National Park Service
U.S. Department of the Interior

Natural Resource Stewardship and Science

# Vascular Plant Inventory for Lewis and Clark National Historical Park

*Public Version*

Natural Resource Technical Report NPS/LEWI/NRTR—2012/603.N

**ON THE COVER**
Headland at Cape Disappointment
Photograph by: Lindsey Koepke Wise

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This report is available from the Lewis and Clark National Historical Park website (http://www.nps.gov/lewi/naturescience/plants.htm), the North Coast and Cascades Network Inventory and Monitoring website (http://science.nature.nps.gov/im/units/nccn/reportpubs.cfm), and the Natural Resource Publications Management website (http://www.nature.nps.gov/publications/nrpm).

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## Abstract

A study to review the status and distribution of vascular plants at Lewis and Clark National Historical Park was initiated in 2009 and completed in 2010 by the Oregon Natural Heritage Information Center at Oregon State University. This study built on previous inventories conducted under the National Park Service's Inventory and Monitoring Program which was initiated in 1992 to collect baseline data on the number and status of biological resources within the parks (National Park Service 2001). The North Coast and Cascades Network of national parks conducted vascular plant inventories in seven Pacific Northwest parks from 1999 to 2003 (Rochefort et al. 2009). At that time, inventories focused on the lands included within Fort Clatsop National Memorial (FOCL), documenting 246 vascular plant species. In 2004 the Fort Clatsop National Memorial was expanded to become Lewis and Clark National Historical Park (LEWI), encompassing several units of state and federal parkland in Oregon and Washington. As this expansion occurred after completion of the initial vascular plant inventory of FOCL, vascular plant species present in the new park units had yet to be documented.

Field surveys were completed between February 2009 and September 2010. Species new to the park were documented with specimen vouchers, GPS locations, and field notes. Point locations and population estimates were made for rare species and for non-native, invasive species of concern. Locations of rare communities were noted. Existing vouchers in the LEWI herbarium were verified and re-labeled with up-to-date nomenclature, mis-identifications were annotated, and species were keyed to variety or subspecies where applicable.

Upon completion of field work and data mining research, an additional 180 species were documented as occurring within the legislative boundary of the park, bringing the total number of vascular species to 467. In addition, the locations of six rare community types, 10 rare species, and 18 non-native species of concern were mapped in park units. These mapped species are discussed in detail and management strategies are presented. An annotated checklist of the vascular plants of the park documents each species recorded for the park and describes their range, nativity, population size within the park, and associated habitats.

# Acknowledgments

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Kathleen Sayce of ShoreBank Pacific provided advice on finding certain species and was a valuable resource for the species and communities at Cape Disappointment. Richard Halse at Oregon State University identified and verified troublesome specimens. David Giblin at the University of Washington provided advice on herbarium specimen preparation and annotation. Gay Hunter at Olympic National Park provided herbarium annotation advice and forms. Noel Bacheller of the Oregon Parks and Recreation Department provided information on Fort Stevens and Sunset Beach resource management.

Evan Roberts of Long Beach Area State Parks kindly provided a canoe for access to O'Neil Lake at Cape Disappointment State Park. The Oregon Military Department provided plant lists and inventory reports for species found at Camp Rilea compiled by Scott Sundberg while working at the OSU Herbarium. The Nature Conservancy's volunteers helped with internet research on plant characteristics. Christina Schull and Melissa Reich with the Oregon Biodiversity Information Center assisted in field work and specimen preparation. Erin Doyle with the Oregon Biodiversity Information Center assisted with research on habitat use, range, and phenology for the appendices. John Christy and Eric Nielsen at the Oregon Biodiversity Information Center contributed ecology and wetland expertise, project design and review, and aided in field work.

Research was conducted under permit # FOCL-2009-SCI-0002 for study number FOCL-00005

# 1 Introduction

The National Park Service's primary mission is to conserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment of present and future generations. Fort Clatsop National Memorial (FOCL) was established in1958 in Astoria, Oregon to commemorate the site of Fort Clatsop. The fort was built in 1805 by Meriwether Lewis and William Clark and their company during their expedition to the Pacific Ocean to house them over the winter before their return trip to Missouri. When established, FOCL consisted mainly of inland lowland forest and riparian wetlands adjacent to the Lewis and Clark River around the site of the Fort replica and visitor center.

In 1992, the National Park Service's (NPS) Inventory and Monitoring Program identified a list of candidate elements and processes for initial inventory in all natural resource parks. The National Parks Omnibus Management Act of 1998 recognized the need for good scientific information to manage parks. The act mandated a "program of inventory and monitoring of National Park System resources to establish baseline information and to provide information on the long-term trends in the condition of National Park System resources" for the purpose of informing park management through greater scientific knowledge (NPS 1998). Baseline species and ecological data from each park would allow the service to track changes over time and provide benchmarks for species and habitat conservation in an ecological setting.

In 1999, the National Park Service initiated the Species Inventory Program focusing on vertebrates and vascular plants. This program was created to provide park resource managers with comprehensive, scientifically-based information about the nature and status of biological resources within park boundaries. The North Coast and Cascades Network (NCCN) of parks developed a plan in 1999 to inventory and document vertebrate and vascular plant species in the network (Rochefort et al. 2009). The goals of this program were to compile lists of vascular plants and vertebrates list for each network park and to verify the occurrence of at least 90% of the species on each park list through written records or voucher specimens. Development of species lists and verification of occurrence was accomplished by summarizing existing park information, data mining (i.e., searching museum records and other reliable outside datasets), and finally conducting field surveys to document species presence through specimen collection. All data was then entered into the NPS NPSpecies database. Data entry followed a two step process of data entry and then certification. The NCCN Inventory program was conducted from 1999 to 2003 and at that time, FOCL had a list of 246 vascular plant species that were verified at the 90% level (Rochefort et al. 2009), precluding the need for additional inventory.

The Lewis and Clark National Historical Park Designation Act of 2004 authorized FOCL to expand to become Lewis and Clark National Historical Park (LEWI). This expansion added several units to the park, including lands in Washington State and along the Oregon coast. Several thousand acres were added along with several habitat types, and the park determined that a vascular plant inventory was needed on the new parklands. In 2008, the Pacific West Region provided funding for the park to conduct a plant inventory of the newly added lands. LEWI partnered with the Oregon Natural Heritage Information Center at Oregon State University to complete the inventories, drawing on the heritage program‘s previous work with NPS and vascular plant inventories. During the completion of the project, the Oregon Natural Heritage Information Center was transferred to Portland State University, where it became the Oregon

Biodiversity Information Center (ORBIC), and it will be referred to as ORBIC throughout this report.

## 1.1 Background and justification

The expansion of Lewis and Clark National Historical Park in 2004 necessitated a new inventory of additional park lands to meet the goals laid out in the NCCN Inventory Program. In addition, a new inventory allowed for rare and non-native, invasive species locations to be mapped, rare plant communities to be identified and discussed, and for the park‘s existing herbarium collections to be reviewed.

## 1.2 Objectives

The objectives of this project were to complete a vascular plant inventory of the new lands, including collection and processing of voucher herbarium specimens. Specific goals of the inventory were to:

1. Document and map locations of special status plants including federal or state listed threatened, endangered, species of concern or special status plant species.
2. Document and identify important locations of plant communities of special interest or concern.
3. Document and map locations of non-native species of concern.
4. Collect and process voucher specimens for any species encountered that were not previously represented in the LEWI herbarium.
5. Develop an annotated checklist and technical report documenting current and previous floristic work at LEWI.

## 1.3 Study area

### *1.3.1 History and setting*

In May 1804, the Corps of Discovery led by Meriwether Lewis and William Clark by order of President Thomas Jefferson began their journey from Missouri to cross the American continent; creating maps, collecting specimens, and making contact with native peoples as they went. A year and a half later, their journey west would end at the mouth of the Columbia River and the Pacific Ocean. Before heading back east, they built Fort Clatsop on the Netul River, now called the Lewis and Clark River, and stayed for three months while they wrote reports, annotated maps, and processed their collections and waited for the winter to pass. They left in March of 1806 to return home. It was in appreciation of the achievements and importance of the Lewis and Clark Expedition that the Fort Clatsop site became a National Memorial in 1958.

Since the National Memorial designation was made in 1958, the park has continued to expand. In 1979 the 0.2 acre Salt Works parcel was purchased in Seaside and added to the park. The Fort Clatsop unit was expanded to about 1200 acres in 2002 under the Fort Clatsop Boundary Expansion Act. The major expansion came in 2004 with the passage of the Lewis and Clark National Historical Park Designation Act, which added units in Washington and additional sites in Oregon. With the 2004 Act the park area now stands at 3,358 acres.

Lewis and Clark National Historical Park is located on the Pacific coast in Clatsop County, Oregon and Pacific County, Washington (Figure 1). There are five main Park Service units: Cape Disappointment, Middle Village/Station Camp, Dismal Nitch, Sunset Beach/Yeon, and Fort

Clatsop. There is also a sixth small Park Service property, the Salt Works, which is a treed city lot with an interpretive panel and reproduction of a salt cairn similar to that described in the Lewis and Clark journals as having been used by expedition members. The lot is inland from the beach due to the fact that several hundred feet of shoreline have accreted over the last 200+ years. There are also three associated State Park units: Fort Columbia, Fort Stevens, and Ecola. In addition to their historical significance, the Lewis and Clark NHP lands preserve coastal habitats that support rare plant species and provide important resources for wildlife.

Three units are located in Washington State. The largest is Cape Disappointment State Park, located on the peninsula at the extreme south-western tip of Washington. It includes headlands, forests, wetlands, dunes and several miles of beach line. While this unit continues to be managed by Washington State Parks, it is within the legislative boundaries of LEWI as defined in the 2004 LEWI designation act. The other two Washington units are located upstream along the Columbia River. They are Middle Village/Station Camp, a site of both pre- and post-contact significance located west of the Astoria Bridge, and Clark‘s Dismal Nitch, a smaller unit located just east of the Astoria Bridge. Both these sites are largely composed of forests on the bluffs overlooking the Columbia River.

The original national memorial site, Fort Clatsop, is located on the Lewis and Clark River south-east of the city of Astoria, Oregon. Aside from the wetlands and riparian habitats along the river, this 1,200 acre unit is a mostly forested area which now includes the Fort to Sea trail east of Highway 101, connecting the fort to the ocean. The Fort to Sea trail terminates at Sunset Beach State Recreation Area, which is owned by Oregon State Parks but is within the legislative boundaries of LEWI, and is cooperatively managed between the two agencies. Directly south of Sunset Beach is the recently acquired Yeon property. Collectively, these two properties comprise the Sunset Beach/Yeon unit.

In addition to the six units that fall within the legislative boundaries of LEWI, there are three state parks that have special cooperative relationships with LEWI and have been included in this study, though they were given less intensive investigation as the focus was on the units within the legislative boundary. They are: Fort Columbia State Park, including 626 acres of forests and the historic fort located on the Columbia River immediately northwest of the Station Camp unit in Washington; Ecola State Park located north of Cannon Beach, Oregon, which includes nine miles of coastline and the most pristine forests of any of the units; and Fort Stevens State Park located on the peninsula at the extreme north-western tip of Oregon. Fort Stevens is the largest unit at over 3,000 acres and includes the largest area of salt marsh and sand dunes within any of the units associated with LEWI.

This report has had confidential information regarding species of management concern locations removed.


**Figure 1**. Locations and names of Lewis and Clark National Historical Park and State Park units.

### *1.3.2 Geology and Climate*

The mountains of the Pacific Coast Range run north-south from Alaska to California. They were formed from a volcanic island chain that collided with the North American continent about 50 million years ago. The subduction of the Juan de Fuca plate under the North American Plate in the Pacific Northwest causes uplift along the coast, creating marine terraces (Roering 2008). Marine sediments that have since collected around the mountains form the lands west of the range, where the Lewis and Clark units are located. The climate along these coasts is cool and wet, with average rainfall ranging around 70-100 inches per year. Winters and summers are mild with an average high of $67^{o}$ F and low of $35^{o}$ F. Storms frequently cause landscape-level changes at the coast, contributing to erosion of beaches and wind throw of trees in forested areas. Recently, storms in 1999 and 2007 have caused blow downs and beach erosion in Park units. Beaches behind the North Jetty at Cape Disappointment have been eroding since the 1950s (Washington DOE 2008). In the summer of 2010 the Littoral Drift Project was completed by the Army Corps of Engineers to restore eroded areas along the North Jetty and Benson Beach using dredged material from the mouth of the Columbia. If successful, the dredging and dumping could occur at Cape Disappointment annually (Great Lakes Dredge and Dock Company 2010; Lower Columbia River Solutions Group 2011). These processes have led to large areas of Cape Disappointment and Fort Stevens being created within the last 100 years (Figures 2 and 3).

### *1.3.3 Vegetation*

In the early 1800s surveyors hired by the General Land Office (now the Bureau of Land Management) parceled out the western frontier into public and private sections. Their notes contain witness tree measurements and landscape descriptions that allow mapping of historical vegetation for this era (Figures 2 and 3). The lands that are now Lewis and Clark National Historical Park were a mosaic of spruce forests, swamps, shrublands, dry prairies, dunes, coastal headlands, and salt marshes in the 1800s and early 1900s (Christy et al. 2009). Although urbanization, dune stabilization, non-native species, and accretion have changed the size and ratio of these habitats, this mosaic is still present across most of the LEWI units. Several habitats are present in Park units that have been identified as conservation targets by NatureServe and The Nature Conservancy (NatureServe 2010; TNC 2006). North Pacific Hypermaritime Sitka Spruce Forest, North Pacific Maritime Coastal Sand Dune and Strand, and North Pacific Coastal Herbaceous Bald and Bluff are ecosystems present in park units that are noted as having a limited distribution on the Pacific Coast and therefore are a priority for conservation (TNC 2006). These ecosystem types correspond to the rare communities mapped in this report, with the addition of other communities that are locally rare. A new vegetation map for LEWI is currently under development, also being developed through a partnership between ORBIC and NPS. The results of this mapping project will be published in a future Technical Report.

This report has had confidential information regarding species of management concern locations removed.

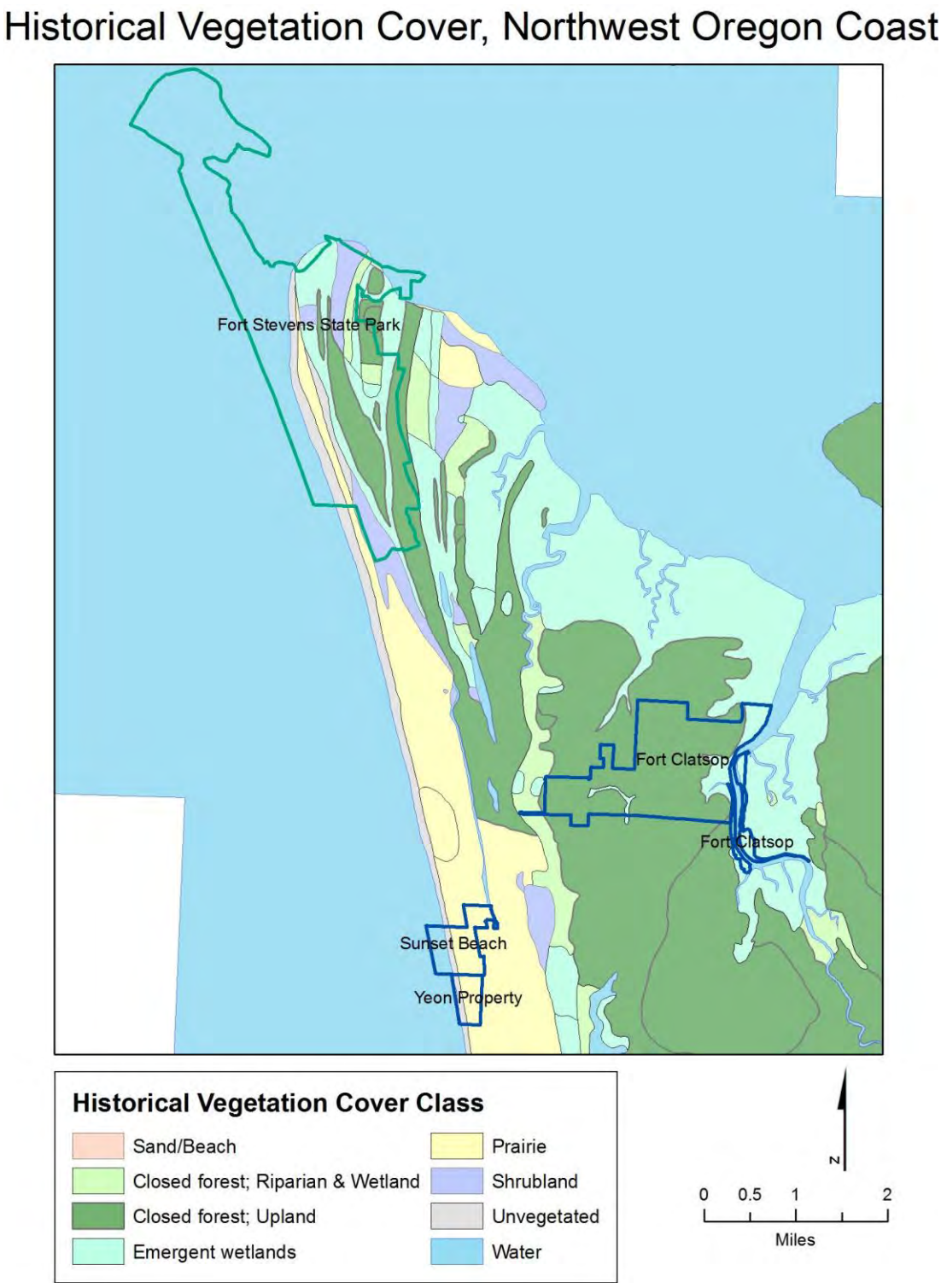


**Figure 2**. Historical vegetation cover of the northwest Oregon coast, as recorded in field surveyor notes during General Land Office Surveys in the 1800s and early 1900s. The area in the historical map that is water at Fort Stevens and part of Sunset Beach is now land that has been added relatively recently by deposition of river sediments and sand influenced by the building of the jetty from 1885 to 1895.

This report has had confidential information regarding species of management concern locations removed.

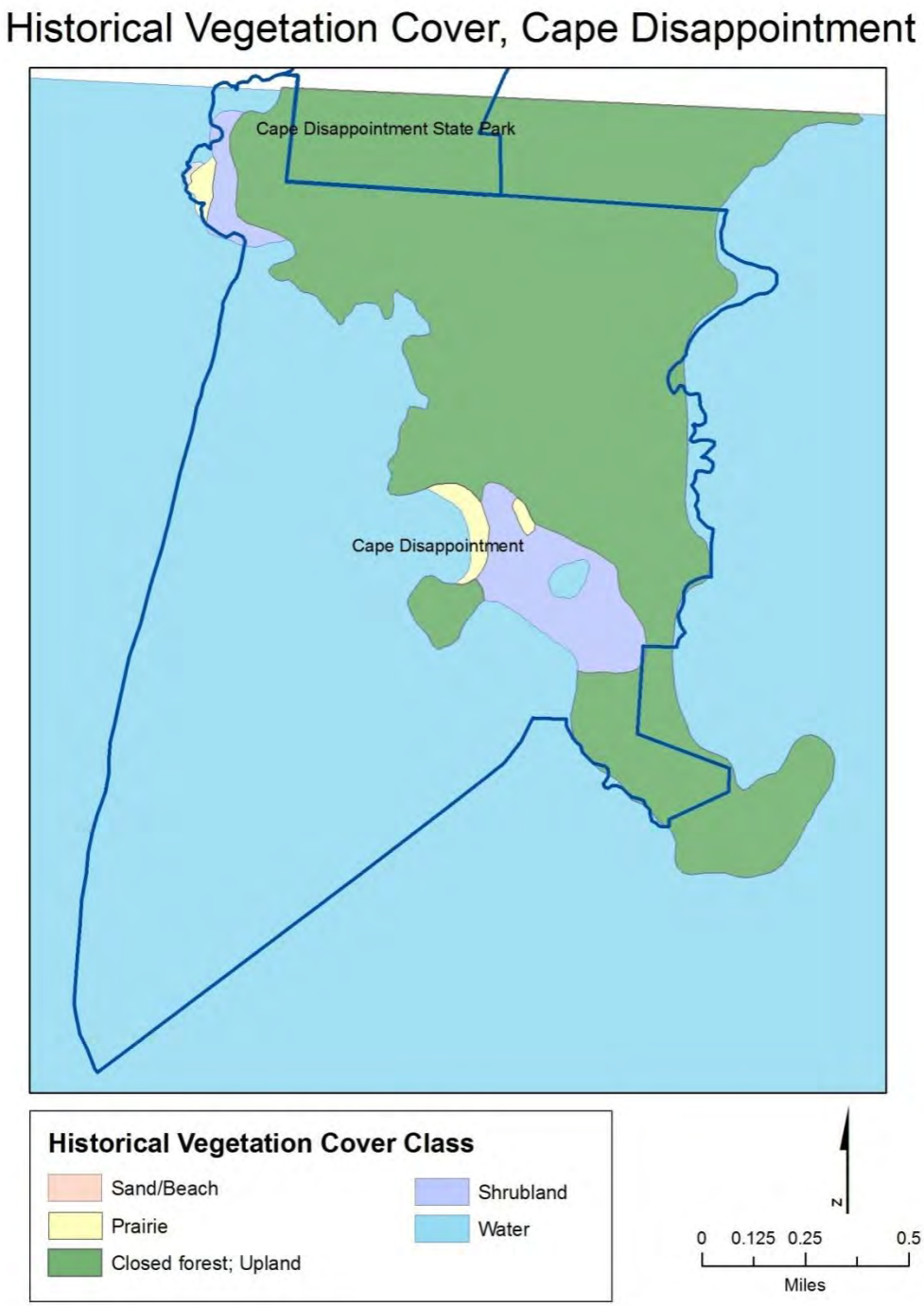


**Figure 3**. Historical vegetation cover of the Cape Disappointment area in southwest Washington, as recorded in field surveyor notes during General Land Office Surveys in the 1800s and early 1900s. The area within the current boundary of Cape Disappointment that was historically water has been added relatively recently by deposition of river sediments and sand influenced by the building of the North Jetty from 1914 to 1917.

### *1.3.4 Previous botanical studies*

Formal herbarium specimens have been collected at LEWI since the Lewis and Clark Expedition in 1805. Notable early collectors include the botanist Wilhelm (William) Suksdorf who collected extensively in Washington State in the late 1800s and early 1900s, including the area of Cape Disappointment. Thomas Howell and L. F. Henderson made forays from Portland to Fort Stevens to collect plants in the 1880s. C.L. Hitchcock, co-author of the *Flora of the Pacific Northwest* (Hitchcock and Cronquist 1973) collected at Cape Disappointment in the 1960s. More recent collectors from the 1990s and 2000s, in addition to park staff, include Mark Eggers, Peter F. Zika, Ben Legler, Sarah Gage, and Sharon Rodman. Most of these specimens are held at the Burke Museum Herbarium at the University of Washington in Seattle, Washington or at the Oregon State University Herbarium in Corvallis, Oregon. Many Pacific Northwest herbaria records can be accessed online from the Consortium of Pacific Northwest Herbaria online portal (Consortium of Pacific Northwest Herbaria 2007).

The Cape Disappointment unit underwent a vascular plant and plant community inventory in 2004 (Sayce and Eid 2004). Most of the unit was surveyed on foot, with the rest being inventoried by binoculars or aerial photographs. Locations of different plant communities within the unit were noted and a list of vascular plant species generated. The Fort Clatsop vascular plant inventory was certified in 2005 with additional surveys taking place from 2006 to 2008.

# 2 Methods

In August 2008 the National Park Service and the Oregon Biodiversity Information Center (ORBIC) agreed to work together to inventory vascular plants on the new lands within LEWI. In March 2009, the existing specimens at the Lewis and Clark Herbarium were reviewed, with name changes and mis-identifications noted as needed. Those specimens requiring identification confirmation were sent to the Oregon State University herbarium for confirmation by Dr. Richard Halse. In February 2010 a second trip to the LEWI Herbarium was made to affix formal annotation labels to the existing specimens and to deposit new collections that had been made during the field season.

Name changes on specimens were in accordance with the Flora of North America (1993). This nomenclature was selected rather than the Integrated Taxonomic Information System (ITIS) for two reasons: there is a lag between general acceptance of new names by taxonomists and academics and their subsequent incorporation into ITIS; and ITIS generally follows the Flora of North America in time. However, where the Flora of North America is incomplete or final determinations have not been made, label nomenclature followed ITIS.

Field surveys were conducted from April 2009 to September 2009 and from March 2010 to September 2010. Walk-over surveys were completed at all park units at several times during the growing season. Systematic transects or randomly generated survey points were not employed because our goal was to concentrate on newly acquired habitats and known or suspected locations of reported but unconfirmed species, and avoid re-surveying areas and habitats that had been well documented at FOCL during previous survey efforts. In addition, by using a walk-over survey method, multiple revisits to areas of botanical interest were easily incorporated into the survey, allowing for collection of plants across the growing season at single locations.

Surveys for this project focused on the newly acquired units within the legislative boundary at LEWI (Cape Disappointment, Dismal Nitch, Middle Village/Station Camp, and Sunset Beach/Yeon Property) and, in particular, the less common habitats contained within those additions. These areas were identified using satellite imagery and existing vegetation maps, as well as following recommendations from park staff on known locations of target species. As the Fort Clatsop unit is primarily lowland spruce forest that had previously been inventoried, habitats such as salt marsh and dunes were surveyed more intensively than spruce forest areas. Confirmed and unconfirmed species lists for the individual units were provided by park staff to assist in the inventory. A list of non-native species of concern as identified by the park and the North Coast Cooperative Weed Management group was provided by the park and all of these species were mapped where encountered.

Rare plants, rare communities, and non-native species of interest were mapped using a Garmin Etrex GPS unit in the NAD 83 geodetic datum. Maps of these species were created using ArcMap version 9.3.1 (ESRI 1999). Species observations were recorded in field notebooks with habitat notes, notable environmental variables, and associated species. Whole plants were collected, pressed, and mounted onto archival herbarium paper for specimen vouchers, submitted to the LEWI herabarium and to the Oregon State University herbarium. Newly documented species were entered into the NPSpecies database version 2.21, the National Park Service‘s

standard species observation database run on the Windows XP operating system in MS Access 2002/2003.

Although the Fort Stevens, Fort Columbia, and Ecola units were not within the legislative boundary of LEWI, they were visited during field work for the LEWI vegetation mapping project, occurring concurrently with the vegetation survey project, and for their floristic interest. Emphasis was placed on collecting at rare communities that had not previously been surveyed such as salt marshes and grassy headlands.

