow / slough sedge - SPHAGNUM

Salix hookeriana / Carex obnupta - SPHAGNUM

Mapping code from figure 4 : 45

Field data: *Pinus contorta/Salix hookeriana-Ulex europaeus/Carex obnupta-Sphagnum sp.*

Condition: M

Age class:

Comments: THE PRESENCE OF SPHAGNUM MAKES THIS COMMUNITY QUITE RARE

Equivalent published habitat type(s): PINCON/CAROBN; SALHOO / (ARGEGE) - CAROBN

Conservation rank: G1S1

Botanical Resource Value Rating: w/2 Priority habitat?:Y

Restoration feasibility: High

45 Vegetation group: gorse / European beachgrass with possible remnant red fescue or

Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49

Field data: *(Ulex europaeus)/Ammophila arenaria-Hypochaeris radicata(-Festuca rubra)(-Poa macrantha)*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation rank: NA;G1S1;G2S1

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

46 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

47 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

48 Vegetation group: hooker willow / slough sedge - Pacific silverweed

Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43

Field data: *Salix hookeriana/Carex obnupta-Potentilla anserina-Agrostis sp-*

Veronica scutellata

Condition: E
Age class:
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

49 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *(Pinus contorta)/Ulex europaeus*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

50 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (-
Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20

Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus(-Vaccinium ovatum)(-Myrica californica)*

Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

51 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *(Pinus contorta)/Ulex europaeus*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

52 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta-Picea sitchensis/Myrica californica-Vaccinium ovatum-Gaultheria shallon(-Ulex europaeus)/Polystichum munitum(-Carex obnupta)*

Condition: G TO E
Age class: C
Comments: MOSTLY PICSIT-PINCON/GAUSHA-VACOVA BUT WITH WETTER

CONCAVITIES GRADING TOWARD PINCON/CAROBN

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA WITH POCKETS OF PINCON/CAROBN

Conservation rank: G3S3;G1S1
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

53 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

54 Vegetation group: shore pine / slough sedge
Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta/(Myrica californica)(Vaccinium ovatum)/Carex obnupta*

Condition: G
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/CAROBN

Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

55 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (-
Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20

Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus(-Vaccinium ovatum)(-Myrica californica)*

Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): SERIOUSLY DEGRADED PICSIT-PINCON/GAUSHA-VACOVA

Conservation rank: NA;G3S3
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

56 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *(Pinus contorta)/Ulex europaeus*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

57 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

58 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (-

Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20

Field data: *Pinus contorta/Ulex europaeus(-Vaccinium ovatum)(-Myrica californica)*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): NA

Conservation rank: NA

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

59 Vegetation group: shore pine - Sitka spruce / gorse

Pinus contorta - Picea sitchensis / Ulex europaeus

Mapping code from figure 4 : 19

Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): PINCON-PICSIT/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Low

60 Vegetation group: reed canarygrass - smallfruit bulrush - slough sedge (- cattail) / water

Phalaris arundinacea - Scirpus micranthus - Carex obnupta (- Typha latifolia) / water

Mapping code from figure 4 : 12

Field data: *Phalaris arundinacea-Scirpus microcarpus-Carex obnupta(-Typha latifolia)/WATER*

Condition: M

Age class:

Comments: PLANT COMMUNITY NARROW AND LINEAR ON BANKS. NOT A TRUE COMMUNITY PER SE... SHARP TRANSITION ZONE.

Equivalent published habitat type(s): CAROBN,SCIMIC

Conservation rank: ~G4S4

Botanical Resource Value Rating: w/4 Priority habitat?:

Restoration feasibility: Med

61 Vegetation group: gorse

Ulex europaeus

Mapping code from figure 4 : 47

Field data: *Ulex europaeus*

Condition: P
Age class:
Comments:
Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

62 Vegetation group: hooker willow / reed canarygrass - canada thistle - cow parsnip (- Salix hookeriana / Phalaris arundinacea - Cirsium arvense - Heracleum lanatum (- Carex obnupta)

Mapping code from figure 4 : 52
Field data: *(Salix hookeriana)/Phalaris arundinacea-Vicia gigantea-Cirsium arvense-Heracleum lanatum(-Carex obnupta)*
Condition: P
Age class:
Comments: SALHOO KEPT MINOR BY EXTENSIVE BEAVER USE
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/4 Priority habitat?:
Restoration feasibility: Med

63 Vegetation group: hooker willow / reed canarygrass - canada thistle - cow parsnip (- Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 52
Field data: *Salix hookeriana/Phalaris arundinacea-Vicia gigantea-Cirsium arvense(-Heracleum lanatum)(-Carex obnupta)(-Scirpus microcarpus)*
Condition: P
Age class:
Comments: SALHOO KEPT MINOR BY EXTENSIVE BEAVER USE
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/4 Priority habitat?:
Restoration feasibility: Med

64 Vegetation group: hooker willow / slough sedge - smallfruit bulrush - reed canarygrass Salix hookeriana / Carex obnupta - Scirpus microcarpus - Phalaris arundinacea

Mapping code from figure 4 : 53
Field data: *Salix hookeriana/Carex obnupta-Scirpus microcarpus-Phalaris arundinacea-Vicia gigantea*
Condition: M
Age class:
Comments: DOESN'T MATCH THE PUBLISHED PLANT COMMUNITY PERFECTLY DUE TO ABUNDANCE OF SCMI.
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/4 Priority habitat?:
Restoration feasibility: Med

65 Vegetation group: red alder / salmonberry / slough sedge - skunkcabbage Alnus rubra / Rubus spectabilis / Carex obnupta - Lysichiton americanus

Mapping code from figure 4 : 2
Field data: *Alnus rubra(-Pinus contorta)(-Picea sitchensis)/Salix hookeriana-Lonicera involucrata-Rubus spectabilis-Myrica californica(-Ulex europaeus)/Carex obnupta-Scirpus microcarpus-Lysichiton americanum(-Phalaris arundinacea)(-Athyrium filix-femina)(-Oenanthe*
Condition: M

Age class:
Comments: A SALT SPRAY VERSION OF ALNRUB/RUBSPE/CAROBN-LYSAME. NOT A PERFECT MATCH.

Equivalent published habitat type(s): ALNRUB / RUBSPE / CAROBN - LYSAME
Conservation rank: G4S4
Botanical Resource Value Rating: w/4 Priority habitat?:
Restoration feasibility: Med

66 Vegetation group: red alder / salmonberry - waxmyrtle / slough sedge - common ladyfern
Alnus rubra / Rubus spectabilis - Myrica californica / Carex obnupta - Athyrium filix-femina

Mapping code from figure 4 : 1
Field data: *Alnus rubra(-Rhamnus purshiana)/Rubus spectabilis-Myrica californica(-Vaccinium ovatum)(-Gaultheria shallon)/Carex obnupta-Athyrium filix-femina*
Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): ALNRUB / RUBSPE / CAROBN - LYSAME
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

67 Vegetation group: shore pine - Sitka spruce / gorse
Pinus contorta - Picea sitchensis / Ulex europaeus

Mapping code from figure 4 : 19
Field data: *Pinus contorta-Picea sitchensis-Alnus rubra/Ulex europaeus-Rubus spectabilis-Salix hookeriana/Carex obnupta*
Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: w/4 Priority habitat?:
Restoration feasibility: Low

68 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33
Field data: *(Pinus contorta)/Ulex europaeus*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Low

69 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33
Field data: *Pinus contorta/Salix hookeriana-Rubus spectabilis-Ulex europaeus/Carex obnupta*
Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): NA

Conservation rank: NA
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: Low

70 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii

Mapping code from figure 4 : 6

Field data: *Ulex europaeus/Carex obnupta-Juncus lesueurii-Potentilla anserina-Agrostis sp*

Condition: M
Age class:
Comments:

Equivalent published habitat type(s): CAROBN; JUNLES; CAROBN - ARGEGE
Conservation rank: G4S4;G3S3;G4S4
Botanical Resource Value Rating: w/3(2) Priority habitat?:
Restoration feasibility: Med

71 Vegetation group: gorse / European beachgrass with possible remnant red fescue or
Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49

Field data: *Ulex europaeus/Ammophila arenaria(-Festuca rubra)(-Poa macrantha)*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1; G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

72 Vegetation group: gorse / European beachgrass with possible remnant red fescue or
Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49

Field data: *Ulex europaeus/Ammophila arenaria(-Festuca rubra)(-Poa macrantha)*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1; G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

73 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43

Field data: *Pinus contorta/Salix hookeriana-Myrica californica-Vaccinium ovatum-Gaultheria shallon/Carex obnupta-Potentilla anserina*

Condition: E
Age class:
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

74 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta-Picea sitchensis/Myrica californica-Vaccinium ovatum-Ulex europaeus/(Carex obnupta)*

Condition: M
Age class: B
Comments: CONTAINS POCKETS OF HABITAT GRADING TO PINCON/CAROBN

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN

Conservation rank: G3S3;G1S1
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: Med

75 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (-
Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20

Field data: *Pinus contorta(-Picea sitchensis)/Ulex europaeus(-Vaccinium ovatum)(-Myrica californica)/(Ammophila arenaria)*

Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): SERIOUSLY DEGRADED PICSIT-PINCON/GAUSHA-VACOVA

Conservation rank: NA;G3S3
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

76 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *(Pinus contorta)/Ulex europaeus*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

77 Vegetation group: European beachgrass with possible remnant red fescue or seashore
Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 3

Field data: *Ammophila arenaria-Hypochaeris radicata(-Festuca rubra)(-Poa macrantha)*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation rank: NA;G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

78 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii
Mapping code from figure 4 : 43
Field data: *(Salix hookeriana)/Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: E
Age class:
Comments:
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

79 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *Pinus contorta(-Picea sitchensis)/Ulex europaeus*
Condition: P
Age class: C
Comments:
Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Low

80 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *Pinus contorta/Ulex europaeus*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

81 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *(Pinus contorta)/Ulex europaeus*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Low

82 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *Pinus contorta/Ulex europaeus*
Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

83 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Pteridium aquilinum-Hypochaeris radicata*

Condition: P
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR/AMMARE
Conservation rank: NA
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: Med

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Pteridium aquilinum-Hypochaeris radicata*

Condition: P
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ULEEUR/AMMARE
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

84 Vegetation group: Sitka spruce (- shore pine - Douglas-fir) / gorse - wavyleaf silktassel -
Picea sitchensis (- Pinus contorta - Pseudotsuga menziesii) / Ulex europaeus -
Garrya elliptica - Vaccinium ovatum

Mapping code from figure 4 : 16

Field data: *Picea sitchensis(-Pinus contorta)(-Pseudotsuga menziesii)/Ulex europaeus-Garrya elliptica-Vaccinium ovatum*

Condition: P
Age class: B
Comments: DEGRADED. PROBABLY FORMERLY TRANSITIONAL BETWEEN PICSIT-PINCON/GAUSHA-VACOVA AND THE UNDESCRIBED ADJAVENT TYPE UPSLOPE. THE REPLACEMENT OF MYRCAL WITH GARREL APPEARS TO BE SIGNIFICANT.

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

85 Vegetation group: shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf
Pinus contorta - Pseudotsuga menziesii - Arbutus menziesii (- Picea sitchensis) /
Garrya elliptica - Vaccinium ovatum (- Myrica californica)

Mapping code from figure 4 : 21

Field data: *Pseudotsuga menziesii-Picea sitchensis-Arbutus menziesii/Garrya elliptica-Vaccinium ovatum-Myrica californica-Arctostaphylos columbiana(-Ulex europaeus)/Hierochloe occidentalis-Pteridium aquilinum(-Arctostaphylos uva-ursi)(-Goodyera oblongifolia)(-Satureja douglasii)(-Polystichum munitum)*

Condition: G
Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO BE UNDESCRIBED. THE INDICATORS OF ARBUTUS AND GARRYA ARE SIGNIFICANT

Equivalent published habitat type(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: NA;~S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

86 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26
Field data: *Pinus contorta/Arctostaphylos columbiana-Myrica californica(-Ulex europaeus)/Arctostaphylos uva-ursi-Pteridium aquilinum-Aira praecox(-Ammophila arenaria)(-Festuca rubra)*
Condition: M
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

87 Vegetation group: shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf
Pinus contorta - Pseudotsuga menziesii - Arbutus menziesii (- Picea sitchensis) / Garrya elliptica - Vaccinium ovatum (- Myrica californica)

Mapping code from figure 4 : 21
Field data: *Pseudotsuga menziesii-Pinus contorta-Arbutus menziesii-Picea sitchensis/Vaccinium ovatum-Myrica californica(-Arctostaphylos columbiana)(-Garrya elliptica)*
Condition: E
Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO BE UNDESCRIBED. THE INDICATORS OF ARBUTUS AND GARRYA ARE SIGNIFICANT

Equivalent published habitat type(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

88 Vegetation group: Sitka spruce / waxmyrtle - evergreen huckleberry - salal / (slough
Picea sitchensis / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 15
Field data: *Picea sitchensis/Myrica californica-Vaccinium ovatum-Gaultheria shallon/(Carex obnupta)*
Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): PICSIT/VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

89 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27
Field data: *Pinus contorta/(Ulex europaeus)/Ammophila arenaria-Arctostaphylos uva-ursi-Pteridium aquilinum-Lupinus littoralis-Festuca rubra-Poa macrantha-Juncus lesueurii-Hypochaeris radicata*
Condition: M TO P
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

90 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon/(Carex obnupta)*

Condition: G
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN?
Conservation rank: G3S3
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

91 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta/Ulex europaeus(-Vaccinium ovatum)(-Myrica californica)/(-Ammophila arenaria)(-Carex obnupta)*

Condition: P
Age class: C
Comments: THERE ARE POCKETS OF DEGRADED PINCON/MYCA-VAOV-GASH/(CAOB) IN MATRIX OF PINCON/ULEU

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN
Conservation rank: G3S3;G1S1
Botanical Resource Value Rating: (w)/3(2) Priority habitat?:
Restoration feasibility: Med

92 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ulex europaeus(-Vaccinium ovatum)(-Arctostaphylos columbiana)/Ammophila arenaria-Arctostaphylos uva-ursi(-Lupinus littoralis)(-Pteridium aquilinum)*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

93 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus(-Myrica californica)/Ammophila arenaria*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

94 Vegetation group: European beachgrass with remnant seashore bluegrass and / or red Ammophila arenaria with remnant Poa macrantha and / or Festuca rubra community components

Mapping code from figure 4 : 5
Field data: *Ammophila arenaria-Festuca rubra-Polygonum paronychia-Artemisia pycnocephala(-Lupinus littoralis)(-Camissonia cheiranthifolia)(-Juncus lesueurii)(-Glehnia littoralis)*
Condition: M
Age class: B(pine)
Comments:
Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB DUNE COMMUNITY COMPONENTS
Conservation rank: NA; G1S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: Med

95 Vegetation group: hooker willow / slough sedge - Pacific silverweed Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43
Field data: *Salix hookeriana/Carex obnupta*
Condition: G
Age class:
Comments:
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

96 Vegetation group: shore pine / slough sedge Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28
Field data: *Pinus contorta/Salix hookeriana-Ulex europaeus/Carex obnupta*
Condition: M
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: Med

97 Vegetation group: shore pine / slough sedge Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28
Field data: *Pinus contorta/(Myrica californica)(Vaccinium ovatum)/Carex obnupta-Goodyera oblongifolia*
Condition: G
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

98 Vegetation group: slough sedge - Pacific silverweed
Carex obnupta - Argentina egedii
Mapping code from figure 4 : 6
Field data: *Carex obnupta-Agrostis sp-Veronica scutellata(-Juncus lesueurii)(-Juncus falcatus)(-Carex sp.)*
Condition: G
Age class:
Comments:
Equivalent published habitat type(s): CAROBN-ARGEGE
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

99 Vegetation group: shore pine / slough sedge
Pinus contorta / Carex obnupta
Mapping code from figure 4 : 28
Field data: *Pinus contorta/Vaccinium ovatum/Carex obnupta*
Condition: E
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

100 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii
Mapping code from figure 4 : 43
Field data: *Salix hookeriana/Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: G
Age class:
Comments:
Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

101 Vegetation group: shore pine / slough sedge
Pinus contorta / Carex obnupta
Mapping code from figure 4 : 28
Field data: *Pinus contorta/(Myrica californica)(Vaccinium ovatum)/Carex obnupta*
Condition: E
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

102 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii
Mapping code from figure 4 : 43
Field data: *(Salix hookeriana)/Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: G
Age class:
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

103 Vegetation group: Sitka spruce / wavyleaf silktassel - evergreen huckleberry - salal /
Picea sitchensis / Garrya elliptica - Vaccinium ovatum - Gaultheria shallon /
Calamagrostis nutkaensis - Maianthemum dilatatum - Hierochloe occidentalis

Mapping code from figure 4 : 14
Field data: *Picea sitchensis/Garrya elliptica-Vaccinium ovatum-Gaultheria shallon/Calamagrostis nutkaensis-Maianthemum dilatatum-Hierochloe occidentalis*
Condition: E
Age class: B
Comments: THE PRESENCE OF HIEOCC AND CALNUT DIFFERENTIATE THIS MICROSITE COMMUNITY FROM THE MORE COMMON RIDGETOP PHASE
Equivalent published habitat type(s): ~PICSIT/VACOVA
Conservation rank: ~S2
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

104 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31
Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon-Ulex europaeus/Carex obnupta*
Condition: M
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAROBN; PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G1S1
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: Med

105 Vegetation group: shore pine / European beachgrass - salt rush - beach knotweed -
Pinus contorta / Ammophila arenaria - Juncus lesueurii - Polygonum paronychia - Hypochaeris radicata - Festuca rubra

Mapping code from figure 4 : 25
Field data: *Pinus contorta/Ammophila arenaria-Juncus lesueurii-Polygonum paronychia-Hypochaeris radicata-Festuca rubra*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): REMNANT FESRUB COMMUNITY SUCCEEDING TO PICO/AMAR
Conservation rank: NA;G1S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

106 Vegetation group: hooker willow / beaked sedge - slough sedge - Pacific silverweed
Salix hookeriana / Carex utriculata - Carex obnupta - Argentina egedii

