## Rare Plant and Vegetation Surveys of Dash Point and Saltwater State Parks



Pacífic Bíodíversíty Institute

### Rare Plant and Vegetation Survey of Dash Point and Saltwater State Parks

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## Introduction

Under contract with the Washington State Parks and Recreation Commission, Dash Point and Saltwater State Parks, located in King and Pierce Counties, were surveyed for rare plant occurrences and mapped according to vegetation communities by Pacific Biodiversity Institute (PBI). Vegetation data was collected for all the mapped vegetation types. This report summarizes the activities and findings of the contracted work.

## **Survey Routes**



Figure 1. Survey routes for the vegetation community mapping and rare and endangered plant surveys conducted by PBI in 2006 for Dash Point State Park.



Figure 2. Survey routes for the vegetation community mapping and rare and endangered plant surveys conducted by PBI in 2006 for Saltwater State Park.

## **Vegetation Communities**

### Methods

Vegetation communities within Dash Point and Saltwater State Park were delineated and classified using a combination of field survey and remote sensing techniques. We relied on descriptions from the Washington State Department of Natural Resources (WADNR) late-seral forested plant associations of the Puget Lowland (Chappell 2004), freshwater wetland vegetation (Kunze 1994), and Baseline inventory of rare, threatened and endangered plant species/communities along Washington's Pacific coast (Kunze and Cornelius, 1982) to make final vegetation community assignments. In some cases, the WADNR descriptions were not adequate in describing existing vegetation associations. In these cases, alternative vegetation communities or plant associations were created by PBI or found in alternative reference material.

Remote sensing techniques consisted of manually delineating plant associations or mosaics of plant associations in a digital environment. We reviewed orthorectified aerial photography from the 1990s and recent ASTER satellite images for discernable vegetation or landform patterns. When available, we also used high resolution true color orthorectified aerial photography. Topographic maps, digital elevation models (DEMs), and light detection and ranging imagery (LIDAR) were also employed to assist the process of vegetation community delineation. The final vegetation polygons were created by hand in a GIS by ocular assessment.

Field surveys consisted of visiting sites located within the vegetation polygons created during the remote sensing process. At representative sites within a polygon, vegetation data and site descriptions were recorded in a fashion consistent with the "plant community polygon" format provided by the Washington State Parks and Recreation Commission. Further refinements and editing of the drafted vegetation polygon layers were done by hand on hardcopy maps in the field, and later edited digitally in a GIS.

### Results

We mapped and surveyed 32 vegetation community polygons, comprised of 12 vegetation community types, within Dash Point State Park. We mapped and surveyed 19 vegetation community polygons, comprised of 10 vegetation community types, within Saltwater State Park. Vegetation community polygons are either stand-alone plant associations or mosaics of multiple plant associations. Table 1 list the plant associations and/or cover types found in Dash Point and Saltwater State Parks. See Appendix B for interpretation of "Status" codes. Figures 3 - 6 on the following pages illustrate the location of the vegetation community polygons. Note that Figures 4 and 6 only show the primary plant associations in each polygon (PA1 in the database). A printout of the complete set of data we collected for each polygon is attached in Appendix D. The ecological condition of each polygon was evaluated according to a simple ranking system described in Appendix C.

Abbreviation	Association Name	English Name	Reference	Status
ACMA3-ALRU2/POMU-TEGR2	Acer macrophyllum – Alnus rubra / Polystichum munitum - Tellima grandiflora	Bigleaf maple – red alder / sword fern – fringecup	Chappell 2004	G2G3
ALRU2/LYAM c.t.	Alnus rubra / Lysichitum americanum	red alder / skunk cabbage cover type	Kunze 1994	G3G4
ALRU2/POMU	Alnus rubra / Polystichum munitum	red alder / sword fern	Chappell 2004	G4S4
ALRU2/RUSP c.t.	Alnus rubra / Rubus spectabilis cover type	red alder / salmonberry cover type	Kunze 1994	G4G5
PSME-ARME/GASH	Pseudotsuga menziesii - Arbutus menziesii / Gaultheria shallon	Douglas-fir - pacific madrone / salal	Chappell 2004	G4S2
PSME-TSHE/GASH/POMU	Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon / Polystichum munitum	Douglas-fir - western hemlock / salal / sword fern	Chappell 2004	G4G5S4
PSME-TSHE/GASH-HODI	Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon / Holodiscus discolor	Douglas-fir - western hemlock / salal / oceanspray	Chappell 2004	G2G3S2S3
PSME-TSHE/GASH/MANE2	Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon / Mahonia nervosa	Douglas-fir - western hemlock / salal / dwarf Oregongrape	Chappell 2004	G4S4
PYFU c.t.	<i>Pyrus fusca</i> cover type	Pacific crabapple cover type	Kunze 1994	G3
TSHE-PSME/POMU-DREX2	Tsuga heterophylla - Pseudotsuga menziesii / Polystichum munitum - Dryopteris expansa	western hemlock - Douglas-fir / sword fern - spreading woodfern	Chappell 2004	G3S3
Water	Water	Water	PBI	
Developed area	Developed area	Developed area	PBI	

## Table 1. Vegetation Community Types Encountered in Dash Point State Park.

## Vegetation Community Types Encountered in Saltwater State Park.

Abbreviation	Association Name	English Name	Reference	Status
ACMA3-ALRU2/POMU-TEGR2	Acer macrophyllum – Alnus rubra / Polystichum munitum - Tellima grandiflora	Bigleaf maple – red alder / sword fern – fringecup	Chappell 2004	G2G3
ALRU2/POMU	Alnus rubra / Polystichum munitum	red alder / sword fern	Chappell 2004	G4S4
ALRU2/RUSP c.t.	Alnus rubra / Rubus spectabilis cover type	red alder / salmonberry cover type	Kunze 1994	G4G5
ELMO9 Community	Elymus mollis community	American dunegrass community	Kunze and Cornelius 1982	G2
PSME-TSHE/GASH/POMU	Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon / Polystichum munitum	Douglas-fir - western hemlock / salal / sword fern	Chappell 2004	G4G5S4
PSME-TSHE/HODI/POMU	Pseudotsuga menziesii - Tsuga heterophylla / Holodiscus discolor / Polystichum munitum	Douglas-fir - western hemlock / oceanspray / sword fern	Chappell 2004	GNRS1
PSME-TSHE/MANE2/POMU	Pseudotsuga menziesii - Tsuga heterophylla / Mahonia nervosa / Polystichum munitum	Douglas-fir - western hemlock / dwarf Oregongrape / sword fern	Chappell 2004	G4S3
TSHE-PSME/POMU-DREX2	Tsuga heterophylla - Pseudotsuga menziesii / Polystichum munitum - Dryopteris expansa	western hemlock - Douglas-fir / sword fern - spreading woodfern	Chappell 2004	G383
Water	Water	Water	PBI	
Developed area	Developed area	Developed area	PBI	



Figure 3. Layout of the vegetation community polygons in Dash Point State Park, overlaying a 2000 color ortho-photo.



Figure 4. The primary vegetation community types within Dash Point State Park.



Figure 5. Layout of the vegetation community polygons in Saltwater State Park, overlaying a 2000 color ortho-photo.



Figure 6. The primary vegetation community types within Saltwater State Park.

### **Examples of Vegetation Community Types**

### Acer macrophyllum – Alnus Rubra / Polystichum munitum - Tellima grandiflora forest (ACMA3-ALRU2/POMU-TEGR2)



This plant association occurs in both parks, although it is a more dominant association in Saltwater State Park because of the abundance of steeper terrain in the park. In both parks, naturally occurring slope failure and off trail recreation-caused erosion (see picture below) are creating ideal conditions for exotic species infestations, especially near the water front areas of each park. Infestations of Himalayan blackberry (*Rubus discolor*) and English ivy (*Hedera helix*) are common within patches of this association.



## Alnus rubra / Lysichitum americanum cover type (ALRU2/LYAM c.t)



This is not a common association in either park. This wetland association typically occurs as a small patch inclusion in a more dominant matrix wetland community such as ALRU2/RUSP c.t. Within a wetland area it occurs on the wettest sites where the soils are most saturated and surface water tends to remain the longest.



### Alnus Rubra / Polystichum munitum forest (ALRU2/POMU)

ALRU2/POMU is a typical plant association in the Puget Trough lowlands, occurring where clearcut logging has taken place within the last century. Both parks experienced high levels of logging prior to State Park's ownership, and hence both parks have this association as a dominant vegetative community. Dash Point State Park especially possesses a dominant cover of the ALRU2/POMU community, with vast areas of the southern section of the park consisting of a forest layer completely devoid of conifer composition, including conifer regeneration. Given the high prevalence of invasive species within and immediately surrounding the parks, the ALRU2/POMU areas are at high risk of acquiring further infestations because they lack the canopy shading characteristics typical of a more conifer dominated forest which can help prohibit exotic plant establishment.



### Alnus Rubra / Rubus spectabilis cover type (ALRU2/RUSP c.t.)

Like ALRU2/POMU, the ALRU2/RUSP c.t. wetland association is common on wetland sites in the Puget Trough lowlands where significant logging has occurred in recent history. Most, if not all of the wetland sites within both parks are dominated by this wetland community type. In both parks, trails, roads, and hydrological alterations such as berms and culverts directly or indirectly impact this association. Creeping buttercup (*Ranunculus repens*) is a common exotic invader of ALRU2/RUSP c.t. wetlands, as well as Himalayan blackberry (*Rubus discolor*) in some areas.



### *Elymus mollis* community (ELMO9 Community)

Although highly impacted by recreation use, a small portion of the beach at Saltwater State Park, at the southern end of the park's shoreline, fits into the shoreline ELMO9 community. American dunegrass (*Elymus mollis*) is the dominant native grass, with some other coastal plants present such as silver burr ragweed (*Ambrosia chamissonis*) and beach pea (*Lathyrus japonicus*). A large amount of driftwood covers most of the area of this plant association. Exotic plants such as English ivy (Hedera helix) and quackgrass (*Agropyron repens*) are well established in this association and threaten to take over the native vegetation without control efforts.



# *Pseudotsuga menziesii - Arbutus menziesii / Gaultheria shallon* forest (PSME-ARME/GASH)

This association only occurs within Dash Point State Park, where it exists in some small localized patches mixed in with the more dominant plant associations, typically on or near a ridgeline. The distribution of this forest type may have been greater within what is now the park's boundaries prelogging. The presence of exotic species within patches of this association are reduced compared to the surrounding plant association types.



## Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon - Holodiscus discolor forest (PSME-TSHE/GASH-HODI)

This association only occurs within a small region of Dash Point State Park. The distribution of this forest type may have been greater within what is now the park's boundaries pre-logging. The presence of exotic species within patches of this association are reduced compared to the surrounding plant association types.



### Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon - Mahonia nervosa forest (PSME-TSHE/GASH-MANE2)

This association only occurs within a small hilly region in the southwest corner of Dash Point State Park. The distribution of this forest type may have been greater within what is now the park's boundaries pre-logging. The presence of exotic species within patches of this association are reduced compared to the surrounding plant association types.



## *Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon / Polystichum munitum* forest (PSME-TSHE/GASH/POMU)

This is a dominant association in Dash Point State Park. It also occurs in parts of Saltwater State Park on flatter areas above the ravine, which encompasses most of the park. The conditions of this plant association vary throughout each park. In some places it is relatively free of exotic plants, but in other places significant infestations of English ivy (*Hedera helix*) exist. English holly (*Ilex aquifolium*) is a common exotic shrub found throughout this plant association in each park as well.



### Pseudotsuga menziesii - Tsuga heterophylla / Holodiscus discolor / Polystichum munitum forest (PSME-TSHE/HODI/POMU)

This association occurs in one small patch near the waterfront of Saltwater State Park. It occurs on the north – south ridgeline beneath the ranger's station. This patch is experiencing large infestations of exotic species, including English ivy, English holly, and scotchbroom (*Cytisus scoparius*).



### Pseudotsuga menziesii - Tsuga heterophylla / Mahonia nervosa / Polystichum munitum forest (PSME-TSHE/MANE2/POMU)

This association occurs in Saltwater State Park. It occurs in patches interspersed with the PSME/TSHE/GASH/POMU association, which occurs only along the flatter areas above the large ravine encompassing most of the park. The same exotic plants found in PSME/TSHE/GASH/POMU are found in this association as well.



### *Pyrus fusca* cover type (PYFU c.t.)

PYFU c.t. is a wetland cover type found in Dash Point State Park. There is a nearly 100% shrub canopy cover of Pacific crabapple (*Pyrus fusca*) over highly saturated soils. There is a seasonal presence of standing water throughout the wetland.



## *Tsuga heterophylla - Pseudotsuga menziesii / Polystichum munitum - Dryopteris expansa* forest (TSHE-PSME/POMU/DREX2)

This association occurs in both Dash Point and Saltwater State Parks. In most areas where this association occurs in both parks, TSHE-PSME/POMU-DREX2 is sporadically mixed in with the ALRU2/POMU association, and is generally in the earlier phases of forest succession where exotic plants have become successfully established. There is one location in Saltwater State Park, however, where a small patch of this association exists with some big old conifer trees and a mostly native plant understory. This is one of the most exotic species free sections of the entire park.



## **Rare Plant Surveys**

### Methods

We visited Dash Point and Saltwater State Parks multiple times during the 2006 field season to conduct rare plant surveys. We used the Washington Department of Natural Resources Natural Heritage Program's (DNR NHP) rare plant list to determine the conservation status of vascular plants encountered in the field. When a plant from the DNR NHP list was located, we used the standard DNR NHP rare plant sighting form to complete field descriptions for the observation.

Specific dates of field surveys for each park can be found in Appendix A of this report. During the field surveys, we were equipped with reference literature, rare plant lists for the area, maps showing rare plant locations from previous surveys, and a portable plant identification lab. We looked for rare plants in habitats previously identified as being likely occurrence sites. So as not to miss a rare plant, all vascular plant species encountered during the inventory were identified on site, at base camp in the portable laboratory, or back at our office.

Survey routes were determined based on the desire to efficiently cover a large proportion of the park's area throughout the field season. We surveyed habitats of the park where we felt rare plants were more likely to occur more intensively. Survey routes for the rare plant inventory and rare plant locations were recorded either by hand, on a hardcopy topographic map, or as GPS waypoints and trackpoints, all of which were later compiled into a single GIS data layer for each park (Figures 1 and 2).

### Results

#### Rare Plants

Previous to Pacific Biodiversity Institute's 2006 surveys, no state or federally listed vascular plants had been documented within Dash Point or Saltwater State Parks. Our 2006 project did not locate any new populations of rare plants.

#### Vascular Plant List for Dash Point State Park

A total of 131 vascular plant species were identified during the 2006 surveys at Dash Point State Park. Of these, 47 of the plant species are non-native, accounting for 36% of the total.

#### Key to Vascular Plant Species List

"Code": Four-letter plant code as shown on the USDA PLANTS database.

- "Alien?": species that are not native to the park are indicated with an "a"
- "Common Name / Accepted Synonym": The species list uses Hitchcock and Cronquist, *Flora of the Pacific Northwest* as the taxonomic authority, as this is still the standard reference for our area. Updated nomenclature or general common names are shown in this column when they exist.

Num	Code	Scientific Name	Common Name/Accepted Synonym	Family	Alien?
1	ACCI	Acer circinatum Pursh	vine maple	Aceraceae	
2	ACMA3	Acer macrophyllum Pursh	bigleaf maple	Aceraceae	
3	ACTR	Achlys triphylla (Sm.) DC.	sweet after death	Berberidaceae	
4	ADAL	Adiantum aleuticum (Rupr.) Paris	Aleutian maidenhair	Pteridaceae	
5	AEHI	Aesculus hippocastanum	horse chestnut	Hippocastanaceae	а
6	AGAL3	Agrostis alba auct. non L. [misapplied]	>>Agrostis gigantea	Poaceae	а
7	AICA	Aira caryophyllea L.	silver hairgrass	Poaceae	а
8	ALRU2	Alnus rubra Bong.	red alder	Betulaceae	
9	ARME	Arbutus menziesii Pursh	madrone	Ericaceae	
10	ATFI	Athyrium filix-femina (L.) Roth	common ladyfern	Dryopteridaceae	
11	BEPE2	Bellis perennis L.	lawn daisy	Asteraceae	а
12	BRPA3	Bromus pacificus Shear	Pacific brome	Poaceae	
13	BRVU	Bromus vulgaris (Hook.) Shear	Columbia brome	Poaceae	
14	BUDA2	Buddleja davidii Franch.	orange eye butterflybush	Buddlejaceae	а
		Cardamine occidentalis (S. Wats. ex B.L.			
15	CAOC	Robins.) T.J. Howell	big western bittercress	Brassicaceae	
16	CAOL	Cardamine oligosperma Nutt.	little western bittercress	Brassicaceae	
17	CADE9	Carex deweyana Schwein.	Dewey sedge	Cyperaceae	
18	CAOB3	Carex obnupta Bailey	slough sedge	Cyperaceae	
19	CEGL2	Cerastium glomeratum Thuill.	sticky chickweed	Caryophyllaceae	а
20	CHAL7	Chenopodium album L.	lambsquarters	Chenopodiaceae	
21	CIAL	Circaea alpina L.	small enchanter's nightshade	Onagraceae	
22	COAR4	Convolvulus arvensis L.	field bindweed	Convolvulaceae	а
23	COST4	Cornus stolonifera Michx.	>>Cornus sericea ssp. sericea	Cornaceae	
24	COCO6	Corylus cornuta Marsh.	California hazelnut	Betulaceae	
25	CRMO3	Crataegus monogyna Jacq.	oneseed hawthorn	Rosaceae	а
26	DIPU	Digitalis purpurea L.	purple foxglove	Scrophulariaceae	а
27	DREX2	Dryopteris expansa (K. Presl) Fraser- Jenkins & Jermy	spreading woodfern	Dryopteridaceae	
28	ELGL	Elymus glaucus Buckl.	blue wildrye	Poaceae	
29	ELMO9	Elymus mollis Trin.	>>Leymus mollis ssp. mollis	Poaceae	
30	EPAN2	Epilobium angustifolium L.	>>Chamerion angustifolium ssp. angustifolium	Onagraceae	
		Epilobium ciliatum Raf. ssp. watsonii			
31	EPCIW	(Barbey) Hoch & Raven	fringed willowherb	Onagraceae	
32	EQAR	Equisetum arvense L.	field horsetail	Equisetaceae	
33	FEAR3	Festuca arundinacea Schreb.	>>Schedonorus phoenix	Poaceae	а
34	GAAP2	Galium aparine L.	stickywilly	Rubiaceae	а
35	GATR3	Galium triflorum Michx.	fragrant bedstraw	Rubiaceae	
36	GASH	Gaultheria shallon Pursh	salal	Ericaceae	
37	GEDI	Geranium dissectum L.	cutleaf geranium	Geraniaceae	а
38	GERO	Geranium robertianum L.	Robert geranium	Geraniaceae	а
39	GEMA4	Geum macrophyllum Willd.	largeleaf avens	Rosaceae	
40	GNPU2	Gnaphalium purpureum L.	>>Gamochaeta purpurea	Asteraceae	
41	HEHE	Hedera helix L.	English ivy	Araliaceae	а
42	HOLA	Holcus lanatus L.	common velvetgrass	Poaceae	а
43	HODI	Holodiscus discolor (Pursh) Maxim.	Indian plum	Rosaceae	
44	HYHI5	Hyacinthoides hispanica (P. Mill.) Rothm.	Hispanic hyacinthoides	Liliaceae	а
45	HYRA3	Hypochaeris radicata L.	hairy cat's ear	Asteraceae	а
46	ILAQ80	Ilex aquifolium L.	English holly	Aquifoliaceae	а
47	JUEF	Juncus effusus L.	common rush	Juncaceae	