For the purpose of this report the vascular plant checklist and herbarium inventory include only those species documented at the following units: Fort Clatsop, Sunset Beach/Yeon, Dismal Nitch, Middle Village/Station Camp, and Cape Disappointment. This is due to the fact that the Park Service does not directly manage the natural resources at the other units and they are not within the legislative boundaries of LEWI. Maps for rare species or invasive species were created for all units in which they were encountered and are found in the Appendices.

# 3 Results

## 3.1 Summary of the flora of Lewis and Clark National Historical Park

Plant inventories prior to 2008 had resulted in a vascular plant species list of 287 species in LEWI, 267 of which were verified by vouchered specimens (Table 1). During the course of this project, 180 species were added to the park list, including 142 new species documented by voucher specimens. Searches through the online Consortium of Pacific Northwest Herbaria yielded another 17 species with vouchers held at other herbariums. The number of species without verification increased to 12 based on reports of species on the newly acquired Park units. Several of these unverified species were located in nearby areas but were outside the legislative boundary of the park. Of the new species documented at LEWI, only 19 were located within the FOCL unit; 168 were found in new areas within the park's legislative boundary. These efforts brought the total number of species within the legislative boundary of the park up to 467 species.

**Table 1**. Summary of species verification at LEWI by stage of inventory.

| Stage of Inventory | # of species (total % verification) | # verified by voucher (%) | # verified by reference (%) | # verified by observation (#) | # without verification (%) |
|---|---|---|---|---|---|
| Initial Inventory (2000) | 246 (90%) | 211 (86%) | 9 (4%) | 2 (1%) | 24 (10%) |
| Certified List (10/05/2005) | 254 (99%) | 232 (91%) | 17 (7%) | 3 (1%) | 2 (1%) |
| NPS Surveys (2006 -2008) | 287 (99%) | 267 (93%) | 17 (6%) | 1 (1%) | 2 (1%) |
| Current Study (2009-2010) | 467 (98%) | 426 (92%) | 5 (1%) | 24 (5%) | 12 (2%) |

A complete list of vouchered species for LEWI is found in Appendix A. Potentially present species are found in Appendix B. Species removed or rejected from the list are provided in Appendix C along with the reasons for their removal. The list of confirmed species with ecological notes is found in Appendix D.

## 3.2 Lifeform and biogeographical diversity

The park's flora is dominated by perennial forbs and graminoids. Perennial forbs represent 39% of all taxa, while perennial graminoids make up 14% of taxa. Annual or biennial forbs represent 25% of the park flora, with annual graminoids representing 4%. Trees and shrubs make up a relatively small percentage of the flora (9% and 8% respectively) but contribute greatly to habitat structure and community characteristics. Most of species occurring in the park have a wide distribution, also occurring in neighboring states or countries. In contrast, 7% are regional endemics occurring only on the Pacific coast within a limited area, and 1% are local endemics occurring only within a 150 mile radius of the park.

Although the majority of the park's plants are native species, a large proportion of the flora (40%) are non-native, introduced species and this number may increase if new species are introduced by winds, tides, animals, visitors, and vehicles. Native species are also introduced through these vectors, though non-native, invasive species often have advantages over native species by possessing characteristics that make them highly competitive in their new environment (Bryson and Carter 2004). While some introduced plants may have minimal impact

on native species, aggressive non-natives can displace native species, altering plant community structure and function. As a result, controlling these species is a management priority for the NPS (Table 4, discussed in section 3.5).

## 3.3 Plant communities of special concern

At the start of the project a list of rare plant communities thought to be present or potentially present in the park was developed by park staff and ORBIC staff. These communities were mapped wherever encountered, during the survey, within the park. Thirteen are considered to be rare in Oregon or Washington with a NatureServe Global Rank of G1 or G2, or with a State Rank of S1 or S2. All species and plant communities in Oregon and Washington have been assigned a state and global rank by ORBIC, the Washington Natural Heritage Program, or NatureServe. These ranks range from highly imperiled, with a rank of 1, to demonstrably secure, with a rank of 5. A detailed description of the methodology used to rank species and habitats and instructions for its use are found within the NatureServe Conservation Assessment: Methodology for Assigning Ranks (Faber-Langendoen et al. 2011). Six rare community types were confirmed and mapped at LEWI (Table 2).

These community types follow the National Vegetation Classification system (NVC) developed by USDA Forest Service, USGS, and NatureServe through a cooperative partnership and adopted in 2008 by the federal geographic data committee (FGDC) as a national standard (USNVC 2011). The classification is hierarchical, including broad scale vegetation classes, such as "Evergreen Forest" or "Temperate or subpolar needle-leaved evergreen forest" at the highest levels. The plant association level is the finest or most detailed level of the classification, and the plant communities listed here represent plant associations in the NVC. This classification is widely used in the USA for characterizing vegetation types and provides a standard classification for inter-agency and multi-partner projects. Maps of known locations of rare communities can be found in Appendix E.

This report has had confidential information regarding species of management concern locations removed.

**Table 2**. List of rare plant communities potentially present in at Lewis and Clark NHP and survey results.

| Scientific Name | Common Name | RANK[1] | Present in Park? | Comments |
|---|---|---|---|---|
| *Carex macrocephala* Herbaceous Vegetation | Big-Headed Sedge | G1G2S1 | yes | Cape D; Ft. Stevens (small area) |
| *Picea sitchensis/Carex obnupta - Lysichiton americanus* Forest | Sitka Spruce / Slough Sedge -Skunk Cabbage Swamp | G2G3S1 | yes | Cape Disappointment |
| *Festuca rubra* coastal headland | Red Fescue Coastal Headland | G2S2 | yes | Cape Disappointment headlands; Ecola |
| *Calamagrostis nutkaensis -Elymus glaucus* Perennial Grassland | Pacific Reedgrass - Blue Wildrye | G2S1 | yes | Cape D North Head headland; may occur on Ecola headlands |
| *Carex lyngbyei - Argentina egedii* Herbaceous Vegetation | Lyngby sedge - Pacific Silverweed Salt Marsh | G4S2 | yes | Fort Clatsop; Ft. Stevens; and Cape D |
| *Salicornia virginica* Herbaceous Vegetation | Glasswort Salt Marsh | G3G4S2 | yes | Ft. Stevens |
| *Deschampsia caespitosa - Argentina egedii* Herbaceous Vegetation | Tufted Hairgrass - Pacific Silverweed High Salt Marsh | G3G4S2 | no | May be at Ft. Stevens salt marsh |
| *Empetrum nigrum - Gaultheria shallon* Dwarf-shrubland | Crowberry - Salal Oceanfront Shrubland | G2S2 | no | Known from southern OR |
| *Festuca rubra - Ambrosia chamissonis* Herbaceous Vegetation | Red Fescue - Beach Bursage Herbaceous Vegetation | G1S1 | no | Known only from Puget Lowlands |
| *Festuca rubra* Stabilized Dune Herbaceous Vegetation | Red Fescue Stabilized Sand Dunes | G1S1 | no | Sensitive to trampling, vehicles, beachgrass |
| *Leymus mollis ssp. mollis - Abronia latifolia* Herbaceous Vegetation | Unstabilized Coastal Dune Wildrye | G1S1 | no | Needs unstabilized dunes |
| *Pinus contorta var. contorta / Gaultheria shallon - Rhododendron macrophyllum - Vaccinium ovatum* Forest | Shore Pine / Western Rhododendron - Evergreen Huckleberry | G1S1 | no | Known from southern OR |
| *Pseudotsuga menziesii-Tsuga heterophylla/Mahonia nervosa* Forest | Douglas-fir - Western Hemlock / Dwarf Oregon-grape Forest | G2 | no | Known from Puget Lowlands; fire-dependent |

1. Global Ranks as reported by NatureServe. State rank for Oregon as determined by Oregon Biodiversity Information Center. Rank Definitions: G=Global, S=State, T=Taxon (variety, subspecies). 1=Critically imperiled; 2=Imperiled; 3=Rare, uncommon, or threatened; 4=Not rare and apparently secure; 5=Demonstrably widespread, abundant, and secure; NR=Not Ranked.

### *3.3.1 Carex macrocephala Herbaceous Vegetation*

*Carex macrocephala* (big-headed sedge) Herbaceous Vegetation occurs in Oregon, Washington, and British Columbia on open sand on spits, berms, or small dunes that are protected from high wind and wave energy but are still subjected to inundation by storms. Big-headed sedge is always dominant, and cover ranges between 20-50% with open sand between. Other species do not exceed 5% cover and can include yellow sand-verbena (*Abronia latifolia*), silver bur-sage (*Ambrosia chamissonis*), or beach morning-glory (*Calystegia soldanella*) (Kagan et al. 2004, Christy et al. 1998). Many of these sites are threatened by exotic species encroachment, recreational activities, and changing coastal geomorphological processes (NatureServe 2010). This community occurs along the jetty and in smaller populations on the beaches at Beards Hollow and Benson Beach in Cape Disappointment Park. There are also two very small patches at Fort Stevens State Park (less than 1/10 acres total).

**Figure 4**. Big-headed sedge herbaceous alliance at Beards Hollow beach in Cape Disappointment. The sedges are the brighter green, low rosettes. Dark-brown heads of the female culms are visible. Note encroachment by non-native beachgrass. Japanese sedge was found nearby scattered amongst the native big-headed sedges. Photo taken in August 2010.

### *3.3.2 Picea sitchensis/Carex obnupta – Lysichiton americanus Forest*

*Picea sitchensis (*Sitka spruce)*/Carex obnupta* (slough sedge) *– Lysichiton americanus* (skunk cabbage) Forest occurs in California, Oregon, and Washington in coastal wetlands, usually on floodplains near perennial streams or rivers. It can also be found in depressions in older, stabilized sand dunes. They are typified by a spruce-dominated canopy with slough sedge and skunk cabbage in perennially wet soils with high organic content. Other species present may include salmonberry (*Rubus spectabilis*), red alder (*Alnus rubra*), or salal (*Gaultheria shallon*) on drier hummocks. The distribution of this community reaches from northern California to British Columbia. Due to the accessibility of these stands, their occurrence on private lands, and the value of timber within them, this community is now rare throughout its range, especially old-growth stands (Christy et al. 1998).

A variant of this community type is present in Cape Disappointment. A number of stands of Sitka spruce with slough sedge ground cover are present in several locations in this unit, but skunk cabbage is absent (Sayce and Eid 2004). While Sitka spruce and slough sedge occur together at Fort Stevens as well, these occurrences are found on the accretion zone behind the jetty and along the dunes. Spruce trees here grow in a Krummholz form, usually with beachgrass or introduced dunegrass present. Due to the differences in associated species, growth form, and habitat, the Krummholz dune spruce community was determined to be sufficiently different from the rare forest type that it was not mapped.

**Figure 5**. Sitka spruce / slough sedge – skunk cabbage forest at Cape Disappointment. This is an example of the association where skunk cabbage is not present. Photo taken in April 2010.

### *3.3.3 Festuca rubra Coastal Headland*

The *Festuca rubra* (red fescue) Coastal Headland community occurs on rocky cliffsides along the Pacific coast from central California to southern Washington. These forb rich grasslands occur on shallow-soiled bluffs or cliffs with extreme to moderate slopes and exposure to salt spray and persistent winds. Soils are well-drained, often with a high gravel content. Most known sites have been heavily impacted by encroachment of non-native species, usually introduced on the larger sites as a result of past livestock grazing (NatureServe 2010). This community is present at the Cape Disappointment and Ecola units.

**Figure 6**. Degraded red fescue coastal headland at Cape Disappointment. Red fescue cover is less than 1% while non-native grasses are more plentiful (Sayce and Eid 2004). Photo taken in May 2010.

### *3.3.4 Calamagrostis nutkaensis – Elymus glaucus Perennial Grassland*

The *Calamagrostis nutkaensis* (Pacific reedgrass) – *Elymus glaucus* (blue wildrye) Perennial Grassland community occurs along the coast from northern California to southwest Washington on open bluffs with exposure to high winds and salt spray. Pacific reedgrass is the dominant species with an average of 60% cover. Blue wildrye composes about 2-3% cover. This community often occurs between the Red fescue Coastal Headland type and Sitka spruce forest. This grassland is present at the North Head headland in Cape Disappointment and is the only occurrence in southwest Washington and one of three occurrences for the entire state (Washington State Parks and Recreation Commission 2004). This type is a bit more common in Oregon, and is found at Ecola state park, although it also is often impacted by introduced perennial grasses introduced from historic livestock use (Kagan et al. 2004).

**Figure 7**. Pacific reedgrass – Blue wildrye Herbaceous Vegetation at Cape Disappointment. Pacific reedgrass is the light-colored bunchgrass. The brown clumps are bracken fern (*Pteridium aquilinum*). Photo taken in April 2010.

### *3.3.5 Carex lyngbyei – Argentina egedii Herbaceous Vegetation*

The *Carex lyngbyei* (Lyngbye sedge) – *Argentina egedii* (Pacific silverweed) association occurs in brackish marshes and deflation plains in estuaries from British Columbia south to northern California. This community is influenced by tides and storm surges which bring salt water into the stand, rework sediments, and deposit logs and debris. Stands are strictly herbaceous with Lyngbye sedge cover up to 90% (Christy et al. 1998). This community is present at Fort Clatsop, Cape Disappointment, and Fort Stevens. Only three occurrences of this wetland type are known to occur in Washington State (Washington State Parks and Recreation Commission 2004). [Specific location information has been removed].

**Figure 8**. Lyngbye's sedge – pacific silverweed herbaceous vegetation type in a Bakers Bay salt marsh at Cape Disappointment. Photo taken in June 2010.

### *3.3.6 Salicornia virginica Herbaceous Vegetation*

The *Salicornia virginica* (common pickleweed) association occurs in salt marshes from California to British Columbia. Stands can be on beaches or rocky shores with a sparse to continuous herbaceous layer where common pickleweed is dominant or co-dominant with other species (Evens and San 2005). This community is present at Fort Stevens. [Specific location information has been removed].

**Figure 9**. Common pickleweed plant (left) and salt marsh community (right) at Fort Stevens State Park. Photo taken in September 2010.

## 3.4 Rare or sensitive plant species

Thirteen rare plant species (those tracked by the states or by Natural Heritage offices) that were known to occur or had the potential to occur at LEWI were targeted for survey at LEWI (Table 3). Of these, ten species were located and mapped at the park. Henderson‘s sidalcea (*Sidalcea hendersonii*) was intentionally planted as part of a native landscaping project at Cape Disappointment. Ocean-bluff bluegrass (*Poa unilateralis*) occurs on headlands and former headlands at Cape Disappointment and has been reported from but not documented at Ecola. The Washington Natural Heritage Program has listed ocean-bluff bluegrass on their list of threatened plants for Washington State.

Pink sandverbena (*Abronia umbellata* ssp. *breviflora*) is on the Oregon endangered species list but was last reported in Clatsop County near Gearhart in 1993; there are no documented sightings of this species in LEWI units (ORBIC 2010). Coyotebrush (*Baccharis pilularis*) is listed as threatened in Washington State and is present at Cape Disappointment. This population is the northernmost known location for coyotebrush.

**Table 3**. Rare or sensitive species surveyed for at Lewis and Clark NHP. Washington ranks were last updated in January 2009; Oregon ranks in October 2010.

| Scientific Name | Common Name | State Status | Global Rank* | OR Rank* | WA Rank* | In Park |
|---|---|---|---|---|---|---|
| *Abronia umbellata ssp. breviflora* | Pink sandverbena | OR:LE | G4G5T2 | S1 | S1 | |
| *Baccharis pilularis* | Coyotebrush | WA:LT | G5 | SNR | S1 | x |
| *Callitriche hermaphroditica* | Autumnal water starwort | | G5 | SNR | SNR | x |
| *Carex brevicaulis* | Short-stemmed sedge | | G5 | S2 | SNR | x |
| *Carex macrocephala* | Big-headed sedge | | G5 | S2 | SNR | x |
| *Carex pluriflora* | Many flowered sedge | | G4 | S1 | S1S2 | |
| *Hydrocotyle ranunculoides* | Floating marsh-pennywort | | G5 | SNR | SNR | x |
| *Lilaea scilloides* | Flowering quillwort | | G5? | S3? | SNR | x |
| *Myriophyllum ussuriense* | Asian water-milfoil | | G3 | S1? | SNR | |
| *Poa unilateralis* | Ocean-bluff bluegrass | WA:LT | G3 | S1? | S2 | x |
| *Samolus valerandi ssp. parviflorus* | Water-pimpernel | | G5 | SNR | S1 | x |
| *Sidalcea hendersonii* | Henderson's sidalcea | | G3 | S1 | SNR | x |
| *Viola adunca* | Early blue violet | | G5 | SNR | SNR | x |

* Global Ranks as reported by NatureServe. State rank for Oregon as determined by Oregon Biodiversity Information Center, and Washington as determined by Washington Natural Heritage. Rank Definitions: G=Global, S=State, T=Taxon (variety, subspecies). 1=Critically imperiled; 2=Imperiled; 3=Rare, uncommon, or threatened; 4=Not rare and apparently secure; 5=Demonstrably widespread, abundant, and secure; NR=Not Ranked.

The following sections describe species that were encountered and mapped during field surveys. Maps of sensitive species locations for each unit are found in Appendix F.

### *3.4.1 Baccharis pilularis – coyotebrush*

Coyotebrush is an evergreen shrub in the Aster family found in coastal ecosystems from California to Washington. It is common in California and southern Oregon where it is found in oak woodlands and on ocean bluffs. In Washington it is only known from Cape Disappointment, where a few patches and individual shrubs are scattered in the dunes and along cliffs. Sea cliff habitat has changed with the building of the jetty, filling these areas in with dunes that are gradually becoming shrubland and forestland. Changing habitat and encroachment of invasive species such as Scots broom (*Cytisus scoparius*) are threats to these Washington plants. This species has also been reported at Fort Stevens, but no plants were encountered in the 2009 or 2010 field seasons.

### *3.4.2 Callitriche hermaphroditica – autumnal water starwort*

Autumnal water starwort is a delicate aquatic plant in the water-starwort family usually found in shallow water and occurs over much of western and northern North America and Canada. While it is ranked as critically imperiled in the north-eastern extent of its range, it is not currently ranked in Oregon or Washington. Autumnal water starwort is present in the Fort Clatsop and Cape Disappointment units.

### *3.4.3 Carex brevicaulis – short-stemmed sedge*

Short-stemmed sedge is found on stabilized sand dunes free of European beachgrass from California to British Columbia. It grows 2 to 20 cm tall and is reddish at the base of the stems. The inflorescences have terminal and lateral male spikes and female basal spikes, most being less than a centimeter long. This sedge is losing habitat due to dune stabilization by European beachgrass, succession of shore pine, and housing developments (Wilson et al. 2008). There is a small population of short-stemmed sedge in the Sunset Beach/Yeon unit.

### *3.4.4 Carex macrocephala – big-headed sedge*

Big-headed sedge (Figure 10) is one of the few sedges that live in shifting sand from California to Alaska. Its large fruiting heads are distinctive, being 3.5-8 cm long and 2.5-5 cm wide, deep brown, with spreading spikes. Once a dominant dune community species, big-headed sedge has lost habitat to dune stabilization by beachgrass and housing developments (Wilson et al. 2008). Several large populations are present at Cape Disappointment, where there are still large stretches of open beach habitat. Two small patches were also found at Fort Stevens.

There is a look-alike sedge native to Asia, Japanese sedge (*Carex kobomugi*), that occurs in similar habitats and can be confused with big-headed sedge (Figure 11). Japanese sedge differs from big-headed sedge in having slightly smaller fruiting heads ranging from 3-6 cm long and 2-4 cm wide which are generally green-tinged rather than deep brown with ascending rather than spreading spikes. Perigynia of Japanese sedge have 12 or more ventral nerves, whereas the perigynia of big-headed sedge have only 7 to 9 ventral nerves (Wilson et al. 2008). Japanese sedge was planted for dune stabilization on the east coast of North America, where it is now being eradicated as it has spread to cover many miles of beaches. Japanese sedge is present and expanding at Cape Disappointment where it can be found alongside big-headed sedge.

**Figure 10**. *Carex macrocephala* (big-headed sedge) male culm (left) at Del Rey Beach and female culm (right) at Cape Disappointment. Note spreading perigynia and dark color of female inflorescence. Photo at left taken in July 2010, photo at right taken in August 2010.

**Figure 11**. *Carex kobomugi* (Japanese sedge) male culms (left) and female culm (right) at Cape Disappointment. Perigynia are more ascending and greener than the native *Carex macrocephala,* as well as having more lines on the ventral surface. See paragraph above for more detail. Photo at left taken in April 2010; photo at right taken in August 2010.

### *3.4.5 Hydrocotyle ranunculoides – floating marsh-pennywort*

Floating marsh-pennywort is an aquatic plant in the carrot family found in much of the southern United States as well as California, Oregon, and Washington. It is generally found in slow-moving waters or ponds. It has long, thin stems that can float on the water surface and bright green, glossy, lobed leaves. It is endangered in Illinois, New Jersey, and New York and was historically present in British Columbia but is not currently ranked for Oregon or Washington. Floating marsh-pennywort is present at Cape Disappointment, Fort Clatsop, Fort Stevens, Fort Columbia, and Sunset Beach.

### *3.4.6 Lilaea scilloides – flowering quillwort*

Flowering quillwort is a small wetland plant in the arrow-grass family that is native to western North America. It has fleshy, grass-like leaves and small flowering spikes that are much shorter than the leaves. It is an easily overlooked plant found in shallow waters or coastal tide flats in alkaline, saline, or brackish areas (Washington DOE 2010). Flowering quillwort is present at the Fort Clatsop unit.

### *3.4.7 Poa unilateralis – ocean-bluff bluegrass*

Ocean-bluff bluegrass is a short perennial bunchgrass growing 15-40 cm tall growing on rocky headlands, sea cliffs, or sandy coastal bluffs in California, Oregon, and Washington. Though it is rare due to its limited habitat, those populations growing on steep or protected cliffs appear to be stable (NatureServe 2010; Sayce and Eid 2004). Ocean-bluff bluegrass is present at Cape Disappointment.

### *3.4.8 Samolus valerandi ssp. parviflorus – water-pimpernel*

Water-pimpernel is a clumping wetland perennial in the primrose family found in much of the United States, Canada, and South America. It grows to 40 cm tall with a basal rosette of broad, light-green leaves and a raceme of small white flowers. It is found in wet soils in lowland wetlands generally below 1300 m elevation (Washington Natural Heritage Program 2005). Water-pimpernel is present in the Fort Clatsop unit.

### *3.4.9 Sidalcea hendersonii – Henderson's sidalcea*

Henderson's sidalcea is a showy perennial in the mallow family found from Oregon to Alaska. It grows to 150 cm tall and has a spikelike inflorescence of large deep pink to pink-lavender flowers. It is found along the coast, generally on or near tidelands (Hitchcock and Cronquist 1973). Henderson's sidalcea was planted at Cape Disappointment as part of a native landscaping project using plants sprouted from seeds collected from a Baker's Bay population (Kathleen Sayce, personal communication, 14 October 2009).

### *3.4.10 Viola adunca – early blue violet*

Early blue violet is a perennial violet found in much of the United States and Canada. It is found in dry to moist meadows, woods, and on open ground (Hitchcock and Cronquist 1973). It is the larval host plant for the Oregon silverspot butterfly (*Speyeria zerene hippolyta*), a federally listed threatened species that had a small population near the park in the 1990s (ORBIC 2010). The Clatsop County population of the Oregon silverspot, like the Washingon State populations, has likely vanished, but the recovery plan includes a viable population in this area. Due to the importance of early blue violet to the Oregon silverspot, early blue violet locations are being mapped as a way to assess the potential for restoration or management of silverspot habitat. Multiple small patches of early blue violet occur at the Sunset Beach/Yeon unit.

**Figure 12**. Remnant prairie habitat for early blue violet in the Yeon section of Sunset Beach. Photo taken in April 2010.

### 3.5 Non-native species

A list of 59 non-native, invasive species of interest that could possibly occur at LEWI was constructed using the Oregon Department of Agriculture Noxious Weed List and the Washington State Noxious Weed List, as well as input from the local weed boards, ORBIC, and NPS (Table 4). Of these, 35 have been documented in the park either with voucher specimens or observations during this project. Each of these species was ranked for management priority by park staff and ORBIC staff, considering the potential for harm to the native ecosystem, aggressiveness of spread of the species, amount of cover already present at the park, and estimated cost of removal.

Eight species have been identified by the North Coast Cooperative Weed Management Group as early detection, rapid response (EDRR) species. These invasive plants have not yet become well-established in Clatsop County, Oregon and are targeted for public education and prevention. They are: garlic mustard (*Alliaria petiolata*), false brome (*Brachypodium sylvaticum*), traveler‘s joy (*Clematis vitalba*), spurge laurel (*Daphne laureola*), shining geranium (*Geranium lucidum*), herb robert *(Geranium robertianum*), policeman‘s helmet (*Impatiens glandulifera*), and common reed (*Phragmites australis*). Park staff are removing or treating these species as soon as they are encountered on Park lands.

This report has had confidential information regarding species of management concern locations removed.