Mapping code from figure 4 : 46
Field data: *(Salix hookeriana)/Carex utriculata-Carex obnupta-Callitriche hermaphroditica-Eleocharis palustris-Potentilla anserina-Viola sp (palustris)*
Condition: E

Age class: B
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4; G5S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

107 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31
Field data: *Pinus contorta/Myrica californica-Salix hookeriana-Vaccinium ovatum-Gaultheria shallon-Spiraea douglasii/Carex obnupta*
Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/CAROBN; PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

108 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31
Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus-Vaccinium ovatum-Myrica californica-Gaultheria shallon/(Carex obnupta)*
Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN
Conservation rank: G3S3;G1S1
Botanical Resource Value Rating: (w)/3(2) Priority habitat?:
Restoration feasibility: Med

109 Vegetation group: shore pine / slough sedge
Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28
Field data: *Pinus contorta/Ulex europaeus-Myrica californica-Salix hookeriana/Carex obnupta*
Condition: M
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: Med

110 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43
Field data: *Salix hookeriana/Carex obnupta-Potentilla anserina-Agrostis sp*
Condition: G
Age class:
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

111 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31
Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum/Carex obnupta*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAROBN;PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: w/3(2) Priority habitat?:
Restoration feasibility: Med

112 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31
Field data: *Pinus contorta-Picea sitchensis/Myrica californica-Vaccinium ovatum/Carex obnupta*
Condition: P
Age class: C
Comments:
Equivalent published habitat type(s): PINCON/CAROBN; PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: (w)/3(2) Priority habitat?:
Restoration feasibility: Med

113 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (-
Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20
Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus-Vaccinium ovatum-Myrica californica*
Condition: P
Age class: C
Comments:
Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

114 Vegetation group: gorse / European beachgrass
Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 48
Field data: *(Pinus contorta)/Ulex europaeus/Ammophila arenaria-Juncus lesueurii*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE
Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

115 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PICO/ULEU/AMAR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

116 Vegetation group: shore pine / gorse / European beachgrass - red fescue - salt rush
Pinus contorta / Ulex europaeus / Ammophila arenaria - Festuca rubra - Juncus lesueurii

Mapping code from figure 4 : 35

Field data: *(Pinus contorta)/Ulex europaeus/Ammophila arenaria-Festuca rubra-Hypochaeris radicata-Juncus lesueurii-AIRA spp.*

Condition: P
Age class:
Comments: DEDEGRADING TO PICO/ULEU/AMMARE

Equivalent published habitat type(s): REMNANT FESRUB-JUNLES COMMUNITY
Conservation rank: NA;G3S3
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

117 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Juncus lesueurii-Hypochaeris radicata-Leontodon taraxacoides*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/AMMARE; JUNLES
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

118 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus(-Vaccinium ovatum)/Ammophila arenaria(-Juncus lesueurii)(-Anaphalis margaritacea)(-Goodyera oblongifolia)*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

119 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

120 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (- Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20

Field data: *Pinus contorta-Pinus attenuata or radiata/Ulex europaeus-Vaccinium ovatum-Myrica californica-Gaultheria shallon*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): DEGRADED PICSIT-PINCON/GAUSHA-VACOVA

Conservation rank: G3S3

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

121 Vegetation group: shore pine - Sitka spruce / gorse (- evergreen huckleberry) (- Pinus contorta - Picea sitchensis / Ulex europaeus (- Vaccinium ovatum) (- Myrica californica)

Mapping code from figure 4 : 20

Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus(-Vaccinium ovatum)(-Myrica californica)(-Gaultheria shallon)*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA

Conservation rank: G3S3

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

122 Vegetation group: slough sedge - salt rush Carex obnupta - Juncus lesueurii

Mapping code from figure 4 : 7

Field data: *(Pinus contorta)/(Ulex europaeus)(Salix hookeriana)/Carex obnupta-Juncus lesueurii-Ammophila arenaria-Leontodon taraxacoides-Gnaphalium sp.-Aira caryophyllea*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): CAROBN; JUNLES

Conservation rank: G4S4; G3S3

Botanical Resource Value Rating: w/3(2) Priority habitat?:

Restoration feasibility: Med

123 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / slough sedge Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / Carex obnupta

Mapping code from figure 4 : 32

Field data: *Pinus contorta/(Myrica californica-Vaccinium ovatum-Gaultheria*

shallon)/Carex obnupta

Condition: G
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAOB WITH AREAS TRENDING TOWARD PINCON-PICSIT/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

124 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / slough sedge
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / Carex obnupta
Mapping code from figure 4 : 32
Field data: *Pinus contorta/(Myrica californica-Vaccinium ovatum-Gaultheria shallon)/Carex obnupta*
Condition: E
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/CAOB WITH AREAS TRENDING TOWARD PINCON-PICSIT/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

125 Vegetation group: shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf
Pinus contorta - Pseudotsuga menziesii - Arbutus menziesii (- Picea sitchensis) / Garrya elliptica - Vaccinium ovatum (- Myrica californica)
Mapping code from figure 4 : 21
Field data: *Pinus contorta-Pseudotsuga menziesii-Arbutus menziesii(-Picea sitchensis)/Garrya elliptica-Vaccinium ovatum(-Myrica californica)*
Condition: E
Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO BE UNDESCRIBED. tHE INDICATORS OF ARBUTUS AND GARRYA ARE SIGNIFICANT
Equivalent published habitat type(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

126 Vegetation group: shore pine - Douglas-fir / wavyleaf silktassel - evergreen huckleberry
Pinus contorta - Pseudotsuga menziesii / Garrya elliptica - Vaccinium ovatum - Arctostaphylos columbiana / Pteridium aquilinum
Mapping code from figure 4 : 23
Field data: *Pinus contorta(-Pseudotsuga menziesii)/Garrya elliptica-Vaccinium ovatum-Arctostaphylos columbiana(-Gaultheria shallon)/Pteridium aquilinum*
Condition: G
Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO BE BETWEEN ADJACENT UNDESCRIBED COMMUNITY AND MORE TYPICAL PINCON-PSEMEN/MYRCAL-VACOVA. THE REPLACEMENT OF MYRCAL WITH GARRYA IS SIGNIFICANT.
Equivalent published habitat type(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

127 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria
Mapping code from figure 4 : 34
Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus/(Ammophila arenaria)*
Condition: P
Age class: C
Comments:
Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

128 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana
Mapping code from figure 4 : 26
Field data: *Pinus contorta-Pseudotsuga menziesii-Arbutus menziesii/Arctostaphylos columbiana-Vaccinium ovatum-Garrya elliptica(-Myrica californica)/Pteridium aquilinum*
Condition: G
Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO TRANSITIONAL BETWEEN PINCON/ARCCOL AND THE ADJACENT UNDESCRIBED TYPE. THE INDICATORS OF ARBUTUS AND GARRYA ARE SIGNIFICANT
Equivalent published habitat type(s): PICO/ARCCOL -> ADJACENT UNDESCRIBED COMMUNITY.
Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

129 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana
Mapping code from figure 4 : 26
Field data: *Pinus contorta/Vaccinium ovatum-Arctostaphylos columbiana(-Ulex europaeus)(-Gaultheria shallon)(-Myrica californica)/Arctostaphylos uva-ursi-Pteridium aquilinum-Juncus lesueurii*
Condition: M
Age class: B
Comments:
Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

130 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana
Mapping code from figure 4 : 26
Field data: *Pinus contorta(-Arbutus menziesii)/Arctostaphylos columbiana-Vaccinium ovatum-Gaultheria shallon-Ulex europaeus(-Myrica californica)/Arctostaphylos uva-ursi*
Condition: M
Age class: B
Comments:
Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

131 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon
Mapping code from figure 4 : 29
Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon*
Condition: G
Age class: B
Comments:
Equivalent published habitat type(s): PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

132 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *Pinus contorta/Ulex europaeus*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Low

133 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria
Mapping code from figure 4 : 34
Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PICO/ULEU/AMAR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

134 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *Pinus contorta/Ulex europaeus*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

135 Vegetation group: shore pine - Douglas-fir - madrone (- Sitka spruce) / wavyleaf
Pinus contorta - Pseudotsuga menziesii - Arbutus menziesii (- Picea sitchensis) / Garrya elliptica - Vaccinium ovatum (- Myrica californica)
Mapping code from figure 4 : 21
Field data: *Pseudotsuga menziesii-Pinus contorta(-Picea sitchensis)(-Arbutus menziesii)/Vaccinium ovatum-Garrya elliptica/Pteridium aquilinum(-Polystichum munitum-Lonicera hispidula-Goodyera oblongifolia)*
Condition: E

Age class: B
Comments: THIS PLANT COMMUNITY APPEARS TO BE UNDESCRIBED. THE INDICATORS OF ARBUTUS AND GARRYA ARE SIGNIFICANT

Equivalent published habitat type(s): NA; ~PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

136 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Arbutus menziesii-Pinus contorta(-Chamaecyparis lawsoniana)(-Pseudotsuga menziesii)/Vaccinium ovatum-Gaultheria shallon(-Arctostaphylos columbiana)(-Myrica californica)*

Condition: E
Age class: B
Comments: THIS COMMUNITY FALL WITHIN A POTENTIAL NEW PLANT COMMUNITY CONCEPT: MADRONE DUNAL

Equivalent published habitat type(s): PINCON/ARCCOL -> PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