48	JUTE	Juncus tenuis Willd.	poverty rush	Juncaceae	
49	LAMU	Lactuca muralis (L.) Fresen.	>>Mycelis muralis	Asteraceae	а
50	LAPU2	Lamium purpureum L.	purple deadnettle	Lamiaceae	
51	LACO3	Lapsana communis L.	common nipplewort	Asteraceae	а
52	LAJA	Lathyrus japonicus Willd.	beach pea	Fabaceae	
53	LEMI3	Lemna minor L.	common duckweed	Lemnaceae	
54	LOPE	Lolium perenne L.	perennial ryegrass	Poaceae	а
55	LOCI3	Lonicera ciliosa (Pursh) Poir. ex DC.	orange honeysuckle	Caprifoliaceae	
56	LOHI2	Lonicera hispidula (Lindl.) Dougl. ex Torr. & Gray	pink honeysuckle	Caprifoliaceae	
57	LUCA*	Luzula campestris (L.) DC.	field woodrush	Juncaceae	
58	LYAM3	Lysichiton americanus Hultén & St. John	American skunkcabbage	Araceae	
59	MANE2	Mahonia nervosa (Pursh) Nutt.	Cascade barberry	Berberidaceae	
60	MADI	Maianthemum dilatatum (Wood) A. Nels. & J.F. Macbr.	false lily of the valley	Liliaceae	
61	MALUS	Malus P. Mill.	apple	Rosaceae	а
62	MAMA11	Matricaria matricarioides auct. non (Less.) Porter [misapplied]	>>Matricaria discoidea	Asteraceae	а
63	MELU	Medicago lupulina L.	black medick	Fabaceae	а
64	MOSI2	Montia sibirica (L.) T.J. Howell	>>Claytonia sibirica var. sibirica	Portulacaceae	
65	NEPA	Nemophila parviflora Dougl. ex Benth.	smallflower nemophila	Hydrophyllaceae	
		Oemleria cerasiformis (Torr. & Gray ex			
66	OECE	Hook. & Arn.) Landon	Indian plum	Rosaceae	
67	OESA	Oenanthe sarmentosa K. Presl ex DC.	water parsely	Apiaceae	
68	OPHO	Oplopanax horridus Miq.	devilsclub	Araliaceae	
69	OSCH	Osmorhiza chilensis Hook. & Arn.	>>Osmorhiza berteroi	Apiaceae	
70	PHAR3	Phalaris arundinacea L.	reed canarygrass	Poaceae	а
71	POAN	Poa annua L.	annual bluegrass	Poaceae	а
72	POPR	Poa pratensis L.	Kentucky bluegrass	Poaceae	а
73	POSA4	Polygonum sachalinense F. Schmidt ex Maxim.	giant knotweed	Polygonaceae	а
74	POGL8	Polypodium glycyrrhiza D.C. Eat.	licorice fern	Polypodiaceae	
75	POMU	Polystichum munitum (Kaulfuss) K. Presl	swordfern	Polypodiaceae	
76	POBAT	Populus balsamifera L. ssp. trichocarpa (Torr. & Gray ex Hook.) Brayshaw	black cottonwood	Salicaceae	
77	PRFM	Prunus emarginata (Dougl. ex Hook.) D. Dietr	bitter cherry	Rosaceae	
78	PRUNU	Prunus I	plum	Rosaceae	а
79	PRI A5	Prunus laurocerasus l	cherry laurel	Rosaceae	a
80	PSME	Pseudotsuga menziesii (Mirbel) Franco	Douglas-fir	Pinaceae	ŭ
81	PTAQ	Pteridium aquilinum (L.) Kuhn	bracken fern	Dennstaedtiaceae	
82	PUPA3	Puccinellia pauciflora (J. Presl) Munz	>>Torrevochloa pallida var pauciflora	Poaceae	
83	PYFU	Pyrus fusca Raf.	>>Malus fusca	Rosaceae	
84	RARE3	Banunculus repens l	creeping buttercup	Ranunculaceae	а
85	RHPU	Rhamnus purshiana DC.	>>Frangula purshiana	Rhamnaceae	
86	RIBR	Ribes bracteosum Dougl. ex Hook.	stink currant	Grossulariaceae	
87	RIDI	Ribes divaricatum Dougl.	spreading gooseberry	Grossulariaceae	
88	RISA	Ribes sanguineum Pursh	redflower currant	Grossulariaceae	
89	ROGY	Rosa gymnocarpa Nutt.	dwarf rose	Rosaceae	
90	RONU	Rosa nutkana K. Presl	Nootka rose	Asteraceae	
91	RUDI2	Rubus discolor Weihe & Nees	>>Rubus armeniacus	Rosaceae	а
92	RULA	Rubus laciniatus Willd.	cutleaf blackberrv	Rosaceae	а
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93	RULE	Rubus leucodermis Dougl. ex Torr. & Grav	whitebark raspberry	Rosaceae	

94	RUPA	Rubus parviflorus Nutt.	thimbleberry	Rosaceae	
95	RUSP	Rubus spectabilis Pursh	salmonberry	Rosaceae	
96	RUUR	Rubus ursinus Cham. & Schlecht.	California blackberry	Rosaceae	
97	RUAC3	Rumex acetosella L.	common sheep sorrel	Polygonaceae	а
98	RUOB	Rumex obtusifolius L.	bitter dock	Polygonaceae	а
99	SALA5	Salix lasiandra Benth.	>>Salix lucida ssp. lasiandra	Salicaceae	
100	SASI2	Salix sitchensis Sanson ex Bong.	Sitka willow	Salicaceae	
101	SARA2	Sambucus racemosa L.	red elderberry	Caprifoliaceae	
102	SEAC	Sedum acre L.	goldmoss stonecrop	Crassulaceae	
400			>>Maianthemum racemosum ssp.		
103	SMRA*	Smilacina racemosa (L) Desf.	amplexicaule	Liliaceae	
104	SODU	Solanum dulcamara L.	climbing nightshade	Solanaceae	а
105	SOOL	Sonchus oleraceus L.	common sowthistle	Asteraceae	а
106	SOAU	Sorbus aucuparia L.	European mountain ash	Rosaceae	а
107	SPDO	Spiraea douglasii Hook.	rose spirea	Rosaceae	
108	STCO14	Stachys cooleyae Heller	>>Stachys chamissonis var. cooleyae	Lamiaceae	
109	STME2	Stellaria media (L.) Vill.	common chickweed	Caryophyllaceae	а
110	STSI2	Stellaria simcoei (T.J. Howell) C.L. Hitchc.	>>Stellaria calycantha	Caryophyllaceae	
111	SYAL	Symphoricarpos albus (L.) Blake	common snowberry	Caprifoliaceae	
112	SYOF	Symphytum officinale L.	common comfrey	Boraginaceae	а
113	TAOF	Taraxacum officinale G.H. Weber ex Wiggers	dandelion	Asteraceae	а
114	TEGR2	Tellima grandiflora (Pursh) Dougl. ex Lindl.	bigflower tellima	Saxifragaceae	
115	THPL	Thuja plicata Donn ex D. Don	western red cedar	Cupressaceae	
116	TITR	Tiarella trifoliata L.	threeleaf foamflower	Saxifragaceae	
117	TOME	Tolmiea menziesii (Pursh) Torr. & Gray	youth on age	Saxifragaceae	
118	TRLA6	Trientalis latifolia Hook.	>>Trientalis borealis ssp. latifolia	Primulaceae	
119	TRFR2	Trifolium fragiferum L.	strawberry clover	Fabaceae	
120	TRPR2	Trifolium pratense L.	red clover	Fabaceae	а
121	TRRE3	Trifolium repens L.	white clover	Fabaceae	а
122	TROV2	Trillium ovatum Pursh	Pacific trillium	Liliaceae	
123	TSHE	Tsuga heterophylla (Raf.) Sarg.	western hemlock	Pinaceae	
124	URDI	Urtica dioica L.	nettle	Urticaceae	
125	VAOV2	Vaccinium ovatum Pursh	California huckleberry	Ericaceae	
126	VAPA	Vaccinium parvifolium Sm.	red huckleberry	Ericaceae	
127	VEAM2	Veronica americana Schwein, ex Benth	American speedwell	Scrophulariaceae	
128	VEAR	Veronica arvensis L.	corn speedwell	Scrophulariaceae	а
129	VEHE2	Veronica bederifolia I	ivvleaf speedwell	Scrophulariaceae	a
130				Seroprialanaoodo	~ ~
100		Vinca maior I	bigleaf periwinkle	Apocynaceae	а

### Vascular Plant List for Saltwater State Park

A total of 127 vascular plant species were identified during the 2006 surveys at Saltwater State Park. Of these, 52 of the plant species are non-native, accounting for 41% of the total.

Num	Code	Scientific Name	Common Name/Accepted Synonym	Family	Alien?
1	ABGR	Abies grandis (Dougl. ex D. Don) Lindl.	grand fir	Pinaceae	
2	ACCI	Acer circinatum Pursh	vine maple	Aceraceae	
3	ACMA3	Acer macrophyllum Pursh	bigleaf maple	Aceraceae	
4	ADBI	Adenocaulon bicolor Hook.	pathfinder	Asteraceae	
5	ADAL	Adiantum aleuticum (Rupr.) Paris	Aleutian maidenhair	Pteridaceae	
6	AEHI	Aesculus hippocastanum	horse chestnut	Hippocastanaceae	а
7	AGAL3	Agrostis alba auct. non L. [misapplied]	>>Agrostis gigantea	Poaceae	а
8	ALRU2	Alnus rubra Bong.	red alder	Betulaceae	
9	AMCH4	Ambrosia chamissonis (Less.) Greene	silver burr ragweed	Asteraceae	
10	ARME	Arbutus menziesii Pursh	madrone	Ericaceae	
11	ARSU4	Artemisia suksdorfii Piper	coastal wormwood	Asteraceae	
12	ARSY	Aruncus sylvester Kostel. ex Maxim.	>>Aruncus dioicus	Rosaceae	
13	ATFI	Athyrium filix-femina (L.) Roth	common ladyfern	Dryopteridaceae	
14	BEPE2	Bellis perennis L.	lawn daisy	Asteraceae	а
15	BRPA3	Bromus pacificus Shear	Pacific brome	Poaceae	
16	BRRI8	Bromus rigidus Roth	>>Bromus diandrus ssp. rigidus	Poaceae	а
17	BRVU	Bromus vulgaris (Hook.) Shear	Columbia brome	Poaceae	
		Cardamine occidentalis (S. Wats. ex B.L.			
18	CAOC	Robins.) T.J. Howell	big western bittercress	Brassicaceae	
19	CAHE7	Carex hendersonii Bailey	Henderson's sedge	Cyperaceae	
20	CHAL7	Chenopodium album L.	lambsquarters	Chenopodiaceae	
21	CILA2	Cinna latifolia (Trev. ex Goepp.) Griseb.	drooping woodreed	Poaceae	
22	CIAL	Circaea alpina L.	small enchanter's nightshade	Onagraceae	
23	CIAR4	Cirsium arvense (L.) Scop.	Canada thistle	Asteraceae	а
24	COAR4	Convolvulus arvensis L.	field bindweed	Convolvulaceae	а
25	COST4	Cornus stolonifera Michx.	>>Cornus sericea ssp. sericea	Cornaceae	
26	COCO6	Corylus cornuta Marsh.	California hazelnut	Betulaceae	
27	COTON	Cotoneaster Medik.	cotoneaster	Rosaceae	а
28	CRMO3	Crataegus monogyna Jacq.	oneseed hawthorn	Rosaceae	а
29	CYMU	Cymbalaria muralis P.G. Gaertn., B. Mey. &	Kenilworth iw	Scrophulariaceae	2
30		Cytique scoparius (L.) Link	scotchbroom	Fabaceae	a 2
31		Dactylis domerata I	orchardgrass	Poaceae	2
32		Draha verna l	spring draba	Brassicaceae	a 2
02	DITVEZ	Dryopteris expansa (K. Presl) Fraser-Jenkins &		Diassicaceae	<u>а</u>
33	DREX2	Jermy	spreading woodfern	Dryopteridaceae	ļ
34	ELGL	Elymus glaucus Buckl.	blue wildrye	Poaceae	ļ
35	ELMO9	Elymus mollis Trin.	>>Leymus mollis ssp. mollis	Poaceae	
36	ELRE4	Elymus repens (L.) Gould	quackgrass	Poaceae	а
37		Epilobium ciliatum Raf. ssp. watsonii (Barbey)	fringed willowberb	Operances	
30					
30					-
10	GAAP2		SlickyWilly	Rublaceae	a
40	GASH			Ericaceae	
41	GERO		Robert geranium	Geraniaceae	а
42	GEMA4	Geum macrophyllum Willd.	largeleat avens	Rosaceae	I !