**Table 4**. Non-native, invasive species that were surveyed for at Lewis and Clark NHP.

| Scientific Name | Common Name | Mgt Priority[1] | OR Listing[2] | WA Listing[3] | In Park[4] |
|---|---|---|---|---|---|
| *Agropyron repens* | quackgrass | 4 | B | | x |
| *Alliaria petiolata* | Garlic mustard | 1 | B | A | |
| *Brachypodium sylvaticum* | False Brome | 1 | B | A | |
| *Buddleja davidii* | Butterfly bush | 3 | B | | |
| *Cabomba caroliniana* | fanwort | 4 | | B | x |
| *Centaurea pratensis* | Meadow knapweed | 1 | B | B | |
| *Cirsium arvense* | Canada thistle | 4 | B | C | x |
| *Cirsium vulgare* | Bull thistle | 4 | B | C | x |
| *Clematis vitalba* | Clematis, Old Man's Beard | 1 | B | C | |
| *Conium maculatum* | poison hemlock | 3 | B | B | x |
| *Convolvulus arvensis* | field bindweed | 3 | B | C | |
| *Cortaderia selloana* | Pampas Grass | 3 | | | |
| *Cotoneaster rugosus* | cotoneaster | 2 | | | x |
| *Cytisus scoparius* | Scots broom | 1 | B | B | x |
| *Daphne laureola* | spurge laurel | 1 | B | B | x |
| *Daucus carota* | Queen Anne's lace | 4 | | B | x |
| *Digitalis purpurea* | Foxglove | 3 | | | x |
| *Egeria densa* | Brazilian waterweed | 3 | B | B | x |
| *Genista monspessulana* | French Broom | 3 | B | | |
| *Geranium lucidum* | shining geranium | 1 | B | A | |
| *Geranium robertianum* | herb robert | 2 | B | B | x |
| *Hedera helix* | English ivy | 2 | B | C | x |
| *Heracleum mantegazzianum* | Giant Hogweed | 1 | A | A | |
| *Hypericum perforatum* | St. Johnswort | 4 | B | C | x |
| *Hypochaeris radicata* | hairy cat's-ear | 4 | | B | x |
| *Ilex aquifolium* | English holly | 2 | | | x |
| *Impatiens glandulifera* | Policeman's Helmet | 1 | B | B | |
| *Iris pseudacorus* | Yellow flag iris | 1 | B | C | x |
| *Lathyrus latifolius* | Everlasting Peavine | 2 | B | | x |
| *Leucanthemum vulgare* | oxeye daisy | 3 | | B | x |
| *Linaria vulgaris* | yellow toadflax | 3 | B | C | ? |
| *Lonicera periclymenum* | European honeysuckle | 3 | | | x |
| *Lythrum salicaria* | Purple loosestrife | 1 | B | B | x |
| *Myriophyllum aquaticum* | Parrot feather watermilfoil | 4 | B | B | x |
| *Myriophyllum spicatum* | Eurasian watermilfoil | 4 | B | B | ? |
| *Nymphaea odorata* | American white waterlily | 4 | | | x |
| *Nymphoides peltata* | Yellow floating heart | 1 | A | B | |
| *Phalaris arundinacea* | Reed canary grass | 3 | | C | x |
| *Phragmites australis* | Common Reed | 2 | A | B | x |
| *Polygonum cuspidatum* | Japanese knotweed | 1 | B | B | x |
| *Polygonum polystachyum* | Himalayan knotweed | 1 | B | B | |

**Table 5**. Non-native, invasive species that were surveyed for at Lewis and Clark NHP (continued).

| ***Polygonum sachalinense*** | **Giant knotweed** | **1** | **B** | **B** | |
|---|---|---|---|---|---|
| *Polygonum x bohemicum* | Hybrid knotweed | 1 | | B | |
| *Potamogeton crispus* | curly pondweed | 4 | | C | x |
| *Pueraria lobata* | Kudzu | 1 | A | A | |
| *Ranunculus ficaria* | lesser celandine | 2 | B | | x |
| *Rubus armeniacus* | Himalayan (Armenian) blackberry | 3 | B | C | x |
| *Rubus laciniatus* | Cutleaf blackberry | 3 | | C | x |
| *Senecio jacobaea* | Tansy ragwort | 4 | B | B | x |
| *Senecio vulgaris* | common groundsel | 3 | | C | x |
| *Soliva sessilis* | field burreed | 4 | | B | x |
| *Sonchus arvensis* | perennial sowthistle | 4 | | B | |
| *Sorbus aucuparia* | European mountain ash | 1 | | | x |
| *Spartina patens* | Saltmarsh/meadow cordgrass | 1 | A | A | |
| *Spartina sp.* | Cordgrasses | 1 | A | A or B | |
| *Tanacetum vulgare* | common tansy | 3 | | C | ? |
| *Tribulus terrestris* | Punctureveine | 1 | B | | |
| *Ulex europaeus* | Gorse | 2 | B | B | x |

1. Management priorities: 1=top, 2=high, 3=medium, 4=low.

2. Oregon List A and B are both quarantined in Oregon. List A weeds can potentially (and should) be eradicated. List B weeds are more widely distributed but are priorities for control or containment. Ranks current as of Feb. 4, 2010.

3. Washington List A weeds are required by law to be eradicated. List B weeds should be controlled and contained where feasible and new infestations prevented. List C weed control may be enforced by individual counties at their discretion.

4. x - denotes species has been documented in the park, but may not persist due to treatments or life cycle. ? - denotes the presence of this species on a local unit list but its presence has not been documented and was not encountered in the 2009-2010 field seasons.

The following sections describe species that were encountered and mapped during field surveys. Maps of invasive species found in each unit are found in Appendix G.

### *3.5.1 Cirsium arvense – Canada thistle*

Canada thistle is an herbaceous perennial growing 1.5 to 4 feet tall with lobed, prickly leaves and clusters of purple flower heads. It is a major agricultural pest in North America and can crowd out native species in many habitats including prairies, savannas, dunes, and meadows. Canada thistle spreads by seed or by lateral roots. Control can be done by hand removal (provided the root mass is removed), mowing, burning, or herbicides (Roddy 2009). Canada thistle is present in the Cape Disappointment, Sunset Beach, and the Fort Clatsop units. In Fort Clatsop, it has been found at South Clatsop Slough, Otter Point, and on the east shore of the Lewis and Clark River and is manually and chemically treated annually.

### *3.5.2 Daphne laureola – spurge laurel*

Spurge laurel is a shade-tolerant evergreen shrub in the Thymelaeaceae family native to Europe and the Mediterranean. Spurge laurel grows 2 to 4 feet tall and has densely whorled shiny green

leaves. It has escaped from gardens and become naturalized in some areas of Washington (King County 2010). An infestation on the Yeon Property of the Sunset Beach unit was first noted in spring 2009 and is being manually and chemically removed by Park staff. This was the first documented population of spurge laurel in Clatsop County.

### *3.5.3 Geranium lucidum – shining geranium*

Shining geranium is a low-growing annual native to Eurasia that can spread through semi-open areas to form carpets of vegetation that exclude native species. The common name comes from the shiny appearance of the leaves, which are round to kidney-shaped with 5 to 7 lobes. Spread is by seed rather than vegetatively, so hand-control and removal is possible for small populations. Herbicide treatment may be necessary for larger populations. Shining geranium was found alongside herb robert at a Fort Stevens campsite.

### *3.5.4 Geranium robertianum – herb robert*

Herb robert is a low-growing annual or biennial that is shade-tolerant and can spread under forest canopies. It is an escaped garden plant with weak, hairy-sticky red stems, dissected leaves, and small pink flowers. Its other common name ~~–st~~inky bob" comes from the strong skunky odor given off when its stems are broken or leaves crushed. Due to its shallow roots hand-pulling is an effective control (King County 2010). Herb robert was located in the Cape Disappointment, Fort Stevens, Dismal Nitch, and Fort Clatsop units. Plants will be pulled and locations monitored.

### *3.5.5 Hedera helix – English ivy*

English ivy is a shade-tolerant woody evergreen vine in the ginseng family. It is extensively used in landscaping and gardening projects and can escape into nearby wooded areas. Control by hand-pulling or cutting can be effective but resprouting from remaining rhizomes is common so multiple-year treatment or herbicide is needed. English ivy is present in all Park units. A large infestation was present at Beards Hollow in Cape Disappointment, but it has been undergoing treatment for several years and is much reduced, though ongoing maintenance is needed for the remaining plants. English ivy is manually and chemically controlled at the Fort Clatsop unit.

### *3.5.6 Ilex aquifolium – English holly*

English holly is a shade-tolerant evergreen tree with spiny, glossy green leaves and red berries. It is grown for ornamental products as well as for landscaping and gardening. The berries are good forage for birds, which provide a dispersal mechansism for this species. Hand-pulling of small saplings is possible but larger trees need to be cut and treated with herbicide as the tree will resprout from the stump. English holly is found in all Park units scattered along trails and throughout wooded areas, with the most trees being encountered in Fort Stevens around Coffenbury Lake. It has been actively controlled by Park staff in the Fort Clatsop unit since 2000 using both manual controls and treatment with the herbicide Garlon.

### *3.5.7 Iris pseudacorus – yellow flag iris*

Yellow flag iris is a showy wetland plant native to Europe and the Mediterranean region. It is used in landscaping and gardens that has escaped cultivation. It displaces native vegetation along streambanks, ponds, and shorelines. Its floating seeds can be dispersed along the waterways on which it grows. Yellow flag iris has a very strong root system, creating mats of rhizomes which make manual control of large populations very difficult. In addition, chemicals present in the leaves and rhizomes can be a skin irritant. Large infestations may require herbicide treatment. (King County 2010). Yellow flag iris is present in the Cape Disappointment, Dismal Nitch, Fort

Columbia, Sunset Beach, and Fort Clatsop units. It has been actively controlled in the Fort Clatsop unit since 2000, and by the Exotic Plant Management Team (EPMT) at the Dismal Nitch unit since 2009. Beards Hollow and Middle Marsh at Cape Disappointment have the largest concentrations of yellow flag iris, with several hundred stems present. The small populations at Dismal Nitch and Fort Columbia are found around lagoons off the Columbia River. Fort Clatsop has small populations scattered along the Lewis and Clark River. Yellow flag iris has been reported on the shore of Sunset Lake with highest abundance near the Astoria Golf Course and along the middle section of the lake (Sytsma 2005). These plants could potentially spread north into the Sunset Beach unit.

### *3.5.8 Lathyrus latifolius – everlasting peavine*

Everlasting peavine is a trailing perennial in the pea family with winged stems and deep pink flowers that has been used for erosion control but can escape and displace native vegetation. Hand-pulling is possible for smaller infestations, while herbicide may be necessary for larger areas or on slopes where hand-pulling could cause slope destabilization. Everlasting peavine is present in the Fort Clatsop unit at Netul Landing and is being manually and chemically treated annually. Small populations are also present at North Head Lighthouse and near the Waikiki Beach parking area at Cape Disappointment.

### *3.5.9 Lonicera periclymenum – European honeysuckle*

European honeysuckle is a deciduous perennial twining woody vine with opposite oval-shaped leaves, showy and fragrant white flowers that can be tinged with yellow or purple, and red berries. It is grown as an ornamental and has escaped cultivation. European honeysuckle was encountered in the Fort Stevens, Sunset Beach, Fort Clatsop, and Cape Disappointment units. Manual and herbicide control of European honeysuckle began in 2006 at Fort Clatsop, and at Sunset Beach where it is a serious infestation. It is especially abundant at the Yeon site, where the source of infestation may be specimens that were planted in the ornamental border surrounding the house.

### *3.5.10 Lythrum salicaria – purple loosestrife*

Purple loosestrife is a perennial emergent wetland plant growing to 3 meters in height with a tall showy infloresence of bright magenta flowers. It is planted as an ornamental but has become a widespread and problematic weed in wetlands throughout much of North America. Purple loosestrife can create monoculture thickets along waterways that exclude native species and alter wetland ecosystems. Once established, large populations of loosestrife are very difficult to eliminate. (Washington DOE 2010). Purple loosestrife is found in the Dismal Nitch, Fort Columbia, Fort Stevens, Fort Clatsop, and Cape Disappointment units. The Fort Columbia and Dismal Nitch populations are found in lagoons off the Columbia River, and population numbers are low. A few scattered plants are present along the northwest shore of Trestle Bay in Fort Stevens. Several plants were found around O'Neill Lake at Cape Disappointment, with the highest concentration of plants seen at the northwest end of the lake. A few young plants were seen at Fort Clatsop along the Lewis and Clark River on the Netul Landing trail in 2010. Purple loosestrife has been reported at the southern end of Sunset Lake (Sytsma 2005) and could spread north into the Sunset Beach unit. The plants around the lagoon at Dismal Nitch have been manually controlled by Park staff since 2007, and plants in the Fort Clatsop unit have been manually removed since 2000. Biocontrol agents are also effective and may be available from local government.

### *3.5.11 Myriophyllum aquaticum – parrot feather watermilfoil*

Parrot feather watermilfoil is a freshwater rhizomatous perennial aquatic plant used in the aquarium trade and as an aquatic garden plant which has escaped cultivation. Parrot feather has both submerged and emergent leaves. The emergent leaves are a bright green color with many-divided leaves that give it a feathery appearance. It is most successful in slow-moving, nutrient-rich waterways. (Washington DOE 2010). Parrot feather was found in the Fort Clatsop unit on the Skipanon River, in a ditch at the northeast boundary of the unit, on log rafts in the Lewis and Clark River, and in a pond along the Fort to Sea trail in the Sunset Beach unit just west of Highway 101. The source of the Skipanon River population is most likely Cullaby Lake and Cullaby Creek upstream of the Skipanon, which are both moderately infested with parrot feather and could potentially introduce more plants. The Sunset Beach population covered much of the banks of the pond and numbered several hundred plants. Control of this species has not been undertaken. Another non-native watermilfoil, Eurasian watermilfoil (*Myriophyllum spicatum*) has been reported at Cape Disappointment (Washington State Parks and Recreation Commission 2004). An established method of control for parrot feather is herbicide application using time release capsules, but as this is a non-targeted treatment it is not an ideal method (Lindsay Cornelius, personal communication).

### *3.5.12 Nymphaea odorata – American white waterlily*

American white waterlily is an attractive aquatic plant with large floating lilypad leaves and showy white or pink flowers. Because of its aesthetic appeal it has been used in water gardens and plantings in lakes, but it is now known to be an aggressive invader. White waterlily spreads both by seeds and rhizomes. It can be controlled through cutting, harvesting, covering, or aquatic herbicides (Washington DOE 2010). American white waterlily was found in the Sunset Beach unit in Sunset Lake where the Fort to Sea Trail crosses the lake at the northeast corner of the unit.

White waterlily has been present in Sunset Lake for more than 40 years and has become a significant detriment to those that use the lake for boating, fishing, and recreation as well as decreasing the quality of habitat for wildlife (Sytsma 2005). Due to the importance of recreation and aesthetic use to the surrounding community, Sytsma et al. recommended a modified high-level of control in Sunset Lake including public education, prevention, monitoring, and small-scale hand removal for most invasives, and large-scale harvesting for waterlily.

### *3.5.13 Phragmites australis – common reed*

Common reed is a tall, rhizomatous perennial grass growing in wetlands, estuaries, and swamps on several continents. Its height is its distinguishing characteristic: it can grow to 3-4 meters tall. The canes and leaves have been used for thatch, forage for livestock, and cellulose production. It can rapidly expand by rhizomes, creates thick monocultures that excludes native plants, and can change wetland hydrology (Saltonstall 2009). Several states have given common reed noxious weed status. Stands of common reed have been located just outside the Fort Clatsop unit on the Lewis and Clark River, and in Trestle Bay in the Fort Stevens unit.

The taxonomy of common reed is currently in review, but there appear to be three strains present in North America, two of which are considered native and one that is invasive (Kartesz 2010). Although a thorough determination of physical characteristics has not been made of the common

reed populations that are present in or near the park, the growth form and rapid expansion of these patches suggest that these plants are the invasive haplotype.

#### *3.5.14 Polygonum cuspidatum – Japanese knotweed*

Japanese knotweed is a large, broad-leaved herbaceous perennial that grows to 1-3 meters tall and is native to Asia. Its hollow stems resemble bamboo and it has been planted as an ornamental and also as a food plant as the young stems are edible. It spreads mainly by stout rhizomes and has become a common invasive in riparian zones. Pulling or digging can be effective for removing small or young plants, but larger infestations require other tactics. Japanese knotweed is present at Dismal Nitch and was reported to be in Cape Disappointment by Sayce and Eid in 2004. Several plants of knotweed (species unknown, likely *P. cuspidatum*) were also located on the east side of the spit at Fort Stevens. The closely related giant knotweed *(Polygonum sachalinense)* has similar invasive characteristics and was found just outside the Fort Stevens boundary east of the historical area. Japanese knotweed and Himalayan knotweed (*Polygonum polystachyum*) were present at Cape Disappointment at historic homesites, but were not encountered during the field season, potentially as these species have been treated by the park for some years (Washington State Parks and Recreation Commission 2004). The three locations of Japanese knotweed at Dismal Nitch have been treated since 2007 by cutting, herbicide, and flaming, yet the plants have regrown each year. All three plants are rooted into the rivershore riprap, rendering manual removal of the roots impossible.

#### *3.5.15 Ranunculus ficaria – fig buttercup*

Fig buttercup is a shiny-leaved herbaceous perennial with yellow flowers that is native to Eurasia. It is planted as an ornamental but spreads rapidly due to the production of bulblets which break off in the soil and produce new plants. This leads to carpets of fig buttercup which crowds out native vegetation. Fig buttercup resembles the native marsh marigold (*Caltha palustris*), but marsh marigold does not produce bulblets or form carpets of vegetation as fig buttercup does. Due to the difficulty of removing all bulblets in the soil, fig buttercup is often treated with herbicide unless the population is small enough to remove all pieces of the plant (Swearingen 2010). A few plants of fig buttercup were found at Dismal Nitch west of the parking lot. Park staff physically removed the plants and surrounding soil in 2009, and returned to remove about three dozen new plants in 2010. Removal and monitoring will be ongoing for this population until it is eradicated.

#### *3.5.16 Sorbus aucuparia – European mountain ash*

European mountain ash is a perennial deciduous shrub or tree with pinnately divided leaves and orange or red berries. It is native to Eurasia but has been widely planted for ornamental purposes. It is shade tolerant and can grow under forest canopy. Birds act as a dispersal mechanism by eating the fruits. European mountain-ash does not spread vegetatively (USDA 2010). European mountain ash is present in the Fort Clatsop unit. Hand-cutting and removal of seedlings was started in this unit in 2008, and larger trees have been cut and treated.

#### *3.5.17 Ulex europaeus – gorse*

Gorse is a perennial, spiny, woody shrub growing 3-7 meters tall and is native to Europe. It can form dense thickets of spiny shrubland that can exclude native species. As mature shrubs can have thick woody stems, cutting off at the ground is often necessary rather than digging or pulling. Plants with stems less than two inches in diameter can be effectively removed using a

weed wrench. For leverage on sandy soils, a plywood base can be attached to the wrench. Once cut stumps can be treated with herbicide or cut again next year to continue to deplete the plant‘s energy stores. Young plants can be hand pulled or hoed, and as the seeds can persist in the seed bank for many years monitoring of populations for regrowth is necessary.

Six gorse plants were found in the Dismal Nitch unit in 2006, on the east side of Megler Road, just south of the gate. The large top growth was removed by cutting and the stems were treated with Garlon. The area is monitored for resprouting annually. In 2010 one plant that had resprouted was cut and the stem treated with Garlon. Gorse is also reported from the Fort Stevens and Cape Disappointment units. Several small plants were hand pulled from south Netul Landing in the Fort Clatsop unit in 2001 and 2002, but no regrowth has since occurred at that site.

#### *3.5.18 Other non-native plants of interest*

Several other non-native plants of interest are present in the park, but their abundance makes it impractical to map their locations. Of particularly wide distribution are Scots broom and Himalayan blackberry (*Rubus armeniacus*, synonymous with *Rubus discolor*). Cut-leaf blackberry (*Rubus laciniatus*) is also present in lower abundance. These species are capable of widespread distribution and habitat change, replacing native communities and altering landscapes. However, due to their long establishment in the Pacific Northwest control can be costly or impractical. A few larger areas of Scots broom and the two blackberry species at the Fort Clatsop unit have been treated by the EPMT. Hand removal of Scots broom at Cape Disappointment has occurred in the past. Control of these species could be prioritized to treat areas with sensitive species, rare communities, or high restoration potential to maximize the effectiveness of the cost of treatment.

Aquatic non-native species pose additional management problems. Many aquatic plants can spread vegetatively, from plant fragments, or have floating seeds that are easily spread along waterways. If an exotic species is established upstream or elsewhere along the coastline, populations can be reintroduced after their downstream removal. Recreational boat traffic can also be a dispersal mechanism and a way for these species to become reintroduced. Chemical treatments of aquatic plants can be damaging to native aquatic species and must be applied with caution, for example through targeted injection or wick application. The inaccessibility of aquatic invasive species rooted at the bottom of lakes and rivers also adds to the difficulty of treatment.

In addition to the non-native aquatic plants that were discussed above, others known to occur in the park are fanwort (*Cabomba caroliniana*) found in Sunset Lake and Coffenbury Lake, water celery (*Vallisneria americana*) found in Sunset Lake and Coffenbury Lake, Brazilian waterweed (*Egeria densa*) found in the Skipanon River along the Fort to Sea trail, and pond water starwort (*Callitriche stagnalis*) found in Sunset Lake. Some of these species are reported from the Fort Clatsop unit as well.

# 4 Discussion

## 4.1 Sensitive communities and rare plant species management

Several new locations of rare communities were recorded within the park‘s boundaries and associated state park units. The two units with the greatest number and coverage of these rare communities were Cape Disappointment and Fort Stevens State Parks. Their locations on the Columbia River estuary and the amount of protected acreage these parks represent translate to a wealth of habitat types, including headlands and salt marshes which have geographically limited distributions.

Both the upland and wetland Sitka spruce forests represent important conservation targets for LEWI. Cape Disappointment has large areas of the Sitka spruce / Slough sedge – Skunk cabbage Forest type, or rather a natural variant of this type where skunk cabbage is not always present. The park can continue to support Sitka spruce conservation by planting seedlings or removing competing species in peripheral habitats where spruce is beginning to recolonize. Invasive species such as Scots broom can be removed from Sitka spruce stands to encourage natural reseeding of spruce trees; Scots broom and Sitka spruce occur together on the accretion zone behind the jetty in Cape Disappointment.

Both wetland and upland Sitka spruce forests were identified as conservation targets (TNC 2006) due to their limited habitat range and the forest‘s value for timber, which has led to a decrease in Sitka spruce cover over time. In addition Sitka spruce old growth forest provides critical habitat for the federally threatened marbled murrelet (*Brachyramphys marmoratus*). Current management such as thinning of the upland forests at the Fort Clatsop unit to promote late successional conditions will contribute to recovery efforts, in spite of natural setbacks by windthrow from major storms. The development trajectory is on track in most locations and little change in management is required. Only in some of the early seral spruce forests at Ecola are there locations where removal or cutting of red alder might speed the pace of succession.

By and large, the management prescriptions for both the upland and wetland Sitka spruce forests are the same. Non-native trees, shrubs and forbs need to be controlled. For the upland stands, removing some red alder which is slowing growth and regeneration of conifers can help in moving from early and mid-seral stands, to the more important late seral stands. The Nature Conservancy explored this at Tillamook Head, before transferring this property to the Oregon Parks and Recreation Department. While there is little doubt this would be effective, its cost and the potential disturbance created makes it a difficult management prescription to follow. However, it appears to be especially needed in the most eastern upland Spruce forests at Ecola State Park.

Coastal headlands are present at Cape Disappointment and Ecola. As Ecola is outside the legislative boundary of LEWI, its headlands were not mapped and will not be discussed here. The Cape Disappointment headlands are degraded by non-native species, particularly graminoids such as ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordaeceus* ssp. *hordaeceus*), and sweet vernal grass (*Anthoxanthum odoratum*) (Sayce and Eid 2004). However, the rare species ocean-bluff bluegrass is found on several headlands at Cape Disappointment, and red fescue is also occasionally present, representing a remnant of the Red fescue Coastal Headland rare community type. The North Head headland at Cape Disappointment hosts an occurrence of

Pacific reedgrass - blue wildrye Herbaceous Vegetation, one of a few occurrences known in Washington State. Removal and management of non-native species where ocean-bluff bluegrass or Pacific reedgrass is present is recommended to preserve these populations. However, completely restoring these grasslands to be dominated or co-dominated by native grasses is unlikely due to the prevalence of non-native grasses and the heavy use of headlands by people and ungulates that act as reintroduction agents of these non-native species. Consequently, management emphasis is focused on conservation of existing rare community types and areas where rare species are present. Geography is also acting against headland communities that have been cut off from the ocean by accretion. The reduction of salt spray in these areas will lead to a steady decline in salt-dependent headland species and a gradual transition to shrub or forest types.

The Big-headed sedge Herbaceous Vegetation type is present in large amounts at Cape Disappointment and in very small remnant patches at Fort Stevens. The major threat to this community type is the encroachment of non-native beachgrasses (*Ammophila* spp.). Big-headed sedge grows on shifting, open sand, and the invasion of beachgrass decreases the available habitat and introduces competition for resources. Removal or control of beachgrass is difficult and potentially labor-intensive and expensive but treatment can open up areas of dunes to native species and allow for expansion or restoration of native communities (Pickart 1997). Due to the presence of native species interspersed within the beachgrass stands and the high amount of public use of these beaches and dunes, manual removal would be recommended over mechanical or chemical treatment. Pickart (1997) determined that manual removal of beachgrass by California Conservation Corps at a Nature Conservancy preserve in California had a cost of $21,831 per acre of beachgrass removed, not including the cost of transportation. It could be possible to mitigate this cost by using volunteer work parties and by targeting small patches around rare plants. The Columbia Land Trust has found that the ~~–a~~dopt a plot" model has worked very well for costly weed control in communities where stewardship ethic is high (Lindsay Cornelius, personal communication). Pickart also noted that by selectively removing beachgrass and preserving native plants on-site, there was no need to revegetate the project site after beachgrass removal as these retained native species successfully recolonized the site.

The US Forest Service and Bureau of Land Management have removed beachgrass for snowy plover management on some beaches in Oregon. The snowy plover is a federally listed bird species that nests in or near open sand. Federal agencies have managed beachgrass in plover nesting areas by bulldozing and removing beachgrass, then following up with either manual removal or direct application of herbicide for resprouts. Treatment costs for a combination of mechanical removal, burning, and herbicide treatment ranged in cost from $2,000 to $6,000 per acre in the 1990s (USDA Forest Service 1994).

Another non-native species that has the potential to be very detrimental to the big-headed sedge populations at Cape Disappointment is Japanese sedge. This sedge has a similar growth form, habit, and appearance to big-headed sedge and has been seen growing amongst big-headed sedge on Cape Disappointment beaches. Japanese sedge is considered a noxious weed in some eastern US states, despite being used as a dune stabilizer in the past, and has spread over many hundreds of acres of beaches there. The populations of Japanese sedge at Cape Disappointment are currently limited, so proactive control or eradication may yet be possible. McGough et al. (2003) tested low-impact management strategies for Japanese sedge in New Jersey and found that

repeated narrowly-focused spray application of Roundup® was effective in greatly decreasing the number of Japanese sedge stems while producing limited loss of nearby native species. The densities of Japanese sedge McGoug *et al*. were testing were significantly denser (hundreds of stems per meter) than the patches found at Cape Disappointment (dozens of stems per meter) so this method of treatment combined with manual digging of remaining stems and rhizomes could be effective at removing these relatively small patches.

Management to promote or restore other native and rare sand dune communities historically found at Fort Stevens and Sunset Beach is a bit more problematic. No other rare dune plant communities were identified from the park, but most of the native forb and grass dominated, partially stabilized dune communities described from the Oregon Dunes National Recreation Area (Christy et al. 1998) are at risk. Based on the historical vegetation from the area, most of these were likely present in these two park units. In addition, a number of partially stabilized types, particularly shorepine woodland communities such as shore pine / hairy manzanita (*Pinus contorta* var. *contorta / Arctostaphylos columbiania*) and shore pine / kinnikinnik (*Pinus contorta* var. *contorta / Arctostaphylos uva-ursi*) might provide good restoration objectives for the pasture or non-native forests included in the new acquisitions at Sunset Beach. Detailed descriptions of these shore pine communities can be found on NatureServe Explorer (NatureServe 2010) or in Christy et al. 1998.