137 Vegetation group: shore pine - Douglas-fir / waxmyrtle - evergreen huckleberry
Pinus contorta - Pseudotsuga menziesii / Myrica californica - Vaccinium ovatum

Mapping code from figure 4 : 24

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon/Pteridium aquilinum*

Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

138 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon/(Carex obnupta)*

Condition: G
Age class: B(pine)
Comments: PINCON CAROBN IN WETTER MICROSITES

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN
Conservation rank: G3S3;G1S1
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

139 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta/Arctostaphylos columbiana(-Vaccinium ovatum)(-Myrica californica)(-Gaultheria shallon)/Arctostaphylos uva-ursi-Juncus*

Condition: G
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

140 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Arctostaphylos uva-ursi-Pteridium aquilinum*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

141 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Arbutus menziesii-Pinus contorta-Pseudotsuga menziesii-Picea sitchensis/Arctostaphylos columbiana-Vaccinium ovatum-Gaultheria shallon/Ammophila arenaria-Pteridium aquilinum-Arctostaphylos uva-*

Condition: M
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

142 Vegetation group: shore pine - Douglas-fir / waxmyrtle - evergreen huckleberry
Pinus contorta - Pseudotsuga menziesii / Myrica californica - Vaccinium ovatum

Mapping code from figure 4 : 24

Field data: *Pseudotsuga menziesii(-Picea sitchensis)(-Arbutus menziesii)/Vaccinium ovatum-Gaultheria shallon(-Myrica californica)/Pteridium aquilinum(-Ammophila arenaria)*

Condition: G
Age class: C
Comments:

Equivalent published habitat type(s): ~PICO-PSEMEN/MYRCAL-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: High

143 Vegetation group: Douglas-fir - white fir - Sitka spruce / evergreen huckleberry - Pseudotsuga menziesii - Abies concolor - Picea sitchensis / Vaccinium ovatum - Garrya elliptica - Gaultheria shallon / satdou - Polystichum munitum - Hierochloe

Mapping code from figure 4 : 40

Field data: *Pseudotsuga menziesii-Abies concolor-Picea sitchensis/Vaccinium ovatum-Garrya elliptica-Gaultheria shallon/Satureja douglasii-Polystichum munitum-Hierochloe occidentalis-Pteridium aquilinum(-Lonicera hispidula)(-Hieracium albiflorum)(-Galium triflorum)(Goodyera oblongifolia)(-Rhus diversiloba)*

Condition: G
Age class: B
Comments: PICSIT/VACOVA TRANSITIONAL WITH UNDESCRIBED ARBMEN/GARELL COMMUNITY AND COMPLICATED BY UNUSUAL ABCO PRESENCE.

Equivalent published habitat type(s): NA; ~PICSIT/VACOVA TRANSITIONAL WITH UNDESCRIBED COMMUNITY ABOVE AND COMPLICATED BY UNUSUAL ABCO PRESENCE.

Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

144 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Ammophila arenaria-Arctostaphylos uva-ursi-Pteridium aquilinum-Festuca rubra(-Lupinus littoralis-Polygonum paronychia-Cardionema ramosissimum-Poa macrantha)*

Condition: M
Age class:
Comments:

Equivalent published habitat type(s): PINCON/ARCUVA; REMNANT FESRUB-PTEAQU COMMUNITY COMPONENTS

Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

145 Vegetation group: shore pine / gorse / European beachgrass with remnant red fescue
Pinus contorta / Ulex europaeus / Ammophila arenaria with remnant Festuca rubra dune community components

Mapping code from figure 4 : 37

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Lupinus littoralis-Hypochaeris radicata-Polygonum paronychia-Poa macrantha-Festuca rubra*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB DUNE COMMUNITY COMPONENTS

Conservation rank: NA;G1S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

146 Vegetation group: European beachgrass with remnant seashore bluegrass and / or red
Ammophila arenaria with remnant Poa macrantha and / or Festuca rubra community components

Mapping code from figure 4 : 5

Field data: *Ammophila arenaria-Lupinus littoralis-Festuca rubra-Polygonum paronychia(-Juncus lesueurii)(-Hypochaeris radicata)*

Condition: M
Age class: B(pine)
Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB DUNE OR FESRUB-PTEAQU COMMUNITY COMPONENTS

Conservation rank: NA;G1S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: Med

147 Vegetation group: shore pine / slough sedge

Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta/(Myrica californica)(Vaccinium ovatum)/Carex obnupta*

Condition: E

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/CAROBN

Conservation rank: G1S1

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

148 Vegetation group: mulched gorse: gorse / weeds

mulched gorse: Ulex europaeus / weeds

Mapping code from figure 4 : 11

Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

149 Vegetation group: mulched gorse: gorse / weeds

mulched gorse: Ulex europaeus / weeds

Mapping code from figure 4 : 11

Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

150 Vegetation group: gorse / European beachgrass with remnant red fescue or seashore

Ulex europaeus / Ammophila arenaria with remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 51

Field data: *(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Hypochaeris radicata-Polygonum paronychia-Poa macrantha*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation rank: NA;G1S1;G2S1

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

151 Vegetation group: gorse / European beachgrass with possible remnant red fescue or

Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49

Field data: *Ulex europaeus/Ammophila arenaria(-Festuca rubra)(-Poa macrantha)(-WEEDS)*

Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

152 Vegetation group: gorse / European beachgrass with possible remnant red fescue or Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components
Mapping code from figure 4 : 49
Field data: *Ulex europaeus/Ammophila arenaria-Festuca rubra-Hypochaeris radicata-Polygonum paronychia-Poa macrantha*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA;G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

153 Vegetation group: gorse / European beachgrass with remnant red fescue or seashore Ulex europaeus / Ammophila arenaria with remnant Festuca rubra or Poa macrantha community components
Mapping code from figure 4 : 51
Field data: *Pinus contorta/Ammophila arenaria-Festuca rubra-Poa macrantha*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1; G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

154 Vegetation group: shore pine - Sitka spruce / mulched gorse / European beachgrass Pinus contorta - Picea sitchensis / mulched Ulex europaeus / Ammophila arenaria
Mapping code from figure 4 : 18
Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Aira caryophyllea-Aira praecox-Hypochaeris radicata(-Erechtites minima)*
Condition: P
Age class: C
Comments:
Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

155 Vegetation group: gorse / European beachgrass with possible remnant red fescue or Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components
Mapping code from figure 4 : 49
Field data: *(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Hypochaeris radicata-Polygonum paronychia-Poa macrantha*

Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA;G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

156 Vegetation group: gorse / European beachgrass with possible remnant red fescue or Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components
Mapping code from figure 4 : 49
Field data: *Ulex europaeus/Ammophila arenaria(-Festuca rubra)(-Poa macrantha)(-WEEDS)*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1; G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

157 Vegetation group: gorse / European beachgrass with possible remnant red fescue or Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components
Mapping code from figure 4 : 49
Field data: *Ulex europaeus/Ammophila arenaria-Festuca rubra-Hypochaeris radicata-Polygonum paronychia-Poa macrantha*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA;G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

158 Vegetation group: gorse / European beachgrass with possible remnant red fescue or Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components
Mapping code from figure 4 : 49
Field data: *(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Poa macrantha*
Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS
Conservation rank: NA; G1S1; G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

159 Vegetation group: shore pine / gorse Pinus contorta / Ulex europaeus
Mapping code from figure 4 : 33
Field data: *Pinus contorta/Ulex europaeus*

Condition: P
Age class: B(pine)
Comments:
Equivalent published habitat type(s): PINCON/ULEEUR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

160 Vegetation group: European beachgrass with remnant seashore bluegrass and / or red Ammophila arenaria with remnant Poa macrantha and / or Festuca rubra community components

Mapping code from figure 4 : 5
Field data: *(Pinus contorta)/(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Polygonum paronychia-Lupinus littoralis-Artemisia pycnocephala(-Pteridium aquilinum)*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB-PTEAQU COMMUNITY COMPONENTS
Conservation rank: NA; G3S3
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: Med

161 Vegetation group: European beachgrass with remnant salt rush community components Ammophila arenaria with remnant Juncus lesueurii community components

Mapping code from figure 4 : 4
Field data: *Ammophila arenaria-Juncus lesueurii-Polygonum paronychia-Hypochaeris radicata-Festuca rubra*
Condition: M
Age class: B(pine)
Comments:
Equivalent published habitat type(s): AMMARE WITH REMNANT JUNLES COMMUNITY COMPONENTS
Conservation rank: NA;G3S3
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: Med

162 Vegetation group: Douglas-fir - shore pine - Sitka spruce (- madrone) / wavyleaf Pseudotsuga menziesii - Pinus contorta - Picea sitchensis (- Arbutus menziesii) / Garrya elliptica - Myrica californica - Ulex europaeus - Vaccinium ovatum / Hierochloe occidentalis

Mapping code from figure 4 : 42
Field data: *Pseudotsuga menziesii-Pinus contorta-Picea sitchensis(-Arbutus menziesii)/Garrya elliptica-Myrica californica-Ulex europaeus-Vaccinium ovatum/Hierochloe occidentalis*
Condition: M TO G
Age class: B
Comments:
Equivalent published habitat type(s): NA; UNDESCRIBED GARRYA VARIANT ON PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: ~S1
Botanical Resource Value Rating: 2 Priority habitat?:
Restoration feasibility: High