I44         HOLA         Holas landus L         common velvegrass         Peaceae         a           45         HOD         Hodesus landus L         Second ("purity Maxim.         >>Hordeum muritum ssp. leporinum         Rosacoae         a           46         HOLE         Hordeum leporinum Link         >>Hordeum muritum ssp. leporinum         Peaceae         a           47         HYRA         Hyrate Munitum Link         Herate Maxim Maxim         Herate Maxim Maxim         Peaceae         a           48         HYRA         Hyrate Munitum Link         English Nelly         Asteracoae         a           49         HYRA         Hyrate Munitum L         English Nelly         Adjuttacoaea         a           51         JuEr         Juenus effusus L         common nuh         Juenusceae         a           52         LABI         Lactuca biennis (Moonch) Fem.         tall blue letituco         Asteracoaea         a           53         LAPU         Lathyrus igonicus Wild         beach pea         Fabacaea         a           54         LAAI         Ladyrus igonicus Wild         beach pea         Fabacaea         a           55         LAIA         Laftyrus igonicus Wild         beach pea         Fabacaea         a	43	HEHE	Hedera helix L.	English ivy	Araliaceae	а
45     HODI     Hodisou discout (Eurit) Maxim.     Indian plum     Rosceae       47     HYHIS     Hydcriftoldes Inspanica (P. Mill ) Rothm.     Hispanic hydcriftoldes     Lilaceae     a       48     HYTE     Hydcriftoldes Inspanica (P. Mill ) Rothm.     Hispanic hydcriftoldes     Lilaceae     a       49     HYRAS     Hydcriftoldes Inspanica (P. Mill ) Rothm.     Hispanic hydcriftoldes     Lilaceae     a       49     HYRAS     Hydcriftoldes Inspanica (P. Mill ) Rothm.     Hispanic hydcriftoldes     Asteraceae     a       50     LLAQ80     Iters audiofium L.     English holy     Acturaceae     a       51     JUEF     Junca efficies L.     purple deadreftie     Lamicaee     a       52     LABI     Lactuca biernis (Moench) Fern.     tall blue leftuca     Asteraceae     a       53     LAPU2     Lanitum purpureum L.     purple deadreftie     Lamicaee     a       54     LAC30     Lagsban communis L.     bonnon nipplewort     Asteraceae     a       55     LAAL     Lapticum latifichum L.     boach pea     Fabaceae     a       56     LALA     Lapticum latifichum L.     boach pea     Fabaceae     a       57     LOPE     Lakitum prevente     preternial rysgrass     Poaceaee     a <td>44</td> <td>HOLA</td> <td>Holcus lanatus L.</td> <td>common velvetgrass</td> <td>Poaceae</td> <td>а</td>	44	HOLA	Holcus lanatus L.	common velvetgrass	Poaceae	а
46       HOLE       Hordeum legorium Link       >>Hordeum murium sep. legorium       Pacelea       a         47       HYH16       Hydrophylaceae       Lilaceae       a         48       HYTR3       Hydrophylaceae       Hydrophylaceae       a         49       HYRA3       Hydrophylaceae       a       Asteraceae       a         50       LLAQB       Lexaudolum L       English holy       Aguroliceae       a         51       JUEF       Junca effusus L       common rush       Juncaceae       a         51       LAQL       Lanium purpureun L       pipe deadnetib       Lamiaceae       a         53       LAPU2       Lanium purpureun L       common rughewort       Asteraceae       a         54       LACG3       Laguam acommunis L       common rughewort       Asteraceae       a         55       LALA       Laguitum latricum L       broadeswd pepperveed       Brassicaceae       a         56       LAU2       Laguitum latricum NL       broadeswd pepperveed       Brassicaceae       a         56       LUA1       Lunaria annua L       annual honesty       Brassicaceae       a         57       LOPE       Luavia compestis (L) DC.       field voodnish	45	HODI	Holodiscus discolor (Pursh) Maxim.	Indian plum	Rosaceae	
147     HYH15     Hydrophulocies hispanica (P, Mill, Rotm.     Hispanic hydrophulocies     Lilaceae     a       48     HYTRA3     Hydrophulom tempes Heller     Poric waterisaf     Hydrophyllocae     a       49     HYRA3     Hydrophyllocae     a     a     Asteraciae     a       50     LAQB0     Lex audvolum L.     English holy     Agutoraciae     a       51     JLEFL     Lamicus purpureun L.     pript deschretite     Lamicus caee     a       51     LAQU     Lamicus purpureun L.     common nipplewort     Asteraceae     a       55     LAA     Larytrus japonicus Wild.     beach pea     Fabaceae     a       56     LEIAZ     Lopicium latitalu (Lud).     beach pea     Fabaceae     a       56     LOHZ     Captioniza Wild.     beach pea     Captionizaee     a       57     LOPE     Lolium perenne L.     perennial regrass     Poaceae     a       58     LOHZ     Gray     anna L.     anna honesity     Brassicaceae       59     LAN     Luraki camusatis (L) C.     field woodrush     Juncaceae       61     LYAM3     Lysichton americanus Hulfe & St. John     Annecian skunkcabbage     Araceae       62     MAN2     Madria mericala Gravith (Wood) A Ne	46	HOLE	Hordeum leporinum Link	>>Hordeum murinum ssp. leporinum	Poaceae	а
48     HYTE     Hydrophylan tenujoes Heller     Pacific waterleaf     Hydrophylaceae       49     HYRA3     Hybochemis radicata L.     hairy cat's ear     Asteraceae     a       50     ILAG80     flex aguifolium L.     English holy     Aguifoliaceae     a       51     JUEF     Juncus effusus L.     common rush     Juncaceaee     a       52     LAB1     Labcus effusus L.     common rush     Asteraceae     a       53     LAAL     Labtyrus igonicus Wild.     beach pea     Fabaceae     a       55     LAA     Labtyrus igonicus Wild.     beach pea     Fabaceae     a       56     LEA2     Leipidum latifolum L.     broadlewed pepperwed     Brasicaeee     a       56     LOH     Low permies L.     annual honesty     Brasicaeae     a       57     LOPE     Low Luzula campestis (L.) OC.     feld woodnush     Juncaceae     a       61     LVAM3     Lysichtion anervoas (Pursh) Nutt.     Cascade barberry     Bertendaceae       62     MANE2     Mahoria nervoas (Pursh) Nutt.     Cascade barberry     Bertendaceae       63     MADI     Machar.     Aderaceae     a       64     MAPA5     Mava partificat Low Askin.     Asteraceae     a	47	HYHI5	Hyacinthoides hispanica (P. Mill.) Rothm.	Hispanic hyacinthoides	Liliaceae	а
49       HYRA3       Hypochemis madcata L.       hairy cafe ser       Asperiodes       a         50       ILAQ80       Ilex aquifolium L.       English holly       Aquifoliaceae       a         51       JUEF       Juncus ofisuas L.       common rush       Juncaceae       a         51       LABUL       Lambuca biennis (Moench) Fern.       fat blue lettuce       Asteraceae       a         53       LAPUL       Lamburg uprevemt.       purple deadnettle       Lamiaceae       a         54       LAC03       Lapsana communis L.       common nipplewort       Asteraceae       a         55       LAAL       Laptium latifolium L.       broadleaved popperweed       Brassicaceae       a         56       LOPE       Lolium perenne L.       peromial regrass       Poaceae       a         58       LOH12       Gray       pirk honeysuckle       Caprificiaceae       a         51       LAVAL       Luzula campestis (L) D/C.       field woodrush       Juncaceae       a         51       MADI       Matorian matericanuke Ast. St. John       American stunkcabbage       Araceae       a         53       MADI       Matorian famicronides auct. non (Less.)       Asteraceae       a       a	48	HYTE	Hydrophyllum tenuipes Heller	Pacific waterleaf	Hydrophyllaceae	
50         LLAQBD         litex aquifolium L.         English holy         Aquifoliaceae         a           51         JUEFF         Juncas effusus L.         common rush         Juncaceae         a           52         LABL         Lactuce biennis (Mench) Fern.         fal blue letuce         Asteraceae         a           53         LAPU2         Lamium purpureum L.         purple deadnettie         Lamineceae         a           54         LACOS         Lapsan communis L.         common nipplewort         Asteraceae         a           56         LELA2         Lapitum latificatum L.         broadieaved pepperweed         Brassicaceae         a           57         LOPE         Lolium permene L.         perinial regarss         Poaceae         a           58         LOHI2         Gray         Capifoliaceae         a         anual honesity         Brassicaceae         a           61         LUXA         Luzua campestis (L.) DC.         field wodrush         Juncaceae         a           62         MANE2         Materia maricania functiona & St. John         American skinkcabbage         Ancaceae         a           63         MAD         Matera amaricaniades auct non (Loss.)         Asteraceae         a         b	49	HYRA3	Hypochaeris radicata L.	hairy cat's ear	Asteraceae	а
151     JUEF     Juncaceae       52     LABI     Lactuca bienis (Moench) Fern.     tall blue lettuce     Asteraceae     a       53     LAPU2     Lamium pupureum L.     purple deadnettie     Lamiuscee       54     LACO3     Lapsana communis L.     common nipplewort     Asteraceae     a       55     LAJA     Lathrus ignonicus Wild.     beach pea     Fabaceae     a       56     LELA2     Lepidium latifolium L.     broadleaved pepperweed     Brassicaceae     a       57     LOPE     Lolum perenne L.     pink honeysuckie     Capifoliaceae     a       57     LOPE     Lunara annua L.     annual honeysuckie     Capifoliaceae     a       58     LOH2     Gray     Brassicaceae     a     a       60     LUCA*     Lunata annua L.     annual honeysuckie     Capifoliaceae     a       61     LVAM3     Lysichton mericanus Hultén & St.John     American skurkcabbage     Araeceae     a       61     MAD1     Matricaria antercanides auct. non (Les.)     Fabaceae     a     a       64     MAP25     Matricaria antercanides auct. non (Les.)     >>Matricaria antercanides auct. non (Les.)     >>Matricaria antercanides auct. non (Les.)       65     MAD1     Matricaria antercanides auct. non (Les.)	50	ILAQ80	llex aquifolium L.	English holly	Aquifoliaceae	а
152     LABI     Lactuca biennis (Moench) Fern.     Iab labe lettuce     Asteraceae     a       153     LAPU2     Lamium purpureun L.     purple deadnettite     Lamiaceae       154     LAC03     Lapsana communis L.     common inplewort     Asteraceae     a       155     LALA     Latyrus isponicus Wild.     beach pea     Fabaceae     a       156     LELA2     Lepidium latifolium L.     broadleaved pepperweed     Brassicaceae     a       158     LOHI2     Gray     pirk honeysuckle     Capritoliaceae     a       159     LUAN     Lunaria annua L.     annual honesty     Brassicaceae     a       161     LVAM3     Lysichton americanus Hultén & St. John     American skunkcabbage     Araceae       161     LVAM3     Lysichton americanus Hultén & St. John     American skunkcabbage     Araceae       163     MADI     Maloin     Maloin     Cascade barberry     Berberidaceae       164     MAPCA     Makaprifora L.     cheeseweed mallow     Makaceae     a       164     MAPCA     Makaparifora L.     cheeseweed mallow     Makaceae     a       165     MAND     Matricaria matricariodes auct. non (Les.)     Side Markaparifora L.     cheeseweed mallow     Makaceae     a       164<	51	JUEF	Juncus effusus L.	common rush	Juncaceae	
153     LAPU2     Lamium purpureum L.     purple deadnettle     Lamiaceae       64     LACO3     Lapsana communis L.     common nipplewort     Asteraceae     a       65     LALA     Lathynus igponicus Wild.     beach pea     Febaccee     a       66     LELA2     Lepidum latfolum L.     broadleaved pepperwed     Brassicaceae     a       67     LOPE     Lolincera hispidula (Lindi.) Dougi. ex Torr. &     preminal ryegrass     Paceaee     a       68     LOHL2     Gray     prink honeysuckle     Caprifilaceae     a       69     LUCA*     Luzula campestris (L.) DC.     field woodnush     Juncaceae     a       61     LYAMS     Lysichtion americanus Hulfen & St. John     American skunkcabbage     Araceae       61     MANDI     Macator     Casade barberry     Berberidaceae       63     MADI     Mactoria     Macatoria     Marceae     a       64     MAPA5     Makatoria     Marceae     a       65     MAMA1     Mactoria     Marceae     a       66     MAH     Mactoria     Marceae     a       67     MADI     Mactoria     Sateraceae     a       68     MAPA5     Makatoria     Sateraceae     a <t< td=""><td>52</td><td>LABI</td><td>Lactuca biennis (Moench) Fern.</td><td>tall blue lettuce</td><td>Asteraceae</td><td>а</td></t<>	52	LABI	Lactuca biennis (Moench) Fern.	tall blue lettuce	Asteraceae	а
54         LACO3         Lagsana communis L.         common nipplewort         Astraceae         a           55         LAJA         Lathyrus japonicus Willd.         beach pea         Fabaceae         a           56         LEL2         Leptidum tatfolum L.         broadleaved pepperweed         Brassicaceae         a           57         LOPE         Loingers inspirational (Ling) Dougl. ex Torr. & prennial ryegrass         Poaceae         a           58         LUAL         Luzula campestris (L.) DC.         field woodrush         Juncaceae         a           59         LUAN         Luzula campestris (L.) DC.         field woodrush         Juncaceae         a           61         LUCA*         Luzula campestris (L.) DC.         field woodrush         Juncaceae         a           63         MADI         Machinemm dilatatum (Wood) A. Nels. & J.F.         false IIIy of the valley         Lilaceae         a           64         MAPA5         Malva parvifora L.         cheeseweed mallow         Malvaceaee         a           65         MAMI         Porter Imspanied         >>Matricaria discoidea         Asteraceae         a           66         MEH         Medicago hapina C.         cheeseweed mallow         Malvaceaee         a	53	LAPU2	Lamium purpureum L.	purple deadnettle	Lamiaceae	
155     LAA     Lathyrus japonicus Wild.     beach pea     Fabaceae       56     LELA2     Lepidum latifolium L.     broadleaved pepperweed     Brassicaceae     a       57     LOPE     Lolium perenne L.     perennial ryegrass     Paceaeae     a       58     LOHLZ     Gray     pink honeysuckle     Caprifoliaceae     a       59     LUAN     Luraria annua L.     annual honesty     Brassicaceae     a       60     LUCA*     Luzal campestris (L.) DC.     field woodrush     Juncaceae       61     LYAM3     Lysichton americanus Hultén & St. John     American skunkcabbage     Araceaae       62     MANE2     Mahonia nervosa (Pursh) Nutt.     Cascade barberry     Berberidaceae       63     MADI     Matricaria matricario/des auct. non (Less.)     False lily of the valley     Liliaceae       64     MAPA5     Mahraga nutificaria (Lori Lori Lori Matricaria discoidea     Asteraceae     a       65     MAIA11     Porter (misappiled)     >>Matricaria discoidea     Asteraceae     a       66     MEH     Medicago lupulina L.     black medick     Fabaceae     a       67     MELU     Medicago lupulina L.     black medick     Fabaceae     a       68     MOFE3     Montia perfoliata (Don ex Wild.) T.J.	54	LACO3	Lapsana communis L.	common nipplewort	Asteraceae	а
56       LELA2       Lepidum latifolium L.       broadleaved peppreved       Brassicaceae       a         57       LOPE       Lolium perenne L.       perennial ryegrass       Poaceae       a         58       LOHIZ       Gray       Gray       Capifoliaceae       anual honesity       Brassicaceae       a         59       LUAN       Lunaria annua L.       annual honesity       Brassicaceae       a         61       LVAM3       Lysichton americanus Huitén & St. John       American skunkcabbage       Arnaceae         61       LVAM3       Lysichton americanus Huitén & St. John       Cascade barberry       Berberidaceae       a         63       MADI       Madrian nervosa (Pursh) Nut.       Cascade barberry       Berberidaceae       a         64       MAPE       Make parvifora L.       cheeseweed mallow       Malvaceae       a         65       MAMAI1       Porter (misapplied]       >>       Asteraceae       a         65       MAMAI1       Porter (misapplied]       >>       Caryophylicaceae       a         66       MCH10       Medicago logulina L.       black medick       Fabaceae       a         67       MELU       Medicago logulina L.       black medick       Fabaceae	55	LAJA	Lathyrus japonicus Willd.	beach pea	Fabaceae	
107         LoB         Lollum perenne L.         perennial ryegrass         Poaceae         a           58         LoHiz         Gray         pink honeysuckie         Capifoliaceae         -           59         LUAN         Lunaria annua L.         annual honesty         Brassicaceae         a           60         LUCA*         Luzula campestris (L.) DC.         field woodrush         Juncaceae         -           61         LYAM3         Lysichtion americanus Huffen & St. John         American skurkcabbage         Araceae         -           62         MANE2         Mahonia nervosa (Pursh) Nutt.         Cascade barberry         Berberidaceae         -           63         MADI         Matchr.         Makora         -         cheesewed mallow         Malvaceae         a           64         MAPA5         Makora         Asteraceae         a         -	56	LELA2	Lepidium latifolium L.	broadleaved pepperweed	Brassicaceae	а
Sb         LOHI2         Gray         pink honeysuckle         Capifoliaceae           59         LUAN         Luraria annua L.         annual honesty         Brassicaceae         a           60         LUCA*         Luzala campestris (L) DC.         field woodrush         Juncaceae         -           61         LYAM3         Lyakhonia mericanus Hultén & St. John         Americanus Hultén & St. John	57	LOPE	Lolium perenne L.	perennial ryegrass	Poaceae	а
Dot         Contact         Clayminication           200         LUAN         Lunaria annua L.         annual homesty         Brassicaceae         a           60         LUCA*         Luzula campestris (L) DC.         field woodrush         Juncaceae	58		Lonicera hispidula (Lindl.) Dougl. ex Torr. &	nink honovsucklo	Caprifoliacoao	
John Lower         Londra annuesty         Distribution         Distribution <thdistribution< th=""> <thdistribution< th=""></thdistribution<></thdistribution<>	59				Brassicaceae	2
Jobs         Lockal Campesini (L, DL)         Inter Modulation         John Structure           61         LYAM3         Lysichton americanus Hutten & St. John         American skunkcabbage         Araceae           62         MANE2         Mahonia nervosa (Pursh) Nutt.         Cascade barberry         Berberidaceae           63         MADI         Mainthemum dilatum (Wood) A. Nels. & J.F.         false lily of the valley         Liliaceae           64         MAPA5         Malva parviffora L.         cheeseweed mallow         Malvaceae         a           65         MAM11         Potter (misapplied)         >>Matricaria discoidea         Asteraceae         a           66         MCH1         Medicago lupulina L.         black medick         Fabaceae         a           67         MELU         Medicago lupulina L.         black medick         Fabaceae         a           68         MOPE3         Montia sibirica (L) T.J. Howell         >>Claytonia perfoliata sc         Caryophylaceae           69         MOSI2         Montia sibirica Car (Torr. & Gray ex Hook. &         Indian plum         Rosaceae         a           71         OESA         Oenanthe samentosa K. Presl ex DC.         water parsely         Apiaceae         Apiaceae           73         OSCH	60		Luzula campetris (L) DC	field woodrush	Juncaceae	a
01       ETABLE       Animetania Statisticacuoge       Anacceae         02       MANEZ       Malonia mervosa (Pursh) Nutt.       Cascade barberry       Berberidaceae         03       MAD       Malanthernum dilatatum (Wood) A. Nels. & J.F.       false lily of the valley       Liliaceae         04       MAPA5       Malva parviflora L.       cheeseweed mallow       Malvaceae       a         05       MAMA11       Porter (Inisapplied)       >>Matricaria discoidea       Asteraceae       a         05       MAMA11       Porter (Inisapplied)       >>Matricaria discoidea       Asteraceae       a         06       MELU       Medicago lupulina L.       >>Medicago polymorpha       Fabaceae       a         06       MOSi2       Montia perfoliata (Donn ex Wilid, ) T.J. Howell       >>Claytonia sibirica var. sibirica       Portulacaceae         07       OECA       Amno       Rosaceae       Indian plum       Rosaceae         11       OESA       Oenanthe samentosa K. Presl ex DC.       water parsely       Apiaceae       Apiaceae         12       OPHO       Oplopanax horridus Miq.       >>Osmontiza betreroi       Apiaceae       a         13       OSCH       Osmortiza chilensis Hook. & Am.       >>Osmontiza betreroi       Apiaceae <td< td=""><td>61</td><td></td><td>Lucichiton amoricanus Hultón &amp; St. John</td><td></td><td>Aracoao</td><td></td></td<>	61		Lucichiton amoricanus Hultón & St. John		Aracoao	
Operation         Operating and the set of th	62		Mahania nonyosa (Purch) Nutt		Rorboridação	
63       MADI       Macbr.       false lily of the valley       Liliaceae         64       MAPA5       Malva parvifiora L.       cheeseweed mallow       Malvaceae       a         65       MAM11       Porter [misapplied]       >>Matricaria discoidea       Asteraceae       a         66       MEHI       Medicago hispida Gaertn.       >>Medicago polymorpha       Fabaceae       a         67       MELU       Medicago hispida Gaertn.       >>Matricaria perfoliata (con ex Wild.) T.J. Howell       >>Claytonia perfoliata sp. perfoliata       Caryophyllaceae         68       MOPE3       Montia perfoliata (con ex Wild.) T.J. Howell       >>Claytonia sibirica var. sibirica       Portulacaceae         70       OECE       Ann.) Landon       Rosaceae       Indian plum       Rosaceae         71       OESA       Oenanthe sarmentosa K. Presl ex DC.       water parsely       Apiaceae       Apiaceae         72       OPHO       Oplopanax horridus Miq.       devisclub       Araliaceae       a       a         73       OSCH       Osmothiza chilensis Hook. & Arn.       >>Osmothiza betreroi       Apiaceae       a         74       PHAR3       Phalaria grundinacea L.       reed canarygrass       Poaceae       a         76       PLLA	02	WANEZ	Maianthemum dilatatum (Wood) A. Nels. & J.F.		Derbendaceae	
64         MAPA5         Malva parvifora L.         cheeseweed mallow         Malvaceae         a           65         MAMA11         Porter [misappiled]         >>Matricaria matricarioides auct. non (Less.)         >>Matricaria discoidea         Asteraceae         a           66         MEHI         Medicago lupulina L.         black medick         Fabaceae         a           67         MELU         Medicago lupulina L.         black medick         Fabaceae         a           68         MOPE3         Montia sibirica (L.) T.J. Howell         >>Claytonia perfoliata sp. perfoliata         Caryophyllaceae           69         MOSI2         Montia sibirica (L.) T.J. Howell         >>Claytonia sibirica var. sibirica         Portulacaceae           70         OECE         Am. Landon         Rosaceae         Indian plum         Rosaceae           71         OESA         Oenanthe samentosa K. Presi ex DC.         water parsely         Apiaceae           73         OSCH         Osmotniza chilensis Hook. & Arn.         >>Osmotniza chilensis Hook. & Arn.         >>Osmotniza chilensis Hook. & Arn.           74         PHAR3         Phalarago nancea L.         reed canarygrass         Poaceae         a           75         PLLA         Plantago nanjor L.         common plantain         Plantagi	63	MADI	Macbr.	false lily of the valley	Liliaceae	
Matricaria         Matricaria         Matricaria         Asteraceae         a           66         MEHI         Medicago hispida Gaertn.         >>Matricaria discoidea         Asteraceae         a           67         MELU         Medicago lupulina L.         black medick         Fabaceae         a           68         MOPE3         Montia perfoliata (Donn ex Willd.) T.J. Howell         >>Claytonia perfoliata ssp. perfoliata         Caryophyllaceae           69         MOSi2         Montia sibirica (L.) T.J. Howell         >>Claytonia sibirica var. sibirica         Portulacaceae           70         OECE         Arn.) Landon         Rosaceae         Indian plum         Rosaceae           71         OESA         Oenanthe sammentosa K. Presl ex DC.         water parsetly         Apliaceae           73         OSCH         Osmorhiza chilenisi Hook. & Arn.         >>Osmorhiza betreroi         Apliaceae           74         PHAR3         Phalaris arundinacea L.         reed canarygrass         Poaceae         a           75         PLLA         Plantago major L.         corrmon plantain         Plantaginaceae         a           77         POAV         Poa pratensis L.         Kentucky bluegrass         Poaceae         a           78         POPR <tp< td=""><td>64</td><td>MAPA5</td><td>Malva parviflora L.</td><td>cheeseweed mallow</td><td>Malvaceae</td><td>а</td></tp<>	64	MAPA5	Malva parviflora L.	cheeseweed mallow	Malvaceae	а
66         MEHI         Medicago hispida Gaertn.         >>Medicago polymorpha         Fabaceae         a           67         MELU         Medicago lupulina L.         black medick         Fabaceae         a           68         MOPE3         Montia perfoliata (Don ex Willd.) T.J. Howell         >>Claytonia perfoliata ssp. perfoliata         Caryophyllaceae           69         MOSI2         Montia sibirica (L.) T.J. Howell         >>Claytonia sibirica var. sibirica         Portulacaceae           70         OECE         Am.) Landon         Rosaceae         Indian plum         Rosaceae           71         OESA         Oenanthe sarmentosa K. Presl ex DC.         water parsely         Apiaceae         Apiaceae           73         OSCH         Osmorhiza chilensis Hook. & Arn.         >>Osmorhiza betteroi         Apiaceae         a           74         PHAR3         Phalaris arundinacea L.         reed canarygrass         Poaceae         a           75         PLLA         Plantago nanoor L.         common plantain         Plantaginaceae         a           77         POAN         Poa pratensis L.         common plantain         Plantaginaceae         a           78         POPR         Poa pratensis L.         kentucky bluegrass         Poaceae         a </td <td>65</td> <td>MAMA11</td> <td>Matricaria matricarioides auct. non (Less.) Porter [misapplied]</td> <td>&gt;&gt;Matricaria discoidea</td> <td>Asteraceae</td> <td>а</td>	65	MAMA11	Matricaria matricarioides auct. non (Less.) Porter [misapplied]	>>Matricaria discoidea	Asteraceae	а
67     MELU     Medicago lupulina L.     black medick     Fabaceae     a       68     MOPE3     Montia perfoliata (Donn ex Willd.) T.J. Howell     >>Claytonia perfoliata sp. perfoliata     Caryophyllaceae       69     MOSI2     Montia sibirica (L.) T.J. Howell     >>Claytonia perfoliata sp. perfoliata     Portulacaceae       70     OECE     Arn.) Landon     Indian plum     Rosaceae     Indian plum       71     OESA     Oenanthe sarmentosa K. Presl ex DC.     water parsely     Apiaceae     Apiaceae       71     OESA     Oenanthe sarmentosa K. Presl ex DC.     water parsely     Apiaceae     Indian plum     Rosaceae       72     OPHO     Oplopanax horridus Miq.     devilsclub     Araliaceae     Indian plum     Rosaceae     Indian plum     Rosaceae       73     OSCH     Osmorhiza chilensis Hook. & Arn.     >>Osmorhiza betreroi     Apiaceae     Indian plum     Poaceae     a       74     PHAR3     Phalaris arundinacea L.     reed canarygrass     Poaceae     a       75     PLLA     Plantago Ianceolata L.     annual bluegrass     Poaceae     a       77     POAN     Poa annua L.     annual bluegrass     Poaceae     a       80     PORL     Polypodium glycyrrhiza D.C. Eat.     licorice fern     Polypodiaceae <td>66</td> <td>MEHI</td> <td>Medicago hispida Gaertn.</td> <td>&gt;&gt;Medicago polymorpha</td> <td>Fabaceae</td> <td>а</td>	66	MEHI	Medicago hispida Gaertn.	>>Medicago polymorpha	Fabaceae	а
68         MOPE3         Montia perfoliata (Donn ex Willd.) T.J. Howell         >>Claytonia perfoliata ssp. perfoliata         Caryophyllaceae           69         MOSI2         Montia sibirica (L.) T.J. Howell         >>Claytonia sibirica var. sibirica         Portulacaceae           70         OECE         Am.) Landon         India plum         Rosaceae         India plum           71         OESA         Oenanthe sarmentosa K. Presl ex DC.         water parsely         Apiaceae           72         OPHO         Oplopanax horridus Miq.         devilsclub         Araliaceae           73         OSCH         Osmorhiza chilensis Hook, & Arn.         >>Osmorhiza berteroi         Apiaceae           74         PHAR3         Phalaris arundinacea L.         reed canarygrass         Poaceae         a           75         PLLA         Plantago major L.         common plantain         Plantaginaceae         7           76         PLMA2         Plantago major L.         common plantain         Plantaginaceae         a           77         POAN         Poa pratensis L.         Kentucky bluegrass         Poaceae         a           78         POPR         Poa pratensis L.         prostrate knotweed         Polygonaceae         a           80         POGL8         <	67	MELU	Medicago lupulina L.	black medick	Fabaceae	а
69       MOSI2       Montia sibirica (L.) T.J. Howell       >>Claytonia sibirica var. sibirica       Portulacaceae         70       OECE       Arn.) Landon       Indian plum       Rosaceae       Rosaceae         71       OESA       Oenanthe samentosa K. Presl ex DC.       water parsely       Apiaceae       Apiaceae         73       OSCH       Osmorhiza chilensis Hook. & Arn.       >>Osmorhiza betteroi       Apiaceae       a         74       PHAR3       Phalaris arundinacea L.       reed canarygrass       Poaceae       a         74       PHAR3       Phalaris gancolata L.       narrowleaf plantain       Plantaginaceae       a         75       PLLA       Plantago lanceolata L.       narrowleaf plantain       Plantaginaceae       a         76       PLMA2       Plantago major L.       common plantain       Plantaginaceae       a         77       POAN       Poa pratensis L.       kentucky bluegrass       Poaceae       a         79       POAV       Polygonum aviculare L.       prostrate knotweed       Polygonaceae       a         81       POMU       Polystichum munitum (Kaulfuss) K. Presl       swordfern       Polypodiaceae       a         82       POBAT       Gray ex Hook.) Brayshaw       black cottonwo	68	MOPE3	Montia perfoliata (Donn ex Willd.) T.J. Howell	>>Claytonia perfoliata ssp. perfoliata	Caryophyllaceae	
70         OECE         Oemleria cerasiformis (Torr. & Gray ex Hook. & Arn.) Landon         Indian plum         Rosaceae           71         OESA         Oenanthe sarmentosa K. Presl ex DC.         water parsely         Apiaceae           72         OPHO         Oplopanax horridus Miq.         devilsclub         Araliaceae           73         OSCH         Osmorhiza chilensis Hook. & Arn.         >>Osmorhiza berteroi         Apiaceae           74         PHAR3         Phalaris arundinacea L.         reed canarygrass         Poaceae         a           75         PLLA         Plantago lanceolata L.         narrowleaf plantain         Plantaginaceae         a           76         PLMA2         Plantago major L.         common plantain         Plantaginaceae         a           77         POAN         Poa paratensis L.         kentucky bluegrass         Poaceae         a           78         POPR         Poa pratensis L.         kentucky bluegrass         Poaceae         a           79         POAV         Polygonum aviculare L.         prostrate knotweed         Polygonaceae         a           80         POGL8         Polypodium glycyrrhiza D.C. Eat.         licorice fern         Polypodiaceae         a           81         POMU         Pol	69	MOSI2	Montia sibirica (L.) T.J. Howell	>>Claytonia sibirica var. sibirica	Portulacaceae	
71       OESA       Oenanthe sarmentosa K. Presl ex DC.       water parsely       Apiaceae         72       OPHO       Oplopanax horridus Miq.       devilsclub       Araliaceae         73       OSCH       Osmorhiza chilensis Hook. & Arn.       >>Osmorhiza berteroi       Apiaceae         74       PHAR3       Phalaris arundinacea L.       reed canarygrass       Poaceae       a         75       PLLA       Plantago najor L.       common plantain       Plantaginaceae       a         76       PLMA2       Plantago major L.       common plantain       Plantaginaceae       a         77       POAN       Poa annua L.       annual bluegrass       Poaceae       a         79       POAV       Polygonum aviculare L.       prostrate knotweed       Polygonaceae       a         80       POGL8       Polypodium glycyrrhiza D.C. Eat.       licorice ferm       Polypodiaceae       a         81       POMU       Polystichum munitum (Kaufuss) K. Presl       swordfern       Polypodiaceae       a         82       POBAT       Gray ex Hook.) Brayshaw       black cottonwood       Salicaceae       a         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84<	70	OECE	Oemleria cerasiformis (Torr. & Gray ex Hook. & Arn.) Landon	Indian plum	Rosaceae	
72       OPHO       Oplopanax horridus Miq.       devilsclub       Araliaceae         73       OSCH       Osmorhiza chilensis Hook. & Arn.       >>Osmorhiza betteroi       Apiaceae         74       PHAR3       Phalaris arundinacea L.       reed canarygrass       Poaceae       a         75       PLLA       Plantago lanceolata L.       narrowleaf plantain       Plantaginaceae       a         76       PLMA2       Plantago major L.       common plantain       Plantaginaceae       a         77       POAN       Poa annua L.       annual bluegrass       Poaceae       a         78       POPR       Poa pratensis L.       Kentucky bluegrass       Poaceae       a         79       POAV       Polygonum aviculare L.       prostrate knotweed       Polygonaceae       a         80       POGL8       Polypodium glycyrrhiza D.C. Eat.       licorice ferm       Polypodiaceae       a         81       POMU       Polystichum munitum (Kaulfuss) K. Presl       swordfern       Polypodiaceae       a         82       POBAT       Gray ex Hook.) Brayshaw       black cottonwood       Salicaceae       a         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a	71	OESA	Oenanthe sarmentosa K. Presl ex DC.	water parsely	Apiaceae	
73       OSCH       Osmorhiza chilensis Hook. & Arn.       >>Osmorhiza berteroi       Apiaceae         74       PHAR3       Phalaris arundinacea L.       reed canarygrass       Poaceae       a         75       PLLA       Plantago lanceolata L.       narrowleaf plantain       Plantaginaceae       a         76       PLMA2       Plantago major L.       common plantain       Plantaginaceae       a         77       POAN       Poa annua L.       annual bluegrass       Poaceae       a         78       POPR       Poa pratensis L.       Kentucky bluegrass       Poaceae       a         79       POAV       Polygonum aviculare L.       prostrate knotweed       Polygonaceae       a         80       POGL8       Polypodium glycyrrhiza D.C. Eat.       licorice fern       Polypodiaceae       a         81       POMU       Polystichum munitum (Kaulfuss) K. Presl       swordfern       Polypodiaceae       a         82       POBAT       Gray ex Hook.) Brayshaw       black cottonwood       Salicaceae       a         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae <td>72</td> <td>OPHO</td> <td>Oplopanax horridus Mig.</td> <td>devilsclub</td> <td>Araliaceae</td> <td></td>	72	OPHO	Oplopanax horridus Mig.	devilsclub	Araliaceae	
74       PHAR3       Phalaris arundinacea L.       reed canarygrass       Poaceae       a         75       PLLA       Plantago lanceolata L.       narrowleaf plantain       Plantaginaceae       -         76       PLMA2       Plantago major L.       common plantain       Plantaginaceae       -         77       POAN       Poa annua L.       annual bluegrass       Poaceae       a         78       POPR       Poa pratensis L.       Kentucky bluegrass       Poaceae       a         79       POAV       Polygonum aviculare L.       prostrate knotweed       Polygonaceae       a         80       POGL8       Polypodium glycyrrhiza D.C. Eat.       licorice fern       Polypodiaceae       a         81       POMU       Polystichum munitum (Kaulfuss) K. Presl       swordfern       Polypodiaceae       a         82       POBAT       Gray ex Hook., Brayshaw       black cottonwood       Salicaceae       a         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae       a         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauci	73	OSCH	Osmorhiza chilensis Hook. & Arn.	>>Osmorhiza berteroi	Apiaceae	
75PLLAPlantago lanceolata L.narrowlea plantainPlantaginaceae76PLMA2Plantago major L.common plantainPlantaginaceae77POANPoa annua L.annual bluegrassPoaceaea78POPRPoa pratensis L.Kentucky bluegrassPoaceaea79POAVPolygonum aviculare L.prostrate knotweedPolygonaceaea80POGL8Polypodium glycyrrhiza D.C. Eat.licorice fernPolypodiaceae81POMUPolystichum munitum (Kaulfuss) K. PreslswordfernPolypodiaceae82POBATGray ex Hook.) Brayshawblack cottonwoodSalicaceae83PRLA5Prunus laurocerasus L.cherry laurelRosaceaea84PSMEPseudotsuga menziesii (Mirbel) FrancoDouglas-firPinaceaePoaceae86PUPA3Puccinellia pauciflora (J. Presl) Munz>>Torreyochloa pallida var. paucifloraPoaceae87PYFUPyrus fusca Raf.>>Malus fuscaRosaceaea88RARE3Ranunculus repens L.creeping buttercupRanunculaceaea89RHPURhamnus purshiana DC.>>Frangula purshianaRhamnaceaea90RIBRRibes bracteosum Dougl, ex Hook.stink currantGrossulariaceae	74	PHAR3	Phalaris arundinacea L.	reed canarygrass	Poaceae	а
76PLMA2PlantaginaceaePlantaginaceae77POANPoa annua L.annual bluegrassPoaceaea78POPRPoa pratensis L.kentucky bluegrassPoaceaea79POAVPolygonum aviculare L.prostrate knotweedPolygonaceaea80POGL8Polypodium glycyrrhiza D.C. Eat.licorice fernPolypodiaceae81POMUPolystichum munitum (Kaulfuss) K. PresiswordfernPolypodiaceae82POBATGray ex Hook.) Brayshawblack cottonwoodSalicaceae83PRLA5Prunus laurocerasus L.cherry laurelRosaceaea84PSMEPseudotsuga menziesii (Mirbel) FrancoDouglas-firPinaceaePinaceae86PUPA3Puccinellia pauciflora (J. Presl) Munz>>Torreyochloa pallida var. paucifloraPoaceae87PYFUPyrus fusca Raf.>>Malus fuscaRosaceaea88RARE3Ranunculus repens L.creeping buttercupRanunculaceaea89RHPURhamnus purshiana DC.>>Frangula purshianaRhamnaceaea90RIBRRibes bracteosum Dougl. ex Hook.stink currantGrossulariaceaea	75	PLLA	Plantago lanceolata L.	narrowleaf plantain	Plantaginaceae	
77POANPoa annua L.annual bluegrassPoaceaea78POPRPoa pratensis L.Kentucky bluegrassPoaceaea79POAVPolygonum aviculare L.prostrate knotweedPolygonaceaea80POGL8Polypodium glycyrrhiza D.C. Eat.licorice fernPolypodiaceaea81POMUPolystichum munitum (Kaulfuss) K. PreslswordfernPolypodiaceaea82POBATGray ex Hook.) Brayshawblack cottonwoodSalicaceaea83PRLA5Prunus laurocerasus L.cherry laurelRosaceaea84PSMEPseudotsuga menziesii (Mirbel) FrancoDouglas-firPinaceaea85PTAQPteridium aquilinum (L.) Kuhnbracken fernDennstaedtiaceae86PUPA3Puccinellia pauciflora (J. Presl) Munz>>Torreyochloa pallida var. paucifloraPoaceae87PYFUPyrus fusca Raf.>>Malus fuscaRosaceaea88RARE3Ranunculus repens L.creeping buttercupRanunculaceaea89RHPURhamnus purshiana DC.>>Frangula purshianaRhamnaceaea90RIBRRibes bracteosum Dougl. ex Hook.stink currantGrossulariaceae	76	PLMA2	Plantago major L.	common plantain	Plantaginaceae	
78POPRPoa pratensis L.Kentucky bluegrassPoaceaea79POAVPolygonum aviculare L.prostrate knotweedPolygonaceaea80POGL8Polypodium glycyrrhiza D.C. Eat.licorice fernPolypodiaceae81POMUPolystichum munitum (Kaulfuss) K. PreslswordfernPolypodiaceae82POBATPopulus balsamifera L. ssp. trichocarpa (Torr. & Gray ex Hook.) Brayshawblack cottonwoodSalicaceae83PRLA5Prunus laurocerasus L.cherry laurelRosaceaea84PSMEPseudotsuga menziesii (Mirbel) FrancoDouglas-firPinaceae85PTAQPteridium aquilinum (L.) Kuhnbracken fernDennstaedtiaceae86PUPA3Puccinellia pauciflora (J. Presl) Munz>>Torreyochloa pallida var. paucifloraPoaceae87PYFUPyrus fusca Raf.>>Malus fuscaRosaceaea88RARE3Ranunculus repens L.creeping buttercupRanunculaceaea89RHPURhamnus purshiana DC.>>Frangula purshianaRhamnaceae90RIBRRibes bracteosum Dougl. ex Hook.stink currantGrossulariaceae	77	POAN	Poa annua L.	annual bluegrass	Poaceae	а
79POAVPolygonum aviculare L.prostrate knotweedPolygonaceaea80POGL8Polypodium glycyrrhiza D.C. Eat.licorice fernPolypodiaceae81POMUPolystichum munitum (Kaulfuss) K. PreslswordfernPolypodiaceae82POBATGray ex Hook.) Brayshawblack cottonwoodSalicaceae83PRLA5Prunus laurocerasus L.cherry laurelRosaceaea84PSMEPseudotsuga menziesii (Mirbel) FrancoDouglas-firPinaceae85PTAQPteridium aquilinum (L.) Kuhnbracken fernDennstaedtiaceae86PUPA3Puccinellia pauciflora (J. Presl) Munz>>Torreyochloa pallida var. paucifloraPoaceae87PYFUPyrus fusca Raf.>>Malus fuscaRosaceaea88RARE3Ranunculus repens L.creeping buttercupRanunculaceaea89RHPURhamnus purshiana DC.>>Frangula purshianaRhamnaceae90RIBRRibes bracteosum Dougl. ex Hook.stink currantGrossulariaceae	78	POPR	Poa pratensis L.	Kentucky bluegrass	Poaceae	а
80       POGL8       Polypodium glycyrrhiza D.C. Eat.       licorice fern       Polypodiaceae         81       POMU       Polystichum munitum (Kaulfuss) K. Presl       swordfern       Polypodiaceae         82       POBAT       Gray ex Hook.) Brayshaw       black cottonwood       Salicaceae         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae       a         85       PTAQ       Pteridium aquilinum (L.) Kuhn       bracken fern       Dennstaedtiaceae       a         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae       a         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae       a         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae       a	79	POAV	Polygonum aviculare L.	prostrate knotweed	Polygonaceae	а
81       POMU       Polystichum munitum (Kaulfuss) K. Presl       swordfern       Polypodiaceae         82       POBAT       Gray ex Hook.) Brayshaw       black cottonwood       Salicaceae         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae       a         85       PTAQ       Pteridium aquilinum (L.) Kuhn       bracken fern       Dennstaedtiaceae       a         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       creeping buttercup       Ranunculaceae       a         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae       a         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae	80	POGL8	Polypodium glycyrrhiza D.C. Eat.	licorice fern	Polypodiaceae	
82       POBAT       Populus balsamifera L. ssp. trichocarpa (Torr. & Gray ex Hook.) Brayshaw       black cottonwood       Salicaceae         83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae         85       PTAQ       Pteridium aquilinum (L.) Kuhn       bracken fern       Dennstaedtiaceae         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae       a         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae	81	POMU	Polystichum munitum (Kaulfuss) K. Presl	swordfern	Polypodiaceae	
83       PRLA5       Prunus laurocerasus L.       cherry laurel       Rosaceae       a         84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae       a         85       PTAQ       Pteridium aquilinum (L.) Kuhn       bracken fern       Dennstaedtiaceae         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae       a         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae       a         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae       a	82	POBAT	Populus balsamifera L. ssp. trichocarpa (Torr. & Grav ex Hook.) Bravshaw	black cottonwood	Salicaceae	
84       PSME       Pseudotsuga menziesii (Mirbel) Franco       Douglas-fir       Pinaceae         85       PTAQ       Pteridium aquilinum (L.) Kuhn       bracken fern       Dennstaedtiaceae         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae       90         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae	83	PRLA5	Prunus laurocerasus L.	cherry laurel	Rosaceae	а
85       PTAQ       Pteridium aquilinum (L.) Kuhn       bracken fern       Dennstaedtiaceae         86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae	84	PSME	Pseudotsuga menziesii (Mirbel) Franco	Douglas-fir	Pinaceae	~
86       PUPA3       Puccinellia pauciflora (J. Presl) Munz       >>Torreyochloa pallida var. pauciflora       Poaceae         87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae	85	PTAQ	Pteridium aguilinum (L.) Kuhn	bracken fern	Dennstaedtiaceae	
87       PYFU       Pyrus fusca Raf.       >>Malus fusca       Rosaceae         88       RARE3       Ranunculus repens L.       creeping buttercup       Ranunculaceae       a         89       RHPU       Rhamnus purshiana DC.       >>Frangula purshiana       Rhamnaceae         90       RIBR       Ribes bracteosum Dougl. ex Hook.       stink currant       Grossulariaceae	86	PUPA3	Puccinellia pauciflora (J. Presl) Munz	>>Torrevochloa pallida var. pauciflora	Poaceae	
88     RARE3     Ranunculus repens L.     creeping buttercup     Ranunculaceae     a       89     RHPU     Rhamnus purshiana DC.     >>Frangula purshiana     Rhamnaceae       90     RIBR     Ribes bracteosum Dougl. ex Hook.     stink currant     Grossulariaceae	87	PYFU	Pyrus fusca Raf.	>>Malus fusca	Rosaceae	
89     RHPU     Rhamnus purshiana DC.     >>Frangula purshiana     Rhamnaceae       90     RIBR     Ribes bracteosum Dougl. ex Hook.     stink currant     Grossulariaceae	88	RARE3	Ranunculus repens L.	creeping buttercup	Ranunculaceae	а
90 RIBR Ribes bracteosum Dougl. ex Hook. stink currant Grossulariaceae	89	RHPU	Rhamnus purshiana DC.	>>Frangula purshiana	Rhamnaceae	
	90	RIBR	Ribes bracteosum Dougl. ex Hook.	stink currant	Grossulariaceae	