Only small amounts of the Lyngby sedge – pacific silverweed Herbaceous Vegetation type are present within the legislative boundaries of the park, but these marshes are sufficiently rare to merit management. While the hydrographic conditions that influence these salt marshes are out of control of the park, control of non-native species can help maintain the quality of these marshes. Knotweeds, purple loosestrife, and yellowflag iris are common invasive species that will be periodically introduced to these marshes via tides. If these sites are periodically monitored, these invasive species can be removed before their populations can become large enough to impact the salt marsh. Common reed is also an encroaching threat as it is present just outside the boundary of Fort Clatsop on the east bank of the Lewis and Clark River and is also found in the salt marsh at Fort Stevens. The subspecies of these populations have not been determined, but the density of stems and its recent colonization suggests these patches are the non-native subspecies. Should common reed turn up inside Park units, and the evidence points to it being the non-native subspecies, efforts should be made to eradicate the population before it reaches an unmanageable size. Saltonstall (2009) recommended repeated glyphosphate-based herbicide treatments in late summer or fall, and optional burning after herbicide treatment to remove above-ground biomass and further set back the common reed population. Mechanical control is unlikely to eradicate common reed.

There is an occurrence of Virginia glasswort Herbaceous Vegetation on Clatsop Spit in the Fort Stevens unit. Although outside the legislative boundary of the park, it is notable for its size and rarity. There are small patches of Virginia glasswort at Cape Disappointment but its numbers are not great enough to support this community type. Should Fort Stevens be included within the legislative boundary in the future, this site should be managed for removal or control of invasive species and any proposed jetty work should be studied for impact on the marsh before action is taken.

By taking the management actions suggested above to conserve rare habitats, rare species that depend on these habitats may also be protected. For example, a few of the rare plants at LEWI are also the main component of a targeted rare community, such as the Big-headed sedge community and the grassy balds where ocean-bluff bluegrass is present. Other species will require their own targeted management. All rare species will benefit from control of invasive species, but due to the time and cost of weed removal, priority sites should be identified based on either the health or uniqueness of the rare species population or, as some rare species occur in the same habitats, the species richness of rare species. In addition, visitor activities may need to be managed for certain populations and treated areas protected so that native vegetation has time to recolonize the area. Beaches and headlands are the most impacted by visitors due to their scenic beauty and opportunities for recreation. If small areas are treated, roping off areas and providing interpretive signs may be enough to close off an area until plantings or existing native species can become established.

## 4.2 Non-native plant species management

The park has been actively treating and monitoring many non-native plant species for several years. The Exotic Plant Management Team‘s work in Park units and surrounding areas, reporting on locations of invasive species by local groups, and involvement of Cooperative Weed Management Groups (CWMGs) represent a valuable collaborative approach to invasive species management that should be fostered. The Early Detection, Rapid Response (EDRR) protocol and lists created by CWMGs and other groups can prevent new invasive species from becoming established by removing them before their populations become unmanageable. The park has also involved the public by hosting volunteer work parties; this too is a valuable and effective way to control non-native species while giving park visitors and local residents opportunity to become invested in these habitats and the park. These relationships and protocols should continue to be maintained to increase the effectiveness and defray costs of weed management in the park.

While non-native species represent significant cover of Park units, priorities can be made for where and how to treat or manage non-native species. Priority should be given to areas with rare species or rare communities present, or where visitor experience is being negatively impacted by non-native species. Visitor education can be useful in preventing introductions of weeds by making visitors aware of simple preventative measures such as cleaning hiking boots before entering the park and washing water craft before boating on Park lakes. Boot brushes can be provided at parking lots and trail heads. Interpretive signs can show photographs of EDRR species and provide a way to report target non-native species locations. Asking visitors to pull and dispose of these target non-native species can help Park staff who do not have the time to patrol all areas of the park themselves, although care must be taken to make sure visitors do not confuse target non-native plants with native species.

Before developing a management plan for individual non-native species, tried-and-tested methods should be reviewed in the literature and contact made with other local weed managers for their expertise. Some specific management strategies are proposed in the sensitive communities management section above.

## 4.3 Updated species list and future floristic work

During the course of this project the park vascular plant list was increased from 267 species to 467, and there was a 75% increase in the number of verified species. All but 19 of the species

added were located in the new areas of the park. There are undoubtedly more species yet to be documented, as annuals crop up some years and not others, perennials are encountered when not in flower or fruit and identification cannot be confirmed, and new species continue to be introduced by natural or anthropogenic means. The Middle Village/Station Camp unit was the most under-surveyed of the new additions to the legislative boundary of LEWI, due to the relative inaccessibility of the majority of the property and the lack of unique habitat types. One arduous trip was made to the top of the slope in this unit, and no new species or communities of interest were discovered during the outing. While it is possible there are new species in this unit to discover, it was felt that our time was more productively spent surveying less common habitats and more accessible areas in the other units.

Fort Stevens, Fort Columbia, and Ecola state parks were not thoroughly surveyed, being outside the current legislative boundary of LEWI. Species noted in these cooperative management areas during field work were documented in a separate database provided to the park, allowing these observations to easily be incorporated should these parks become incorporated into the legislative boundary of LEWI in the future.

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# Appendices

The following appendices contain annotated checklists of vascular flora at Lewis and Clark National Historical Park.

Appendix A lists confirmed, historical, and reported taxa that have been documented by specimen voucher, reliable observation, or official reports. Vouchers were examined at the Fort Clatsop Herbarium and queried from the NPSpecies database. NPSpecies is the National Park Service's standard database for tracking species observations, specimens, and scientific names. The LEWI NPSpecies dataset is a compendium of previous botanical work and has been certified by Park staff. Specimens contained at the University of Washington Burke Museum and the Oregon State University Herbarium were queried using the Consortium of Pacific Northwest Herbaria's online database. Observations were collected in the field in 2009 and 2010 and also queried from the NPSpecies database. Reported taxa were queried from the NPSpecies database.

Appendix B lists potentially occurring, but unconfirmed taxa that have a) been reported but not documented within the park or b) have been found in neighboring areas or in units that are not part of the legislative boundary of Lewis and Clark National Historical Park.

Appendix C lists taxa rejected from the park list due to false or questionable reports.

Appendix D lists the same confirmed taxa as Appendix D but describes habitat use in the park and is organized by life form rather than family in order to better meet the needs of NPS interpretive specialists.

The codes and abbreviations for each field in the appropriate appendices are summarized below.

**Family, Species Name (Appendices A, B, C, and D)**

Family and species nomenclature and concepts follow the Integrated Taxonomic Information System (ITIS), except where recent taxonomic changes were incorporated following the Flora of North America.

**Synonyms/Taxonomic Notes (Appendices A, B, and C)**

Pertinent synonyms are listed for taxa with alternative names in local flora or commonly used historical names.

**Common Name (Appendices A, B, C, and D)**

Common names are derived mainly from the USDA PLANTS database and ITIS.

**Nativity (Nat) (Appendices A and D)**

Nativity indicates whether a species is native (Nat) to Oregon and/or Washington (academically accepted as naturally occuring in the Pacific Northwest for hundreds or thousands of years) or non-native (Non) (introduced through human interference in recent, post-European settlement

history). Nativity is based on the Oregon Flora Project and the USDA PLANTS database. Native hybrid (Nat Hybd) is used to denote hybrid plants determined to be native.

**Life Form (Appendices A, B, and D)**

Life form was obtained from the USDA PLANTS database. Trees (Tree) are woody perennials, normally with a single stem growing to greater than four meters. Shrub (Shr) refers to a woody perennial with multiple stems, usually not growing to greater than four meters. Subshrubs (Sub) are woody perennials with multiple stems not growing to more than one-half meter in height. Forb/herbs (Forb) are non-woody perennials, annuals, or biennials. This classification includes ferns, horsetails, lycopods, and whisk-ferns but excludes graminoids. Graminoids (Gram) are grasses or grass-like plants, including grasses, sedges, rushes, quillworts, and arrow-grasses. Vines (Vine) are climbing or twining plants with relatively long stems that may or may not be woody. Where a plant can display characteristics of multiple life forms, these are listed and separated by commas.

**Duration (Dur) (Appendix A)**

Duration refers to the lifespan of the species. Annual (Ann) species live for one year or season only. Biennial species (Bien) may live for two years. Perennial (Per) species persist for several years.

**Range (Appendices A, B, and C)**

Range represents the distribution of the species in northwest Oregon and southwest Washington and the relation to its distribution in North America. Range distribution was determined primarily by the Biota of North America Program and the Oregon Flora Project. Nativity was not taken into account when determining range; this field reports how widely a species is found, whether or not it evolved here or was introduced from its native range. Wide (Wide) ranging taxa are present in at least 10% of Oregon and Washington and are also found in neighboring states. Regional (Reg) ranging taxa is only found in the Pacific Northwest (may include parts of Canada and Alaska). Local (Loc) taxa in only found in southwest Washington and/or northwest Oregon (defined as about a 150-mile radius from the extreme northwest and southwest tips of Oregon and Washington). Disjunct (Disj) taxa is one that is found in Oregon or Washington and is not found in adjacent states, but is present in other areas of North America. Lastly cultivated (Cul) taxa are present in the park but are a garden or ornamental plant that was intentionally planted.

**Park Status (Appendices A and D)**

Park Status denotes the present status of the taxa in the park. Present (Pres) taxa were recently (since 1970) confirmed to be occurring in the park. Historical (Hist) taxa were documented from before 1970 but have not since been observed. Reported (Rep) taxa were noted in official reports but have not been confirmed by observation or voucher. Unconfirmed (Uncon) taxa have been noted anecdotally or found in nearby locales, but have not been documented in the park.

### Population Size (Appendix A)

Population size describes the abundance and frequency of a species in the park. Abundance information was queried from the NPSpecies database and based on personal observation. Abundant (Abun) taxa have large populations and are often key components in one or more vegetation types, or are widely distributed across the park. Common (Com) taxa have large populations but may be restricted in their habitats or only occur in a few locations in the park. Uncommon (Unc) taxa have small to medium sized populations and are found in few vegetation communities or have a low occurrence in several community types. Rare (Rare) taxa have low populations within the park and are not often encountered. Taxa that were present historically but that do not have an extant population within the park are noted as (NA), not applicable.

### Source (Appendix A)

Source gives a reference for the assigned park status. These are Park staff, associated contractors, researchers, and accredited databases reporting documented species occurrences within the park.

### Year Doc. (Appendix A)

Year documented is the year the species status within the park was confirmed or reported. This does not indicate the year the first documented specimen was collected, which may be a much earlier date.

### Comments (Appendices B and D)

Comments give more detail or speculation about the status of a species in the park, or speculation on its status.

### Flower time (Appendix D)

Flower time refers to the months or seasons when a species is most likely to be in flower. Indeterminate or insufficient is given when a species‘ phenology is not determined. Non-flowering is given for species with spores, e.g. ferns and horsetails. Gymnosperms, while not flowering plants, are given a flower time for when their pollen is generally released. The main source for flower time was the USDA PLANTS database.

### Habitat (Appendix D)

The distribution of species across a generalized set of habitats is denoted by an _x‘ in the columns for habitats where that species occurs, based on observations in the field and general literature. The habitat types are: Headland/Sea cliff, Dune/Deflation Plane/Meadow (includes beaches and weedy grasslands but not manicured lawn areas), Lowland Forest, Estuary/Wetland (includes aquatics, salt marsh species), and Disturbed/Developed (includes roadsides, campgrounds, lawns, etc).

# Appendix A. Confirmed, historical, and reported vascular plant taxa of Lewis and Clark National Historical Park, organized by family and scientific name with taxonomic and biogeographic notes.

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aceraceae | *Acer circinatum* | | vine maple | Nat | Wide | Tree, Shr, Vine | Per | Pres | Unc | David Ek, NPS | 2000 |
| Aceraceae | *Acer macrophyllum* | | bigleaf maple | Nat | Wide | Tree | Per | Pres | Rare | David Ek, NPS | 2000 |
| Aceraceae | *Acer platanoides* | | Norway maple | Non | Wide | Tree | Per | Pres | Rare | David Ek, NPS | 2000 |
| Alismataceae | *Alisma triviale* | | northern water-plantain | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Alismataceae | *Sagittaria latifolia* | | common arrowhead | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Apiaceae | *Angelica genuflexa* | | kneeling angelica | Nat | Reg | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Apiaceae | *Angelica lucida* | | seacoast angelica | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Apiaceae | *Cicuta douglasii* | | western water hemlock | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Apiaceae | *Conioselinum gmelinii* | *Conioselinum pacificum* | Pacific hemlockparsley | Nat | Wide | Forb | Per | Pres | Unc | BONAP database | 2000 |
| Apiaceae | *Daucus carota* | | Queen Anne's lace | Non | Wide | Forb | Bien | Pres | Unc | Herbarium & field notes | 2007 |
| Apiaceae | *Heracleum maximum* | *Heracleum lanatum* | common cowparsnip | Nat | Wide | Forb | Per | Pres | Com | BONAP database | 2000 |
| Apiaceae | *Hydrocotyle ranunculoides* | | floating marsh pennywort | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Apiaceae | *Lilaeopsis occidentalis* | | western grasswort | Nat | Reg | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Apiaceae | *Oenanthe sarmentosa* | | water parsely | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apiaceae | *Osmorhiza purpurea* | | purple sweetroot | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Apiaceae | *Sium suave* | | common waterparsnip | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Apocynaceae | *Vinca minor* | | common periwinkle | Non | Wide | Vine, Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Aquifoliaceae | *Ilex aquifolium* | | English holly | Non | Wide | Tree, Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Araceae | *Lysichiton americanus* | | American skunkcabbage | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Araliaceae | *Hedera helix* | | English ivy | Non | Wide | Vine | Per | Pres | Unc | David Ek, NPS | 2000 |
| Araucariaceae | *Araucaria araucana* | | monkeypuzzle tree | Non | Cul | Tree | Per | Pres | Rare | David Ek, NPS | 2000 |
| Asteraceae | *Achillea millefolium* | | common yarrow | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Anaphalis margaritacea* | | common pearleverlasting | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Anthemis cotula* | | chamomile | Non | Wide | Forb | Ann | Pres | Unc | Herbarium & field notes | 2007 |
| Asteraceae | *Artemisia suksdorfii* | | coastal wormwood | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2000 |
| Asteraceae | *Baccharis pilularis* | | coyotebrush | Nat | Wide | Sub, Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Bellis perennis* | | English daisy | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Bidens cernua* | | nodding beggarticks | Nat | Wide | Forb | Ann | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Bidens frondosa* | | devils beggartick | Nat | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Asteraceae | *Cirsium arvense* | | Californian thistle | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Asteraceae | *Cirsium brevistylum* | | clustered thistle | Nat | Wide | Forb | Ann, Bien, Per | Pres | Unc | Herbarium & field notes | 2007 |
| Asteraceae | *Cirsium edule* | | edible thistle | Nat | Wide | Forb | Bien, Per | Pres | Rare | David Ek, NPS | 2000 |
| Asteraceae | *Cirsium vulgare* | | bull thistle | Non | Wide | Forb | Bien | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Conyza canadensis* | | Canada horseweed | Nat | Wide | Forb | Ann, Bien | Pres | Com | Lindsey Wise, ORBIC | 2000 |
| Asteraceae | *Cotula coronopifolia* | | brassbuttons | Non | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Asteraceae | *Crepis capillaris* | | smooth hawksbeard | Non | Wide | Forb | Ann, Bien | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Erechtites glomerata* | | Australian fireweed | Non | Reg | Forb | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Erechtites minima* | | Australian fireweed | Non | Reg | Forb | Ann, Per | Pres | Unc | David Ek, NPS | 2000 |
| Asteraceae | *Gnaphalium palustre* | | cudweed | Nat | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Gnaphalium uliginosum* | | low cudweed | Non | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Asteraceae | *Hieracium albiflorum* | | whiteflower hawkweed | Nat | Wide | Forb | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2007 |
| Asteraceae | *Hypochaeris glabra* | | smooth cat's ear | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Asteraceae | *Hypochaeris radicata* | | spotted cat's ear | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Lapsana communis* | | common nipplewort | Non | Wide | Forb | Ann | Pres | Com | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Asteraceae | *Leontodon taraxacoides ssp. taraxacoides* | | lesser hawkbit | Non | Wide | Forb | Bien, Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Leucacantha cyanus* | *Centaurea cyanus* | Bachelor's button | Non | Wide | Forb | Ann | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Leucanthemum vulgare* | *Chrysanthemum leucanthemum* | ox-eye daisy | Non | Wide | Forb | Per | Pres | Unc | BONAP database | 2000 |
| Asteraceae | *Matricaria discoidea* | *Matricaria matricarioides, Chamomilla suaveolens* | pineapple weed | Non | Wide | Forb | Ann | Pres | Unc | Herbarium & field notes | 2007 |
| Asteraceae | *Mycelis muralis* | *Lactuca muralis* | wall-lettuce | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Petasites frigidus var. palmatus* | *Petasites palmatus* | arctic sweet coltsfoot | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Asteraceae | *Senecio jacobaea* | | ragwort | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Asteraceae | *Senecio sylvaticus* | | woodland ragwort | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Senecio triangularis* | *Senecio triangularis var. triangularis* | arrowleaf ragwort | Nat | Wide | Sub, Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Asteraceae | *Senecio vulgaris* | | common groundsel | Non | Wide | Forb | Ann, Bien | Pres | Unc | David Ek, NPS | 2000 |
| Asteraceae | *Solidago canadensis* | | Canada goldenrod | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Asteraceae | *Solidago canadensis ssp. salebrosa* | | Canada goldenrod | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Asteraceae | *Solidago simplex var. spathulata* | | Dune goldenrod | Nat | Wide | Forb, Sub | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Asteraceae | *Soliva sessilis* | | field burrweed | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Asteraceae | *Sonchus asper* | | prickly sowthistle | Non | Wide | Forb | Ann | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Sonchus oleraceus* | | annual sowthistle | Non | Wide | Forb | Ann | Pres | Com | Herbarium & field notes | 2000 |
| Asteraceae | *Symphyotrichum subspicatum var. subspicatum* | *Aster subspicatus* | Douglas aster | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Asteraceae | *Tanacetum camphoratum* | *Tanacetum douglasii* | dune tansy | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Asteraceae | *Taraxacum officinale* | | dandelion | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Balsaminaceae | *Impatiens capensis* | | jewelweed | Non | Wide | Forb | Ann | Pres | Com | Peter F. Zika, UW | 2006 |
| Balsaminaceae | *Impatiens ecalcarata* | | spurless touch-me-not | Nat | Wide | Forb | Ann | Pres | Com | David Ek, NPS | 2000 |
| Balsaminaceae | *Impatiens x pacifica* | | Pacific jewelweed | Nat Hybd | Loc | Forb | Ann | Pres | Unc | Peter F. Zika, UW | 2010 |
| Berberidaceae | *Berberis aquifolium* | *Mahonia aquifolium* | hollyleaved barberry | Nat | Wide | Shr, Sub | Per | Pres | Rare | BONAP database | 2000 |
| Betulaceae | *Alnus rubra* | | red alder | Nat | Wide | Tree | Per | Pres | Abun | David Ek, NPS | 2000 |
| Blechnaceae | *Blechnum spicant* | | deer fern | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Boraginaceae | *Myosotis discolor* | | changing forget-me-not | Non | Wide | Forb | Ann, Per | Pres | Unc | David Ek, NPS | 2000 |
| Boraginaceae | *Myosotis laxa* | | bay forget-me-not | Nat | Wide | Forb | Ann, Bien, Per | Pres | Unc | David Ek, NPS | 2000 |
| Brassicaceae | *Barbarea orthoceras* | | erectpod wintercress | Nat | Wide | Forb | Bien, Per | Pres | Unc | David Ek, NPS | 2000 |
| Brassicaceae | *Brassica rapa* | | turnip rape | Non | Wide | Forb | Ann, Bien | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Brassicaceae | *Cakile edentula* | | American searocket | Nat | Wide | Forb | Ann, Bien, Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Brassicaceae | *Cakile maritima* | | Eurpoean searocket | Non | Wide | Forb | Ann, Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Brassicaceae | *Cardamine angulata* | | seaside bittercress | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Brassicaceae | *Cardamine breweri var. orbicularis* | | Sierra bittercress | Nat | Wide | Forb | Per | Pres | Unc | Margaret McCarter et al, NPS | 2000 |
| Brassicaceae | *Cardamine hirsuta* | | hairy bittercress | Non | Wide | Forb | Ann | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Brassicaceae | *Cardamine oligosperma var. oligosperma* | | little western bittercress | Nat | Wide | Forb | Ann, Bien | Pres | Com | David Ek, NPS | 2000 |
| Brassicaceae | *Draba verna* | | spring draba | Nat | Wide | Forb | Ann | Pres | Com | Lindsey Wise, ORBIC | 2010 |
| Brassicaceae | *Rorippa curvisiliqua* | | curvepod yellowcress | Nat | Wide | Forb | Ann, Bien | Pres | Rare | David Ek, NPS | 2000 |
| Brassicaceae | *Rorippa palustris* | *Rorippa islandica* | bog yellowcress | Nat | Wide | Forb | Ann, Bien, Per | Pres | Unc | David Ek, NPS | 2000 |
| Brassicaceae | *Sisymbrium officinale* | | hedge mustard | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Brassicaceae | *Teesdalia nudicaulis* | | barestem teesdalia | Non | Wide | Forb | Ann | Pres | Unc | Nancy Eid, NPS | 2006 |
| Buxaceae | *Buxus sp.* | | boxwood | Non | Cul | Shr | Per | Rep | Rare | David Ek, NPS | 2000 |
| Buxaceae | *Pachysandra terminalis* | | Japanese pachysandra | Non | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cabombaceae | *Cabomba caroliniana* | | Carolina fanwort | Non | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2010 |
| Callitrichaceae | *Callitriche hermaphroditica* | | northern water-starwort | Nat | Wide | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Callitrichaceae | *Callitriche stagnalis* | | pond water-starwort | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Campanulaceae | *Lobelia cardinalis* | | cardinalflower | Nat | Disj | Forb | Per | Hist | NA | Consortium of PNW Herbaria | 1964 |
| Caprifoliaceae | *Lonicera involucrata var. involucrata* | | twinberry honeysuckle | Nat | Wide | Shr | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Caprifoliaceae | *Lonicera periclymenum* | | European honeysuckle | Non | Wide | Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Caprifoliaceae | *Sambucus racemosa var. racemosa* | | scarlet elderberry | Nat | Wide | Tree, Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Caprifoliaceae | *Symphoricarpos albus var. laevigatus* | | common snowberry | Nat | Wide | Sub, Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Caprifoliaceae | *Weigela sp.* | | weigela | Non | Wide | Shr | Per | Rep | Rare | David Ek, NPS | 2000 |
| Caryophyllaceae | *Cardionema ramosissimum* | *Cardionema ramosissima* | sandcarpet | Nat | Wide | Forb | Per | Pres | Rare | Herbarium & field notes | 2007 |
| Caryophyllaceae | *Cerastium arvense* | | field chickweed | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Caryophyllaceae | *Cerastium fontanum ssp. vulgare* | *Cerastium vulgatum* | big chickweed | Non | Wide | Forb | Bien, Per | Pres | Com | BONAP database | 2000 |
| Caryophyllaceae | *Cerastium glomeratum* | *Cerastium viscosum* | sticky chickweed | Non | Wide | Forb | Ann | Pres | Com | BONAP database | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Caryophyllaceae | *Cerastium semidecandrum* | | fivestamen chickweed | Non | Wide | Forb | Ann | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Caryophyllaceae | *Dianthus armeria* | | Deptford pink | Non | Wide | Forb | Ann, Bien | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Caryophyllaceae | *Honckenya peploides* | | seaside sandplant | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Caryophyllaceae | *Honckenya peploides ssp. major* | | seaside sandplant | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Caryophyllaceae | *Moenchia erecta* | | upright chickweed | Non | Wide | Forb | Ann | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Caryophyllaceae | *Sagina apetala* | | annual pearlwort | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Caryophyllaceae | *Sagina maxima ssp. crassicaulis* | | stickystem pearlwort | Nat | Wide | Forb | Ann, Bien, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Caryophyllaceae | *Sagina procumbens* | | procumbent pearlwort | Non | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Caryophyllaceae | *Scleranthus annuus* | | German knotgrass | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Caryophyllaceae | *Silene gallica* | | common catchfly | Non | Wide | Forb | Ann, Bien | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Caryophyllaceae | *Spergula arvensis* | *Spergularia arvensis ssp. arvensis* | pickpurse | Non | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Caryophyllaceae | *Spergularia rubra* | | red sandspurry | Non | Wide | Forb | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Caryophyllaceae | *Stellaria calycantha* | | northern starwort | Nat | Wide | Forb | Ann, Per | Pres | Unc | Jimmy Kagan, ORBIC | 2009 |
| Caryophyllaceae | *Stellaria crispa* | | crisp starwort | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Caryophyllaceae | *Stellaria humifusa* | | saltmarsh starwort | Nat | Wide | Forb | Ann | Pres | Unc | Herbarium & field notes | 2008 |
| Caryophyllaceae | *Stellaria longipes var. longipes* | | longstalk starwort | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Caryophyllaceae | *Stellaria media* | | chickweed | Non | Wide | Forb | Ann, Per | Pres | Com | David Ek, NPS | 2000 |
| Ceratophyllaceae | *Ceratophyllum demersum* | | coon's tail | Nat | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Chenopodiaceae | *Atriplex prostrata* | | hastate orache | Nat | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Chenopodiaceae | *Chenopodium album* | | lambsquarters goosefoot | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Chenopodiaceae | *Salicornia virginica* | | Virginia glasswort | Nat | Wide | Forb, Sub | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Clusiaceae | *Hypericum anagalloides* | | creeping St. Johnswort | Nat | Wide | Forb | Ann, Per | Pres | Rare | David Ek, NPS | 2000 |
| Clusiaceae | *Hypericum androsaemum* | | sweet-amber | Non | Wide | Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2010 |
| Clusiaceae | *Hypericum perforatum* | | St. Johnswort | Non | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Clusiaceae | *Hypericum scouleri ssp. scouleri* | *Hypericum formosum var. scouleri* | Scouler St. Johnswort | Nat | Wide | Forb | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Convolvulaceae | *Calystegia sepium ssp. sepium* | *Convolvulus sepium* | hedge false bindweed | Non | Wide | Vine, Forb | Per | Pres | Unc | BONAP database | 2000 |