163 Vegetation group: shore pine / gorse / European beachgrass Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PICO/ULEU/AMAR
Conservation rank: NA
Botanical Resource Value Rating: 3 Priority habitat?:
Restoration feasibility: Med

164 Vegetation group: shore pine / kinnikinnick
Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Arctostaphylos uva-ursi-Festuca rubra-Artemisia pycnocephala-Hypochaeris radicata-Polygonum paronychia-Fragaria chiloensis-Lupinus littoralis-Poa macrantha-Rumex acetocella*

Condition: G
Age class: B(pine)
Comments:

Equivalent published habitat type(s): FESRUB DUNE -> PINCON/ARCUVA
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

165 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *(Pinus contorta)/Ulex europaeus(-Ammophila arenaria)(-WEEDS)*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

166 Vegetation group: hooker willow / slough sedge - Pacific silverweed
Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43

Field data: *(Salix hookeriana)/Carex obnupta-Potentilla anserina-Veronica scutellata-Agrostis sp-Leontodon taraxacoides*

Condition: G
Age class:
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

167 Vegetation group: shore pine - Sitka spruce - red alder / waxmyrtle - evergreen
Pinus contorta - Picea sitchensis - Alnus rubra / Myrica californica - Vaccinium ovatum - Gaultheria shallon / Carex obnupta (- Lysichiton americanus)

Mapping code from figure 4 : 17

Field data: *Pinus contorta-Picea sitchensis-Alnus rubra-Rhamnus purshiana(-Thuja plicata)/Myrica californica-Vaccinium ovatum-Gaultheria shallon/Carex obnupta(-Lysichiton americanum)*

Condition: E
Age class: B

Comments:

Equivalent published habitat type(s): PINCONC / CAROBN

Conservation rank: G1S1

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

168 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

169 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *(Pinus contorta)/Ulex europaeus*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

170 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *(Pinus contorta)/Ulex europaeus*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

171 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough

Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta(-Picea sitchensis)/Myrica californica-Vaccinium ovatum(-Gaultheria shallon)(-Ulex europaeus)/(Carex obnupta)*

Condition: M

Age class: C

Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN

Conservation rank: G3S3;G1S1

Botanical Resource Value Rating: (w)/3(2) Priority habitat?:

Restoration feasibility: Med

172 Vegetation group: red fescue dune community with emerging European beachgrass
Festuca rubra dune community with emerging Ammophila arenaria community characteristics

Mapping code from figure 4 : 10

Field data: *Ammophila arenaria-Festuca rubra-Polygonum paronychia-Artemisia pycnocephala(-Lupinus littoralis)(-Camissonia cheiranthifolia)(-Juncus lesueurii)(-Glehnia littoralis)*

Condition: G
Age class: B(pine)
Comments:

Equivalent published habitat type(s): FESRUB DUNE COMMUNITY WITH EMERGING AMMARE COMMUNITY CHARACTERISTICS

Conservation rank: NA; G1S1
Botanical Resource Value Rating: 1 Priority habitat?:
Restoration feasibility: High

173 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta-Pinus attenuata or radiata-Picea sitchensis/Myrica californica-Vaccinium ovatum-Gaultheria shallon/(Carex obnupta)*

Condition: G
Age class: B
Comments: PINCON/CAROBN IN CONCAVITIES AND INTERGRADING WITH PICSIT-PINCON/GAUSHA-VACOVA.

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN

Conservation rank: G3S3;G1S1
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

174 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough
Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *Pinus contorta-Pseudotsuga menziesii-Picea sitchensis/Myrica californica-Vaccinium ovatum-Gaultheria shallon(-Salix hookeriana)(-Rhamnus purshiana)/Pteridium aquilinum(-Carex obnupta)(-Arctostaphylos uva-ursi)*

Condition: E
Age class: B
Comments: MINOR PINCON/CAROBN IN WETTER MICROSITES

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON-PSEMEN/MYRCAL-VACOVA; MINOR PINCON/CAROBN

Conservation rank: G3S3; G1S1
Botanical Resource Value Rating: (w)/2 Priority habitat?:
Restoration feasibility: High

175 Vegetation group: shore pine / gorse
Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P
Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

176 Vegetation group: shore pine / gorse

Pinus contorta / Ulex europaeus

Mapping code from figure 4 : 33

Field data: *Pinus contorta/Ulex europaeus*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/ULEEUR

Conservation rank: NA

Botanical Resource Value Rating: 3 Priority habitat?:

Restoration feasibility: Med

177 Vegetation group: gorse / European beachgrass

Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 48

Field data: *(Pinus contorta)/Ulex europaeus/Ammophila arenaria-Juncus lesueurii*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): AMMARE; JUNLES

Conservation rank: NA;G3S3

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

178 Vegetation group: shore pine / slough sedge

Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta/Salix hookeriana-Ulex europaeus/Carex obnupta-Agrostis sp-Juncus ensifolius(AC)-Veronica scutellata*

Condition: M

Age class: B(pine)

Comments:

Equivalent published habitat type(s): CAROBN-ARGEGE

Conservation rank: G4S4

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: Med

179 Vegetation group: shore pine - Douglas-fir - Sitka spruce / gorse

Pinus contorta - Pseudotsuga menziesii - Picea sitchensis / Ulex europaeus

Mapping code from figure 4 : 22

Field data: *Pinus contorta-Pseudotsuga menziesii-Picea sitchensis/Ulex europaeus*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): NA

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

180 Vegetation group: shore pine / slough sedge

Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta/Carex obnupta*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/CAROBN
Conservation rank: G1S1
Botanical Resource Value Rating: w/3(2) Priority habitat?:
Restoration feasibility: Med

181 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal - gorse / Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon - Ulex europaeus / Carex obnupta

Mapping code from figure 4 : 30

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum-Gaultheria shallon-Ulex europaeus/Carex obnupta*

Condition: P
Age class: B
Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: (w)/3(2) Priority habitat?:
Restoration feasibility: Med

182 Vegetation group: shore pine / hairy manzanita Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum(-Arctostaphylos columbiana)(-Gaultheria shallon)/(Arctostaphylos uva-ursi)(-Juncus lesueurii)*

Condition: E
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL -> PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

183 Vegetation group: shore pine / kinnikinnick Pinus contorta / Arctostaphylos uva-ursi

Mapping code from figure 4 : 27

Field data: *Pinus contorta/Myrica californica-Vaccinium ovatum(-Ulex europaeus)/Arctostaphylos uva-ursi(-Juncus lesueurii)(-Festuca rubra)*

Condition: M
Age class: B(pine)
Comments: STRONGLY TRANSITIONAL

Equivalent published habitat type(s): PINCON/ARCUVA -> PICSIT-PINCON/GAUSHA-VACOVA
Conservation rank: G1S1;G3S3
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

184 Vegetation group: hooker willow / slough sedge - Pacific silverweed Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43

Field data: *Salix hookeriana-Vaccinium ovatum-Myrica californica/Carex obnupta*

Condition: E
Age class:
Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN
Conservation rank: G4S4
Botanical Resource Value Rating: w/2 Priority habitat?:
Restoration feasibility: High

185 Vegetation group: shore pine - Sitka spruce / gorse
Pinus contorta - Picea sitchensis / Ulex europaeus

Mapping code from figure 4 : 19
Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus*
Condition: P
Age class: C
Comments:

Equivalent published habitat type(s): NA
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

186 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds

Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

187 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds

Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

188 Vegetation group: gorse / European beachgrass with possible remnant red fescue or
Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49
Field data: *(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Poa macrantha-Hypochaeris radicata-AIRA spp.-Leontodon taraxacoides-Polygonum paronychia-Camissonia cheiranthifolia-Pseudognaphalium stramineum?*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation rank: NA;G1S1;G2S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

189 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds
Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

190 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds
Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

191 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds
Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

192 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds
Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:
Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

193 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds
Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P

Age class:
Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

194 Vegetation group: gorse / European beachgrass with remnant red fescue dune
Ulex europaeus / Ammophila arenaria with remnant Festuca rubra dune community components

Mapping code from figure 4 : 50
Field data: *(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Poa macrantha-Hypochaeris radicata-AIRA spp.-Leontodon taraxacoides-Polygonum paronychia-Camissonia cheiranthifolia-Pseudognaphalium stramineum?*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB DUNE COMMUNITY COMPONENTS
Conservation rank: NA;G1S1
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

195 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds

Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

196 Vegetation group: mulched gorse: gorse / weeds
mulched gorse: Ulex europaeus / weeds

Mapping code from figure 4 : 11
Field data: *MULCHED GORSE: Ulex europaeus/WEEDS*
Condition: P
Age class:
Comments:

Equivalent published habitat type(s): MULCHED GORSE: ULEU/WEEDS
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

197 Vegetation group: gorse / European beachgrass with remnant red fescue dune
Ulex europaeus / Ammophila arenaria with remnant Festuca rubra dune community components

Mapping code from figure 4 : 50
Field data: *(Ulex europaeus)/Ammophila arenaria-Festuca rubra-Poa macrantha-Hypochaeris radicata-AIRA spp.-Leontodon taraxacoides-Polygonum paronychia-Camissonia cheiranthifolia-Pseudognaphalium stramineum?*
Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB DUNE COMMUNITY COMPONENTS