91	RIDI	Ribes divaricatum Dougl.	spreading gooseberry	Grossulariaceae	
92	RISA	Ribes sanguineum Pursh	redflower currant	Grossulariaceae	
93	ROPS	Robinia pseudoacacia L.	black locust	Fabaceae	а
94	RUDI2	Rubus discolor Weihe & Nees	>>Rubus armeniacus	Rosaceae	а
95	RULA	Rubus laciniatus Willd.	cutleaf blackberry	Rosaceae	а
96	RUPA	Rubus parviflorus Nutt.	thimbleberry	Rosaceae	
97	RUSP	Rubus spectabilis Pursh	salmonberry	Rosaceae	
98	RUUR	Rubus ursinus Cham. & Schlecht.	California blackberry	Rosaceae	
99	RUOB	Rumex obtusifolius L.	bitter dock	Polygonaceae	а
100	SALA5	Salix lasiandra Benth.	>>Salix lucida ssp. lasiandra	Salicaceae	
101	SASI2	Salix sitchensis Sanson ex Bong.	Sitka willow	Salicaceae	
102	SARA2	Sambucus racemosa L.	red elderberry	Caprifoliaceae	
103	SEVU	Senecio vulgaris L.	old-man-in-the-Spring	Asteraceae	а
104	SMRA*	Smilacina racemosa (L) Desf.	>>Maianthemum racemosum ssp. amplexicaule	Liliaceae	
105	SMST	Smilacina stellata (L.) Desf.	>>Maianthemum stellatum	Liliaceae	
106	SODU	Solanum dulcamara L.	climbing nightshade	Solanaceae	а
107	SOOL	Sonchus oleraceus L.	common sowthistle	Asteraceae	а
108	SOAU	Sorbus aucuparia L.	European mountain ash	Rosaceae	а
109	SPDO	Spiraea douglasii Hook.	rose spirea	Rosaceae	
110	SYAL	Symphoricarpos albus (L.) Blake	common snowberry	Caprifoliaceae	
111	TADO	Tanacetum douglasii DC.	>>Tanacetum camphoratum	Asteraceae	
112	TAOF	Taraxacum officinale G.H. Weber ex Wiggers	dandelion	Asteraceae	а
113	TEGR2	Tellima grandiflora (Pursh) Dougl. ex Lindl.	bigflower tellima	Saxifragaceae	
114	THPL	Thuja plicata Donn ex D. Don	western red cedar	Cupressaceae	
115	TRLA6	Trientalis latifolia Hook.	>>Trientalis borealis ssp. latifolia	Primulaceae	
116	TRPR2	Trifolium pratense L.	red clover	Fabaceae	а
117	TRRE3	Trifolium repens L.	white clover	Fabaceae	а
118	TROV2	Trillium ovatum Pursh	Pacific trillium	Liliaceae	
119	TSHE	Tsuga heterophylla (Raf.) Sarg.	western hemlock	Pinaceae	
120	URDI	Urtica dioica L.	nettle	Urticaceae	
121	VAPA	Vaccinium parvifolium Sm.	red huckleberry	Ericaceae	
122	VACA4	Valerianella carinata Loisel.	European cornsalad	Valerianaceae	а
123	VEAM2	Veronica americana Schwein. ex Benth.	American speedwell	Scrophulariaceae	
124	VEAR	Veronica arvensis L.	corn speedwell	Scrophulariaceae	а
125	VIHI	Vicia hirsuta (L.) S.F. Gray	tiny vetch	Fabaceae	а
126	VIMA	Vinca major L.	bigleaf periwinkle	Apocynaceae	а
127	VUBR	Vulpia bromoides (L.) S.F. Gray	brome fescue	Poaceae	а