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| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Convolvulaceae | *Calystegia soldanella* | | seashore morning-glory | Nat | Wide | Vine, Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Cornaceae | *Cornus sericea* | | redosier dogwood | Nat | Wide | Tree, Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Crassulaceae | *Crassula tillaea* | | moss pygmyweed | Non | Reg | Forb | Ann | Pres | Rare | Peter F. Zika, UW | 2003 |
| Crassulaceae | *Sedum oreganum* | | Oregon stonecrop | Nat | Reg | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Cucurbitaceae | *Marah oreganus* | | coastal manroot | Nat | Wide | Vine, Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Cupressaceae | *Chamaecyparis lawsoniana* | | Oregon cedar | Non | Wide | Tree | Per | Pres | Unc | David Ek, NPS | 2000 |
| Cupressaceae | *Thuja plicata* | | western red cedar | Nat | Wide | Tree | Per | Pres | Com | David Ek, NPS | 2000 |
| Cyperaceae | *Carex brevicaulis* | | shortstem sedge | Nat | Wide | Gram | Per | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Cyperaceae | *Carex deweyana* | | Dewey sedge | Nat | Wide | Gram | Per | Pres | Unc | David Ek, NPS | 2000 |
| Cyperaceae | *Carex kobomugi* | | Japanese sedge | Non | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Cyperaceae | *Carex leptopoda* | | shortscale sedge | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Cyperaceae | *Carex lyngbyei* | | Lyngbye's sedge | Nat | Reg | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Cyperaceae | *Carex macrocephala* | | big-head ed sedge | Nat | Reg | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Cyperaceae | *Carex obnupta* | | slough sedge | Nat | Reg | Gram | Per | Pres | Abun | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cyperaceae | *Carex pansa* | | sanddune sedge | Nat | Reg | Gram | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Cyperaceae | *Carex stipata* | | owlfruit sedge | Nat | Wide | Gram | Per | Pres | Unc | David Ek, NPS | 2000 |
| Cyperaceae | *Carex stipata var. stipata* | | owlfruit sedge | Nat | Wide | Gram | Per | Pres | Unc | Consortium of PNW Herbaria | 2010 |
| Cyperaceae | *Eleocharis ovata* | | ovate spikerush | Nat | Wide | Gram | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Cyperaceae | *Eleocharis palustris* | | spikesedge | Nat | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Cyperaceae | *Eleocharis parvula* | *Eleocharis parvula var. parvula* | dwarf spikesedge | Nat | Wide | Gram | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Cyperaceae | *Isolepis cernua* | *Scirpus cernuus* | low bulrush | Nat | Wide | Gram | Ann | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Cyperaceae | *Schoenoplectus acutus var. occidentalis* | *Scirpus acutus var. occidentalis* | tule | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Cyperaceae | *Schoenoplectus americanus* | *Scirpus americanus* | American bulrush | Nat | Wide | Gram | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Cyperaceae | *Schoenoplectus tabernaemontani* | *Scirpus validus, Scirpus tabernaemontani* | soft-stem bulrush | Nat | Wide | Gram | Per | Pres | Com | BONAP database | 2000 |
| Cyperaceae | *Scirpus microcarpus* | | panicled bulrush | Nat | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Dennstaedti-aceae | *Pteridium aquilinum* | | northern bracken fern | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Dipsacaceae | *Dipsacus fullonum ssp. sylvestris* | *Dipsacus sylvestris* | common teasel | Non | Wide | Forb | Bien | Pres | Com | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dryopteridaceae | *Athyrium filix-femina* | | common ladyfern | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Dryopteridaceae | *Dryopteris expansa* | | spreading woodfern | Nat | Wide | Forb | Per | Pres | Unc | Nancy Eid. David Ek, NPS | 2000 |
| Dryopteridaceae | *Polystichum munitum* | | western swordfern | Nat | Wide | Forb | Per | Pres | Abun | David Ek, NPS | 2000 |
| Equisetaceae | *Equisetum arvense* | | western horsetail | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Equisetaceae | *Equisetum hyemale* | *Equisetum hyemale var. pseudohyemale* | western scouringrush | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Equisetaceae | *Equisetum telmateia ssp. braunii* | | giant horsetail | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Ericaceae | *Arctostaphylos uva-ursi* | | bearberry | Nat | Wide | Sub, Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Ericaceae | *Gaultheria shallon* | | salal | Nat | Reg | Sub, Shr | Per | Pres | Abun | David Ek, NPS | 2000 |
| Ericaceae | *Menziesia ferruginea* | | rusty menziesia | Nat | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Ericaceae | *Rhododendron macrophyllum* | | Pacific rhododendron | Nat | Wide | Tree, Shr | Per | Pres | Unc | BONAP database | 2000 |
| Ericaceae | *Rhododendron occidentale* | | western azalea | Nat | Reg | Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Ericaceae | *Vaccinium ovalifolium* | | oval-leaf huckleberry | Nat | Wide | Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Ericaceae | *Vaccinium ovatum* | | California huckleberry | Nat | Wide | Sub, Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Ericaceae | *Vaccinium parvifolium* | | red huckleberry | Nat | Wide | Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Euphorbiaceae | *Chamaesyce maculata* | | spotted sandmat | Non | Wide | Forb | Ann | Pres | Com | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fabaceae | *Cytisus scoparius* | | English broom | Non | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Fabaceae | *Lathyrus japonicus* | | beach pea | Nat | Wide | Vine, Forb | Per | Pres | Abun | Herbarium & field notes | 2007 |
| Fabaceae | *Lathyrus latifolius* | | everlasting peavine | Non | Wide | Vine, Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Lathyrus littoralis* | | silky beach pea | Nat | Reg | Vine, Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Lathyrus palustris* | | marsh pea | Nat | Wide | Vine, Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Fabaceae | *Lotus corniculatus* | | bird's-foot-trefoil | Non | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Lotus denticulatus* | | riverbar bird's-foot trefoil | Nat | Wide | Forb | Ann | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Fabaceae | *Lotus pedunculatus* | *Lotus uliginosus* | big trefoil | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Fabaceae | *Lotus unifoliolatus var. unifoliolatus* | *Lotus purshianus* | American bird's-foot-trefoil | Nat | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Fabaceae | *Lupinus arboreus* | | yellow bush lupine | Non | Wide | Sub, Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Lupinus latifolius var. latifolius* | | broad-leaved lupine | Nat | Reg | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Lupinus littoralis* | | seashore lupine | Nat | Reg | Sub, Forb | Per | Pres | Com | Herbarium & field notes | 2007 |
| Fabaceae | *Medicago lupulina* | | black medic | Non | Wide | Forb | Ann, Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |

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| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fabaceae | *Melilotus alba* | | white sweetclover | Non | Wide | Forb | Ann, Bien, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Robinia pseudoacacia* | | black locust | Non | Wide | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Fabaceae | *Trifolium arvense* | | rabbitfoot clover | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Fabaceae | *Trifolium dubium* | | hop clover | Non | Wide | Forb | Ann | Pres | Com | David Ek, NPS | 2000 |
| Fabaceae | *Trifolium hybridum* | | alsike clover | Non | Wide | Forb | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Trifolium pratense* | | red clover | Non | Wide | Forb | Bien, Per | Pres | Rare | Herbarium & field notes | 2007 |
| Fabaceae | *Trifolium repens* | | Dutch clover | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Fabaceae | *Trifolium subterraneum* | | subterranean clover | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Fabaceae | *Trifolium wormskjoldii* | | cow clover | Nat | Wide | Forb | Ann, Per | Pres | Unc | David Ek, NPS | 2000 |
| Fabaceae | *Ulex europaeus* | | gorse | Non | Wide | Shr | Per | Hist | NA | Netul Landing Plant List, NPS | 2001 |
| Fabaceae | *Vicia americana ssp. americana* | | American vetch | Nat | Wide | Forb, Vine | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Fabaceae | *Vicia hirsuta* | | tiny vetch | Non | Wide | Forb | Ann | Pres | Com | Lindsey Wise, ORBIC | 2010 |
| Fabaceae | *Vicia nigricans ssp. gigantea* | *Vicia gigantea* | giant vetch | Nat | Wide | Vine, Forb | Per | Pres | Unc | BONAP database | 2000 |
| Fabaceae | *Vicia sativa ssp. nigra* | *Vicia sativa var. angustifolia* | common vetch | Non | Wide | Vine, Forb | Ann | Pres | Com | BONAP database | 2000 |

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| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fabaceae | *Vicia tetrasperma* | | lentil vetch | Non | Wide | Vine, Forb | Ann | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2007 |
| Fumariaceae | *Corydalis scouleri* | | Scouler's fumewort | Nat | Reg | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Fumariaceae | *Dicentra formosa* | | Pacific bleeding heart | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Gentianaceae | *Centaurium erythraea* | | European centaury | Non | Wide | Forb | Ann, Bien | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Geraniaceae | *Erodium cicutarium* | | redstem stork's bill | Non | Wide | Forb | Ann, Bien | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Geraniaceae | *Geranium dissectum* | | cutleaf geranium | Non | Wide | Forb | Ann, Bien | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Geraniaceae | *Geranium molle* | | dovefoot geranium | Non | Wide | Forb | Ann, Bien, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Geraniaceae | *Geranium robertianum* | | herb robert | Non | Wide | Forb | Ann, Bien | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Grossulariaceae | *Escallonia rubra* | | redclaws | Non | Reg | Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Grossulariaceae | *Ribes bracteosum* | | stink currant | Nat | Wide | Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Grossulariaceae | *Ribes divaricatum var. divaricatum* | | spreading gooseberry | Nat | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Grossulariaceae | *Ribes lacustre* | | prickly currant | Nat | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Grossulariaceae | *Ribes laxiflorum* | | trailing black currant | Nat | Wide | Vine, Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Grossulariaceae | *Ribes sanguineum* | | redflower currant | Nat | Wide | Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Haloragaceae | *Myriophyllum aquaticum* | *Myriophyllum brasiliense* | parrot's-feather | Non | Wide | Forb | Per | Pres | Com | BONAP database | 2000 |
| Haloragaceae | *Myriophyllum hippuroides* | | western watermilfoil | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Hippuridaceae | *Hippuris vulgaris* | | marestail | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Hydrangeaceae | *Deutzia scabra* | | fuzzy pride-of-Rochester | Non | Wide | Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Hydrocharitaceae | *Egeria densa* | | Brazilian waterweed | Non | Wide | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2010 |
| Hydrocharitaceae | *Elodea canadensis* | | broad waterweed | Nat | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Hydrocharitaceae | *Vallisneria americana* | | American eelgrass | Non | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Hydrophyllaceae | *Hydrophyllum tenuipes* | | Pacific waterleaf | Nat | Reg | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Hydrophyllaceae | *Phacelia nemoralis* | | shade phacelia | Nat | Reg | Forb | Bien, Per | Pres | Unc | Herbarium & field notes | 2007 |
| Hydrophyllaceae | *Romanzoffia tracyi* | | Tracy's mist maiden | Nat | Reg | Forb | Per | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Iridaceae | *Crocosmia X crocosmiiflora* | | montbretia | Non | Wide | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Iridaceae | *Iris pseudacorus* | | paleyellow iris | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iridaceae | *Sisyrinchium californicum* | | golden blue-eyed grass | Nat | Wide | Forb | Per | Pres | Rare | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Iridaceae | *Sisyrinchium idahoense var. occidentale* | | Idaho blue-eyed grass | Nat | Wide | Forb | Per | Pres | Rare | Nancy Eid | 2000 |
| Juncaceae | *Juncus acuminatus* | | sharp-fruit rush | Nat | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Juncaceae | *Juncus articulatus* | | jointed rush | Nat | Wide | Gram | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Juncaceae | *Juncus balticus var. balticus* | *Juncus arcticus ssp. littoralis* | Baltic rush | Nat | Wide | Gram | Per | Pres | Rare | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Juncaceae | *Juncus breweri* | | Brewer's rush | Nat | Reg | Gram | Per | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Juncaceae | *Juncus bufonius* | | toad rush | Non | Wide | Gram | Ann | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Juncaceae | *Juncus effusus var. effusus* | | common rush | Non | Wide | Gram | Per | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Juncaceae | *Juncus effusus var. pacificus* | | Pacific rush | Nat | Wide | Gram | Per | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Juncaceae | *Juncus ensifolius* | | swordleaf rush | Nat | Wide | Gram | Per | Pres | Unc | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Juncaceae | *Juncus hesperius* | | three-stamened rush | Nat | Reg | Gram | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Juncaceae | *Juncus lesueurii* | | salt rush | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Juncaceae | *Juncus nevadensis var. inventus* | | Sierra rush | Nat | Loc | Gram | Per | Pres | Rare | Consortium of Pacific Northwest Herbaria | 2010 |
| Juncaceae | *Juncus oxymeris* | | pointed rush | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Juncaceae | *Juncus supiniformis* | | hairyleaf rush | Nat | Reg | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Juncaceae | *Juncus tenuis* | | path rush | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Juncaceae | *Luzula comosa* | | Pacific woodrush | Nat | Wide | Gram | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Juncaceae | *Luzula parviflora* | | smallflower woodrush | Nat | Wide | Gram | Per | Pres | Unc | David Ek, NPS | 2000 |
| Juncaginaceae | *Lilaea scilloides* | | awl-leaf lilaea | Nat | Wide | Gram | Ann | Pres | Rare | Herbarium & field notes | 2001 |
| Juncaginaceae | *Triglochin maritima* | | seaside arrowgrass | Nat | Wide | Gram | Per | Pres | Com | Lindsey Wise, ORBIC | 2010 |
| Juncaginaceae | *Triglochin striata* | | three-rib arrowgrass | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Lamiaceae | *Glechoma hederacea* | | creeping charlie | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |

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| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lamiaceae | *Lamium purpureum* | | purple deadnettle | Non | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Lamiaceae | *Lycopus americanus* | | water horehound | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lamiaceae | *Mentha aquatica* | *Mentha citrata* | water mint | Non | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Lamiaceae | *Mentha arvensis* | *Mentha arvensis var. glabrata* | field mint | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lamiaceae | *Mentha pulegium* | | pennyroyal | Non | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Lamiaceae | *Mentha X piperita* | | peppermint | Non | Wide | Forb | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Lamiaceae | *Prunella vulgaris ssp. lanceolata* | | lance selfheal | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lamiaceae | *Prunella vulgaris ssp. vulgaris* | | common selfheal | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lamiaceae | *Stachys mexicana* | | Mexican hedgenettle | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lemnaceae | *Lemna minor* | | common duckweed | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lemnaceae | *Spirodela polyrhiza* | | giant duckweed | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2000 |
| Liliaceae | *Hyacinthoides nonscripta* | *Scilla nonscripta* | English bluebell | Non | Wide | Forb | Per | Pres | Unc | BONAP database | 2000 |
| Liliaceae | *Maianthemum dilatatum* | | false lily of the vally | Nat | Wide | Forb | Per | Pres | Abun | David Ek, NPS | 2000 |
| Liliaceae | *Maianthemum racemosum* | | feathery false lily of the vally | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2000 |
| Liliaceae | *Narcissus sp.* | | daffodil | Non | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Liliaceae | *Prosartes smithii* | *Disporum smithii* | largeflower fairybells | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Liliaceae | *Streptopus amplexifolius* | | clasping twistedstalk | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Liliaceae | *Trillium ovatum* | | Pacific trillium | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Lycopodiaceae | *Lycopodium clavatum* | | common club moss | Nat | Wide | Forb, Sub | Per | Pres | Rare | Herbarium & field notes | 2000 |
| Lythraceae | *Lythrum hyssopifolia* | | hyssop loosestrife | Non | Wide | Forb | Ann | Pres | Rare | Lindsey Wise, ORBIC | 2010 |
| Lythraceae | *Lythrum portula* | | spatulaleaf loosestrife | Non | Wide | Forb | Ann | Pres | Unc | Herbarium & field notes | 2007 |
| Lythraceae | *Lythrum salicaria* | | purple loosestrife | Non | Wide | Forb, Sub | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Malvaceae | *Sidalcea hendersonii* | | Henderson's checkerbloom | Nat | Loc | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Monotropaceae | *Monotropa uniflora* | | Indian pipe | Nat | Wide | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2010 |
| Myricaceae | *Morella californica* | *Myrica californica* | California wax myrtle | Nat | Wide | Tree, Shr | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Najadaceae | *Najas flexilis* | | nodding waternymph | Nat | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Nyctaginaceae | *Abronia latifolia* | | coastal sand verbena | Nat | Loc | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Nymphaeaceae | *Nuphar lutea ssp. polysepala* | | Rocky Mountain cowlily | Nat | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Nymphaeaceae | *Nymphaea odorata* | | white waterlily | Non | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Onagraceae | *Chamerion angustifolium* | | fireweed | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Onagraceae | *Epilobium ciliatum ssp. glandulosum* | | fringed willowherb | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Onagraceae | *Epilobium minutum* | | chaparral willowherb | Nat | Wide | Forb | Ann | Pres | Rare | Herbarium & field notes | 2007 |
| Onagraceae | *Fuchsia magellanica* | | hardy fuchsia | Non | Reg | Shr, Vine | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Onagraceae | *Ludwigia palustris* | *Ludwigia palustris var. pacifica* | marsh seedbox | Nat | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Onagraceae | *Oenothera glazioviana* | *Oenothera erythrosepala* | redsepal evening-primrose | Non | Wide | Forb | Bien | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Ophioglossaceae | *Botrychium multifidum* | | leathery grapefern | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Orchidaceae | *Goodyera oblongifolia* | | rattlesnake plantain | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Orchidaceae | *Spiranthes romanzoffiana* | | hooded lady's tresses | Nat | Wide | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Oxalidaceae | *Oxalis oregana* | | redwood-sorrel | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Oxalidaceae | *Oxalis trilliifolia* | | threeleaf woodsorrel | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Papaveraceae | *Eschscholzia californica* | | California goldenpoppy | Nat | Wide | Forb | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Pinaceae | *Abies grandis* | | silver fir | Nat | Wide | Tree | Per | Pres | Unc | David Ek, NPS | 2000 |
| Pinaceae | *Abies procera* | | noble fir | Nat | Reg | Tree | Per | Pres | Rare | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pinaceae | *Cedrus libani* | | cedar of Lebanon | Non | Loc | Tree | Per | Rep | Rare | David Ek, NPS | 2000 |
| Pinaceae | *Picea sitchensis* | | coast spruce | Nat | Wide | Tree | Per | Pres | Com | David Ek, NPS | 2000 |
| Pinaceae | *Pinus contorta var. contorta* | | beach pine | Nat | Wide | Tree | Per | Pres | Unc | David Ek, NPS | 2000 |
| Pinaceae | *Pinus nigra* | | australian pine | Non | Wide | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Pinaceae | *Pinus pinaster* | | cluster pine | Non | Cul | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Pinaceae | *Pinus sylvestris* | | Scots pine | Non | Cul | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Pinaceae | *Pseudotsuga menziesii* | | Douglas fir | Nat | Wide | Tree | Per | Pres | Unc | David Ek, NPS | 2000 |
| Pinaceae | *Tsuga heterophylla* | | pacific hemlock | Nat | Wide | Tree | Per | Pres | Abun | David Ek, NPS | 2000 |
| Plantaginaceae | *Plantago coronopus* | | buckhorn plantain | Non | Wide | Forb | Ann, Bien | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Plantaginaceae | *Plantago elongata* | | prairie plantain | Nat | Wide | Forb | Ann | Pres | Rare | Consortium of Pacific Northwest Herbaria | 2010 |
| Plantaginaceae | *Plantago lanceolata* | | ribwort | Non | Wide | Forb | Ann, Bien, Per | Pres | Com | David Ek, NPS | 2000 |
| Plantaginaceae | *Plantago major* | *Plantago major var. pachyphylla* | rippleseed plantain | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Plantaginaceae | *Plantago psyllium* | | sand plantain | Non | Wide | Forb | Ann | Pres | Rare | Consortium of Pacific Northwest Herbaria | 2010 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Plantaginaceae | *Plantago subnuda* | | tall coastal plantain | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Plumbaginaceae | *Armeria maritima ssp. californica* | | California seapink | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Agrostis capillaris* | | colonial bentgrass | Non | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Agrostis exarata* | | spike bentgrass | Nat | Wide | Gram | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Agrostis pallens* | | seashore bentgrass | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Agrostis scabra* | | rough bent | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Agrostis stolonifera* | *Agrostis alba var. palustris, Agrostis stolonifera var. palustris* | spreading bent | Non | Wide | Gram | Per | Pres | Com | BONAP database | 2000 |
| Poaceae | *Aira praecox* | | yellow hairgrass | Non | Wide | Gram | Ann | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Alopecurus geniculatus* | | marsh meadow-foxtail | Nat | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Alopecurus pratensis* | | field meadow-foxtail | Non | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Ammophila arenaria* | | European beachgrass | Non | Wide | Gram | Per | Pres | Abun | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Ammophila breviligulata* | | American beachgrass | Non | Wide | Gram | Per | Pres | Abun | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Anthoxanthum odoratum* | | sweet vernalgrass | Non | Wide | Gram | Per | Pres | Unc | David Ek, NPS | 2000 |

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| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Poaceae | *Bromus carinatus* | | California brome | Nat | Wide | Gram | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Bromus diandrus* | *Bromus rigidus* | ripgut brome | Non | Wide | Gram | Ann, Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Bromus hordeaceus ssp. hordeaceus* | *Bromus mollis* | downy brome | Non | Wide | Gram | Ann | Pres | Com | BONAP database | 2000 |
| Poaceae | *Bromus sitchensis var. sitchensis* | | Sitka brome | Nat | Wide | Gram | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Bromus sterilis* | | poverty brome | Non | Wide | Gram | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Cynosurus echinatus* | | bristly dogstail grass | Non | Wide | Gram | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Dactylis glomerata* | | cocksfoot | Non | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Danthonia californica* | | California oatgrass | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Deschampsia caespitosa* | *Deschampsia caespitosa var. arctica, D. caespitosa var. longiflora* | tufted hairgrass | Nat | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Deschampsia elongata* | *Aira elongata* | slender hairgrass | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Digitaria sanguinalis* | | hairy crab grass | Non | Wide | Gram | Ann | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Echinochloa crus-galli* | | Japanese millet | Non | Wide | Gram | Ann | Pres | Unc | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Poaceae | *Elymus repens* | *Elytrigia repens* | quackgrass | Non | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Festuca rubra* | | red fescue | Nat | Wide | Gram | Per | Pres | Unc | David Ek, NPS | 2000 |
| Poaceae | *Glyceria grandis* | | American mannagrass | Nat | Wide | Gram | Per | Pres | Rare | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Poaceae | *Glyceria leptostachya* | | davy mannagrass | Nat | Reg | Gram | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Poaceae | *Holcus lanatus* | | common velvetgrass | Non | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Leymus mollis ssp. mollis* | | American dunegrass | Nat | Wide | Gram | Per | Pres | Abun | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Lolium perenne* | | perennial | Non | Wide | Gram | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Lolium perenne ssp. multiflorum* | *Lolium multiflorum* | Italian ryegrass | Non | Wide | Gram | Ann, Per | Pres | Com | BONAP database | 2000 |
| Poaceae | *Phalaris arundinacea* | | reed canary grass | Non | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Poa annua* | | walkgrass | Non | Wide | Gram | Ann | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Poa bulbosa* | | bulbous bluegrass | Non | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Poa compressa* | | Canada bluegrass | Non | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Poaceae | *Poa howellii* | | Howell's bluegrass | Non | Wide | Gram | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Poaceae | *Poa macrantha* | | seashore bluegrass | Nat | Reg | Gram | Per | Pres | Rare | Consortium of Pacific Northwest Herbaria | 2010 |
| Poaceae | *Poa pratensis* | | Kentucky bluegrass | Nat | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Poa trivialis* | | rough bluegrass | Non | Wide | Gram | Per | Pres | Rare | David Ek, NPS | 2000 |
| Poaceae | *Poa unilateralis* | | ocean-bluff bluegrass | Nat | Reg | Gram | Per | Pres | Rare | Sayce & Eid, NPS | 2004 |
| Poaceae | *Polypogon monspeliensis* | | annual rabbitsfoot grass | Non | Wide | Gram | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Schedonorus arundinaceus* | *Schedonorus phoenix, Festuca arundinacea* | tall fescue | Non | Wide | Gram | Per | Pres | Com | David Ek, NPS | 2000 |
| Poaceae | *Torreyochloa pallida var. pauciflora* | *Puccinellia pallida var. pauciflora* | pale false mannagrass | Nat | Wide | Gram | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Trisetum canescens* | *Trisetum cernuum* | tall trisetum | Nat | Wide | Gram | Per | Pres | Unc | BONAP database | 2009 |
| Poaceae | *Triticum aestivum* | | common wheat | Non | Wide | Gram | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Poaceae | *Vulpia bromoides* | *Festuca bromoides* | brome fescue | Non | Wide | Gram | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Polemoniaceae | *Navarretia squarrosa* | | skunkbush | Nat | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Polygonaceae | *Polygonum amphibium var. emersum* | *Polygonum coccineum; Persicaria amphibia* | colored smartweed | Nat | Wide | Forb | Per | Pres | Unc | BONAP database | 2000 |
| Polygonaceae | *Polygonum aviculare* | *Polygonum arenastrum* | prostrate knotweed | Non | Wide | Forb | Ann, Per | Pres | Unc | Herbarium & field notes | 2007 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Polygonaceae | *Polygonum cuspidatum* | *Fallopia japonica* | Japanese knotweed | Non | Wide | Forb, Sub | Per | Pres | Rare | Nancy Eid, NPS | 2010 |
| Polygonaceae | *Polygonum hydropiper* | | annual smartweed | Non | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Polygonaceae | *Polygonum hydropiperoides* | | swamp smartweed | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Polygonaceae | *Polygonum hydropiperoides hydropiperoides* | *Polygonum hydropiperoides var. hydropiperoides* | waterpepper | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Polygonaceae | *Polygonum paronychia* | | beach knotweed | Nat | Wide | Sub | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Polygonaceae | *Polygonum persicaria* | | ladysthumb smartweed | Non | Wide | Forb | Ann, Per | Pres | Unc | Herbarium & field notes | 2007 |
| Polygonaceae | *Polygonum polystachyum* | | Himalayan knotweed | Non | Wide | Forb | Per | Pres | Rare | Cape D Mgt Plan | 2004 |
| Polygonaceae | *Rumex acetosella* | | sheep sorrel | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Polygonaceae | *Rumex aquaticus var. fenestratus* | *Rumex occidentalis* | western dock | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Polygonaceae | *Rumex conglomeratus* | | clustered dock | Non | Wide | Forb | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Polygonaceae | *Rumex crispus* | | Curley dock | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Polygonaceae | *Rumex maritimus* | | golden dock | Nat | Wide | Forb | Ann, Bien | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Polygonaceae | *Rumex obtusifolius* | | bitter dock | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Polypodiaceae | *Polypodium glycyrrhiza* | | licorice fern | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Polypodiaceae | *Polypodium scouleri* | | leathery polypody | Nat | Wide | Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Portulacaceae | *Claytonia perfoliata* | *Montia perfoliata* | miner's lettuce | Nat | Wide | Forb | Ann, Per | Pres | Unc | Herbarium & field notes | 2007 |
| Portulacaceae | *Claytonia sibirica* | | Siberian springbeauty | Nat | Wide | Forb | Ann, Per | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Portulacaceae | *Montia fontana* | | annual water miner's lettuce | Nat | Wide | Forb | Ann | Pres | Rare | Lindsey Wise, ORBIC | 2010 |
| Portulacaceae | *Montia parvifolia ssp. flagellaris* | | littleleaf minerslettuce | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Potamogeton-aceae | *Potamogeton crispus* | | curly pondweed | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Potamogeton-aceae | *Potamogeton foliosus* | | leafy pondweed | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Potamogeton-aceae | *Potamogeton gramineus* | | grassy pondweed | Nat | Wide | Forb | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Potamogeton-aceae | *Potamogeton zosteriformis* | | flat-stem pondweed | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Primulaceae | *Lysimachia terrestris* | | earth loosestrife | Non | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Primulaceae | *Samolus valerandi ssp. parviflorus* | *Samolus parviflorus* | water brookweed | Nat | Wide | Forb | Per | Pres | Rare | Herbarium & field notes | 2007 |
| Pteridaceae | *Adiantum aleuticum* | | maidenfern | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Pyrolaceae | *Moneses uniflora* | | single delight | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |

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| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ranunculaceae | *Ranunculus acris* | | meadow buttercup | Non | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Ranunculaceae | *Ranunculus ficaria* | *Ficaria verna* | fig buttercup | Non | Wide | Forb | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Ranunculaceae | *Ranunculus flammula* | | greater creeping spearwort | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Ranunculaceae | *Ranunculus repens* | | creeping buttercup | Non | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Ranunculaceae | *Ranunculus sceleratus* | | celeryleaf buttercup | Nat | Wide | Forb | Ann, Per | Pres | Rare | David Ek, NPS | 2000 |
| Ranunculaceae | *Ranunculus uncinatus* | | hooked buttercup | Nat | Wide | Forb | Ann, Per | Pres | Unc | David Ek, NPS | 2000 |
| Rhamnaceae | *Frangula purshiana* | *Rhamnus purshiana* | cascara buckthorn | Nat | Wide | Tree, Shr | Per | Pres | Unc | BONAP database | 2000 |
| Rosaceae | *Amelanchier alnifolia* | | Saskatoon serviceberry | Nat | Wide | Tree, Shr | Per | Pres | Rare | Consortium of PNW Herbaria | 2010 |
| Rosaceae | *Aphanes microcarpa* | *Aphanes australis* | slender parsley piert | Non | Wide | Forb | Ann | Pres | Rare | Peter F. Zika, UW | 2003 |
| Rosaceae | *Argentina egedii ssp. egedii* | *Potentilla anserina ssp. pacifica, Potentilla egedii* | Pacific silverweed | Nat | Wide | Forb | Per | Pres | Com | BONAP database | 2000 |
| Rosaceae | *Aruncus dioicus var. vulgaris* | *Aruncus dioicus, Aruncus sylvester* | bride's feathers | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rosaceae | *Cotoneaster franchetii* | | orange cotoneaster | Non | Reg | Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Rosaceae | *Cotoneaster horizontalis* | | rockspray cotoneaster | Non | Wide | Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rosaceae | *Crataegus douglasii* | | black hawthorn | Nat | Wide | Tree, Shr | Per | Pres | Unc | Jimmy Kagan, ORBIC | 2010 |
| Rosaceae | *Crataegus monogyna* | | oneseed hawthorn | Non | Wide | Tree, Shr | Per | Pres | Rare | Herbarium & field notes | 2007 |
| Rosaceae | *Fragaria chiloensis* | | beach strawberry | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Rosaceae | *Geum macrophyllum var. macrophyllum* | | large-leaf avens | Nat | Wide | Forb | Per | Pres | Com | Herbarium & field notes | 2007 |
| Rosaceae | *Malus fusca* | *Pyrus fusca* | Oregon crabapple | Nat | Wide | Tree, Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Rosaceae | *Malus pumila* | *Malus sylvestris, Malus domestica* | paradise apple | Non | Wide | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Rosaceae | *Oemleria cerasiformis* | | Indian plum | Nat | Wide | Tree, Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rosaceae | *Physocarpus capitatus* | | Pacific ninebark | Nat | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rosaceae | *Prunus avium* | | sweet cherry | Non | Wide | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Rosaceae | *Prunus cerasus* | | sour cherry | Non | Wide | Tree, Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Rosaceae | *Prunus domestica* | | European plum | Non | Wide | Tree | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Rosaceae | *Rosa nutkana* | | Nootka rose | Nat | Wide | Sub | Per | Pres | Com | David Ek, NPS | 2000 |
| Rosaceae | *Rubus armeniacus* | *Rubus discolor, Rubus procerus* | Himalaya blackberry | Non | Wide | Sub | Per | Pres | Com | David Ek, NPS | 2000 |
| Rosaceae | *Rubus laciniatus* | | cut-leaved blackberry | Non | Wide | Vine, Sub | Per | Pres | Com | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rosaceae | *Rubus parviflorus* | | thimbleberry | Nat | Wide | Sub | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rosaceae | *Rubus spectabilis* | | salmonberry | Nat | Wide | Vine, Sub | Per | Pres | Com | David Ek, NPS | 2000 |
| Rosaceae | *Rubus ursinus* | | California blackberry | Nat | Wide | Sub | Per | Pres | Com | David Ek, NPS | 2000 |
| Rosaceae | *Sorbaria arborea* | | giant false spiraea | Non | Cul | Shr | Per | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Rosaceae | *Sorbus aucuparia* | | European mountainash | Non | Wide | Tree, Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rosaceae | *Spiraea douglasii* | | rose spirea | Nat | Wide | Shr | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rubiaceae | *Galium aparine* | *Galium aparine var. echinospermum* | sticky-willy | Nat | Wide | Vine, Forb | Ann | Pres | Com | David Ek, NPS | 2000 |
| Rubiaceae | *Galium trifidum* | | small bedstraw | Nat | Wide | Vine, Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Rubiaceae | *Galium trifidum ssp. columbianum* | *Galium cymosum, Galium trifidum var. pacificum* | threepetal bedstraw | Nat | Wide | Vine, Forb | Per | Pres | Com | Lindsey Wise, ORBIC | 2009 |
| Rubiaceae | *Galium triflorum* | | fragrant bedstraw | Nat | Wide | Forb, Vine | Per | Pres | Unc | David Ek, NPS | 2000 |
| Salicaceae | *Populus balsamifera ssp. trichocarpa* | | balsam poplar | Nat | Wide | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Salicaceae | *Salix alba* | | golden willow | Non | Wide | Tree | Per | Pres | Unc | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Salicaceae | *Salix hookeriana* | | dune willow | Nat | Wide | Tree, Shr | Per | Pres | Com | David Ek, NPS | 2000 |
| Salicaceae | *Salix lucida ssp. lasiandra* | *Salix lasiandra* | Pacific willow | Nat | Wide | Tree, Shr | Per | Pres | Unc | David Ek, NPS | 2000 |

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Salicaceae | *Salix scouleriana* | | Scouler's willow | Nat | Wide | Tree | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Salicaceae | *Salix sitchensis* | | Sitka willow | Nat | Wide | Tree, Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Saxifragaceae | *Boykinia occidentalis* | *Boykinia elata* | coastal brookfoam | Nat | Wide | Forb | Per | Pres | Unc | BONAP database | 2000 |
| Saxifragaceae | *Chrysosplenium glechomifolium* | *Chrysosplenium glechomaefolium* | Pacific golden saxifrage | Nat | Reg | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Saxifragaceae | *Heuchera micrantha var. diversifolia* | | crevice alumroot | Nat | Reg | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Saxifragaceae | *Tellima grandiflora* | | bigflower tellima | Nat | Wide | Forb | Per | Pres | Rare | David Ek, NPS | 2000 |
| Saxifragaceae | *Tiarella trifoliata* | | threeleaf foamflower | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Saxifragaceae | *Tiarella trifoliata var. trifoliata* | | threeleaf foamflower | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Saxifragaceae | *Tolmiea menziesii* | | youth on age | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Scrophulariaceae | *Castilleja affinis ssp. litoralis* | | Pacific paintbrush | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Scrophulariaceae | *Castilleja ambigua ssp. ambigua* | | johnny-nip | Nat | Reg | Forb | Ann | Pres | Unc | Herbarium & field notes | 2007 |
| Scrophulariaceae | *Cymbalaria muralis* | | Kenilworth ivy | Non | Wide | Forb | Ann | Pres | Rare | Lindsey Wise, ORBIC | 2009 |
| Scrophulariaceae | *Digitalis purpurea* | | purple foxglove | Non | Wide | Forb | Bien | Pres | Com | David Ek, NPS | 2000 |
| Scrophulariaceae | *Mimulus dentatus* | | coastal monkeyflower | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scrophulariaceae | *Mimulus guttatus* | | yellow monkeyflower | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Scrophulariaceae | *Parentucellia viscosa* | | yellow glandweed | Non | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Scrophulariaceae | *Scrophularia californica* | | California figwort | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Scrophulariaceae | *Scrophularia californica ssp. californica* | | California figwort | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Scrophulariaceae | *Triphysaria pusilla* | *Orthocarpus pusillus* | dwarf owl's-clover | Nat | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Scrophulariaceae | *Veronica americana* | | American speedwell | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Scrophulariaceae | *Veronica arvensis* | | rock speedwell | Non | Wide | Forb | Ann | Pres | Unc | David Ek, NPS | 2000 |
| Scrophulariaceae | *Veronica scutellata* | | grass-leaf speedwell | Nat | Wide | Forb | Per | Pres | Unc | Lindsey Wise, ORBIC | 2009 |
| Scrophulariaceae | *Veronica serpyllifolia ssp. serpyllifolia* | | thymeleaf speedwell | Non | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Selaginellaceae | *Selaginella oregana* | | Oregon spikemoss | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |
| Solanaceae | *Solanum dulcamara* | | woody nightshade | Non | Wide | Sub, Forb, Vine | Per | Pres | Unc | David Ek, NPS | 2000 |
| Sparganiaceae | *Sparganium angustifolium* | *Sparganium emersum var. angustifolium* | narrow leaf bur reed | Nat | Wide | Forb | Per | Pres | Com | John Christy & Lindsey Wise, ORBIC | 2010 |
| Sparganiaceae | *Sparganium eurycarpum* | | broad fruit bur reed | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Synonyms | Common name | Nat | Range | Life form | Dur | Park stat | Pop size | Source | Year doc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Taxaceae | *Taxus brevifolia* | | Pacific yew | Nat | Wide | Tree | Per | Rep | NA | David Ek, NPS | 2000 |
| Thymelaeaceae | *Daphne laureola* | | spurge laurel | Non | Disj | Tree, Shr | Per | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Typhaceae | *Typha angustifolia* | | narrow-leaf cat-tail | Non | Wide | Forb | Per | Pres | Com | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Typhaceae | *Typha latifolia* | | cattail | Nat | Wide | Forb | Per | Pres | Com | David Ek, NPS | 2000 |
| Urticaceae | *Urtica dioica ssp. gracilis* | *Urtica dioica var lyallii* | California nettle | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Valerianaceae | *Plectritis congesta ssp. brachystemon* | | shortspur seablush | Nat | Wide | Forb | Ann | Pres | Unc | Lindsey Wise, ORBIC | 2010 |
| Valerianaceae | *Valerianella locusta* | | Lewiston cornsalad | Non | Wide | Forb | Ann | Pres | Rare | Lindsey Wise, ORBIC | 2010 |
| Violaceae | *Viola adunca* | | early blue violet | Nat | Wide | Forb | Per | Pres | Rare | Carla Cole, LEWI. | 2009 |
| Violaceae | *Viola glabella* | | pioneer violet | Nat | Wide | Forb | Per | Pres | Unc | David Ek, NPS | 2000 |
| Violaceae | *Viola sempervirens* | | evergreen violet | Nat | Wide | Forb | Per | Pres | Rare | Lynne Johnson & Nancy Eid, NPS | 2000 |
| Zannichelliaceae | *Zannichellia palustris* | | horned-pondweed | Nat | Wide | Forb | Per | Pres | Unc | Herbarium & field notes | 2007 |

# Appendix B. Potential (unconfirmed) taxa of Lewis and Clark National Historical Park.

| Family | Species name | Synonyms | Common name | Park Status | Comments |
|---|---|---|---|---|---|
| Asteraceae | *Adenocaulon bicolor* | | American trailplant | Uncon | Reported from Ft Columbia |
| Brassicaceae | *Capsella bursa-pastoris* | | shepherd's purse | Uncon | Observed in Fort Stevens |
| Cyperaceae | *Carex aquatilis var. dives* | *Carex sitchensis* | Sitka sedge | Uncon | Reported to be at Cape Disappointment |
| Fabaceae | *Lupinus rivularis* | | riverbank lupine | Uncon | Collected at Fort Stevens |
| Fabaceae | *Trifolium campestre* | | Field (Big-hop) clover | Uncon | In BONAP database |
| Fabaceae | *Vicia villosa* | | winter vetch | Uncon | On 1972 Fort Clatsop species list |
| Hydrocharitaceae | *Myriophyllum subspicatum* | | Eurasian watermilfoil | Uncon | Reported to be at Cape Disappointment |
| Hydrophyllaceae | *Hydrophyllum occidentale* | | squaw-lettuce | Uncon | On 1972 Fort Clatsop species list |
| Onagraceae | *Epilobium brachycarpum* | | autumn willowherb | Uncon | In BONAP database |
| Ranunculaceae | *Ranunculus occidentalis* | | western buttercup | Uncon | On 1972 Fort Clatsop species list |
| Rosaceae | *Prunus laurocerasus* | | cherry laurel | Uncon | Collected at Fort Stevens |

# Appendix C. Rejected (falsely reported or questionable) taxa of Lewis and Clark National Historical Park.

| Family | Species name | Synonyms | Common name | Life form | Comments |
|---|---|---|---|---|---|
| Alismataceae | *Alisma plantago-aquatica* | | European water plantain | Forb | mis-ID of Alisma triviale |
| Caryophyllaceae | *Stellaria humifusa* | | saltmarsh starwort | | mis-ID of Stellaria calycantha |
| Ericaceae | *Vaccinium alaskaense* | | Alaska huckleberry | Shrub | Specimens are actually V. ovalifolium; definition of species has changed. |
| Juncaceae | *Luzula campestris* | | field woodrush | Gram | Re-alignment of species. Previously noted for Park as L. campestris var. congesta, which is synonymous with L. congesta. |
| Rosaceae | *Prunus subcordata* | | Klamath plum | Tree | Falsely reported from Fort Clatsop |

# Appendix D. Confirmed, historical, and reported taxa of Lewis and Clark National Historical Park, organized by life form with ecological notes

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | HeadInd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aceraceae | *Acer circinatum* | vine maple | Nat | Tree, Shr, Vine | Pres | Spring | | | x | | |
| Aceraceae | *Acer macrophyllum* | bigleaf maple | Nat | Tree | Pres | Mid Spring | | | x | | |
| Aceraceae | *Acer platanoides* | Norway maple | Non | Tree | Pres | Early Spring | | | x | | x |
| Alismataceae | *Alisma triviale* | northern water-plantain | Nat | Forb | Pres | Mid Summer | | | | x | |
| Alismataceae | *Sagittaria latifolia* | common arrowhead | Nat | Forb | Pres | Late Spring | | | | x | |
| Apiaceae | *Angelica genuflexa* | kneeling angelica | Nat | Forb | Pres | Late Spring | | | | x | |
| Apiaceae | *Angelica lucida* | seacoast angelica | Nat | Forb | Pres | Late Spring | x | x | | | |
| Apiaceae | *Cicuta douglasii* | western water hemlock | Nat | Forb | Pres | Late Spring | | | | x | |
| Apiaceae | *Conioselinum gmelinii* | Pacific hemlockparsley | Nat | Forb | Pres | May to August | x | x | | | |
| Apiaceae | *Daucus carota* | Queen Anne's lace | Non | Forb | Pres | May to October | | x | | | x |
| Apiaceae | *Heracleum maximum* | common cowparsnip | Nat | Forb | Pres | Early Summer | | x | x | | |
| Apiaceae | *Hydrocotyle ranunculoides* | floating marsh pennywort | Nat | Forb | Pres | Early May to Late August | | | | x | |
| Apiaceae | *Lilaeopsis occidentalis* | western grasswort | Nat | Forb | Pres | Late Spring | | | | x | |
| Apiaceae | *Oenanthe sarmentosa* | water parsely | Nat | Forb | Pres | Summer | | | | x | |
| Apiaceae | *Osmorhiza purpurea* | purple sweetroot | Nat | Forb | Pres | Early Spring | | | x | | |
| Apiaceae | *Sium suave* | common waterparsnip | Nat | Forb | Pres | Mid Summer | | | | x | |
| Apocynaceae | *Vinca minor* | common periwinkle | Non | Vine, Forb | Pres | Early Summer | | | | | x |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aquifoliaceae | *Ilex aquifolium* | English holly | Non | Tree, Shr | Pres | Mid Summer | | | x | | x |
| Araceae | *Lysichiton americanus* | American skunkcabbage | Nat | Forb | Pres | Early Spring | | | | x | |
| Araliaceae | *Hedera helix* | English ivy | Non | Vine | Pres | Late Spring | | | x | | x |
| Araucariaceae | *Araucaria araucana* | monkeypuzzle tree | Non | Tree | Pres | Late Winter | | | | | x |
| Asteraceae | *Achillea millefolium* | common yarrow | Nat | Forb | Pres | Early Summer | | x | | | x |
| Asteraceae | *Anaphalis margaritacea* | common pearleverlasting | Nat | Forb | Pres | Early Summer | | x | | | |
| Asteraceae | *Anthemis cotula* | chamomile | Non | Forb | Pres | Summer | | | | | x |
| Asteraceae | *Artemisia suksdorfii* | coastal wormwood | Nat | Forb | Pres | Summer | x | x | | | |
| Asteraceae | *Baccharis pilularis* | coyotebrush | Nat | Sub, Shr | Pres | Late Summer | | x | x | | |
| Asteraceae | *Bellis perennis* | English daisy | Non | Forb | Pres | Late Spring to Mid Fall | | | | | x |
| Asteraceae | *Bidens cernua* | nodding beggarticks | Nat | Forb | Pres | Late Summer | | x | | | |
| Asteraceae | *Bidens frondosa* | devils beggartick | Nat | Forb | Pres | Late Summer | | x | | | x |
| Asteraceae | *Cirsium arvense* | Californian thistle | Non | Forb | Pres | All Summer | | x | x | | x |
| Asteraceae | *Cirsium brevistylum* | clustered thistle | Nat | Forb | Pres | All Summer | | x | x | x | |
| Asteraceae | *Cirsium edule* | edible thistle | Nat | Forb | Pres | All Summer | | x | x | | |
| Asteraceae | *Cirsium vulgare* | bull thistle | Non | Forb | Pres | June to September | | x | x | x | x |
| Asteraceae | *Conyza canadensis* | Canada horseweed | Nat | Forb | Pres | Indeterminate | | | | | x |
| Asteraceae | *Cotula coronopifolia* | brassbuttons | Non | Forb | Pres | Early Spring to Late Summer | | x | | | x |
| Asteraceae | *Crepis capillaris* | smooth hawksbeard | Non | Forb | Pres | July to September | | | x | | x |
| Asteraceae | *Erechtites glomerata* | Australian fireweed | Non | Forb | Pres | April to October | | x | x | | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Asteraceae | *Erechtites minima* | Australian fireweed | Non | Forb | Pres | Early Summer | | x | x | | |
| Asteraceae | *Gnaphalium palustre* | cudweed | Nat | Forb | Pres | All Summer | | x | | | |
| Asteraceae | *Gnaphalium uliginosum* | low cudweed | Non | Forb | Pres | All Year Long | | x | | | x |
| Asteraceae | *Hieracium albiflorum* | whiteflower hawkweed | Nat | Forb | Pres | Late Spring | | | x | | |
| Asteraceae | *Hypochaeris glabra* | smooth cat's ear | Non | Forb | Pres | Spring and Summer | | | | | x |
| Asteraceae | *Hypochaeris radicata* | spotted cat's ear | Non | Forb | Pres | All Spring and Summer | | x | x | | x |
| Asteraceae | *Lapsana communis* | common nipplewort | Non | Forb | Pres | Mid Summer | | | x | | |
| Asteraceae | *Leontodon taraxacoides ssp. taraxacoides* | lesser hawkbit | Non | Forb | Pres | March to July | | x | x | | x |
| Asteraceae | *Leucacantha cyanus* | Bachelor's button | Non | Forb | Pres | Early Summer to Early Fall | | | | | x |
| Asteraceae | *Leucanthemum vulgare* | ox-eye daisy | Non | Forb | Pres | Summer | | x | | | x |
| Asteraceae | *Matricaria discoidea* | pineapple weed | Non | Forb | Pres | All Spring and All Summer | | | | | x |
| Asteraceae | *Mycelis muralis* | wall-lettuce | Non | Forb | Pres | Late June to Early July | | | x | | x |
| Asteraceae | *Petasites frigidus var. palmatus* | arctic sweet coltsfoot | Nat | Forb | Pres | Late Winter to Mid Spring | | | x | x | |
| Asteraceae | *Senecio jacobaea* | ragwort | Non | Forb | Pres | July to September | | x | | | x |
| Asteraceae | *Senecio sylvaticus* | woodland ragwort | Non | Forb | Pres | Late Summer | | | x | | x |
| Asteraceae | *Senecio triangularis* | arrowleaf ragwort | Nat | Sub, Forb | Pres | Mid Summer | | | x | x | |
| Asteraceae | *Senecio vulgaris* | common groundsel | Non | Forb | Pres | Early Spring | | | x | | x |
| Asteraceae | *Solidago canadensis* | Canada goldenrod | Nat | Forb | Pres | Late Summer | | x | x | | |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Asteraceae | *Solidago canadensis ssp. salebrosa* | Canada goldenrod | Nat | Forb | Pres | Late Spring to Early Summer | | x | x | | |
| Asteraceae | *Solidago simplex var. spathulata* | Dune goldenrod | Nat | Forb, Sub | Pres | June to September | | x | | | |
| Asteraceae | *Soliva sessilis* | field burrweed | Non | Forb | Pres | Spring to Summer | | | x | | x |
| Asteraceae | *Sonchus asper* | prickly sowthistle | Non | Forb | Pres | Mid-February to May | | | x | | x |
| Asteraceae | *Sonchus oleraceus* | annual sowthistle | Non | Forb | Pres | Mid-February to May | | | | | x |
| Asteraceae | *Symphyotrichum subspicatum var. subspicatum* | Douglas aster | Nat | Forb | Pres | Late Summer | | x | x | | |
| Asteraceae | *Tanacetum camphoratum* | dune tansy | Nat | Forb | Pres | June to July | | x | | | |
| Asteraceae | *Taraxacum officinale* | dandelion | Non | Forb | Pres | Early Spring | | x | x | | x |
| Balsaminaceae | *Impatiens capensis* | jewelweed | Non | Forb | Pres | Indeterminate | | | x | | |
| Balsaminaceae | *Impatiens ecalcarata* | spurless touch-me-not | Nat | Forb | Pres | Late Spring to Fall | | | x | | |
| Balsaminaceae | *Impatiens x pacifica* | Pacific jewelweed | Nat Hybd | Forb | Pres | | | | x | | |
| Berberidaceae | *Berberis aquifolium* | hollyleaved barberry | Nat | Shr, Sub | Pres | Late Spring | | | x | | |
| Betulaceae | *Alnus rubra* | red alder | Nat | Tree | Pres | Early Spring | | | x | x | |
| Blechnaceae | *Blechnum spicant* | deer fern | Nat | Forb | Pres | Spring | | | x | | |
| Boraginaceae | *Myosotis discolor* | changing forget-me-not | Non | Forb | Pres | May to June | | | x | | |
| Boraginaceae | *Myosotis laxa* | bay forget-me-not | Nat | Forb | Pres | May to July | | | x | x | |
| Brassicaceae | *Barbarea orthoceras* | erectpod wintercress | Nat | Forb | Pres | Mid to Late Spring | | x | | x | |
| Brassicaceae | *Brassica rapa* | turnip rape | Non | Forb | Pres | Late Spring | | x | | | x |
| Brassicaceae | *Cakile edentula* | American searocket | Nat | Forb | Pres | All Summer to Fall | | x | | | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Brassicaceae | *Cakile maritima* | Eurpoean searocket | Non | Forb | Pres | All Spring and Summer | | x | | | |
| Brassicaceae | *Cardamine angulata* | seaside bittercress | Nat | Forb | Pres | Late Spring | | | x | | |
| Brassicaceae | *Cardamine breweri var. orbicularis* | Sierra bittercress | Nat | Forb | Pres | Spring | | | | x | |
| Brassicaceae | *Cardamine hirsuta* | hairy bittercress | Non | Forb | Pres | Late Winter to Mid Spring | | | x | | x |
| Brassicaceae | *Cardamine oligosperma var. oligosperma* | little western bittercress | Nat | Forb | Pres | Early Spring | | | x | | x |
| Brassicaceae | *Draba verna* | spring draba | Nat | Forb | Pres | Early Spring | | x | x | | x |
| Brassicaceae | *Rorippa curvisiliqua* | curvepod yellowcress | Nat | Forb | Pres | All Spring and Summer | | | | x | |
| Brassicaceae | *Rorippa palustris* | bog yellowcress | Nat | Forb | Pres | May to October | | | | x | |
| Brassicaceae | *Sisymbrium officinale* | hedge mustard | Non | Forb | Pres | Summer | | | x | | |
| Brassicaceae | *Teesdalia nudicaulis* | barestem teesdalia | Non | Forb | Pres | June and July | | x | | | x |
| Buxaceae | *Buxus sp.* | boxwood | Non | Shr | Rep | | | | | | x |
| Buxaceae | *Pachysandra terminalis* | Japanese pachysandra | Non | Shr | Pres | April | | | | | x |
| Cabombaceae | *Cabomba caroliniana* | Carolina fanwort | Non | Forb | Pres | Indeterminate | | | | x | |
| Callitrichaceae | *Callitriche hermaphroditica* | northern water-starwort | Nat | Forb | Pres | Late Summer | | | | x | |
| Callitrichaceae | *Callitriche stagnalis* | pond water-starwort | Non | Forb | Pres | April to November | | | | x | |
| Campanulaceae | *Lobelia cardinalis* | cardinalflower | Nat | Forb | Hist | Summer | | | | | x |
| Caprifoliaceae | *Lonicera involucrata var. involucrata* | twinberry honeysuckle | Nat | Shr | Pres | Summer | | | x | | |
| Caprifoliaceae | *Lonicera periclymenum* | European honeysuckle | Non | Shr | Pres | Summer | | | x | | x |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Caprifoliaceae | *Sambucus racemosa var. racemosa* | scarlet elderberry | Nat | Tree, Shr | Pres | Late Winter to Early Spring | | | x | | |
| Caprifoliaceae | *Symphoricarpos albus var. laevigatus* | common snowberry | Nat | Sub, Shr | Pres | Early Summer | | | x | | |
| Caprifoliaceae | *Weigela sp.* | weigela | Non | Shr | Rep | Spring | | | | | x |
| Caryophyllaceae | *Cardionema ramosissimum* | sandcarpet | Nat | Forb | Pres | All Spring and Summer | | x | | | x |
| Caryophyllaceae | *Cerastium arvense* | field chickweed | Nat | Forb | Pres | Late Spring to Early Summer | x | | | | |
| Caryophyllaceae | *Cerastium fontanum ssp. vulgare* | big chickweed | Non | Forb | Pres | March to July | | x | | | x |
| Caryophyllaceae | *Cerastium glomeratum* | sticky chickweed | Non | Forb | Pres | May to June | | x | | | x |
| Caryophyllaceae | *Cerastium semidecandrum* | fivestamen chickweed | Non | Forb | Pres | Spring | | | | | x |
| Caryophyllaceae | *Dianthus armeria* | Deptford pink | Non | Forb | Pres | Summer | | x | | | x |
| Caryophyllaceae | *Honckenya peploides* | seaside sandplant | Nat | Forb | Pres | Spring and Summer | | x | | | |
| Caryophyllaceae | *Honckenya peploides ssp. major* | seaside sandplant | Nat | Forb | Pres | Spring and Summer | | x | | | |
| Caryophyllaceae | *Moenchia erecta* | upright chickweed | Non | Forb | Pres | Spring | | | | | x |
| Caryophyllaceae | *Sagina apetala* | annual pearlwort | Non | Forb | Pres | July to November | | x | | | |
| Caryophyllaceae | *Sagina maxima ssp. crassicaulis* | stickystem pearlwort | Nat | Forb | Pres | April to June | | x | | | |
| Caryophyllaceae | *Sagina procumbens* | procumbent pearlwort | Non | Forb | Pres | June to September | | x | | | |
| Caryophyllaceae | *Scleranthus annuus* | German knotgrass | Non | Forb | Pres | Spring and Summer | | x | | | x |
| Caryophyllaceae | *Silene gallica* | common catchfly | Non | Forb | Pres | Summer | x | | | | x |
| Caryophyllaceae | *Spergula arvensis* | pickpurse | Non | Forb | Pres | June to August | | x | | | x |
| Caryophyllaceae | *Spergularia rubra* | red sandspurry | Non | Forb | Pres | All Year Long | | x | | | x |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Caryophyllaceae | *Stellaria calycantha* | northern starwort | Nat | Forb | Pres | Summer | | x | | | |
| Caryophyllaceae | *Stellaria crispa* | crisp starwort | Nat | Forb | Pres | Summer | | x | x | | |
| Caryophyllaceae | *Stellaria humifusa* | saltmarsh starwort | Nat | Forb | Pres | Spring | | | | x | |
| Caryophyllaceae | *Stellaria longipes var. longipes* | longstalk starwort | Nat | Forb | Pres | Mid Spring | | x | | | |
| Caryophyllaceae | *Stellaria media* | chickweed | Non | Forb | Pres | All Spring and Summer | | x | | | x |
| Ceratophyllaceae | *Ceratophyllum demersum* | coon's tail | Nat | Forb | Pres | Summer | | | | x | |
| Chenopodiaceae | *Atriplex prostrata* | hastate orache | Nat | Forb | Pres | July to September | | x | | | |
| Chenopodiaceae | *Chenopodium album* | lambsquarters goosefoot | Non | Forb | Pres | June to October | | x | | | x |
| Chenopodiaceae | *Salicornia virginica* | Virginia glasswort | Nat | Forb, Sub | Pres | Late Spring | | x | | | |
| Clusiaceae | *Hypericum anagalloides* | creeping St. Johnswort | Nat | Forb | Pres | Early Summer | | x | | x | |
| Clusiaceae | *Hypericum androsaemum* | sweet-amber | Non | Shr | Pres | Summer | | | | | x |
| Clusiaceae | *Hypericum perforatum* | St. Johnswort | Non | Forb | Pres | All Summer | | x | | | x |
| Clusiaceae | *Hypericum scouleri ssp. scouleri* | Scouler St. Johnswort | Nat | Forb | Pres | June to September | | | | x | |
| Convolvulaceae | *Calystegia sepium ssp. sepium* | hedge false bindweed | Non | Vine, Forb | Pres | July to August | | | | | x |
| Convolvulaceae | *Calystegia soldanella* | seashore morning-glory | Nat | Vine, Forb | Pres | All Spring and Summer | | x | | | |
| Cornaceae | *Cornus sericea* | redosier dogwood | Nat | Tree, Shr | Pres | Late Spring and Early Summer | | | x | | |
| Crassulaceae | *Crassula tillaea* | moss pygmyweed | Non | Forb | Pres | Summer | | | | | x |
| Crassulaceae | *Sedum oreganum* | Oregon stonecrop | Nat | Forb | Pres | All Summer | | | x | | |
| Cucurbitaceae | *Marah oreganus* | coastal manroot | Nat | Vine, Forb | Pres | All Spring | | | x | | |