Conservation rank: NA; G1S1

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

198 Vegetation group: shore pine / slough sedge

Pinus contorta / Carex obnupta

Mapping code from figure 4 : 28

Field data: *Pinus contorta/Salix hookeriana-Ulex europaeus/Carex obnupta-Polystichum munitum*

Condition: G

Age class: B(pine)

Comments:

Equivalent published habitat type(s): PINCON/CAROBN

Conservation rank: G1S1

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

199 Vegetation group: shore pine / waxmyrtle - evergreen huckleberry - salal / (slough

Pinus contorta / Myrica californica - Vaccinium ovatum - Gaultheria shallon / (Carex obnupta)

Mapping code from figure 4 : 31

Field data: *(Pinus contorta)/Myrica californica-Vaccinium ovatum-Gaultheria shallon/(Carex obnupta)*

Condition: G

Age class: B

Comments:

Equivalent published habitat type(s): PICSIT-PINCON/GAUSHA-VACOVA; PINCON/CAROBN

Conservation rank: G3S3;G1S1

Botanical Resource Value Rating: (w)/2 Priority habitat?:

Restoration feasibility: High

200 Vegetation group: hooker willow / slough sedge - Pacific silverweed

Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43

Field data: *Pinus contorta/Salix hookeriana-Myrica californica-Vaccinium ovatum-Gaultheria shallon/Carex obnupta-Potentilla anserina*

Condition: G

Age class:

Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN

Conservation rank: G4S4

Botanical Resource Value Rating: w/3 Priority habitat?:

Restoration feasibility: High

201 Vegetation group: hooker willow / slough sedge - Pacific silverweed

Salix hookeriana / Carex obnupta - Argentina egedii

Mapping code from figure 4 : 43

Field data: *Pinus contorta/Salix hookeriana-Myrica californica-Vaccinium ovatum-Gaultheria shallon/Carex obnupta-Potentilla anserina*

Condition: G

Age class:

Comments:

Equivalent published habitat type(s): SALHOO / (ARGEGE) - CAROBN

Conservation rank: G4S4

Botanical Resource Value Rating: w/3 Priority habitat?:
Restoration feasibility: High

202 Vegetation group: shore pine - Douglas-fir / waxmyrtle - evergreen huckleberry
Pinus contorta - Pseudotsuga menziesii / Myrica californica - Vaccinium ovatum

Mapping code from figure 4 : 24

Field data: *Pinus contorta(-Pseudotsuga menziesii)(-Arbutus menziesii)/Myrica californica-Vaccinium ovatum(-Ulex europaeus)/Pteridium aquilinum(-Ammophila arenaria)*

Condition: M
Age class: B
Comments:

Equivalent published habitat type(s): PINCON-PSEMEN/MYRCAL-VACOVA
Conservation rank: G3S3
Botanical Resource Value Rating: 3(2) Priority habitat?:
Restoration feasibility: Med

203 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta/Arctostaphylos columbiana-Ulex europaeus/Ammophila arenaria-WEEDS*

Condition: P
Age class: B(pine)
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: Med

204 Vegetation group: shore pine / hairy manzanita
Pinus contorta / Arctostaphylos columbiana

Mapping code from figure 4 : 26

Field data: *Pinus contorta/Arctostaphylos columbiana-Vaccinium ovatum-Myrica californica(-Baccharis pilularis)/Arctostaphylos uva-ursi*

Condition: G
Age class: B
Comments:

Equivalent published habitat type(s): PINCON/ARCCOL
Conservation rank: G1S1
Botanical Resource Value Rating: 2 Priority habitat?:Y
Restoration feasibility: High

205 Vegetation group: shore pine / gorse / European beachgrass
Pinus contorta / Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 34

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Hypochaeris radicata-Aira praecox*

Condition: P
Age class:
Comments:

Equivalent published habitat type(s): AMMARE
Conservation rank: NA
Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Med

206 Vegetation group: gorse / European beachgrass
Ulex europaeus / Ammophila arenaria

Mapping code from figure 4 : 48

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Hypochaeris radicata-Aira praecox*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): AMMARE

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Med

207 Vegetation group: Sitka spruce - shore pine - red alder / salmonberry - hooker willow - Picea sitchensis - Pinus contorta - Alnus rubra / Rubus spectabilis - Salix hookeriana - Myrica californica / Carex obnupta - Lysichiton americanus

Mapping code from figure 4 : 13

Field data: *Picea sitchensis-Pinus contorta-Alnus rubra/Rubus spectabilis-Salix hookeriana-Myrica californica/Carex obnupta-Lysichiton americanum-Oenanthe sarmentosa-Athyrium filix-femina(-Polystichum munitum)*

Condition: E

Age class: C

Comments: SERAL AMALGAM

Equivalent published habitat type(s): PINCON/CAROBN & PICSIT/CAROBN-LYSAME & ALRU/RUSP/CAROBN-LYSAME

Conservation rank: G1S1; G2S1;G4S4

Botanical Resource Value Rating: w/2 Priority habitat?:

Restoration feasibility: High

208 Vegetation group: shore pine / gorse / European beachgrass with possible remnant red Pinus contorta / Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 36

Field data: *Pinus contorta/Ulex europaeus/Ammophila arenaria-Hypochaeris radicata-Aira praecox*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation rank: NA; G1S1; G2S1

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

209 Vegetation group: gorse / European beachgrass with possible remnant red fescue or Ulex europaeus / Ammophila arenaria with possible remnant Festuca rubra or Poa macrantha community components

Mapping code from figure 4 : 49

Field data: *Ulex europaeus/Ammophila arenaria(-Festuca rubra)(-Poa macrantha)*

Condition: P

Age class:

Comments:

Equivalent published habitat type(s): AMMARE WITH POSSIBLE REMNANT FESRUB OR POAMAC COMMUNITY COMPONENTS

Conservation rank: NA; G1S1; G2S1

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

210 Vegetation group: European beachgrass with remnant seashore bluegrass and / or red

Ammophila arenaria with remnant Poa macrantha and / or Festuca rubra community components

Mapping code from figure 4 : 5

Field data: *Ammophila arenaria-Hypochaeris radicata(-Lupinus littoralis)(-Pteridium aquilinum)(-Festuca rubra)(-Poa macrantha)*

Condition: P

Age class: B(pine)

Comments:

Equivalent published habitat type(s): AMMARE WITH REMNANT FESRUB-PTEAQU COMMUNITY COMPONENTS

Conservation rank: NA; G3S3

Botanical Resource Value Rating: 3(2) Priority habitat?:

Restoration feasibility: Med

211 Vegetation group: Sitka spruce - shore pine - red alder / salmonberry - hooker willow - Picea sitchensis - Pinus contorta - Alnus rubra / Rubus spectabilis - Salix hookeriana - Myrica californica / Carex obnupta - Lysichiton americanus

Mapping code from figure 4 : 13

Field data: *Picea sitchensis-Pinus contorta-Alnus rubra/Rubus spectabilis-Salix hookeriana-Myrica californica/Carex obnupta-Lysichiton americanum-Oenanthe sarmentosa-Athyrium filix-femina(-Polystichum munitum)*

Condition: E

Age class: B

Comments: AN AMALGAM OF PLANT COMMUNITIES DUE TO SERAL NATURE. PROBABLY TRANSITIONAL FROM STABILIZATION. INGROWTH OF SHRUB SPECIES ACN ACCUMULATION OF SAND MAY TURN THIS WETLAND TO UPLAND IN 50 OR MORE YEARS.

Equivalent published habitat type(s): PINCON/CAROBN & PICSIT/CAROBN-LYSAME & PICSIT-PINCONC/GAUSHA-VAOV

Conservation rank: G1S1,G3S1,G3S3

Botanical Resource Value Rating: (w)/2 Priority habitat?:

Restoration feasibility: High

212 Vegetation group: shore pine - Sitka spruce / gorse Pinus contorta - Picea sitchensis / Ulex europaeus

Mapping code from figure 4 : 19

Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus(-Myrica californica)(-Rhamnus purshiana)(-Rubus spectabilis)*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): NA

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:

Restoration feasibility: Low

213 Vegetation group: shore pine - Sitka spruce / gorse Pinus contorta - Picea sitchensis / Ulex europaeus

Mapping code from figure 4 : 19

Field data: *Pinus contorta-Picea sitchensis/Ulex europaeus(-Myrica californica)(-Rhamnus purshiana)(-Rubus spectabilis)*

Condition: P

Age class: C

Comments:

Equivalent published habitat type(s): NA

Conservation rank: NA

Botanical Resource Value Rating: 4 Priority habitat?:
Restoration feasibility: Low

Appendix 2. Rare Species Known or Suspected from the Coast Range Ecoregion of Coos and Curry Counties, OR

ORBIC list 1-4, State or Federally-listed, candidate, or SOC[1] species known to occur in the Coast Range Ecoregion of Lincoln, Lane, and Tillamook Counties, Oregon.

