WASHINGTON NATURAL HERITAGE PROGRAM

Reference Standard Wetlands for Washington State.

An Approach Based on the U.S. National Vegetation Classification

Prepared for

U.S. Environmental Protection Agency, Region 10

Prepared by

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ON THE COVER: Rocky Mountain Patterned Fen at Bunchgrass Meadows Research Natural Area
Photographs by: Joe Rocchio

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1.0 Introduction

1.1 Background

In the context of ecological management, reference sites are physical representations of the range of ecological conditions of a given ecosystem type within a given geography. Reference sites provide opportunities for scientists and resource managers to understand how ecosystems function—enabling us to better conserve and restore them and continue to benefit from the ecosystem services they provide.

The concept of using reference sites to guide ecological management is not new. Nearly 100 years ago, a committee of the Ecological Society of America published a guide to all North American preserves and preservation-worthy areas in which natural conditions persisted (Shelford 1926). That publication noted:

> *"A branch of biological science which obtains its inspiration in the natural order in original habitats must depend upon the preservation of natural areas for the solution of many problems…It was the conviction of many members of the Ecological Society soon after its organization, that the society should take steps to make available for study as much of the original biota of North America, as possible. An inventory of available areas and the extent to which they are modified is naturally one of the early steps in the preservation of suitable areas for ecological study."*

Because of the complexity of ecosystems, Jenkins and Bedford (1973) suggest that we must first understand the function of undisturbed ecosystems (i.e. those lacking significant human-induced impacts) before we can begin to study how anthropogenic activities affect them and thereafter make informed ecosystem management decisions. They note that natural areas, or places lacking human modifications, provide the ideal locations to measure and document conditions in undisturbed ecosystems.

The USFS and other federal agencies established a system of Research Natural Areas (RNAs) in the early 1970s to "(1) preserve examples of all significant natural ecosystems for comparison with those influenced by man; (2) provision of educational and research areas for ecological and environmental studies; and (3) preservation of gene pools for typical and rare and endangered plants and animals." (Dyrness et al. 1975). Many states established natural area programs to achieve similar objectives. In 1972, the Washington State Legislature established a system of natural area preserves, noting the importance of protecting areas lacking significant human impacts in order to, in part, provide research opportunities for studying the historical ecological conditions of the state:

> "*All areas within the state, except those which are expressly dedicated by law for preservation and protection in their natural condition, are subject to alteration by human activity. Natural lands, together with the plants and animals living thereon in natural ecological systems, are valuable for the purposes of scientific research, teaching, as habitats of rare and vanishing species, as places of natural historic and natural interest and scenic beauty, and as living museums of the original heritage of the state.*" (Revised Code of Washington: 79.70.010).

The collection of state and federal natural areas in the Pacific Northwest has recently been highlighted for its critical contribution to the depth and scale of climate change monitoring programs (Massie et al. 2016). Because these natural areas reflect minimal human impacts, are widely distributed across the Pacific Northwest, and represent both common and rare ecosystems across numerous ecological gradients, they serve as excellent locations for monitoring climate change effects (Massie et al. 2016).

Reference sites have been used for guiding management of streams and lakes (Karr 1981; Karr and Chu 1999; Hughes et al. 1986; Hughes et al. 1993). As noted in Brooks et al. (2016), the use of reference wetlands to guide wetland management and regulatory actions originated in efforts by the U.S. Environmental Protection Agency to develop and implement a Wetlands Research Program (Zedler & Kentula 1985; Leibowitz et al. 1992) and with the implementation of the Environmental Management and Assessment Program (Messer et al. 1991; Leibowitz et al. 1991). At the same time, the U.S. Army Corps of Engineers was searching for efficient ways to assess wetlands with an emphasis on hydrogeomorphic characteristics and functions (Brooks et al. 2016). This led to the conception of a system of reference wetlands for use in assessing wetland functions, especially in the context of compensatory wetland mitigation where the concept of "no net loss" of wetland function is paramount (Kentula et al. 1992, Brinson 1993a,b; Brinson and Rheinhardt 1996; Smith et al. 1995; Smith 2001).