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| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cupressaceae | *Chamaecyparis lawsoniana* | Oregon cedar | Non | Tree | Pres | Mid Spring | | | | | x |
| Cupressaceae | *Thuja plicata* | western red cedar | Nat | Tree | Pres | Mid Spring | | | x | | |
| Cyperaceae | *Carex brevicaulis* | shortstem sedge | Nat | Gram | Pres | Summer | | x | | | |
| Cyperaceae | *Carex deweyana* | Dewey sedge | Nat | Gram | Pres | Late Spring | | | x | x | |
| Cyperaceae | *Carex kobomugi* | Japanese sedge | Non | Gram | Pres | April through June | | x | | | |
| Cyperaceae | *Carex leptopoda* | shortscale sedge | Nat | Gram | Pres | Spring | | | x | x | |
| Cyperaceae | *Carex lyngbyei* | Lyngbye's sedge | Nat | Gram | Pres | May to August | | x | | x | |
| Cyperaceae | *Carex macrocephala* | big-head ed sedge | Nat | Gram | Pres | Spring | | x | | | |
| Cyperaceae | *Carex obnupta* | slough sedge | Nat | Gram | Pres | Mid Spring | | x | x | x | |
| Cyperaceae | *Carex pansa* | sanddune sedge | Nat | Gram | Pres | Spring | | x | | | |
| Cyperaceae | *Carex stipata* | owlfruit sedge | Nat | Gram | Pres | Mid Spring | | | | x | |
| Cyperaceae | *Carex stipata var. stipata* | owlfruit sedge | Nat | Gram | Pres | Mid Spring | | | | x | |
| Cyperaceae | *Eleocharis ovata* | ovate spikerush | Nat | Gram | Pres | Late Summer | | | | x | |
| Cyperaceae | *Eleocharis palustris* | spikesedge | Nat | Gram | Pres | Late Spring | | | | x | |
| Cyperaceae | *Eleocharis parvula* | dwarf spikesedge | Nat | Gram | Pres | Mid Summer | | | | x | |
| Cyperaceae | *Isolepis cernua* | low bulrush | Nat | Gram | Pres | Late Spring to Early Fall | | | | x | |
| Cyperaceae | *Schoenoplectus acutus var. occidentalis* | tule | Nat | Gram | Pres | May to August | | | | x | |
| Cyperaceae | *Schoenoplectus americanus* | American bulrush | Nat | Gram | Pres | April to August | | | | x | |
| Cyperaceae | *Schoenoplectus tabernaemontani* | soft-stem bulrush | Nat | Gram | Pres | Late Spring | | | | x | |
| Cyperaceae | *Scirpus microcarpus* | panicled bulrush | Nat | Gram | Pres | Late Spring | | | | x | |
| Dennstaedtiaceae | *Pteridium aquilinum* | northern bracken fern | Nat | Forb | Pres | Summer | | | x | | |
| Dipsacaceae | *Dipsacus fullonum ssp. sylvestris* | common teasel | Non | Forb | Pres | Early Summer to | | | | | x |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Mid Fall | | | | | |
| Dryopteridaceae | *Athyrium filix-femina* | common ladyfern | Nat | Forb | Pres | Non-flowering | | | x | | |
| Dryopteridaceae | *Dryopteris expansa* | spreading woodfern | Nat | Forb | Pres | Non-flowering | | | x | | |
| Dryopteridaceae | *Polystichum munitum* | western swordfern | Nat | Forb | Pres | Non-flowering | | x | x | | |
| Equisetaceae | *Equisetum arvense* | western horsetail | Nat | Forb | Pres | Spring | | | x | x | |
| Equisetaceae | *Equisetum hyemale* | western scouringrush | Nat | Forb | Pres | Non-flowering | | | x | | x |
| Equisetaceae | *Equisetum telmateia ssp. braunii* | giant horsetail | Nat | Forb | Pres | March to May | | | x | x | x |
| Ericaceae | *Arctostaphylos uva-ursi* | bearberry | Nat | Sub, Shr | Pres | Late Spring | | | x | | |
| Ericaceae | *Gaultheria shallon* | salal | Nat | Sub, Shr | Pres | Mid Spring | | x | x | | |
| Ericaceae | *Menziesia ferruginea* | rusty menziesia | Nat | Shr | Pres | Early Summer | | | x | | |
| Ericaceae | *Rhododendron macrophyllum* | Pacific rhododendron | Nat | Tree, Shr | Pres | Spring | | | x | | x |
| Ericaceae | *Rhododendron occidentale* | western azalea | Nat | Shr | Pres | Late Spring | | | x | | x |
| Ericaceae | *Vaccinium ovalifolium* | oval-leaf huckleberry | Nat | Shr | Pres | Mid Spring | | | x | | |
| Ericaceae | *Vaccinium ovatum* | California huckleberry | Nat | Sub, Shr | Pres | Late Spring | | x | x | | |
| Ericaceae | *Vaccinium parvifolium* | red huckleberry | Nat | Shr | Pres | Spring | | | x | | |
| Euphorbiaceae | *Chamaesyce maculata* | spotted sandmat | Non | Forb | Pres | Mid Summer to Early Fall | | x | | | x |
| Fabaceae | *Cytisus scoparius* | English broom | Non | Shr | Pres | Spring | | x | | | x |
| Fabaceae | *Lathyrus japonicus* | beach pea | Nat | Vine, Forb | Pres | Early Spring | | x | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Fabaceae | *Lathyrus latifolius* | everlasting peavine | Non | Vine, Forb | Pres | All Spring and Summer | | | | | x |
| Fabaceae | *Lathyrus littoralis* | silky beach pea | Nat | Vine, Forb | Pres | Spring | | x | | | |
| Fabaceae | *Lathyrus palustris* | marsh pea | Nat | Vine, Forb | Pres | June to August | | x | | | |
| Fabaceae | *Lotus corniculatus* | bird's-foot-trefoil | Non | Forb | Pres | Early Spring | | x | | | x |
| Fabaceae | *Lotus denticulatus* | riverbar bird's-foot trefoil | Nat | Forb | Pres | Spring and Summer | | x | | | |
| Fabaceae | *Lotus pedunculatus* | big trefoil | Non | Forb | Pres | June to August | | x | | | |
| Fabaceae | *Lotus unifoliolatus var. unifoliolatus* | American bird's-foot-trefoil | Nat | Forb | Pres | Spring | | x | | | x |
| Fabaceae | *Lupinus arboreus* | yellow bush lupine | Non | Sub, Shr | Pres | Mid Spring | | x | | | |
| Fabaceae | *Lupinus latifolius var. latifolius* | broad-leaved lupine | Nat | Forb | Pres | May to August | | | x | | |
| Fabaceae | *Lupinus littoralis* | seashore lupine | Nat | Sub, Forb | Pres | Late Spring to Early Summer | | x | | | |
| Fabaceae | *Medicago lupulina* | black medic | Non | Forb | Pres | Summer | | | x | | x |
| Fabaceae | *Melilotus alba* | white sweetclover | Non | Forb | Pres | Summer | | | | | x |
| Fabaceae | *Robinia pseudoacacia* | black locust | Non | Tree | Pres | Spring | | x | x | | x |
| Fabaceae | *Trifolium arvense* | rabbitfoot clover | Non | Forb | Pres | Spring to Summer | | | | | x |
| Fabaceae | *Trifolium dubium* | hop clover | Non | Forb | Pres | All Summer | | | x | | x |
| Fabaceae | *Trifolium hybridum* | alsike clover | Non | Forb | Pres | Late Spring | | | | | x |
| Fabaceae | *Trifolium pratense* | red clover | Non | Forb | Pres | Late Spring | | | | | x |
| Fabaceae | *Trifolium repens* | Dutch clover | Non | Forb | Pres | Late Spring | | | | | x |
| Fabaceae | *Trifolium subterraneum* | subterranean clover | Non | Forb | Pres | Late Winter | | | | | x |
| Fabaceae | *Trifolium wormskjoldii* | cow clover | Nat | Forb | Pres | Late Spring | | x | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Fabaceae | *Ulex europaeus* | gorse | Non | Shr | Hist | All Spring and Summer | | x | | | x |
| Fabaceae | *Vicia americana ssp. americana* | American vetch | Nat | Forb, Vine | Pres | Spring | | x | | | |
| Fabaceae | *Vicia hirsuta* | tiny vetch | Non | Forb | Pres | Spring | | x | | | x |
| Fabaceae | *Vicia nigricans ssp. gigantea* | giant vetch | Nat | Vine, Forb | Pres | All Spring and Summer | | x | | | |
| Fabaceae | *Vicia sativa ssp. nigra* | common vetch | Non | Vine, Forb | Pres | July through September | | x | x | | |
| Fabaceae | *Vicia tetrasperma* | lentil vetch | Non | Vine, Forb | Pres | June to September | | | | | x |
| Fumariaceae | *Corydalis scouleri* | Scouler's fumewort | Nat | Forb | Pres | Late Spring | | | x | | |
| Fumariaceae | *Dicentra formosa* | Pacific bleeding heart | Nat | Forb | Pres | Early Summer | | | x | | |
| Gentianaceae | *Centaurium erythraea* | European centaury | Non | Forb | Pres | June to Early September | | x | | | x |
| Geraniaceae | *Erodium cicutarium* | redstem stork's bill | Non | Forb | Pres | Summer | | x | | | x |
| Geraniaceae | *Geranium dissectum* | cutleaf geranium | Non | Forb | Pres | All Spring and Summer | | | | | x |
| Geraniaceae | *Geranium molle* | dovefoot geranium | Non | Forb | Pres | All Spring and Summer | | | | | x |
| Geraniaceae | *Geranium robertianum* | herb robert | Non | Forb | Pres | All Summer | | | x | | x |
| Grossulariaceae | *Escallonia rubra* | redclaws | Non | Shr | Pres | June and July | | | | | x |
| Grossulariaceae | *Ribes bracteosum* | stink currant | Nat | Shr | Pres | Late Spring to Early Summer | | | x | | |
| Grossulariaceae | *Ribes divaricatum var. divaricatum* | spreading gooseberry | Nat | Shr | Pres | Early Spring | | | x | | |
| Grossulariaceae | *Ribes lacustre* | prickly currant | Nat | Shr | Pres | Early Spring | | | x | | |
| Grossulariaceae | *Ribes laxiflorum* | trailing black currant | Nat | Vine, Shr | Pres | Late Spring to Early Summer | | | x | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Grossulariaceae | *Ribes sanguineum* | redflower currant | Nat | Shr | Pres | Late Spring | | | x | | |
| Haloragaceae | *Myriophyllum aquaticum* | parrot's-feather | Non | Forb | Pres | Mid Summer | | | | x | |
| Haloragaceae | *Myriophyllum hippuroides* | western watermilfoil | Nat | Forb | Pres | Mid Summer | | | | x | |
| Hippuridaceae | *Hippuris vulgaris* | marestail | Nat | Forb | Pres | Late Spring | | | | x | |
| Hydrangeaceae | *Deutzia scabra* | fuzzy pride-of-Rochester | Non | Shr | Pres | Early June | | | | | x |
| Hydrocharitaceae | *Egeria densa* | Brazilian waterweed | Non | Forb | Pres | | | | | x | |
| Hydrocharitaceae | *Elodea canadensis* | broad waterweed | Nat | Forb | Pres | Summer | | | | x | |
| Hydrocharitaceae | *Vallisneria americana* | American eelgrass | Non | Forb | Pres | Mid Summer | | | | x | |
| Hydrophyllaceae | *Hydrophyllum tenuipes* | Pacific waterleaf | Nat | Forb | Pres | Mid Spring to Mid Summer | | | x | | |
| Hydrophyllaceae | *Phacelia nemoralis* | shade phacelia | Nat | Forb | Pres | June | | x | x | | |
| Hydrophyllaceae | *Romanzoffia tracyi* | Tracy's mist maiden | Nat | Forb | Pres | Spring | x | | | | |
| Iridaceae | *Crocosmia X crocosmiiflora* | montbretia | Non | Forb | Pres | July to September | | | x | | x |
| Iridaceae | *Iris pseudacorus* | paleyellow iris | Non | Forb | Pres | Early Summer | | x | | x | |
| Iridaceae | *Sisyrinchium californicum* | golden blue-eyed grass | Nat | Forb | Pres | Early Summer | | x | | | |
| Iridaceae | *Sisyrinchium idahoense var. occidentale* | Idaho blue-eyed grass | Nat | Forb | Pres | Mid Summer | | x | | | |
| Juncaceae | *Juncus acuminatus* | sharp-fruit rush | Nat | Gram | Pres | Spring | | x | | x | |
| Juncaceae | *Juncus articulatus* | jointed rush | Nat | Gram | Pres | Early Summer | | | | x | |
| Juncaceae | *Juncus balticus var. balticus* | Baltic rush | Nat | Gram | Pres | May to September | | | | x | |
| Juncaceae | *Juncus breweri* | Brewer's rush | Nat | Gram | Pres | Spring and Summer | | x | | | |
| Juncaceae | *Juncus bufonius* | toad rush | Non | Gram | Pres | Spring | | x | | | x |