### **Ecological Condition of Dash Point and Saltwater State Parks**



Figure 7. English ivy climbing trees in the Dash Point park.

We encountered few sites within either Dash Point or Saltwater State Park that had not been disturbed or impacted by resource extraction or recreational activities. Roads and trails, either maintained, undesignated, or abandoned, permeate the diversity of habitats within the parks, indicating a high intensity of human influence on the parks' ecosystems. Invasive plant infestations are common occurrences throughout the parks, especially near the roads and trails infrastructure. English ivy (Hedera Helix), Himalayan blackberry (Rubus discolor), and bigflowered perrywinkle (Vinca major) were all found to have exceptionally large infestations in the parks (Figures 7 and 8). Eradication of these invasive plants is extremely difficult once established. Controlling the spread of these plants may be possible, however, through manual cutting of above ground vines, and pulling of the below ground new rhizomes. Such treatments are labor intensive and complete removal of the dislodged plant parts from the park premises is necessary to prohibit further infestations that might occur via vegetative propagation of the cuttings. Replanting of

controlled areas with native plants and possibly importation of exotic seed free soil will be necessary to prohibit re-infestations of treated areas. Without control efforts, the existing infestations may continue to expand into new areas of the park, threatening the native vegetation and plant communities. Natural successional process that move the existing plant communities toward closed canopy, late seral coniferous forests may also limit the invasive plants to some extent.



Figure 8. Himalayan blackberry infestation in Saltwater State Park.

## **GIS Products Produced**

Associated with this report are polygon layers created by PBI depicting the vegetation community types mapped in Dash Point and Saltwater State Parks. The datasets have been converted into ESRI shapefile format and provided to the Washington State Parks and Recreation Commission. The spatial datasets are complete with metadata meeting FGDC standards. Refer to the associated metadata for descriptions and attribute definitions for each spatial dataset.

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Kunze L.M., Cornelius L.C. 1982. *Baseline inventory of rare, threatened and endangered plant species/communities along Washington's Pacific coast.* Washington Natural Heritage Program. Washington Department of Natural Resources. Olympia WA.

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# Appendix A – Field Survey Schedule

# **Dash Point State Park**

## April 25, 2006

Field Staff: Hans Smith, Scott Heller

# August 2, 2006

Field Staff: Hans Smith, Scott Heller

# Saltwater State Park

## April 26, 2006

Field Staff: Hans Smith, Scott Heller

### August 2, 2006

Field Staff: Hans Smith, Scott Heller

# Appendix B – Description of Rare Element Status Codes

#### Global Rank (GRank)

Global Rank characterizes the relative rarity or endangerment of the element world-wide. Two codes (e.g. G1G2) represent an intermediate rank.

- G1 = Critically imperiled globally (5 or fewer occurrences).
- G2 = Imperiled globally (6 to 20 occurrences).
- G3 = Either very rare and local throughout its range or found locally in a restricted range (21 to 100 occurrences).
- G4 = Apparently secure globally.
- G5 = Demonstrably secure globally.

GH = Of historical occurrence throughout its range.

- GU = Possibly in peril range-wide but status uncertain.
- GX = Believed to be extinct throughout former range.
- GNR = Not yet ranked.
- Tn = Rarity of an infraspecific taxon. Numbers and codes similar to those for Gn ranks above.

Q = Questionable.

#### State Rank (SRank)

State Rank characterizes the relative rarity or endangerment within the state of Washington. Two codes (e.g. S1S2) represents an intermediate rank.

- S1 = Critically imperiled (5 or fewer occurrences).
- S2 = Imperiled (6 to 20 occurrences), very vulnerable to extirpation.
- S3 = Rare or uncommon (21 to 100 occurrences).
- S4 = Apparently secure, with many occurrences.
- S5 = Demonstrably secure in state.
- SA = Accidental in state.
- SE = An exotic established in state.
- SH = Historical occurrences only but still expected to occur.
- SN = Regularly occurring, usually migratory, nonbreeding animals.
- SU = Unrankable; need more information.
- SX = Apparently extirpated from the state.
- SP = Likely to occur or to have occurred but without documentation.
- SZ = Not of conservation concern (not SE or SA).
- SNR = Not yet ranked.

"B" and "N" qualifiers are used to indicate breeding and nonbreeding status, respectively, of migrant species whose nonbreeding status (rank) may be quite different from their breeding status in the state (e.g. S1B,S4N for a very rare breeder that is a common winter resident).

#### State Status (StStat)

State Status of plant species is determined by the Washington Natural Heritage Program. Factors considered include abundance, occurrence patterns, vulnerability, threats, existing protection, and taxonomic distinctness. Values include:

- E = Endangered. In danger of becoming extinct or extirpated from Washington.
- T = Threatened. Likely to become Endangered in Washington.
- S = Sensitive. Vulnerable or declining and could become Endangered or Threatened in the state.
- X = Possibly extinct or Extirpated from Washington.
- P1 = Priority 1. Rare nonvascular plant but with insufficient information to assign another rank.
- P2 = Priority 2. Nonvascular plant of concern but with insufficient information to assign another rank.
- R1 = Review group 1. Of potential concern but needs more field work to assign another rank.
- R2 = Review group 2. Of potential concern but with unresolved taxonomic questions.
- W = Watch. More abundant and/or less threatened than previously thought.

#### Federal Status

Federal Status under the U.S. Endangered Species Act (USESA) as published in the Federal Register:

- LE = Listed Endangered. In danger of extinction.
- LT = Listed Threatened. Likely to become endangered.
- PE = Proposed Endangered.
- PT = Proposed Threatened.
- C = Candidate species. Sufficient information exists to support listing as Endangered or Threatened.
- SC = Species of Concern. An unofficial status, the species appears to be in jeopardy, but insufficient information to support listing.
- NL = Not Listed. Used when two portions of a taxon have different federal status.

# Appendix C – Ecological Condition Ranking System

# **Ecological Condition Ranks**

When assessing conservation priorities and management decisions, it can be useful to rank natural communities into levels of ecological condition. For example, an unfragmented area with high native species diversity, absence of non-native species and little soil erosion often has greater conservation value than another area in the same habitat type that is fragmented, infested with weeds or has erosion problems. Likewise, areas with a lower ecological condition rank may be targets for restoration activities.

The flowing ecological condition ranks were applied to vegetation polygons that were surveyed in this project:

**Condition Rank 1.** This condition class represents areas that have been altered to the point where the ecological condition often deviates dramatically from baseline conditions found in areas where stressors are much less prevalent. Areas characterized by Condition Class 1 often have high amounts of bare ground and/or non-native plant cover. The structure is often significantly altered from baseline conditions. Often one or more of the structural layers (trees, shrubs, herbs, grasses, mosses & lichens, biotic crust) may be significantly altered or even missing from the community. The composition of native vegetation is skewed toward species that can survive despite regular disturbance. Species diversity of native plants is usually low and native grass species are usually absent or in very low abundance (for a given community type). Evidence of accelerated erosion and soil compaction may be present. Hydrologic alteration may also be present. Significant direct evidence of various stress factors is usually abundant. Rare plant and animal species generally do not occur in this condition class.

Condition Rank 2. This condition class represents areas that show a fairly broad range of stress ranging from high to moderately low impact from a variety of stressors. Areas characterized by Condition Class 2 usually have moderate levels of non-native plant cover. The structure of the natural community present in Condition Class 2 areas is often relatively intact when compared to baseline conditions. Usually all structural layers are present, but form and stature may be altered from baseline conditions. Soil surface conditions are often intermediate between those in Condition Class 1 and Condition Class 3. Species diversity of native plants is often moderate for that community. Non-native species are usually present, but not as common or abundant as in Condition Class 1. Native grass species are often present, but usually in low abundance for that community type. Diversity of native grass species is relatively low when compared to baseline conditions. Evidence of accelerated erosion and soil compaction may be present in isolated areas, but is not dramatic or widespread. Hydrologic alteration is absent. Direct signs of stressors may be present, but not widespread or abundant. Rare plant and animal species may be found in this condition class, but are not common. Rare species that are found in this condition class are relatively tolerant of the stressors that are present.

**Condition Rank 3**. This condition class represents areas that show the least stress in the project area and are the closest to representing baseline conditions. Areas characterized by Condition Class 3 have little evidence of non-native plant invasion. The composition and

structure of native vegetation in this condition class correspond to the natural ranges of variation characteristic to this habitat type. Old-growth conditions may exist. Species diversity of native plants is often high relative to the community under consideration. Native grass species are usually present and often fairly abundant for the community type. Species diversity of native grass species is also often high. Soil compaction, accelerated erosion and hydrologic alteration are absent. Direct signs of stressors are usually absent. Certain rare species may only exist within this condition class and rare species are generally more common than in the lower condition classes.

# Appendix D – Vegetation Survey Data

# Legend:

Site = name of locality of map project

**Polygon** = number you put on map

Name/Date = your name / day-month-year completed polygon survey

Photo roll/number = number of roll (on canister) and number of shot

# Survey intensity

1 = walked or could see most of polygon (high confidence in survey data)

2 = walked or could see part of polygon interior (moderate confidence)

3 = walked perimeter or could see part of polygon interior (low confidence)

4 = photo interpretation or other remote survey

# **VEGETATION COVER**

This is canopy cover, i.e. the <u>space between</u> leaves/branches is included in "cover". Each Life form category canopy cover must be 0-100%. Therefore, the sum of all life forms (layers) can exceed 100%. List most abundant species in each life form category; when trees are cored, note DBH, species, length of core, number of rings counted.

**TOTAL VEGETATION COVER** includes all vascular plants, mosses, lichens and foliose lichens (crustose lichens excluded they are considered rock); this <u>never</u> exceeds 100%.

**SOIL SURFACE** estimate to nearest **%** the following, the sum of the categories adds to 100%

Rock outcrop = exposed bedrock including detached boulders over 1m across

Gravel/cobble = large fragments between sand and boulder

Bareground = exposed mineral soil

Mosses/lichens = nonvascular plant cover on soil

Litter = includes logs, branches, and basal area of plants

Describe in comments if there is wide variation in any category; note % standing water if it is persistent or characteristic of site.

LAND USE - put 0 (zero) if not applicable to site.

# Logging

1 = unlogged, no evidence of past logging or occasional cut stumps not part of systematic harvest of trees, no or very little impact on stand composition

2 = selectively logged: frequent cut stumps but origin of dominant or co-dominant cohort appears to be natural disturbance

3 = heavy logging disturbance with natural regeneration: many cut stumps that predate the dominant or co-dominant cohort with no tree planting

4 = tree plantation: dominant cohort appears to be planted after clearcutting

## Stand Age

- 1 = very young 0-40 yr
- 2 = young 40-90 yr
- 3 = mature 90-200 yr
- 4 = old-growth 200 + yr
- 5 = young with scattered old trees (2-10 old trees per acre)
- 6 = mature with scattered old trees

### Agriculture

- 1 = active annual cropping
- 2 = active perennial herbaceous cropping
- 3 = active woody plant cultivation
- 4 = fallow, plowed no crops this yr
- 5 = Federal CRP
- 6 = other

#### Livestock

- 1 = active heavy grazing (most forage used to ground soil compaction or churning)
- 2 = active moderate grazing (25-75% forage used)
- 3 = active light grazing (lots of last year's litter left)
- 4 = no current, heavy past grazing
- 5 = no current, light past grazing
- 6 = no obvious sign of grazing

### Development

- 1 = actively used facilities
- 2 = roads
- 3 = established trails
- 4 = abandoned facilities
- 5 = none obvious
- 6 = multiple types (detail in comments)

### Wildlife

- 1 = heavy ungulate use
- 2 = moderate ungulate use
- 3 = light to no ungulate use
- 4 = burrowing animals
- 5 = active beaver
- 6 = active porcupine
- 7 = other, list animal

### **Recreation Use Severity**

- 1 = heavy use, abundant soil and vegetation displacement off trail/road
- 2 = moderate use, frequent soil and vegetation displacement off trail/road
- 3 = light use, little sign of activity off trail/road

### **Recreation Use Primary Type**

1 = wheeled 2 = hoofed 3 = pedestrian 4 = combination of above 5 = other

# Hydrology

1 = unaltered 2 = altered; dams, dikes, ditches, culverts, etc 3 = not assessed

**Plant Association** (PA) = list all PAs encountered in polygon survey, in comments list source of name if not on provided key.

Condition Rank of PA in key or estimate

% of Polygon = your estimate

Pattern = how PA is distributed in polygon 1 = matrix (most of polygon) 2 = large patches 3 = small patches 4 = clumped, clustered, contiguous 5 = scattered, more or less evenly repeating 6 = linear 7 = other

**Exotic** = primary species observed; secondary species observed.

**Plot Number** = number of any plots established for EO (element occurrence), or other more detail sheets within polygon.