Scientific Name	Common Name	Heritage Global Rank	Heritage State Rank	Federal Status	State Status	Heritage List	Oregon County Distribution
Encalypta brevicolla	Moss	G4	S1			2	Coos, Curr
Encalypta brevipes	Moss	G3	S1			2	Clat, Coos, Curr
Grimmia anomala	Moss	G5	S2			3	Curr, Jack, Jose, Klam, Lane
Limbella fryei	Moss	G1	S1	SOC	C	1	Coos, Curr, Lane
Orthodontium gracile	Moss	G5	S1			2	Curr
Orthodontium pellucens	Moss	G5	S1			2	Curr
Triquetrella californica	Moss	G1	S1			1	Curr
Anastrophyllum minutum	Liverwort	G5	S1			2	Curr, Hood, Jack, Linn, Wall
Calypogeia sphagnicola	Liverwort	G4	S2			2	Clac, Coos, Curr, Doug, Jack, Lane, Linc, Linn, Till
Diplophyllum plicatum	Liverwort	G4	S3			3	Clat, Coos, Doug, Lane, Linc, Till
Kurzia makinoana	Liverwort	G2G4Q	S1			2	Coos
Metzgeria violacea	Liverwort	G4	S1			2	Coos, Lane, Linc, Till
Phymatoceros phymatodes	Hornwort	G2G3	S1			2	Coos, Curr, Doug
Anaptychia crinalis	Lichen	G5	S1			3	Clat, Coos, Curr
Bryoria pseudocapillaris	Lichen	G3	S3			4	Clat, Coos, Curr, Doug, Lane
Bryoria spiralifera	Lichen	G3	S2			2	Coos, Doug

Scientific Name	Common Name	Heritage Global Rank	Heritage State Rank	Federal Status	State Status	Heritage List	Oregon County Distribution
Bryoria subcana	Lichen	G3G4	S2			2	Bent, Clac, Clat, Coos, Lane, Linn, Mari, Till
Buellia oidalea	Lichen	G3?	S1			3	Curr, Doug
Caloplaca stantonii	Lichen	G2G3	S1			3	Coos
Cladidium bolanderi	Lichen	G4	S1			2	Bent, Curr, Desc, Linc
Erioderma sorediatum	Lichen	G4	S2			2	Coos, Curr, Doug, Lane, Linc, Till
Heterodermia leucomela	Lichen	G4	S2S3			2	Coos, Curr, Doug, Lane, Linc, Till
Hypotrachyna revoluta	Lichen	G3G4	S1			2	Clat, Coos, Lane, Linc, Mari, Till
Lecanora caesiorubella ssp. merrillii	Lichen	G4G5T3T4	S1			3	Curr, Lane
Leioderma sorediatum	Lichen	G4	S1			2	Coos, Doug, Lane, Linc
Leptogium platynum	Lichen	G3G4	S1S2			3	Coos, Lane, Linn
Niebla cephalota	Lichen	G3G4	S2			2	Coos, Curr, Lane, Linc, Till
Pannaria rubiginella	Lichen	G3G5	S1			3	Coos, Mari
Pannaria rubiginosa	Lichen	G4G5	S2			2	Coos, Lane, Linc
Pseudocyphellaria perpetua	Lichen	G4	S3			4	Bent, Coos, Doug, Lane, Linc, Linn, Till
Pyrrhospora quernea	Lichen	G4	S3			4	Clat, Coos, Curr, Doug, Lane, Linc, Till
Ramalina pollinaria	Lichen	G4	S1S2			2	Clat, Coos, Curr, Lane, Till
Sigridea californica	Lichen	G3	S1			3	Curr

Scientific Name	Common Name	Heritage Global Rank	Heritage State Rank	Federal Status	State Status	Heritage List	Oregon County Distribution
Stenocybe clavata	Lichen	G3	S3			4	Curr, Lane, Linc, Linn, Till, Wasc, Yamh
Sulcaria badia	Lichen	G3	S3			4	Bent, Coos, Doug, Jack, Jose, Lane
Teloschistes flavicans	Lichen	G4G5	S1			2	Coos, Curr, Till
Usnea rubicunda	Lichen	G4G5	S2			3	Clac, Coos, Lane, Linc, Till
Usnea subgracilis	Lichen	G4G5	S3			4	Bent, Clat, Coos, Curr, Doug, Jack, Lane, Linn, Till
Albatrellus avellaneus	Fungus	G2	S1?			1	Coos
Amanita novinupta	Fungus	G3	S1			3	Clac, Coos, Lane, Wash
Arcangeliella camphorata	Fungus	G2	S2			1	Bent, Coos, Curr, Doug, Jose, Lane, Polk
Arcangeliella crassa	Fungus	G2G4	S1			3	Coos, Doug, Wasc
Boletus pulcherrimus	Fungus	G3	S2			1	Curr, Jack, Klam, Lane
Catathelasma ventricosum	Fungus	G3G4	S2S4			3	Coos, Linn, Till
Glomus pubescens	Fungus	G2?	S1			3	Coos, Doug
Gomphus kauffmanii	Fungus	G3?	S3?			3	Bent, Clac, Coos, Doug, Jack, Lane, Linn, Mult, Wasc
Leucogaster citrinus	Fungus	G3G4	S3S4			3	Bent, Clac, Curr, Doug, Jack, Linn, Mari

Scientific Name	Common Name	Heritage Global Rank	Heritage State Rank	Federal Status	State Status	Heritage List	Oregon County Distribution
Leucogaster microsporus	Fungus	G3	S3			4	Bent, Clac, Curr, Lane, Linn, Mari, Wasc
Macowanites chlorinosmus	Fungus	G3?	S3			3	Curr, Lane, Till
Phaeocollybia californica	Fungus	G2?	S2?			1	Bent, Coos, Doug, Jose, Lane, Linc, Linn, Mult, Till, Yamh
Phaeocollybia oregonensis	Fungus	G2?	S2?			1	Clac, Coos, Mult
Phaeocollybia pseudofestiva	Fungus	G3	S3?			3	Bent, Clac, Colu, Coos, Doug, Jose, Lane, Linc, Linn, Mult, Till
Phaeocollybia radicata	Fungus	G2	S1			3	Bent, Coos, Lane
Ramaria aurantiisiccescens	Fungus	G3	S3			4	Bent, Coos, Lane, Linc, Linn, Mari
Ramaria concolor	Fungus (forma tsugina)	GU	S2?			3	Coos
Ramaria conjunctipes var. sparsiramosa	Fungus	GUT3	S2?			3	Coos, Doug, Lane
Ramaria rainierensis	Fungus	G2	S2			3	Coos
Ramaria rubribrunnescens	Fungus	G2G3	S2?			3	Coos, Doug, Jose, Polk
Rickenella swartzii	Fungus	G4G5	S2			3	Bent, Coos, Doug, Lane, Linc, Polk, Till
Stropharia albovelata	Fungus	G3?	S3?			3	Clac, Coos, Lane
Tuber pacificum	Fungus	G2	S1			3	Coos, Lane, Polk

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Abronia latifolia	Yellow sandverbena	G5	S3			4	Clat, Coos, Curr, Doug, Lane, Linc, Till
Abronia umbellata ssp. breviflora	Pink sandverbena	G4G5T2	S1	SOC	LE	1	Clat, Coos, Curr, Doug, Lane, Linc, Till
Adiantum jordanii	California maiden-hair	G4G5	S2			2	Coos, Curr, Doug, Jose
Arctostaphylos hispidula	Gasquet manzanita	G3	S2	SOC		2	Curr, Doug, Jose
Artemisia pycnocephala	Coastal sagewort	G4G5	S1			2	Coos, Curr
Astragalus umbraticus	Woodland milk-vetch	G4	S3			4	Curr, Doug, Jose, Lane
Atriplex leucophylla	Beach saltbush	G4G5	SNR			3	Coos, Linc
Baccharis douglasii	Marsh baccharis	G5	S1?			2	Curr
Bensoniella oregana	Bensonia	G3	S3	SOC	C	1	Coos, Curr, Doug, Jose
Brodiaea terrestris	Dwarf brodiaea	G4G5	S2			2	Coos, Curr
Cardamine nuttallii var. dissecta	Dissected toothwort	G5T4T5	SNR			3	Coos, Jack, Jose, Klam
Carex barbarae	Santa Barbara sedge	G4G5Q	S3?			4	Curr, Doug, Jack, Jose
Carex brevicaulis	Short-stemmed sedge	G5	S2			2	Clat, Coos, Curr, Doug, Linc, Till
Carex gynodynama	Hairy sedge	G4G5	S3			4	Coos, Curr, Doug, Lane
Carex macrocephala	Bighead sedge	G5	S2			2	Clat, Coos, Doug, Lane, Linc, Till
Carex subbracteata	Small-bract sedge	G5	SNR			3	Coos, Jose
Castilleja mendocinensis	Mendocino coast paintbrush	G2	S1	SOC		1	Curr
Castilleja wightii	Wight's paintbrush	G2G3Q	SH			3	Curr
Cicendia quadrangularis	Timwort	G4	S2			2	Coos, Curr, Doug, Lane, Linn
Clintonia andrewsiana	Andrew's bead-lily	G4	SH			2-ex	Curr
Cochlearia officinalis	Spoonwort	G5	S1			2	Coos, Curr
Cryptantha leiocarpa	Seaside cryptantha	G3G4	S1			2	Curr