1.2 Project Objective

Reference wetland sites reflect either the entire range or a specific set of ecological conditions found in a population of wetlands. The range of ecological conditions found in reference sites can assist in establishing standards for designing wetland mitigation and management (e.g., restoration, creation, or enhancement) projects and evaluating their success (Brinson and Rheinhardt 1996; Brooks et al. 2016). Specifically, reference sites can be used to inform wetland mitigation performance standards, provide templates for restoration objectives, and calibrate wetland assessment methods. Reference sites also provide opportunities for establishing baseline conditions with which ecological trends can be compared. For example, monitoring changes in reference sites with minimal human-induced impacts provides an opportunity to detect climate-induced changes.

An important part of identifying reference wetlands is to classify the wetland resource such that the resulting classes consist of wetlands with similar ecological function (Brinson and Rheinhardt 1996). The hydrogeomorphic (HGM) classification (Brinson 1993b) is used in most reference wetland networks in the United States. This report describes an approach based on the U.S. National Vegetation Classification (USNVC 2016), which is in turn derived from the EcoVeg approach to classifying vegetation (Faber-Langendoen et al. 2014). The Washington Department of Natural Resources, Natural Heritage Program (WNHP) customized the USNVC, as it is applied in Washington State, by adding a new, lower level unit called the "subgroup". Subgroups aggregate wetland plant communities, or associations, based on shared ecological functions such as water source, landscape position, soil chemistry, elevation, etc. Thus, subgroups incorporate similar classification criteria as those used in HGM.

Identifying a set of reference sites entails a significant inventory effort. Over the past 30 years, WNHP has made significant progress in classifying Washington's ecosystem types and inventorying locations that represent high-quality examples of those types. To date, WNHP has

1,082 wetland and riparian ecosystem element occurrences in the Program's Biotics database (Rocchio et al. 2015). An element occurrence represents a specific location of a rare species, rare ecosystem type, or high-quality example of a common ecosystem type. Ecosystem type is identified using the USNVC. 'Quality' is determined using narrative or metric based assessments of ecological integrity (Faber-Langendoen et al. 2016b,c,d,e; Rocchio et al. 2016). In addition, the Washington Department of Natural Resources, Natural Areas Program manages 56 Natural Area Preserves (NAPs) and 36 Natural Resource Conservation Areas (NRCAs). The primary objective of these managed areas is to protect the best remaining examples of Washington's ecosystems and provide research opportunities. The 1,082 wetland and riparian element occurrences—particularly those found within NAPs and NRCAs—provided the foundation for the development of the reference standard wetlands network described in this report.

This report describes the methods and results of WNHP's identification of reference standard wetlands (those reference wetlands lacking significant human-induced impacts) for Washington State. The objective is to provide a list of sites that researchers, consultants, and agency staff can use to document the range of ecological conditions exhibited in wetlands and riparian areas functioning within their historical or natural range of variation. The location of reference standard wetlands will also be incorporated into WNHP's Wetlands of High Conservation Value map viewer (http://www.dnr.wa.gov/NHPwetlandviewer).

2.0 Wetland Reference Networks

The wetland reference standard sites presented here are based on the approach outlined by Smith et al. (1995) and Smith (1991). Our approach differs in that wetland types are defined using the USNVC, instead of HGM (Brinson 1993b). However, many of the principles outlined in Brinson 1993a were incorporated into a custom unit within the USNVC called the subgroup, the primary classification level used in our approach. Below, the significant components of a wetland reference network are described generally. The specifics of these components—as they apply to the reference network developed for this project—are discussed in the following section.

A *wetland reference network* is a group of wetland sites that reflect the range of variability associated with a specific wetland type in a given geographic region. The objective of the network is to identify sites where baseline ecological information can be documented and used to inform various wetland regulatory and management objectives (Table **1**). Ideally, the reference network should consist of the full range of wetland types across natural physiographic and climatic gradients, including a variety of vegetation types, disturbance regimes, and landscape positions. It should also include the full range of ecological condition—from minimally disturbed (ecologically intact) to severely disturbed sites (degraded ecological integrity and functions)—in order to provide a robust dataset for application to a variety of objectives (Brooks et al. 2016). There are a few key components to a wetland reference network that are described below (Table **1**).