# Vegetation Polygon Data – Dash Point State Park

Polygon Number Survey Intensity Observer Date Specific Location	<b>0</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Forbs Total	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	0 0 0 0 0 0 0 0 0 0

Exotic Species Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. Water	100	Matrix	3
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location	<b>10</b> 1 HS 4/25/2006 SE section of park.			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual	6 5 PSME, TSHE, ARME, 2 5 2 5 GASH, RUUR, RUSP 4 3 1 1 0 1 POMU 1 0 2	, ACMA3		
Ferns Total	3	Exotic	Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 1 1 0 0 0 0 0 0 1 99 3 2 0 0 0 3 0 3 4 1	Primary I HEHE Seconda Noxious	Exotic ry Exotic Exotic	
Plant Associations	e Pe	ercent	Pattern	Rank
<ol> <li>PSME-TSHE/GASH/POM</li> <li>TSHE-PSME/POMU-DRE</li> <li>3.</li> </ol>	U (CHAPPELL) X2 (CHAPPELL)	80 20 0	Matrix Small	

3. Notes: Rec type=1 and 3.

Polygon Number Survey Intensity Observer Date Specific Location	<b>11</b> 1 HS 4/25/2006 SE corner of park.		
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Ferns Total	6 6 7 3 5 5 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	PL JRA2, ROGY, I	HODI
Ferns Evergreen	1		opeoles
Ferns Deciduous	1	Primary B	Exotic
ExoticsTotal	1	RUDI2	
Exotics Perennial Exotics Annual	1	SOALL	ry Exotic
Water	0	Noxious	Exotic
Rock Outcrop	0		
Gravel	0		
Bare Ground	0		
Moss Lichen	2		
Litter	98		
Stand Age	2		
Agriculture	0		
Livestock	0		
Development	3		
Wildlife	0		
Recreation Severity	3		
Hydrology	4		
Plant Associations		Percent	Pattern

		1 ci cent	I weeter in	
				Rank
1.	PSME-TSHE/GASH-MANE2 (CHAPPELL)	45	Large	
2.	PSME-ARME/GASH (CHAPPELL)	45	Large	
3.	PSME-TSHE/GASH/POMU (CHAPPELL)	10	Small	
No	tes: Rec type=1 and 3			

Polygon Number Survey Intensity Observer Date Specific Location	<b>12</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Trees	0 0
emergent maincanopy	0 0
Shrubs Total Dominant Shrubs	0
< 1.5' tall Graminoids Total	0 0
Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total	0 0 0
Forbs Perennial Forbs Annual Ferns Total	0 0 0
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual	0 0 0 0
Water Rock Outcrop Gravel Bare Ground Moss Lichen	0 0 0 0 0
Litter Logging Stand Age Agriculture	0
Development Wildlife Recreation Severity Recreation Type Hydrology	
Diant Associatio	

Pattern

Primary Exotic Secondary Exotic Noxious Exotic

### **Plant Associations**

			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Percent

Polygon Number Survey Intensity	<b>13</b> 2
Observer	HS
Date	8/2/2006
Specific Location	
Total Vegetation	0
Trees Total	0
Dominant Trees	
emergent	0
maincanopy	0
subcanopy	0
Shrubs Total	0
Dominant Shrubs	0
	0
< 1.5 tall	0
Grammolus Total	0
Dominant Grammolds	0
Graminoida Appual	0
Grammolus Annual	0
Dominant Forbs	0
Earba Barannial	0
Forbe Annual	0
Fords Annual	0
	0
Ferns Evergreen	0
Ferns Deciduous	0
ExoticsTotal	0
Exotics Perennial	0
Exotics Annual	0
Water	0
Rock Outcrop	0
Gravel	0
Bare Ground	0
Moss Lichen	0
Litter	0
Logging	
Stand Age	
Agriculture	
Dovelopment	
Wildlife	
Pocreation Soverity	
Recreation Type	
Hydrology	
nyululuyy	
<b>Diant Accordiati</b>	000

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Po Su Ob Da Sp	lygon Number rvey Intensity server te ecific Location	<b>15</b> 1 SH 4/25/2006 N portion of easte	ern arm of park.		
To Tree Do em Su Sh Do > 1 Gr Gr Gr Fo Do	tal Vegetation ees Total minant Trees hergent hincanopy bcanopy rubs Total minant Shrubs 1.5' tall aminoids Total minant Graminoids aminoids Perennial aminoids Annual rbs Total minant Forbs	6 6 PSME, TSHE 1 6 2 6 GASH 5 3 1 1 1 0 1			
Fo	rbs Perennial	1			
Fo	rbs Annual	0			
ге	rns lotai	4	Eveti	0	_
_	_		EXOLIC	c Species	5
Fe	rns Evergreen	4	Drimon	Evotio	
Fe	oticsTotal	2			
Ev	otics Perennial	2	Seconda		
Fx	otics Annual	0	Seconda		
W	ater	0	Noxious	Exotic	
Ro	ck Outcrop	0	Hoxidud	EXOLIO	
Gr	avel	0			
Ва	re Ground	2			
Мо	oss Lichen	2			
Lit	ter	96			
Lo	gging	3			
Sta	and Age	2			
Ag	riculture	0			
	vestock	0			
De	Velopment	3			
	Idille	0			
Re Do	creation Seventy	3			
Hv	drology	4			
	arology	I			
P	ant Associations	6	Percent	Pattern	Rank
1			100	Matrix	IXAIIK
1. 2			100	Maula	
4. 2			0		
Э. No	tes.	Some AL RU2/PC	U MIL association	near wetland	l Waynoi

Polygon Number	<b>16</b>
Survey Intensity	1
Observer	HS
Date	8/2/2006
Specific Location	Center of park.
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial	6 5 ALRU2, ACMA3 1 5 2 6 RUSP, SARA2 0 0 2
Graminoids Annual	0
Forbs Total	3
Dominant Forbs	URDI
Forbs Perennial	3
Forbs Annual	1
Ferns Total	3
Ferns Evergreen	3
Ferns Deciduous	2
ExoticsTotal	1
Exotics Perennial	1
Exotics Annual	0
Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging	0 0 2 98 3
Stand Age	2
Agriculture	0
Livestock	0
Development	0
Wildlife	0
Recreation Severity	0
Recreation Type	0

## **Plant Associations**

1. ALRU2/RUSP c.t. (KUNZE)

2. ALRU2/POMU (CHAPPELL) 3. Notes:

### **Exotic Species**

Primary Exotic SOAU Secondary Exotic PHAR3 **Noxious Exotic** 

Percent	Pattern		
		Rank	
90	Matrix		2
10	Small		2
0			0

Polygon Number Survey Intensity Observer Date Specific Location	<b>17</b> 1 SH 4/25/2006 Far eastern arm of	park.			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Eorbs Annual	6 5 ALRU2, ACMA3, P 2 5 2 8 RUSP, SARA2 5 3 2 2 2 0 2	'SME, TSHE			
Ferns Total	3				
		Exotic	<b>Species</b>		
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 2 2 0 0 0 2 2 96 3 2 0 0 0 3 4 2	Primary E HEHE Secondar Noxious	Exotic ry Exotic Exotic		
Plant Associations	5	Percent	Pattern	Rank	
<ol> <li>ALRU2/POMU (CHAPPE)</li> <li>.</li> <li>.</li> <li>Notes:</li> </ol>	LL) Portion of polygon	100 0 0 is a wetland wi	Matrix th Populus tric	hocarpa,	2 0 0 ACMA3,
	ALRU2, RUSP, SY Wetland delineation	AL, URDI, TEO	GR2, POMU. V king areas. (Or	Vaypoint ( ne on eith	010. er side of

Polygon Number Survey Intensity Observer Date Specific Location	<b>19A</b> 1 HS 4/25/2006 W side of park				
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Forbs Annual	6 5 PSME, ACMA3, Al 2 5 3 6 GASH, OECE, SAI 6 2 1 1 0 2 POMU 2 0 2	.RU2, TSHE RA2, RUSP, V	APA		
	2	Exotic	: Species		
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	2 1 2 2 0 0 0 0 0 1 99 3 2 0 0 0 3 7 3 4 2	Primary I HEHE Seconda ILAQ80 Noxious	Exotic ry Exotic Exotic		
Plant Associations	5	Percent	Pattern	Rank	
<ol> <li>PSME-TSHE/GASH/POM</li> <li>ALRU2/POMU (CHAPPE)</li> <li>ALRU2/RUSP c.t. (KUNZ)</li> <li>Notes:</li> </ol>	U (CHAPPELL) LL) E) Wildlife; pileated w	83 15 2 oodpecker. Re	Matrix Small linear c type; wheele	ed and peo	2 2 2 destrian.

Polygon Number Survey Intensity Observer Date Specific Location	<b>19B</b> 1 HS 4/25/2006 W side of park			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 5 ACMA3, ALRU2, TS 1 5 2 4 RUSP, VAPA, HOD 3 2 2 2 0 3 TEGR2, CIAL, URD 3 0	she I, ruur		
Ferns Total	3	Exotic	: Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 2 2 0 0 0 0 4 96 3 2 0 0 3 0 3 4 2	Primary B ILAQ80, I Seconda Noxious	Exotic DAGL ry Exotic Exotic	
Plant Associations		Percent	Pattern	Rank
<ol> <li>ALRU2/POMU (CHAPPEL</li> <li>PSME-TSHE/GASH/POMU</li> <li>ALRU2/RUSP c.t. (KUNZE</li> </ol>	L) U (CHAPPELL) E)	90 7 3	Matrix Small linear	

3. ALRU2/RUSP c.t. (KUNZE) Notes: Rec type=1 and 3.

Polygon Number Survey Intensity Observer Date Specific Location	<b>19W</b> 1 HS 4/25/2006 NW corner of park.			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs	6 5 ALRU2, ACMA3 3 4 2 5 Ribes sp. RUSP, Co 5 2 1 1 1 0 3 LYAM3, TOME, TEO	DST4 GR2, ATFI		
Forbs Perennial	3			
Ferns Total	2			
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	1 2 1 1 0 0 0 3 12 85 3 2 0 0 0 3 0 3 4 2	Exotic Primary B POPR Secondar Noxious	Exotic Try Exotic Exotic	
<b>Plant Associations</b>		Percent	Pattern	
<ol> <li>ALRU2/RUSP c.t. (KUNZE</li> <li>3.</li> <li>Notes:</li> </ol>	E) Rec. type; 1 and 3.	100 0 Fire evident a	Matrix area.	Rank

Rec. type; 1 and 3. Fire evident area.

Polygon Number Survey Intensity Observer Date Specific Location	<b>2</b> 1 SH 4/24/2006 NW portion of park	(near water).	
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total	6 5 ACMA3, ALRU2, P 1 5 1 5 OECE, RUSP, VAF 5 3 1	SME, TSHE PA, MANE2	
Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Ferns Total	1 0 2 LYAM3, MADI 2 0 3	Exotic	Species
Ferns Evergreen	3		Opecies
Ferns Deciduous	1	Primary E	Exotic
ExoticsTotal	3	HEHE	
Exotics Perennial	3	Seconda	ry Exotic
Exotics Annual Water	0	Novious	Exotic
Rock Outcrop	0	NOXIOUS	
Gravel	0		
Bare Ground	1		
Moss Lichen	2		
Litter	97		
Logging Stand Age	3		
	0		
Livestock	Õ		
Development	3		
Wildlife	0		
Recreation Severity	2		
Recreation Type	3		
Plant Associations	-	Percent	Pattern
		i ci cent	1 aut 11
1. ACMA3-ALRU2/POMU-TE	GR2 (CHAPPELL)	100	Matrix

				Rank
1.	ACMA3-ALRU2/POMU-TEGR2 (CHAPPELL)	100	Matrix	2
2.		0		0
3.		0		0
No	tes: Major infestation of HE	HE on AC	MA3.	

Polygon Number Survey Intensity Observer Date Specific Location	21 1 SH 4/25/2006 Adjacent to campgr	ound. Near be	ginning of Outb	oound Trail.
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy	6 5 PSME, ALRU2, TSI 2 5 2	ΗE		
Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids	5 GASH, HODI, SAR 5 3 1	A2, MANE2		
Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	1 0 1 TEGR2 1 0			
Ferns Total	2	Exotic	Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	2 1 1 1 0 0 3 2 2 93 3 2 90 3 2 0 0 3 0 3 0 3 4 1	Primary E ILAQ80 Secondar Noxious E	xotic y Exotic Exotic	
Plant Associations		Percent	Pattern	Rank
1. PSME-TSHE/GASH-HODI 2. 3.	(CHAPPELL)	100 0 0	Matrix	2 0 0
Notes:	Deep ravine in poly	gon, creek belo	ow. Additional p	ohotos: Cam #2

1265-66. Rec users--hiking, biking.

Polygon Number	21D
Survey Intensity	2
Observer	HS
Date Creating Leasting	8/2/2006
Specific Location	
Total Vegetation	0
Trees Total	0
Dominant Trees	
emergent	0
maincanopy	0
subcanopy	0
Shrubs Total	0
Dominant Shrubs	
> 1.5' tall	0
< 1.5' tall	0
Graminoids Total	0
Dominant Graminoids	
Graminoids Perennial	0
Graminoids Annual	0
Forbs Total	0
Dominant Forbs	
Forbs Perennial	0
Forbs Annual	0
Ferns Total	0
Ferns Evergreen	0
Ferns Deciduous	0
ExoticsTotal	0
Exotics Perennial	0
Exotics Annual	0
Water	0
Rock Outcrop	0
Gravel	0
Bare Ground	0
Moss Lichen	0
Litter	0
Logging	
Stand Age	
Agriculture	
Livestock	
Development	
Wildlife	
Recreation Severity	
Recreation Type	
Hydrology	
Diant Associations	

Exotic	Species
--------	---------

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location	<b>22</b> 1 SH 4/25/2006 N side of Dash Poir	nt Rd. Near be	ach		
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial	6 6 PSME, TSHE, ALR 2 6 1 6 GASH, RUSP, HOE 6 3 1 1 1 0 2 URDI 2	U2, ACMA3 DI			
Forbs Annual	0				
Ferns Total	4		<u> </u>		
		Exotic	Species		
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type	4 1 2 2 0 0 0 0 0 0 3 97 3 2 0 0 0 3 4 3 3	Primary E ILAQ80, F Secondar Noxious I	Exotic IEHE ry Exotic Exotic		
	1				
Plant Associations		Percent	Pattern	<b>D</b> 1	
		100		Kank	•
I. PSME-TSHE/GASH/POM	U (CHAPPELL)	100	Matrix		2
2.		0			0
3.		0			0
Notes:	Some large ACMA3	3 mixed in the	PSME-TSHE/G	ASH/PC	DMU.

Po Su Ob Da Sp	lygon Number rvey Intensity server te ecific Location	<b>23</b> 1 SH 8/2/2006 Near group camp.				
To Tre Do em ma sul Sh Do > 1 Co Gra	tal Vegetation wes Total minant Trees ergent incanopy bcanopy rubs Total minant Shrubs .5' tall .5' tall aminoids Total minant Graminoids	6 6 PSME, ACMA3, A 0 6 2 6 OECE, MANE2, R 6 2 1	LRU2, POTR <sup>*</sup> USP	15		
Gra Fo Do Fo Fo	aminoids Perennial aminoids Annual rbs Total minant Forbs rbs Perennial rbs Annual	1 0 2 GEMA4, URDI 2 0				
Fe	rns Total	4	Exoti	c Species	5	
Fei Exc Exc Wa Ro Gra Ba Mo Litt Lo Sta	rns Evergreen rns Deciduous oticsTotal otics Perennial otics Annual tter ck Outcrop avel re Ground oss Lichen ter gging and Age	4 2 5 5 0 0 0 2 2 96 3 2 0	Primary HEHE Second ILAQ80 Noxious	Exotic ary Exotic s Exotic		
Ag Liv De Wi Re Re Hy	rectiture velopment Idlife creation Severity creation Type drology	0 3 7 3 4 1				
Pl	ant Associations	5	Percent	Pattern	Rank	
1. 2. 3.	ALRU2/POMU (CHAPPEI TSHE-PSME/POMU-DRE	L) X2 (CHAPPELL)	80 20 0	Matrix Small	капк	1 1 0
No	tes:	Ferns: POMU, PT/ Wildlife is birds	AQ. OECE aln	nost exclusive	in shrub la	ayer.

Polygon Number Survey Intensity Observer Date Specific Location	<b>23D</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Trees	0 0
emergent maincanopy subcanopy	0 0 0
Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall	0 0 0
Graminoids Total Dominant Graminoids Graminoids Perennial	0
Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial	0 0
Forbs Annual Ferns Total	0 0
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial	0 0 0
Exotics Annual Water Rock Outcrop	0 0 0
Gravel Bare Ground Moss Lichen Litter	0 0 0 0
Logging Stand Age Agriculture	
LIVESTOCK Development Wildlife Recreation Severity Recreation Type	
Hydrology	-

Exotic	Species
--------	---------

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location	<b>24A</b> 1 HS 4/25/2006 Around beach, park	king lot.		
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 6 ACMA3, ALRU2, P 2 5 3 5 MANE2, RUUR, SA 5 2 1 1 1 0 3 URDI, TEGR2, POI 3 0	SME, TSHE ARA2 MU		
Ferns Total	3	Exotic	Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 2 2 0 0 0 1 2 97 3 2 0 0 0 6 0 2 4 2	Primary B HEHE Seconda ILAQ80 Noxious	Exotic ry Exotic Exotic	
Plant Associations		Percent	Pattern	Rank
<ol> <li>ACMA3-ALRU2/POMU-TE</li> <li>ALRU2/POMU (CHAPPEL</li> </ol>	EGR2 (CHAPPELL) L)	90 9	Matrix Small	

 3. ALRU2/LYAM3 c.t. (KUNZE)
 1
 Small

 Notes:
 Development=roads and trails. Rec type= 1 and 3.