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| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Juncaceae | *Juncus effusus var. effusus* | common rush | Non | Gram | Pres | June to August | | | | x | |
| Juncaceae | *Juncus effusus var. pacificus* | Pacific rush | Nat | Gram | Pres | June to August | | | | x | |
| Juncaceae | *Juncus ensifolius* | swordleaf rush | Nat | Gram | Pres | Summer | | | | x | |
| Juncaceae | *Juncus hesperius* | three-stamened rush | Nat | Gram | Pres | Spring | | | | x | |
| Juncaceae | *Juncus lesueurii* | salt rush | Nat | Gram | Pres | May to August | | x | | x | |
| Juncaceae | *Juncus nevadensis var. inventus* | Sierra rush | Nat | Gram | Pres | Summer | x | x | | x | |
| Juncaceae | *Juncus oxymeris* | pointed rush | Nat | Gram | Pres | June to August | | | | x | |
| Juncaceae | *Juncus supiniformis* | hairyleaf rush | Nat | Gram | Pres | Summer | | | | x | |
| Juncaceae | *Juncus tenuis* | path rush | Nat | Gram | Pres | Late Spring | | | | x | |
| Juncaceae | *Luzula comosa* | Pacific woodrush | Nat | Gram | Pres | February to June | | | x | x | |
| Juncaceae | *Luzula parviflora* | smallflower woodrush | Nat | Gram | Pres | Mid Summer | | | x | | |
| Juncaginaceae | *Lilaea scilloides* | awl-leaf lilaea | Nat | Gram | Pres | Mid Spring | | | | x | |
| Juncaginaceae | *Triglochin maritima* | seaside arrowgrass | Nat | Gram | Pres | Spring | | | | x | |
| Juncaginaceae | *Triglochin striata* | three-rib arrowgrass | Nat | Gram | Pres | Spring | | | | x | |
| Lamiaceae | *Glechoma hederacea* | creeping charlie | Non | Forb | Pres | April to July | | | x | | x |
| Lamiaceae | *Lamium purpureum* | purple deadnettle | Non | Forb | Pres | All Spring and Summer | | x | | | x |
| Lamiaceae | *Lycopus americanus* | water horehound | Nat | Forb | Pres | Early Summer | | | x | x | |
| Lamiaceae | *Mentha aquatica* | water mint | Non | Forb | Pres | August to October | | | x | x | |
| Lamiaceae | *Mentha arvensis* | field mint | Nat | Forb | Pres | Spring | | | x | x | |
| Lamiaceae | *Mentha pulegium* | pennyroyal | Non | Forb | Pres | April to August | | x | | | x |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Lamiaceae | *Mentha X piperita* | peppermint | Non | Forb | Pres | July to August | | x | | | x |
| Lamiaceae | *Prunella vulgaris ssp. lanceolata* | lance selfheal | Nat | Forb | Pres | June through October | | | x | | x |
| Lamiaceae | *Prunella vulgaris ssp. vulgaris* | common selfheal | Non | Forb | Pres | May through July | | | x | | x |
| Lamiaceae | *Stachys mexicana* | Mexican hedgenettle | Nat | Forb | Pres | Early Summer | | | x | x | |
| Lemnaceae | *Lemna minor* | common duckweed | Nat | Forb | Pres | Summer | | | | x | |
| Lemnaceae | *Spirodela polyrhiza* | giant duckweed | Nat | Forb | Pres | Insufficient | | | | x | |
| Liliaceae | *Hyacinthoides nonscripta* | English bluebell | Non | Forb | Pres | Spring | | | | | x |
| Liliaceae | *Maianthemum dilatatum* | false lily of the vally | Nat | Forb | Pres | Late Spring | | | x | | |
| Liliaceae | *Maianthemum racemosum* | feathery false lily of the vally | Nat | Forb | Pres | Mid Spring | | | x | | |
| Liliaceae | *Narcissus sp.* | daffodil | Non | Forb | Pres | Early Spring | | | | | x |
| Liliaceae | *Prosartes smithii* | largeflower fairybells | Nat | Forb | Pres | Spring | | | x | | |
| Liliaceae | *Streptopus amplexifolius* | clasping twistedstalk | Nat | Forb | Pres | Late Spring to Early Summer | | | x | | |
| Liliaceae | *Trillium ovatum* | Pacific trillium | Nat | Forb | Pres | Early Spring | | | x | | |
| Lycopodiaceae | *Lycopodium clavatum* | common club moss | Nat | Forb, Sub | Pres | Early July to Late September | | | x | | |
| Lythraceae | *Lythrum hyssopifolia* | hyssop loosestrife | Non | Forb | Pres | Summer | | | | | x |
| Lythraceae | *Lythrum portula* | spatulaleaf loosestrife | Non | Forb | Pres | Summer | | x | | x | |
| Lythraceae | *Lythrum salicaria* | purple loosestrife | Non | Forb, Sub | Pres | All Summer | | | | x | |
| Malvaceae | *Sidalcea hendersonii* | Henderson's checkerbloom | Nat | Forb | Pres | All Summer | | x | | | |
| Monotropaceae | *Monotropa uniflora* | Indian pipe | Nat | Forb | Pres | Summer | | | x | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Myricaceae | *Morella californica* | California wax myrtle | Nat | Tree, Shr | Pres | Early Summer | | x | x | | |
| Najadaceae | *Najas flexilis* | nodding waternymph | Nat | Forb | Pres | Late Summer | | | | x | |
| Nyctaginaceae | *Abronia latifolia* | coastal sand verbena | Nat | Forb | Pres | All Spring and Summer | | x | | | |
| Nymphaeaceae | *Nuphar lutea ssp. polysepala* | Rocky Mountain cowlily | Nat | Forb | Pres | Mid Summer | | | | x | |
| Nymphaeaceae | *Nymphaea odorata* | white waterlily | Non | Forb | Pres | Mid to Late Summer | | | | x | |
| Onagraceae | *Chamerion angustifolium* | fireweed | Nat | Forb | Pres | All Summer | | | x | | |
| Onagraceae | *Epilobium ciliatum ssp. glandulosum* | fringed willowherb | Nat | Forb | Pres | June to August | | | | x | |
| Onagraceae | *Epilobium minutum* | chaparral willowherb | Nat | Forb | Pres | All Spring and Summer | | | x | | |
| Onagraceae | *Fuchsia magellanica* | hardy fuchsia | Non | Shr, Vine | Pres | Mid Summer to Early Fall | | | | | x |
| Onagraceae | *Ludwigia palustris* | marsh seedbox | Nat | Forb | Pres | Spring | | x | | x | |
| Onagraceae | *Oenothera glazioviana* | redsepal evening-primrose | Non | Forb | Pres | Late Spring | | x | | | x |
| Ophioglossaceae | *Botrychium multifidum* | leathery grapefern | Nat | Forb | Pres | Early Summer to Fall | | x | | | |
| Orchidaceae | *Goodyera oblongifolia* | rattlesnake plantain | Nat | Forb | Pres | Mid Summer | | | x | | |
| Orchidaceae | *Spiranthes romanzoffiana* | hooded lady's tresses | Nat | Forb | Pres | Mid Summer | | x | x | | |
| Oxalidaceae | *Oxalis oregana* | redwood-sorrel | Nat | Forb | Pres | All Spring and Summer | | | x | | |
| Oxalidaceae | *Oxalis trilliifolia* | threeleaf woodsorrel | Nat | Forb | Pres | Early Summer | | | x | x | |
| Papaveraceae | *Eschscholzia californica* | California goldenpoppy | Nat | Forb | Pres | Late Spring | | | | | x |
| Pinaceae | *Abies grandis* | silver fir | Nat | Tree | Pres | Late Spring | | | x | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Pinaceae | *Abies procera* | noble fir | Nat | Tree | Pres | Late Spring | | | x | | |
| Pinaceae | *Cedrus libani* | cedar of Lebanon | Non | Tree | Rep | September to November | | | x | | |
| Pinaceae | *Picea sitchensis* | coast spruce | Nat | Tree | Pres | Late Spring | | x | x | | |
| Pinaceae | *Pinus contorta var. contorta* | beach pine | Nat | Tree | Pres | Late Spring | | x | x | | |
| Pinaceae | *Pinus nigra* | australian pine | Non | Tree | Pres | Late Spring | | x | | | x |
| Pinaceae | *Pinus pinaster* | cluster pine | Non | Tree | Pres | Spring | | x | | | x |
| Pinaceae | *Pinus sylvestris* | Scots pine | Non | Tree | Pres | Mid Spring | | x | | | x |
| Pinaceae | *Pseudotsuga menziesii* | Douglas fir | Nat | Tree | Pres | Mid Spring | | | x | | |
| Pinaceae | *Tsuga heterophylla* | pacific hemlock | Nat | Tree | Pres | Mid Spring | | | x | | |
| Plantaginaceae | *Plantago coronopus* | buckhorn plantain | Non | Forb | Pres | Mid Spring | | | x | | |
| Plantaginaceae | *Plantago elongata* | prairie plantain | Nat | Forb | Pres | Spring | x | x | | | x |
| Plantaginaceae | *Plantago lanceolata* | ribwort | Non | Forb | Pres | All Year Long | | x | | | x |
| Plantaginaceae | *Plantago major* | rippleseed plantain | Non | Forb | Pres | All Year Long | | x | | | x |
| Plantaginaceae | *Plantago psyllium* | sand plantain | Non | Forb | Pres | Summer | | | | | x |
| Plantaginaceae | *Plantago subnuda* | tall coastal plantain | Nat | Forb | Pres | Late Spring | x | x | | | x |
| Plumbaginaceae | *Armeria maritima ssp. californica* | California seapink | Nat | Forb | Pres | Spring to Summer | x | | | | |
| Poaceae | *Agrostis capillaris* | colonial bentgrass | Non | Gram | Pres | Mid Summer | | x | | | x |
| Poaceae | *Agrostis exarata* | spike bentgrass | Nat | Gram | Pres | Late Spring | | x | | | |
| Poaceae | *Agrostis pallens* | seashore bentgrass | Nat | Gram | Pres | Summer | | x | | | |
| Poaceae | *Agrostis scabra* | rough bent | Nat | Gram | Pres | Early Spring | | x | | | |
| Poaceae | *Agrostis stolonifera* | spreading bent | Non | Gram | Pres | Mid Summer | | x | | | x |
| Poaceae | *Aira praecox* | yellow hairgrass | Non | Gram | Pres | August | x | x | | | x |
| Poaceae | *Alopecurus geniculatus* | marsh meadow-foxtail | Nat | Gram | Pres | Summer | | | | x | |
| Poaceae | *Alopecurus* | field meadow- | Non | Gram | Pres | Spring | | | | x | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *pratensis* | foxtail | | | | | | | | | |
| Poaceae | *Ammophila arenaria* | European beachgrass | Non | Gram | Pres | Spring | | x | | | |
| Poaceae | *Ammophila breviligulata* | American beachgrass | Non | Gram | Pres | Spring | | x | | | |
| Poaceae | *Anthoxanthum odoratum* | sweet vernalgrass | Non | Gram | Pres | Late Winter to Mid Spring | | x | | | x |
| Poaceae | *Bromus carinatus* | California brome | Nat | Gram | Pres | Early Spring | | x | | x | x |
| Poaceae | *Bromus diandrus* | ripgut brome | Non | Gram | Pres | Late Spring | x | | x | | x |
| Poaceae | *Bromus hordeaceus ssp. hordeaceus* | downy brome | Non | Gram | Pres | Mid Spring | | | | | x |
| Poaceae | *Bromus sitchensis var. sitchensis* | Sitka brome | Nat | Gram | Pres | Late Spring | | | x | | |
| Poaceae | *Bromus sterilis* | poverty brome | Non | Gram | Pres | Late Spring | | | | | x |
| Poaceae | *Cynosurus echinatus* | bristly dogstail grass | Non | Gram | Pres | July | | | x | | x |
| Poaceae | *Dactylis glomerata* | cocksfoot | Non | Gram | Pres | Mid Spring | | | | | x |
| Poaceae | *Danthonia californica* | California oatgrass | Nat | Gram | Pres | Early Spring | x | | | | x |
| Poaceae | *Deschampsia caespitosa* | tufted hairgrass | Nat | Gram | Pres | Mid Summer | | x | | x | |
| Poaceae | *Deschampsia elongata* | slender hairgrass | Nat | Gram | Pres | Summer | x | x | | | |
| Poaceae | *Digitaria sanguinalis* | hairy crab grass | Non | Gram | Pres | August to October | | | | | x |
| Poaceae | *Echinochloa crus-galli* | Japanese millet | Non | Gram | Pres | July to October | | | | x | x |
| Poaceae | *Elymus repens* | quackgrass | Non | Gram | Pres | Mid Spring | | | | | x |
| Poaceae | *Festuca rubra* | red fescue | Nat | Gram | Pres | Mid Spring | x | x | | | |
| Poaceae | *Glyceria grandis* | American mannagrass | Nat | Gram | Pres | June to July | | | | x | |
| Poaceae | *Glyceria leptostachya* | davy mannagrass | Nat | Gram | Pres | May to June | | | | x | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Poaceae | *Holcus lanatus* | common velvetgrass | Non | Gram | Pres | Summer | | x | | | x |
| Poaceae | *Leymus mollis ssp. mollis* | American dunegrass | Nat | Gram | Pres | Late Spring | | x | | | |
| Poaceae | *Lolium perenne* | perennial | Non | Gram | Pres | Mid Spring | | | | | x |
| Poaceae | *Lolium perenne ssp. multiflorum* | Italian ryegrass | Non | Gram | Pres | Early Spring | | | | | x |
| Poaceae | *Phalaris arundinacea* | reed canary grass | Non | Gram | Pres | Late Spring | | | | x | |
| Poaceae | *Poa annua* | walkgrass | Non | Gram | Pres | Mid Spring | | | | | x |
| Poaceae | *Poa bulbosa* | bulbous bluegrass | Non | Gram | Pres | Spring | | | x | | x |
| Poaceae | *Poa compressa* | Canada bluegrass | Non | Gram | Pres | Late Spring | | | | | x |
| Poaceae | *Poa howellii* | Howell's bluegrass | Non | Gram | Pres | Spring | | | x | | |
| Poaceae | *Poa macrantha* | seashore bluegrass | Nat | Gram | Pres | Late Winter | | x | | | |
| Poaceae | *Poa pratensis* | Kentucky bluegrass | Nat | Gram | Pres | Mid Spring | | x | | | x |
| Poaceae | *Poa trivialis* | rough bluegrass | Non | Gram | Pres | Early Spring | | | x | x | |
| Poaceae | *Poa unilateralis* | ocean-bluff bluegrass | Nat | Gram | Pres | July to August | x | | | | |
| Poaceae | *Polypogon monspeliensis* | annual rabbitsfoot grass | Non | Gram | Pres | Late Spring | | | | | x |
| Poaceae | *Schedonorus arundinaceus* | tall fescue | Non | Gram | Pres | Late Spring | | x | | | x |
| Poaceae | *Torreyochloa pallida var. pauciflora* | pale false mannagrass | Nat | Gram | Pres | August to November | | | | x | |
| Poaceae | *Trisetum canescens* | tall trisetum | Nat | Gram | Pres | Summer | | | x | | |
| Poaceae | *Triticum aestivum* | common wheat | Non | Gram | Pres | Early Spring | | | | | x |
| Poaceae | *Vulpia bromoides* | brome fescue | Non | Gram | Pres | Early Spring | x | | | | x |
| Polemoniaceae | *Navarretia squarrosa* | skunkbush | Nat | Forb | Pres | May to July | | | | | x |
| Polygonaceae | *Polygonum amphibium var.* | colored smartweed | Nat | Forb | Pres | July to September | | | | x | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *emersum* | | | | | | | | | | |
| Polygonaceae | *Polygonum aviculare* | prostrate knotweed | Non | Forb | Pres | All Year Long | | | | | x |
| Polygonaceae | *Polygonum cuspidatum* | Japanese knotweed | Non | Forb, Sub | Pres | Summer | | x | | | x |
| Polygonaceae | *Polygonum hydropiper* | annual smartweed | Non | Forb | Pres | Late Spring | | | | x | |
| Polygonaceae | *Polygonum hydropiperoides* | swamp smartweed | Nat | Forb | Pres | Indeterminate | | | | x | |
| Polygonaceae | *Polygonum hydropiperoides hydropiperoides* | waterpepper | Nat | Forb | Pres | June to September | | | | x | |
| Polygonaceae | *Polygonum paronychia* | beach knotweed | Nat | Sub | Pres | All Spring and Summer | | x | | | |
| Polygonaceae | *Polygonum persicaria* | ladysthumb smartweed | Non | Forb | Pres | Spring | | | | x | x |
| Polygonaceae | *Rumex acetosella* | sheep sorrel | Non | Forb | Pres | All Summer | | x | | | x |
| Polygonaceae | *Rumex aquaticus var. fenestratus* | western dock | Nat | Forb | Pres | Summer | | x | | x | |
| Polygonaceae | *Rumex conglomeratus* | clustered dock | Non | Forb | Pres | April to June | | x | | | x |
| Polygonaceae | *Rumex crispus* | Curley dock | Non | Forb | Pres | All Summer | | | | x | x |
| Polygonaceae | *Rumex maritimus* | golden dock | Nat | Forb | Pres | Late Spring | | | | x | |
| Polygonaceae | *Rumex obtusifolius* | bitter dock | Non | Forb | Pres | June to October | | | | | x |
| Polypodiaceae | *Polypodium glycyrrhiza* | licorice fern | Nat | Forb | Pres | Non-flowering | | | x | | |
| Polypodiaceae | *Polypodium scouleri* | leathery polypody | Nat | Forb | Pres | Non-flowering | | | x | | |
| Portulacaceae | *Claytonia perfoliata* | miner's lettuce | Nat | Forb | Pres | Mid Spring | | | | x | |
| Portulacaceae | *Claytonia sibirica* | Siberian springbeauty | Nat | Forb | Pres | Mid Spring | | | | x | |
| Portulacaceae | *Montia fontana* | annual water miner's lettuce | Nat | Forb | Pres | Early Spring | | | | x | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Portulacaceae | *Montia parvifolia ssp. flagellaris* | littleleaf minerslettuce | Nat | Forb | Pres | March to September | x | | | | |
| Potamogeton-aceae | *Potamogeton crispus* | curly pondweed | Non | Forb | Pres | Mid Spring | | | | x | |
| Potamogeton-aceae | *Potamogeton foliosus* | leafy pondweed | Nat | Forb | Pres | June to September | | | | x | |
| Potamogeton-aceae | *Potamogeton gramineus* | grassy pondweed | Nat | Forb | Pres | Late Spring | | | | x | |
| Potamogeton-aceae | *Potamogeton zosteriformis* | flat-stem pondweed | Nat | Forb | Pres | Mid Summer | | | | x | |
| Primulaceae | *Lysimachia terrestris* | earth loosestrife | Non | Forb | Pres | June to September | | | | x | |
| Primulaceae | *Samolus valerandi ssp. parviflorus* | water brookweed | Nat | Forb | Pres | April to October | | | | x | |
| Pteridaceae | *Adiantum aleuticum* | maidenfern | Nat | Forb | Pres | Non-flowering | | | x | | |
| Pyrolaceae | *Moneses uniflora* | single delight | Nat | Forb | Pres | Late Spring to Early Summer | | | x | | |
| Ranunculaceae | *Ranunculus acris* | meadow buttercup | Non | Forb | Pres | Late Spring to Mid Summer | | x | | x | x |
| Ranunculaceae | *Ranunculus ficaria* | fig buttercup | Non | Forb | Pres | April to June | | | | | x |
| Ranunculaceae | *Ranunculus flammula* | greater creeping spearwort | Nat | Forb | Pres | Mid Summer | | x | | x | |
| Ranunculaceae | *Ranunculus repens* | creeping buttercup | Non | Forb | Pres | Mid Spring | | | | x | x |
| Ranunculaceae | *Ranunculus sceleratus* | celeryleaf buttercup | Nat | Forb | Pres | Late Spring | | x | | x | |
| Ranunculaceae | *Ranunculus uncinatus* | hooked buttercup | Nat | Forb | Pres | Early Summer | | | x | | |
| Rhamnaceae | *Frangula purshiana* | cascara buckthorn | Nat | Tree, Shr | Pres | Mid Spring | | x | x | | |
| Rosaceae | *Amelanchier alnifolia* | Saskatoon serviceberry | Nat | Tree, Shr | Pres | Early Summer | | | x | | |
| Rosaceae | *Aphanes microcarpa* | slender parsley piert | Non | Forb | Pres | Spring | | | | | x |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rosaceae | *Argentina egedii ssp. egedii* | Pacific silverweed | Nat | Forb | Pres | All Spring and Summer | | x | | | |
| Rosaceae | *Aruncus dioicus var. vulgaris* | bride's feathers | Nat | Forb | Pres | April to June | | | x | | |
| Rosaceae | *Cotoneaster franchetii* | orange cotoneaster | Non | Shr | Pres | June to July | | | | | x |
| Rosaceae | *Cotoneaster horizontalis* | rockspray cotoneaster | Non | Shr | Pres | Spring | | | | | x |
| Rosaceae | *Crataegus douglasii* | black hawthorn | Nat | Tree, Shr | Pres | Mid Spring | | | x | | |
| Rosaceae | *Crataegus monogyna* | oneseed hawthorn | Non | Tree, Shr | Pres | Mid Spring | | | x | | x |
| Rosaceae | *Fragaria chiloensis* | beach strawberry | Nat | Forb | Pres | Early Spring | | x | | | |
| Rosaceae | *Geum macrophyllum var. macrophyllum* | large-leaf avens | Nat | Forb | Pres | Early May through Mid August | | | x | | |
| Rosaceae | *Malus fusca* | Oregon crabapple | Nat | Tree, Shr | Pres | Mid Spring | | x | | x | |
| Rosaceae | *Malus pumila* | paradise apple | Non | Tree | Pres | April to May | | | | | x |
| Rosaceae | *Oemleria cerasiformis* | Indian plum | Nat | Tree, Shr | Pres | Spring | | | x | | |
| Rosaceae | *Physocarpus capitatus* | Pacific ninebark | Nat | Shr | Pres | Late Spring | | | x | x | |
| Rosaceae | *Prunus avium* | sweet cherry | Non | Tree | Pres | Late Winter to Early Spring | | | | | x |
| Rosaceae | *Prunus cerasus* | sour cherry | Non | Tree, Shr | Pres | Mid Spring | | | | | x |
| Rosaceae | *Prunus domestica* | European plum | Non | Tree | Pres | April | | | | | x |
| Rosaceae | *Rosa nutkana* | Nootka rose | Nat | Sub | Pres | Late Spring | | x | x | x | |
| Rosaceae | *Rubus armeniacus* | Himalaya blackberry | Non | Sub | Pres | Late Spring to Early Summer | | x | x | | x |
| Rosaceae | *Rubus laciniatus* | cut-leaved blackberry | Non | Vine, Sub | Pres | Early Summer | | | x | | x |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rosaceae | *Rubus parviflorus* | thimbleberry | Nat | Sub | Pres | Spring | | | x | | |
| Rosaceae | *Rubus spectabilis* | salmonberry | Nat | Vine, Sub | Pres | Early Spring | | | x | x | |
| Rosaceae | *Rubus ursinus* | California blackberry | Nat | Sub | Pres | Early Spring | | | x | | |
| Rosaceae | *Sorbaria arborea* | giant false spiraea | Non | Shr | Pres | Mid to Late Summer | | | | | x |
| Rosaceae | *Sorbus aucuparia* | European mountainash | Non | Tree, Shr | Pres | Late Spring | | | x | | x |
| Rosaceae | *Spiraea douglasii* | rose spirea | Nat | Shr | Pres | Mid Summer | | | | x | |
| Rubiaceae | *Galium aparine* | sticky-willy | Nat | Vine, Forb | Pres | Mid Spring | | | x | | x |
| Rubiaceae | *Galium trifidum* | small bedstraw | Nat | Vine, Forb | Pres | Early Summer | | | x | | |
| Rubiaceae | *Galium trifidum ssp. columbianum* | threepetal bedstraw | Nat | Vine, Forb | Pres | August | | | x | | |
| Rubiaceae | *Galium triflorum* | fragrant bedstraw | Nat | Forb, Vine | Pres | May to September | | | x | | |
| Salicaceae | *Populus balsamifera ssp. trichocarpa* | balsam poplar | Nat | Tree | Pres | Mid Spring | | | x | x | |
| Salicaceae | *Salix alba* | golden willow | Non | Tree | Pres | Early Spring | | | | x | |
| Salicaceae | *Salix hookeriana* | dune willow | Nat | Tree, Shr | Pres | Winter | | | | x | |
| Salicaceae | *Salix lucida ssp. lasiandra* | Pacific willow | Nat | Tree, Shr | Pres | Spring | | | | x | |
| Salicaceae | *Salix scouleriana* | Scouler's willow | Nat | Tree | Pres | Early Spring | | | x | | |
| Salicaceae | *Salix sitchensis* | Sitka willow | Nat | Tree, Shr | Pres | Spring | | | | x | |
| Saxifragaceae | *Boykinia occidentalis* | coastal brookfoam | Nat | Forb | Pres | All Summer | | | x | x | |
| Saxifragaceae | *Chrysosplenium glechomifolium* | Pacific golden saxifrage | Nat | Forb | Pres | All Summer | | | x | x | |
| Saxifragaceae | *Heuchera micrantha var. diversifolia* | crevice alumroot | Nat | Forb | Pres | June to July | x | | x | x | |
| Saxifragaceae | *Tellima grandiflora* | bigflower tellima | Nat | Forb | Pres | Late Spring | | | x | x | |

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Saxifragaceae | *Tiarella trifoliata* | threeleaf foamflower | Nat | Forb | Pres | Early Spring | | | x | | |
| Saxifragaceae | *Tiarella trifoliata var. trifoliata* | threeleaf foamflower | Nat | Forb | Pres | Late Spring to Early Summer | | | x | x | |
| Saxifragaceae | *Tolmiea menziesii* | youth on age | Nat | Forb | Pres | Late Spring to Early Summer | | | x | x | |
| Scrophulariaceae | *Castilleja affinis ssp. litoralis* | Pacific paintbrush | Nat | Forb | Pres | Summer | x | x | | | |
| Scrophulariaceae | *Castilleja ambigua ssp. ambigua* | johnny-nip | Nat | Forb | Pres | All Year Long | | | | x | |
| Scrophulariaceae | *Cymbalaria muralis* | Kenilworth ivy | Non | Forb | Pres | May to October | | | | | x |
| Scrophulariaceae | *Digitalis purpurea* | purple foxglove | Non | Forb | Pres | Summer | | x | | | x |
| Scrophulariaceae | *Mimulus dentatus* | coastal monkeyflower | Nat | Forb | Pres | Mid Spring | x | | | | |
| Scrophulariaceae | *Mimulus guttatus* | yellow monkeyflower | Nat | Forb | Pres | Mid Spring | x | | | | |
| Scrophulariaceae | *Parentucellia viscosa* | yellow glandweed | Non | Forb | Pres | Late Spring | | x | | | x |
| Scrophulariaceae | *Scrophularia californica* | California figwort | Nat | Forb | Pres | Early Spring to Late Summer | | | x | | |
| Scrophulariaceae | *Scrophularia californica ssp. californica* | California figwort | Nat | Forb | Pres | Early Spring to Late Summer | | | x | | |
| Scrophulariaceae | *Triphysaria pusilla* | dwarf owl's-clover | Nat | Forb | Pres | Mid Spring | | x | | | x |
| Scrophulariaceae | *Veronica americana* | American speedwell | Nat | Forb | Pres | Mid Summer | | x | | x | |
| Scrophulariaceae | *Veronica arvensis* | rock speedwell | Non | Forb | Pres | April to August | | | | | x |
| Scrophulariaceae | *Veronica scutellata* | grass-leaf speedwell | Nat | Forb | Pres | All Summer | | | | x | |
| Scrophulariaceae | *Veronica serpyllifolia ssp. serpyllifolia* | thymeleaf speedwell | Non | Forb | Pres | April to June | | x | | x | |

This report has had confidential information regarding species of management concern locations removed.

| Family | Species name | Common name | Nat | Life form | Park stat | Flower time | Headlnd/ Sea cliff | Dune/ Mdw | Lowland Forest | Estry/ Wtlnd | Dist/ Dev |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selaginellaceae | *Selaginella oregana* | Oregon spikemoss | Nat | Forb | Pres | Non-flowering | | | x | | |
| Solanaceae | *Solanum dulcamara* | woody nightshade | Non | Sub, Forb, Vine | Pres | Late Spring to Early Summer | | x | x | | x |
| Sparganiaceae | *Sparganium angustifolium* | narrow leaf bur reed | Nat | Forb | Pres | Summer | | | | x | |
| Sparganiaceae | *Sparganium eurycarpum* | broad fruit bur reed | Nat | Forb | Pres | Indeterminate | | | | x | |
| Taxaceae | *Taxus brevifolia* | Pacific yew | Nat | Tree | Rep | Early Summer | | | x | | |
| Thymelaeaceae | *Daphne laureola* | spurge laurel | Non | Tree, Shr | Pres | Spring | | | x | | x |
| Typhaceae | *Typha angustifolia* | narrow-leaf cat-tail | Non | Forb | Pres | Late Spring | | | | x | |
| Typhaceae | *Typha latifolia* | cattail | Nat | Forb | Pres | Late Spring | | | | x | |
| Urticaceae | *Urtica dioica ssp. gracilis* | California nettle | Nat | Forb | Pres | May to August | | | x | x | |
| Valerianaceae | *Plectritis congesta ssp. brachystemon* | shortspur seablush | Nat | Forb | Pres | Early Spring | x | | | | |
| Valerianaceae | *Valerianella locusta* | Lewiston cornsalad | Non | Forb | Pres | Spring | | | | | x |
| Violaceae | *Viola adunca* | early blue violet | Nat | Forb | Pres | Mid Spring | | x | | | |
| Violaceae | *Viola glabella* | pioneer violet | Nat | Forb | Pres | Mid Spring | | | x | | |
| Violaceae | *Viola sempervirens* | evergreen violet | Nat | Forb | Pres | Mid Spring | | | x | | |
| Zannichelliaceae | *Zannichellia palustris* | horned-pondweed | Nat | Forb | Pres | March to November | | | | x | |

# Appendix E. Maps of rare community types by unit.

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# Appendix F. Maps of rare species locations by unit.

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# Appendix G. Maps of non-native species of interest by unit.

This report has had confidential information regarding species of management concern locations removed.

# Non-Native Plants, Dismal Nitch

**Legend**

- Herb robert
- English ivy
- English holly
- Yellowflag iris
- Everlasting peavine
- Bachelor's button
- Purple loosestrife
- Japanese knotweed
- Fig buttercup
- Gorse
- Purple loosestrife
- Yellowflag iris

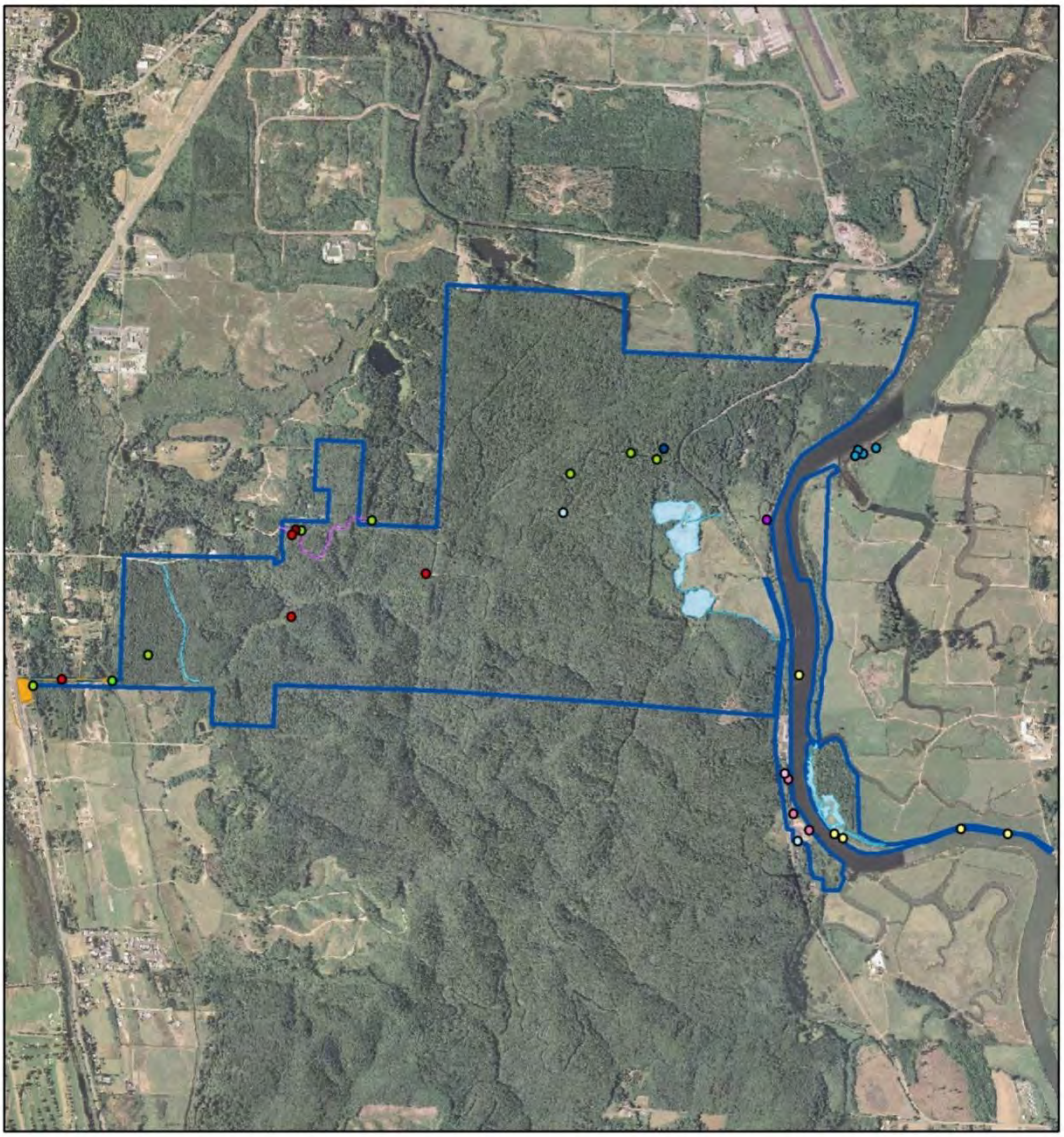
N

0 0.05 0.1 0.2

Miles

This report has had confidential information regarding species of management concern locations removed.

# Non-Native Plants, Fort Clatsop



**Legend**

- Canada thistle
- Herb robert
- English ivy
- English holly
- Yellowflag iris
- Everlasting peavine
- Parrot feather watermilfoil
- Common reed
- European mountain ash
- European honeysuckle
- Purple loosestrife
- Cutleaf blackberry
- Himalayan blackberry
- Scots broom

N

0 0.2 0.4

Miles

This report has had confidential information regarding species of management concern locations removed.

# Non-Native Plants, Fort Stevens

**Legend**

- Herb robert
- English ivy
- English holly
- Yellowflag iris
- European honeysuckle
- Purple loosestrife
- Common reed
- Giant knotweed
- Knotweed sp.

N

0 0.25 0.5 1

Miles

This report has had confidential information regarding species of management concern locations removed.

# Non-Native Plants, Station Camp, Fort Columbia

**Legend**

- English ivy
- English holly
- Yellowflag iris
- Purple loosestrife

N

0 0.125 0.25 0.5

Miles

This report has had confidential information regarding species of management concern locations removed.

# Non-Native Plants, Sunset Beach/Yeon

**Legend**

- Canada thistle
- English ivy
- English holly
- European honeysuckle
- Parrot feather watermilfoil
- American white waterlily
- Spurge laurel

N

0 0.125 0.25 0.5

Miles

The Department of the Interior protects and manages the nation‘s natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

NPS 405/115905, July 2012

**National Park Service**
**U.S. Department of the Interior**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