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Cyperus bipartitus	Shining cyperus	G5	SNR			3	Curr, Doug, Jack, Jose, Lane, Malh, Umat, Wasc
Cypripedium californicum	California lady's-slipper	G3	S3			4	Coos, Curr, Doug, Jack, Jose
Darlingtonia californica	California pitcher-plant	G3G4	S3S4			4	Coos, Curr, Doug, Jose, Lane, Linc, Till
Dichelostemma ida-maia	Firecracker flower	G4	S4			4	Curr, Doug, Jack, Jose
Elymus glaucus ssp. virescens	Smooth wildrye	G5T4?	SNR			3	Coos, Curr, Linc
Ericameria arborescens	Golden fleece	G4	S1			2	Curr, Jose
Eriogonum nudum var. paralinum	Del Norte buckwheat	G5T2T4	SNR			3	Curr
Eriophorum chamissonis	Russet cotton-grass	G5	S1			2	Coos, Lane, Linc, Till
Erysimum menziesii ssp. concinnum	Pacific wallflower	G3?T3?	S1	SOC		2	Curr
Erythronium revolutum	Pink fawn-lily	G4	S4			4	Bent, Clat, Coos, Curr, Doug, Lane, Linc, Till
Gilia millefoliata	Seaside gilia	G2	S1	SOC		1	Curr, Linc
Gnaphalium californicum	California cudweed	G5	SNR			3	Clat, Curr, Doug, Lane, Linc, Till
Hesperevax sparsiflora var. brevifolia	Short-leaved evax	G4T3	SNR			3	Coos, Curr, Jose
Hierochloe odorata	Holy grass	G5	S3			4	Bent, Clac, Colu?, Coos, Croo, Desc, Doug, Gran, Harn, Jack, Jose, Klam, Lane, Mult, Umat
Hydrocotyle verticillata	Whorled marsh pennywort	G5	S1			2	Bent, Coos, Curr, Doug

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Iliamna latibracteata	California globe-mallow	G3	S2			2	Coos, Curr, Doug, Jack, Jose, Linn
Lasthenia ornduffii	Large-flowered goldfields	G2	S2	SOC	C	1	Curr
Lilium kelloggii	Kellogg's lily	G3	SH	SOC		2-ex	Curr, Jose, Klam?
Lilium occidentale	Western lily	G1	S1	LE	LE	1	Coos, Curr
Lycopodiella inundata	Northern bog clubmoss	G5	S2			2	Clac, Coos, Doug, Klam, Lane, Linc, Linn, Mult
Marsilea vestita	Hairy water-fern	G5	SNR			3	Bake, Clac, Colu?, Curr?, Doug, Harn, Jack, Jeff, Klam, Lake, Lane, Malh, Morr, Mult, Sher, Umat, Unio, Wasc, Whee
Microseris bigelovii	Coast microseris	G4	S2			2	Coos, Curr, Lane, Linc
Monardella purpurea	Siskiyou monardella	G3Q	S3	SOC		2	Curr, Jose
Myrica gale	Sweet gale	G5	S1?			3	Clat, Curr, Linc, Mult
Myriophyllum sibiricum	Common water-milfoil	G5	S3			4	Croo, Curr, Desc, Harn, Jeff, Klam, Malh, Till, Wall, Whee
Oenothera wolfii	Wolf's evening-primrose	G1	S1	SOC	LT	1	Curr
Ophioglossum pusillum	Adder's-tongue	G5	S1			2	Bake, Clac, Coos, Doug, Lane, Linn
Pellaea andromedifolia	Coffee fern	G4	S2			2	Coos, Doug, Jack, Jose, Lane

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Persicaria punctata	Dotted smartweed	G5	SNR			3	Bake, Clac, Curr, Klam, Lane, Morr?, Mult, Till
Phacelia argentea	Silvery phacelia	G2	S2	SOC	LT	1	Coos, Curr
Phacelia malvifolia	Mallow-leaved phacelia	G4	SH			2-ex	Curr
Phacelia verna	Spring phacelia	G3	S3			4	Coos, Doug, Jose, Lane
Piperia candida	White piperia	G3G4	SNR			3	Coos, Jack, Jose, Lane
Piperia elongata	Dense-flower rein orchid	G3G5	SNR			3	Curr, Doug, Jack, Jeff, Jose, Klam, Lane
Plantago eriopoda	Hairy-foot plantain	G5	SNR			3	Coos, Malh
Poa laxiflora	Loose-flowered bluegrass	G3G4	S3			4	Bent, Clac, Coos, Lane, Linc, Linn, Mari, Mult, Polk, Till, Wash, Yamh
Poa piperi	Piper's bluegrass	G4	S3			4	Coos, Curr, Jose
Poa stenantha	Narrow-flower bluegrass	G5	SNR			3	Curr, Desc, Doug, Lane, Mari, Till
Poa unilateralis	San Francisco bluegrass	G3	S1?	SOC		2	Curr, Linc, Till
Polystichum californicum	California sword-fern	G4	S2			2	Coos, Curr, Doug, Lane, Linn
Rhynchospora capitellata	Brownish beakrush	G5	S1			2	Curr
Ribes divaricatum var. pubiflorum	Straggly gooseberry	G4T4?	S2			2	Curr, Jose, Lane
Ribes laxiflorum	Trailing blackberry	G5	SNR			3	Clat, Coos, Klam, Lake, Lane, Linc, Linn
Samolus parviflorus	Water-pimpernel	G5	SNR			3	Clat, Coos?, Doug

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Schoenoplectus subterminalis	Water clubrush	G4G5	S2			2	Coos, Curr, Doug, Jose, Klam, Lake, Lane, Linn, Wasc
Scoliopus bigelovii	California fetid adder's-tongue	G4?	S1			2	Curr
Senecio triangularis var. angustifolius	Bog groundsel	G5TNR	S1?			3	Coos, Curr
Sidalcea malachroides	Maple-leaved sidalcea	G3G4	SH	SOC		1-ex	Curr
Sidalcea malviflora ssp. patula	Coast checker bloom	G5T1	S1	SOC	C	1	Coos, Curr
Triglochin striata	Three-ribbed arrow-grass	G5	SNR			3	Clat?, Coos, Curr, Lane, Linc, Till
Trillium kurabayashii	Giant purple trillium	G4G5	S1			2	Curr
Triteleia hendersonii var. leachiae	Leach's brodiaea	G4G5T3	S3	SOC	C	4	Coos, Curr
Triteleia laxa	Ithuriel's spear	G4	S1			2	Curr, Jack
Utricularia gibba	Humped bladderwort	G5	S1			2	Bent, Coos, Doug, Lane, Linn
Utricularia minor	Lesser bladderwort	G5	S2			2	Bake?, Clac, Coos, Doug, Gran?, Harn, Jack, Klam, Lane, Linn, Mari, Wall?, Wasc
Viola langsdorfii	Aleutian viola	G4	SNR			3	Coos, Curr, Linc

1. LE = “Listed endangered”; LT = “Listed threatened”; C = “Candidate”; SOC = “species of concern”
2. The Coast Range ecoregion is an ecological zone mapped by the Oregon Biodiversity Information Center in cooperation with The United States Environmental Protection Agency, the US Forest Service, the US Natural Resources Conservation Service, and United States Geological Survey. Bandon State Natural Area is entirely within the Coast Range ecoregion.
3. ORBIC tracks rare species in lists ranging from 1 to 4. List 1 contains species that are endangered or threatened throughout their range. List 2 contains species which are endangered or threatened in Oregon, but that are more common elsewhere. List 3 contains species which may be endangered or threatened, but more information is needed to determine their true rarity. List 4 contains species that are rare or declining, but not currently endangered or threatened.

Rank Definitions

The ranking is a 1-5 scale, based primarily on the number of known occurrences, but also including threats, sensitivity, area occupied, and other biological factors. In this booklet, the ranks occupy two lines. The top line is the Global Rank and begins with a "G".If the taxon has a trinomial (a subspecies, variety or recognized race), this is followed by a "T" rank indicator. The second line is the State Rank and begins with the letter "S". The ranks are summarized below (see page 6 for migratory bird ranks):

1 = Critically imperiled because of extreme rarity or

because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.
2 = Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences.
3 = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences.
4 = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences.
5 = Demonstrably widespread, abundant, and secure.
H = Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered.
X = Presumed extirpated or extinct.
U = Unknown rank.
NR = Not yet ranked.

Rank Qualifiers
Q = Questionable taxonomy. Global ranks sometimes have a "Q" at the end. This indicates that there are questions related to the taxonomic validity of the taxon.
? = Inexact Numeric Rank. Taxa that can be ranked, but for which the rank is not certain. Ranks with a "?" indicate that the rank is probably correct, but that either documentation is lacking or there is still some uncertainty. Such ranks are always provisional.
Range Ranks = Ranks with more than one value. These can be G1G2, G1G3, etc. These indicate that the predicted final rank would be within the range, but with no indication of preference among the possibilities.
More details on the Heritage Ranking system and more definitions can be found at the NatureServe web site: *http://www.natureserve.org/explorer/ranking.htm*

The information presented in the table above was gathered through tabular data query of the 2010 ORBIC publication, "Rare, Threatened, and Endangered Species of Oregon".