Polygon Number Survey Intensity Observer Date Specific Location	<b>24B</b> 1 HS 4/25/2006 N side of park				
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Ferns Total	6 6 ACMA3, ALRU2, F 2 5 2 5 SARA2, GASH 5 2 1 1 0 2 POMU 2 0 4	SME, ARMI	E		
		Exot	tic	Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	4 1 3 0 0 0 2 1 97 3 2 0 0 0 6 0 3 4 1	Primar HEHE Secon ILAQ80 Noxiou	ry E (([ dar ) us E	ixotic BAD!!!)) y Exotic Exotic	
Plant Associations	5	Percent		Pattern	Rank
<ol> <li>ALRU2/POMU (CHAPPEL</li> <li>PSME-ARME/GASH (CH/</li> <li>ACMA3-ALRU2/POMU-TE</li> </ol>	L) Appell) Egr2 (Chappell )	90 5 5	) 5 5	Matrix Small Small	

**Notes:** Development=roads and trails. Rec type= 1 and 3.

Po Su Ob Da Sp	lygon Number rvey Intensity server te ecific Location	<b>25</b> 1 SH 4/25/2006 Along beach; uppe	er slope	and be	yond.		
To Tre Do em a sul Sh Do 2 1 Gra Gra Gra Fo Do Fo	tal Vegetation bes Total minant Trees hergent hincanopy bcanopy rubs Total minant Shrubs .5' tall .5' tall aminoids Total minant Graminoids aminoids Perennial aminoids Annual rbs Total minant Forbs rbs Perennial rbs Annual	6 6 PSME, TSHE, ACI 2 6 3 5 GASH, HODI, SAF 5 3 1 1 1 0 2 SMRA, TEGR2 2 0	MA3, A RA2	LRU2			
Fo	rns Total	5					
			E	xotic	: Species	;	
Fei Fei Ex: Ex: Wa Ro Gra Ba Mo Litt Do Sta Ag Liv De Wi Re Re Hy	rns Evergreen rns Deciduous oticsTotal otics Perennial otics Annual ater ck Outcrop avel re Ground bss Lichen ter gging and Age riculture vestock velopment Idlife creation Severity creation Type drology	5 2 2 2 0 0 0 2 2 96 3 2 0 0 0 3 0 0 1 3 1	Pi IL Se	rimary I AQ80, F econda oxious	Exotic HEHE ry Exotic Exotic		
PI	ant Associations	;	Perce	nt	Pattern	Donk	
1.	PSME-TSHE/GASH/POM	U (CHAPPELL)		70	Matrix	NAIIK	2
2.	ACMA3-ALRU2/POMU-TE	EGR2 (CHAPPELL)		30	Small		2
3.		· · · · · · · · ·		0			0
No	tes:	Hiker created trails	s up ste	ep slop	e trom beach;	quickenir	ng e

Hiker created trails up steep slope from beach; quickening erosion.

Polygon Number Survey Intensity Observer Date Specific Location	<b>26</b> 1 SH 4/25/2006 Eastern arm of park.			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Forbs Annual	6 6 PSME, TSHE, ARME 1 6 GASH, SARA2, VAO 6 4 1 1 1 0 1	:, THPL, ALR V2, HODI, R	RU2 HMA3	
	5	Exotic	Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 2 2 0 0 0 3 2 95 3 2 0 0 0 3 4 3 4 1	Primary E ILAQ80, H Secondar Noxious I	Exotic IEHE ry Exotic Exotic	
Plant Associations	i P	ercent	Pattern	Rank
<ol> <li>PSME-TSHE/GASH/POM</li> <li>3</li> </ol>	U (CHAPPELL)	100 0 0	Matrix	

#### Notes: Rec users--biking and hiking.

Polygon Number Survey Intensity Observer Date Specific Location	27 1 SH 4/25/2006 Eastern arm of park.				
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Forbs Annual	6 6 ALRU2, PSME, TSH 1 6 2 5 RUSP, SARA2, MAN 5 3 1 1 1 0 2 SMRA, TROV2, MAI 2 0 4	ie Ne2, gash Di, urdi			
		Exotic	Species		
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	4 2 2 0 0 0 2 1 97 3 2 0 0 0 3 4 3 4 2	Primary E ILAQ80, F Secondar Noxious	Exotic HEHE ry Exotic Exotic		
Plant Associations	i 1	Percent	Pattern	Rank	
<ol> <li>ALRU2/POMU (CHAPPE)</li> <li>.</li> <li>.</li> <li>.</li> <li>Notes:</li> </ol>	L) Several large ILAQ8	100 0 0 in polygon	Matrix (tree size). HE	HE climbi	2 0 0 ng up to
	20m high in ALRU2.	Rec users in	clude biking ar	nd hiking.	3 - p 10

Hydrology--culvert (currently a dry stream). Rec users--hking,

Polygon Number Survey Intensity Observer Date Specific Location	<b>28</b> 1 HS 8/2/2006 E boundary of park			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 5 ACMA3, ALRU2, P 2 5 3 5 OECE, HODI, COO 5 4 2 2 0 2 2 1	SME :06, RUSP, R	UUR	
Ferns Total	4	Exotic	: Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	4 2 3 3 1 0 0 0 0 1 99 3 2 0 0 0 0 7 2 3 1	Primary I ILAQ80 Seconda HEHE Noxious	Exotic ry Exotic Exotic	
Plant Associations	i	Percent	Pattern	Rank
<ol> <li>ALRU2/POMU (CHAPPEL</li> <li>TSHE-PSME/POMU-DRE</li> </ol>	.L) X2 (CHAPPELL)	50 30	Matrix Large	

2. TSHE-PSME/POMU-DREX2 (CHAPPELL)30Large3. ALRU2/RUSP c.t. (KUNZE)20LargeNotes:Ferns: POMU. Wildlife is birdsLarge

Poly Sur Obs Date Spe Tota Tree Don emai sub Shr Don > 1. < Gra Don Gra Gra	ygon Number vey Intensity server e crific Location al Vegetation es Total ninant Trees ergent ncanopy ubs Total ninant Shrubs 5' tall 5' tall 5' tall minoids Total ninant Graminoids minoids Annual	<b>29</b> 1 SH 4/25/2006 Adjacent to Hwy 509/ to park entrance. 5 5 PSME, TSHE, ACMA 1 5 GASH, HODI, VAOV2 5 3 2 2 0	Dash Point F 3, ALRU2 2, RUSP	Rd. NE portion	of park a	nd adjacent
For Don For For For	bs Total ninant Forbs bs Perennial bs Annual ns Total	2 2 0 3	Exotic	Species		
Ferr Ferr Exo Exo Wat Roc Gra Bar Mos Litto Log Star Agr Live Dev Wild Rec Rec	ns Evergreen ns Deciduous ticsTotal tics Perennial tics Annual ter ek Outcrop vel e Ground ss Lichen er gjing nd Age iculture estock relopment dlife rreation Severity reation Type	3 1 3 3 0 0 6 0 2 92 3 2 0 0 6 0 0 3 4	Primary E ILAQ80, H Secondar Noxious I	Exotic IEHE ry Exotic		
Hyd Pla	ant Associations	1 5 <b>P</b> e	ercent	Pattern	Daula	
1. 2. 3. Not	PSME-TSHE/GASH/POM ALRU2/POMU (CHAPPEL es:	U (CHAPPELL) L) Portion of campgroun polygon. Abundance	90 10 0 d w/ roads, b of llex. Grave	Matrix Small pathrooms, tras el estimate incl	Kank sh cans e udes pav	2 2 0 etc. in vement.

Polygon Number Survey Intensity Observer Date Specific Location	<b>3</b> 2 HS 8/2/2006
Total Vegetation Trees Total	0 0
emergent maincanopy	0 0
subcanopy Shrubs Total Dominant Shrubs	0 0
> 1.5' tall < 1.5' tall Graminoids Total	0 0 0
Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total	0 0
Dominant Forbs Forbs Perennial Forbs Annual	0
Ferns Total	0
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial	0 0 0
Exotics Annual Water Rock Outcrop	0 0 0
Gravel Bare Ground Moss Lichen	0 0 0
Logging Stand Age Agriculture	0
Livestock Development Wildlife	
Recreation Severity Recreation Type Hydrology	
Plant Accordiations	

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location	<b>4</b> 1 HS 4/25/2006 N side of park.		
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 6 PSME, TSHE, ACMA3, 3 5 2 5 GASH, HODI, COCO6, 5 3 1 1 0 1 POMU 1 0	ARME	
Ferns Total	3	Exotic	Species
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 2 2 0 0 0 0 0 0 1 99 3 3 0 0 0 3 0 3 4 1	Primary E HEHE Secondar ILAQ80 Noxious E	xotic y Exotic Exotic
Plant Associations	Per	cent	Pattern
1. PSME-TSHE/GASH/POM	U (CHAPPELL)	100	Matrix

Fiant Associations	rercent	rattern	
			Rank
1. PSME-TSHE/GASH/POMU (CHAP)	PELL) 100	Matrix	2
2.	0		0
3.	0		0
Notes: Rec type	e=1 and 3.		

Polygon Number Survey Intensity Observer Date Specific Location	<b>5</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Troos	0 0
emergent	0
maincanopy	0
subcanopy	0
Shrubs Total	0
Dominant Shrubs	0
< 1.5 tall	0
Graminoids Total	0
Dominant Graminoids	•
Graminoids Perennial	0
Graminoids Annual	0
Forbs Total	0
Dominant Forbs	•
Forbs Perennial	0
Forbs Annual Ferns Total	0
	0
Ferns Everareen	0
Ferns Deciduous	0
ExoticsTotal	0
Exotics Perennial	0
Exotics Annual	0
Water	0
Rock Outcrop	0
Bare Ground	0
Moss Lichen	0
Litter	0
Logging	
Stand Age	
Agriculture	
Livestock	
Development Wildlife	
Recreation Severity	
Recreation Type	
Hydrology	
Diant Associations	

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity	<b>5B</b> 2
Observer	HS
Date	8/2/2006
Specific Location	
Total Vegetation	0
Trees Total	0
Dominant Trees	•
emergent	0
maincanopy	0
subcanopy	0
Shrubs Total	0
Dominant Shrubs	
> 1.5' tall	0
< 1.5' tall	0
Graminoids Total	0
Dominant Graminoids	
Graminoids Perennial	0
Graminoids Annual	0
Forbs Total	0
Dominant Forbs	
Forbs Perennial	0
Forbs Annual	0
Ferns Total	0
Ferns Evergreen	0
Ferns Deciduous	0
ExoticsTotal	0
Exotics Perennial	0
Exotics Annual	0
Water	0
Rock Outcrop	0
Gravel	0
Bare Ground	0
Moss Lichen	0
Litter	0
Logging	
Stand Age	
Agriculture	
Livestock	
Development	
Wildlife	
Recreation Severity	
Recreation Type	
Hydrology	
Diant Associations	

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern	
			Rank
1. developed	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location		<b>6</b> 1 SH 8/2/2006 Near entrance road, campground					
Total Vegetation Trees Total Dominant Trees		6 6 PSME, ACMA3, ALRU2					
emergent		2					
subcapopy		0					
Sh	rubs Total	6					
Do	minant Shrubs	GASH, OECE, RUSP, SARA2, RUPA					
> 1.5' tall		6					
< 1.5' tall		1					
Graminoids Total		1					
Do	minant Graminoids						
Gra	aminoids Perennial	1					
Gra	aminoids Annuai	0					
Do	Dominant Forbs GEMA4						
Fo	rbs Perennial	2					
Fo	rbs Annual	0					
Fe	rns Total	5					
			Exe	otic	: Spec	ies	
Fe	rns Evergreen	5					
Ferns Deciduous		2	Primary Exotic				
ExoticsTotal		5 HEHE					
Exotics Perennial		5 Secondary Exotic					
Exotics Annual		0 ILAQ80					
Water Book Outeron							
Rock Outcrop		0	RUD	12			
Ba	re Ground	10					
Moss Lichen		2					
Litter		88					
Logging		3					
Stand Age		5					
Agriculture		0					
LIVESTOCK		0					
Wildlife		7					
Recreation Severity		2					
Recreation Type		4					
Hydrology		1					
- -							
PI	ant Associations		Percent		Pattern		
						Rank	
1.	1. ACMA3-ALRU2/POMU-TEGR2 (CHAPPELL)			80	Matrix		
2. PSME-TSHE/GASH/POM		U (CHAPPELL)		20	Small		
3. 0							
No	otes: Ferns: POMU, PTAQ. Wildlife is birds. Roads, structur						

Ferns: POMU, PTAQ. Wildlife is birds. Roads, structures, trails
Polygon Number Survey Intensity Observer Date Specific Location	7 1 HS 4/25/2006 SW of park corner				
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Ferns Total	6 4 ALRU2 0 4 1 6 RUSP, OECE 6 1 1 1 1 0 3 OESA, ATFI 3 0 2	Exotic	c Species		
Ferns Deciduous	2	Primary	Exotic		
ExoticsTotal	1	POPR	m. Exatio		
Exotics Appual	1	Seconda	ary Exotic		
Water	0	Noxious	Exotic		
Rock Outcrop	0	HOXIOUS	EXOLIC		
Gravel	0				
Bare Ground	20				
Moss Lichen	30				
Litter	50				
Logging	3				
Stand Age	2				
Agriculture	0				
LIVESTOCK	0				
Wildlife	0				
Recreation Severity	3				
Recreation Type	4				
Hydrology	2				
Plant Associations		Percent	Pattern	Rank	
1. ALRU2/RUSP c.t. (KUN7F	E)	100	Matrix		2
2	-,	0.00			0
3.		0			0
Notes:	Big alder, Road ab	ove wetland. I	Rec type=1 and	3.	Ũ

Polygon Number Survey Intensity Observer Date Specific Location	<b>8</b> 1 HS 4/25/2006 S side of park.			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual	6 5 ALRU2, ACMA3, TSHE 1 5 2 5 7 RUSP, OECE 5 2 1 1	Ξ		
Forbs Total Dominant Forbs	3 MOSI2, MADI, POMU			
Forbs Perennial Forbs Annual Ferns Total	3 0 3			
		Exotic	Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Base Ground	3 0 1 1 0 0	Primary E ILAQ80 Seconda Noxious	Exotic ry Exotic Exotic	
Moss Lichen Litter Logging Stand Age	0 100 3			
Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	2 0 0 3 0 3 4 2			
Plant Associations	Per	rcent	Pattern	
<ol> <li>ALRU2/POMU (CHAPPEL</li> <li>ALRU2/RUSP c.t. (KUNZE</li> <li>PSME-TSHE/GASH/POMI</li> </ol>	L) E) J (CHAPPELL)	80 10 10	Matrix Large Small	Rank

**Notes:** Fire evident area. Rec type=1 and 3. Tree frogs, owls.

Polygon Number Survey Intensity Observer Date Specific Location	<b>9</b> 1 HS 4/25/2006 S side of park.			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Ferns Total Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground	6 6 PSME, ALRU2, TSHE 3 5 3 6 GASH, RUSP, COCOE 2 1 1 0 1 POMU 1 0 2 2 1 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	Exotic Primary B ILAQ80 Seconda Noxious	<b>Species</b> Exotic ry Exotic Exotic	
Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	1 99 3 2 0 0 3 0 3 4 1			
Plant Associations 1. PSME-TSHE/GASH/POMI 2. ALRU2/POMU (CHAPPEL 3.	Per U (CHAPPELL) L)	rcent 95 5 0	Pattern Matrix Small	Rank

Notes:

Rec type; 1 and 3.

## Vegetation Polygon Data – Saltwater State Park

Polygon Number Survey Intensity Observer Date Specific Location	<b>1</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Forbs Annual	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	

Exotic Species

Primary Exotic Secondary Exotic

Plant Associations	Percent	Pattern		
			Rank	
1. developed	0			0
2.	0			0
3.	0			0
Notes:				

Polygon Number Survey Intensity Observer Date Specific Location	<b>10</b> 1 SH 4/26/2006 Bluff near beach				
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial	5 5 PSME, TSHE, ACI 2 5 3 4 HODI, SYAL, GAS 4 2 2 2 2 2 2 2 2 2 2 2 2	Ma3, Abgr SH, Vaov2			
Forbs Annual	0				
Ferris Total	5	Exoti	r Snecies		
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 4 4 0 0 0 5 0 95 3 2 0 0 0 6 0 3 3 1	Primary HEHE, IL Seconda CYSC4 Noxious	Exotic AQ80 ary Exotic Exotic		
Plant Associations	•	Percent	Pattern	Donk	
1. PSME-TSHE/HODI/POMU 2. 3. Notes:	J (CHAPPELL) Abundance of HEH camp, and old firep are open and "park	100 0 HE. Exotics inc place in polygo klike".	Matrix crease in disturt on. The trails an	Kank bed areas d develo	1 0 s. A group ped areas

Polygon Number Survey Intensity Observer Date Specific Location	10A 1 SH 4/26/2006 E section of polygo	n 10		
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 6 ACMA3, ALRU2, P 1 6 1 5 HODI, RUSP, SAR 5 3 2 2 2 0 3 TEGR2, URDI 3 0	SME A2		
Ferns Total	3	Exotic	Species	5
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 2 2 0 0 4 3 1 92 3 2 0 0 0 3 0 3 3 1	Primary B HEHE, IL Seconda Noxious	Exotic AQ80 ry Exotic Exotic	-
riant Associations		Percent	Pattern	Rank
<ol> <li>ACMA3-ALRU2/POMU-TE</li> <li>3.</li> </ol>	EGR2 (CHAPPELL)	100 0 0	Matrix	

 
 Notes:
 Polygon on steep slope. Stream runs along polygon. Hydrology--bridge, but no alteration os stream.

Polygon Number Survey Intensity Observer Date Specific Location Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Forbs Annual Ferns Evergreen Ferns Deciduous Exotics Perennial Exotics Perennial Exotics Perennial Exotics Perennial Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type	10B 2 SH 4/26/2006 Along beach; slope 10. 0 0 ACMA3, ALRU2 0 0 0 0 0 0 0 0 0 0 0 0 0	e of polygon 10 Exotic Primary F RUDI2 Seconda Noxious	, W facing. W p Species Exotic ry Exotic Exotic	portion of polygon
Hydrology				
Plant Associations	i	Percent	Pattern	Rank
		100	Matrix	1 1
1. AGIVIAJ-ALKUZ/FONIO-TE		100	IVICUIX	і О
2.		0		U
3.		0		0
Notes:	Landslide area. Ru	bus discolor in	festation along	chain-link fence

seperating slope from beach/grassy area.

Polygon Number Survey Intensity Observer Date Specific Location	<b>11</b> 1 HS 4/26/2006 W side, S of bridge			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 5 ACMA3, ALRU2, T 2 5 2 5 5 5 1 1 1 0 3 URDI, TEGR2 3 0	SHE		
Ferns Total	3	Exoti	c Species	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3 1 5 5 0 0 0 0 0 1 99 3 2 0 0 0 3 0 3 3 1	Primary HEHE Seconda ILAQ80 Noxious	Exotic ary Exotic Exotic	
Plant Associations		Percent	Pattern	Rank
<ol> <li>ALRU2/POMU (CHAPPEL</li> <li>ACMA3-ALRU2/POMU-TE</li> <li>3.</li> </ol>	L) GR2 (CHAPPELL)	70 30 0	Matrix Matrix	

3. Notes:

Polygon Number Survey Intensity Observer Date Specific Location	<b>12</b> 1 HS 4/26/2006 Ravine on W side o	of bridge.	
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs	6 6 7SHE, PSME, ACN 3 5 3 4 HEHE, SARA2, VA 4 4 1 1 0 2 POMULATEL	/IA3, ABGR ∖PA	
Forbs Perennial	2		
Forbs Annual	0		
Ferns Total	4		_
		Exotic	: Species
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	4 2 3 3 0 0 0 0 0 1 99 2 3 0 0 0 3 0 2 3 1	Primary I HEHE Seconda ILAQ80 Noxious	Exotic ry Exotic Exotic
Plant Associations	i	Percent	Pattern
1. TSHE-PSME/POMU-DRE	X2 (CHAPPELL)	92	Matrix

1.	TSHE-PSME/POMU-DREX2 (CHAPPELL)	92	Matrix
2.	ALRU2/RUSP c.t. (KUNZE)	5	linear
3.	PSME-TSHE/GASH/POMU (CHAPPELL)	3	Small
No	tes: Evidence of fire.		

Rank

Polygon Number Survey Intensity Observer Date	<b>13</b> 1 HS 8/2/2006		
Specific Location	SW corner of park.		
Total Vegetation Trees Total Dominant Trees	4 0		
emergent	0		
maincanopy	0		
subcanopy Shrubs Total	0		
Dominant Shrubs	I		
> 1.5' tall	0		
< 1.5' tall	1		
Graminoids Total	3		
Dominant Graminoids	ELMO9, ARAL, HOLA		
Graminoids Perennial	3		
Forbs Total	2		
Dominant Forbs	AMCH4 LAJA		
Forbs Perennial	3		
Forbs Annual	2		
Ferns Total	1		
		Exotic	Species
Forme Evergreen	0		•
Ferns Evergreen	0		
Ferns Deciduous	1	Primary E	xotic
Ferns Deciduous ExoticsTotal	1 3	Primary E HEHE	Exotic
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial	1 3 3	Primary E HEHE Secondar	Exotic ry Exotic
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water	1 3 3 2	Primary E HEHE Secondar AGRE2 Novious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop	1 3 3 2	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel	1 3 3 2 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground	0 0 30	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen	1 3 3 2 0 0 30 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter	1 3 3 2 0 0 30 0 70	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Aco	1 3 2 0 0 30 0 70 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture	1 3 3 2 0 0 30 0 70 0 0 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock	1 3 3 2 0 0 30 0 70 0 0 0 0 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development	1 3 3 2 0 0 30 0 70 0 0 0 0 0 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife	1 3 3 2 0 0 30 0 70 0 0 0 0 0 0 7	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity	1 3 3 2 0 0 30 0 70 0 0 0 0 0 0 0 7 3	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type	1 3 3 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	1 3 3 2 0 0 30 0 70 0 0 0 0 0 0 0 0 7 3 3 3 1	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic
Ferns Evergreen Ferns Deciduous Exotics Total Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology <b>Plant Associations</b>	1 3 3 2 0 0 0 0 0 0 0 0 0 0 0 0 0	Primary E HEHE Secondar AGRE2 Noxious I	Exotic ry Exotic Exotic Pattern

Plant Associations		Percent	Pattern		
				Rank	
1.	ELMO9 Community (KUNZE)	100	Matrix		2
2.		0			0
3.		0			0
No	tes: Wildlife is birds	S			

Polygon Number Survey Intensity Observer Date Specific Location	<b>14</b> 2 HS 8/2/2006
Total Vegetation Trees Total	0 0
emergent	0
maincanopy	0
Subcanopy Shrubs Total	0
Dominant Shrubs	0
> 1.5' tall	0
< 1.5' tall Graminoida Total	0
Dominant Graminoids	0
Graminoids Perennial	0
Graminoids Annual	0
Dominant Forbs	0
Forbs Perennial	0
Forbs Annual	0
Ferns Total	0
Ferns Evergreen	0
Ferns Deciduous	0
Exotics I otal	0
Exotics Annual	0
Water	0
Rock Outcrop	0
Gravel	0
Bare Ground	0
Moss Lichen	0
	0
Stand Age	
Agriculture	
Livestock	
Development	
Wildlife	
Recreation Severity	
Hydrology	
Diant Associations	

Exotic	Species
--------	---------

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern		
			Rank	
1. developed	0			0
2.	0			0
3.	0			0
Notes:				

Polygon Number Survey Intensity Observer Date Specific Location	<b>2</b> 2 HS 8/2/2006
Total Vegetation Trees Total	0 0
emergent	0
maincanopy	0
subcanopy	0
Shrubs Total	0
> 1.5' tall	0
< 1.5' tall	Õ
Graminoids Total	0
Dominant Graminoids	
Graminoids Perennial	0
Graminolds Annual	0
Dominant Forbs	0
Forbs Perennial	0
Forbs Annual	0
Ferns Total	0
Ferns Evergreen	0
Ferns Deciduous	0
ExoticsTotal	0
Exotics Perennial	0
Water	0
Rock Outcrop	Ő
Gravel	0
Bare Ground	0
Moss Lichen	0
Litter	0
Stand Age	
Agriculture	
Livestock	
Development	
Wildlife Description Coverting	
Recreation Severity	
Hydrology	
Disut Assasiat	

Primary Exotic Secondary Exotic

Plant Associations	Percent	Pattern		
			Rank	
1. Water	0			0
2.	0			0
3.	0			0
Notes:				

Polygon Number Survey Intensity Observer Date Specific Location	<b>3</b> 1 HS 4/26/2006 Sw corner of park.
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 6 ACMA3, ALRU2, TSHE 1 6 HEHE, OECE, RUSP, RUDI2 5 5 1 1 1 0 1 POMU 1 0
Ferns Total	3 Exotia Spaciae
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	3       Primary Exotic         5       HEHE         5       Secondary Exotic         0       RUDI2         Noxious Exotic         0         1         99         3         2         0         0         0         0         2         3         1         Percent       Pattern
	Rank
1. ALRU2/POMU (CHAPPE 2. ACMA3-ALRU2/POMULT	L) 89 Matrix

Notes:	Development=2 and 3		
3. TSHE-PSME/PO	MU-DREX2 (CHAPPELL)	5	Small
2. ACMA3-ALRU2/	POMU-TEGR2 (CHAPPELL)	6	Large
1. ALRU2/POMU (C	CHAPPELL)	89	Matrix

Polygon Number Survey Intensity Observer Date Specific Location	<b>4A</b> 1 SH 4/26/2006			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total	6 6 ACMA3, ALRU2, ( 2 6 3 5 RUSP, SARA2, M 5 3 2	PSME, ABGR, ANE2	THPL, TSHE)	I
Forbs Perennial Forbs Total Dominant Forbs Forbs Perennial Forbs Perennial Forbs Annual Forbs Annual Forbs Total	2 0 2 2 0 4			
Ferns Evergreen Ferns Deciduous ExoticsTotal	4 2 4	Exotic Primary E HEHE	Species	;
Exotics Perennial Exotics Annual Water Rock Outcrop	4 0 0	Seconda ILAQ80 Noxious	ry Exotic Exotic	
Gravel Bare Ground Moss Lichen Litter Logging	2 2 94 3			
Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	2 0 3 0 3 3 1			
Plant Associations	5	Percent	Pattern	Ran
1. ACMA3-ALRU2/POMU-T	EGR2 (CHAPPELL)	60	Matrix	

Pl	ant Associations	Percent	Pattern	
				Rank
1.	ACMA3-ALRU2/POMU-TEGR2 (CHAPPELL)	60	Matrix	
2.	ALRU2/POMU (CHAPPELL)	30	Large	
3.	PSME-TSHE/GASH/POMU (CHAPPELL)	10	Small	
	4			

Notes:

Polygon Number Survey Intensity Observer Date Specific Location	<b>4B</b> 1 HS 8/2/2006			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 5 PSME, TSHE, THF 1 5 2 4 HODI, SARA2, MA 4 3 2 2 2 0 2 7 EGR2, HYTE 2 1	PL, ACMA3 NE2, COCO6		
Ferns Total	4	Exotic	- Snecies	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	4 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0	Primary HEHE Seconda DIPU Noxious	Exotic Ary Exotic Exotic	·
Plant Associations	•	Percent	Pattern	Rank
<ol> <li>PSME-TSHE/MANE2/POI</li> <li>TSHE-PSME/POMU-DRE</li> </ol>	MU (CHAPPELL) X2 (CHAPPELL)	55 30	Matrix Large	

1. PSME-TSHE/MANE2/POMU (CHAPPELL)55Matrix2. TSHE-PSME/POMU-DREX2 (CHAPPELL)30Large3. ACMA3-ALRU2/POMU-TEGR2 (CHAPPELL)15SmallNotes:Notes:Notes:Notes:

Polygon Number Survey Intensity Observer Date Specific Location	<b>4C</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual	6 5 ALRU2 0 5 0 4 RUSP, RUDI2 4 2 1 1 0 3 TITR 3 1
Ferns Total Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type	4 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Hydrology	2

## **Plant Associations**

1.	ALRU2/POMU (CHAPPELL)
2.	ALRU2/RUSP c.t. (KUNZE)
3.	
No	ites:

Percent	Pattern		
		Rank	
60	Matrix		1
40	Large		1
0			0

**Exotic Species** 

Primary Exotic RUDI2 Secondary Exotic RARE3

Polygon Number Survey Intensity Observer Date Specific Location	<b>4D</b> 2 HS 8/2/2006
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids	6 5 ALRU2 0 5 RUSP, RUDI2 5 2 2
Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Ferns Total	2 0 4 TITR, ATFI, 4 1 4
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture	3 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	0 3 0 3 3 2

## **Plant Associations**

1.	ALRU2/RUSP c.t. (KUNZE)
2.	ALRU2/POMU (CHAPPELL)
2	

Percent	Pattern		
		Rank	
70	Matrix		1
30	Large		1
0			0

**Exotic Species** 

Primary Exotic RARE3 Secondary Exotic RUDI2

**Noxious Exotic** 

2. ALR 3. Notes:

Polygon Number Survey Intensity Observer Date Specific Location	<b>4E</b> 1 HS 8/2/2006	
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Perennial Forbs Annual	6 5 TSHE, PSME, THPL, ACMA3 1 5 2 4 HEHE, SARA2, HODI 2 4 1 1 2 2 2 0	
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age	Exotic Species Primary Exotic HEHE Secondary Exotic Noxious Exotic Noxious Exotic C C C C C C C C C	
Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology Plant Associations	0 3 0 3 3 1 Percent Pattern	]

	rercent	I attern	
			Rank
1. TSHE-PSME/POMU-DREX2 (CHAPPELL)	100	Matrix	1
2.	0		0
3.	0		0
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location	<b>4F</b> 1 HS 8/2/2006			
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total Dominant Graminoids Graminoids Perennial Graminoids Annual	6 5 TSHE, PSME, THI 2 5 2 4 GASH, MANE2, S 4 3 2 2 2	PL, ACMA3, AB ARA2, COCO6	BGR, ALRU	
Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Ferns Total	2 2 1 4			
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Recreation Type Hydrology	4 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Exotic Primary I HEHE Seconda Noxious	c Species Exotic rry Exotic Exotic	•
<ul> <li>Plant Associations</li> <li>1. PSME-TSHE/GASH/POM</li> <li>2. TSHE-PSME/POMU-DRE</li> </ul>	U (CHAPPELL) X2 (CHAPPELL)	Percent 60 30	Pattern Matrix Large	Rank
3. PSME-TSHE/MANE2/POI Notes:	MU (CHAPPELL)	10	Small	

Polygon Number Survey Intensity Observer Date Specific Location	<b>6</b> 1 HS 4/26/2006 NW polygon.		
Total Vegetation Trees Total Dominant Trees emergent maincanopy subcanopy Shrubs Total Dominant Shrubs > 1.5' tall < 1.5' tall Graminoids Total	6 5 ACMA3, ALRU2, PSM 2 5 3 6 HEHE, RUSP, OECE 4 5 1	E, TSHE	
Dominant Graminoids Graminoids Perennial Graminoids Annual Forbs Total Dominant Forbs Forbs Perennial Forbs Annual Ferns Total	1 0 3 TEGR2, HYTE, POMU 3 0 3		
		Exotic	: Species
Ferns Evergreen Ferns Deciduous ExoticsTotal Exotics Perennial Exotics Annual Water	3 2 5 5 0	Primary B HEHE Seconda ILAQ80	Exotic ry Exotic Exotic
Water Rock Outcrop Gravel Bare Ground Moss Lichen Litter Logging Stand Age Agriculture Livestock Development Wildlife Recreation Severity Becerotion Ture	0 0 2 98 3 2 0 0 0 3 0 2 2	NOXIOUS	EXOTIC
Hydrology	3 1		
Plant Associations	e Per	rcent	Pattern
1. ACMA3-ALRU2/POMU-TE	EGR2 (CHAPPELL)	60 40	I Matrix

	1 er cent	1 accel ii	
			Rank
1. ACMA3-ALRU2/POMU-TEGR2 (CHAPPELI	L) 60	Matrix	
2. ALRU2/POMU (CHAPPELL)	40	Large	
3.	0		
Notes:			

Polygon Number Survey Intensity Observer Date Specific Location	7 2 HS 8/2/2006
Total Vegetation Trees Total	0 0
emergent	0
maincanopy	0
subcanopy	0
Shrubs Total	0
Dominant Shrubs	•
	0
Graminoids Total	0
Dominant Graminoids	0
Graminoids Perennial	0
Graminoids Annual	0
Forbs Total	0
Dominant Forbs	•
Forbs Perennial	0
Forbs Annual Forbs Total	0
	0
Ferns Everareen	0
Ferns Deciduous	0
ExoticsTotal	0
Exotics Perennial	0
Exotics Annual	0
Water	0
Rock Outcrop	0
Bare Ground	0
Moss Lichen	0
Litter	0
Logging	
Stand Age	
Agriculture	
LIVESTOCK	
Wildlife	
Recreation Severity	
Recreation Type	
Hydrology	
Diant Associations	

Exotic S	species
----------	---------

Primary Exotic

Secondary Exotic

Plant Associations	Percent	Pattern		
			Rank	
1. developed	0			0
2.	0			0
3.	0			0
Notes:				

Total Vegetation0Trees Total0Dominant Treesemergent0subcanopy0shrubs Total0Dominant Shrubs> 1.5' tall0Graminoids Total0Dominant Graminoids0Graminoids Perennial0Forbs Total0Dominant ForbsForbs Total0Forbs Perennial0Forbs Perennial0Forbs Annual0Ferns Evergreen0Ferns Deciduous0Exotics Perennial0Exotics Perennial0Castics Annual0Ferns Evergreen0Fars Evergreen0Ferns Deciduous0Exotics Perennial0O0Exotics Perennial0Bare Ground0Moss Lichen0Litter0	3
boinnant rices         emergent       0         maincanopy       0         subcanopy       0         Shrubs Total       0         Dominant Shrubs       >         > 1.5' tall       0         Graminoids Total       0         Dominant Shrubs       >         > 1.5' tall       0         Graminoids Total       0         Dominant Graminoids       0         Graminoids Perennial       0         Forbs Total       0         Dominant Forbs       0         Forbs Perennial       0         Forbs Perennial       0         Ferns Evergreen       0         Exotics Perennial       0         Exotics Perennial       0         Exotics Perennial       0         Exotics Annual       0         Water       0         Rock Outcrop       0         Gravel       0         Bare Ground       0         Moss Lichen       0         Litter       0	
maincanopy0subcanopy0Shrubs Total0Dominant Shrubs> 1.5' tall0< 1.5' tall00Graminoids Total0Dominant Graminoids0Graminoids Perennial0Graminoids Annual0Forbs Total0Dominant ForbsForbs Perennial0Forbs Annual0Ferns Evergreen0Ferns Deciduous0Exotics Perennial0Exotics Perennial0Vater0Rock Outcrop0Gravel0Bare Ground0Litter0	
Shrubs Total0Dominant Shrubs> 1.5' tall0< 1.5' tall0Graminoids Total0Dominant Graminoids0Graminoids Perennial0Graminoids Annual0Forbs Total0Dominant ForbsForbs Perennial0Forbs Annual0Ferns Evergreen0Ferns Deciduous0Exotics Perennial0Vater0Rock Outcrop0Gravel0Bare Ground0Litter0	
> 1.5' tall       0         > 1.5' tall       0         Graminoids Total       0         Dominant Graminoids       0         Graminoids Total       0         Dominant Graminoids       0         Graminoids Total       0         Graminoids Total       0         Graminoids Perennial       0         Forbs Total       0         Porbs Total       0         Forbs Perennial       0         Ferns Total       0         Ferns Total       0         Ferns Deciduous       0         Exotics Perennial       0         Exotics Perennial       0         Exotics Annual       0         Water       0         Rock Outcrop       0         Bare Ground       0         Moss Lichen       0         Litter       0	
< 1.5' tall0Graminoids Total0Dominant Graminoids0Graminoids Perennial0Graminoids Annual0Forbs Total0Dominant Forbs0Forbs Perennial0Forbs Annual0Ferns Total0Ferns Evergreen0Exotics Perennial0Exotics Perennial0Vater0Rock Outcrop0Gravel0Bare Ground0Litter0	
Ferns Evergreen       0         Ferns Deciduous       0         Ferns Could of Evential       0         Forbs Total       0         Dominant Forbs       0         Forbs Perennial       0         Forbs Perennial       0         Forbs Annual       0         Ferns Total       0         Ferns Evergreen       0         Exotics Perennial       0         Exotics Perennial       0         Exotics Annual       0         Water       0         Rock Outcrop       0         Bare Ground       0         Moss Lichen       0         Litter       0	
Graminoids Perennial0Graminoids Annual0Forbs Total0Dominant Forbs6Forbs Perennial0Forbs Annual0Ferns Total0Ferns Deciduous0Exotics Total0Exotics Perennial0Exotics Perennial0Water0Rock Outcrop0Gravel0Bare Ground0Litter0	
Forbs Total0Dominant Forbs0Forbs Perennial0Forbs Annual0Ferns Total0Ferns Deciduous0Exotics Total0Exotics Perennial0Exotics Annual0Water0Rock Outcrop0Gravel0Bare Ground0Lither0	
Forbs Perennial       0         Forbs Annual       0         Ferns Total       0         Ferns Deciduous       0         ExoticsTotal       0         Exotics Perennial       0         Exotics Annual       0         Water       0         Rock Outcrop       0         Bare Ground       0         Lither       0	
Forbs Annual0Ferns Total0Ferns Deciduous0Exotics Total0Exotics Total0Exotics Perennial0Exotics Annual0Water0Rock Outcrop0Gravel0Bare Ground0Lither0	
Ferns Evergreen0Ferns Deciduous0ExoticsTotal0Exotics Perennial0Exotics Annual0Water0Rock Outcrop0Gravel0Bare Ground0Moss Lichen0Litter0	
Ferns Evergreen0Ferns Deciduous0Exotics Total0Exotics Perennial0Exotics Annual0Water0Rock Outcrop0Gravel0Bare Ground0Moss Lichen0Litter0	
ExoticsTotal 0 Exotics Perennial 0 Exotics Annual 0 Water 0 Rock Outcrop 0 Gravel 0 Bare Ground 0 Moss Lichen 0 Litter 0	
Exotics Perennial0Exotics Annual0Water0Rock Outcrop0Gravel0Bare Ground0Moss Lichen0Litter0	
Water0Rock Outcrop0Gravel0Bare Ground0Moss Lichen0Litter0	
Gravel   0     Bare Ground   0     Moss Lichen   0     Litter   0	
Bare Ground0Moss Lichen0Litter0	
Litter 0	
Le unite u	
Logging Stand Age	
Agriculture	
Development	
Wildlife Recreation Severity	
Recreation Type	

Pattern

0 0 0

Primary Exotic Secondary Exotic Noxious Exotic

## **Plant Associations**

	1 ci cent	1 40001 11
		Rank
1. developed	0	
2.	0	
3.	0	
Notes:		

Percent