Table 1. Key Concepts of a Wetland Reference Network (Smith et al. 1995, Smith 2001; Brooks et al. 2016; Faber-Langendoen et al. 2016d)

Concept	Definition	Example(s)
Purpose	Provides baseline conditions to better understand how wetlands function and respond to human-induced disturbances in order to improve wetland conservation, restoration and management actions.	Inform restoration design; establish restoration benchmarks; calibrate wetland assessment tools designed to detect ecological changes across a disturbance gradient.
Regional Wetland Type	Wetlands within a geographic region that are similar based on hydrogeomorphic, vegetation, or other classification factors, and thus, are likely to provide similar sets of functions, values, and services	HGM class or subclass; USNVC types
Reference Wetlands	Group of wetlands selected from a specific geographic area to represent the entire range of variability exhibited by a regional wetland type within a specific reference domain.	Depressional wetlands reflecting minimally impacted to highly disturbed conditions within a specific watershed.
Reference Domain	Homogeneous (in terms of drivers of wetland function) geographic area from which reference wetland are selected	Ecoregions; hydrologic units; climatic regions; physiographic regions; floristic provinces
Reference Standard Wetlands	Subset of reference wetlands that represent the standard for comparison	Minimally disturbed; least-altered; highest functional capacity

Reference Standard Conditions	Ecological conditions which occur in reference standard wetlands	Species composition, vegetation structure, & hydrological regime function within range expected under minimally disturbed conditions

The *regional wetland type* is determined with a wetland classification system. The regional wetland types should be similar based on hydrogeomorphic, vegetation, or other classification factors. As such, they presumably provide similar sets of ecological functions, values, and services. The HGM classification (Brinson 1993b) has been used most often, but other classifications may be used. Whichever classification scheme is chosen, it must result in units that are best suited for the intended goal of the reference network.

Reference wetlands refers to a group of wetland sites that exhibit the range of variability associated with a regional wetland type within a reference domain. The represented variability includes both natural and human-induced disturbances.

A *reference domain* is the geographic extent of the reference network. The reference domain is intended to reflect shared primary ecological drivers of a given wetland type (Smith 2001). For example, the reference domain could be a watershed, physiographic region, floristic province, or ecoregion. Thus, the reference domain—along with wetland classification—constrains natural variability and thereby makes human-induced change more detectable.

Reference standard wetlands are sites within a reference wetland dataset from which reference standards are developed (Brooks et al. 2016). These sites are determined to have the least human-induced impact (Smith et al. 1995, Smith 2001, Stoddard et al. 2006) and/or the highest level of functioning (Hruby et al. 1999, Hruby 2001) within the reference domain. Reference standard conditions (i.e., ecological variability associated with reference standard wetlands) can be used to set restoration and management goals and provide baseline conditions for a variety of monitoring objectives.

3.0 Methods

Development of a reference wetland network is a stepwise process of classification, inventory, determination of the range of ecological conditions, and designation of reference standard sites (Table 2). First, we used the UNSNVC to classify regional wetland types in Washington. Next step we use embedded biogeographic components of the USNVC and ecoregions to delineate the reference domains. We then used WNHP's Biotics database as the primary source of data to assess the location and current ecological condition of extant examples of the regional wetland types. WNHP's Ecological Integrity Assessment (EIA) methodology (Faber-Langendoen et al. 2016b,c,d,e; Rocchio et al. 2016) was used to determine ecological condition during recent (post-2011) inventory work while older records used Natural Heritage "element occurrence" specifications to determine ecological condition. The EIA method was also used to set reference standard conditions. The final step was to determine which sites match reference standard conditions and which of those are most suitable for designation as reference standard wetlands. These steps are described in more detail in the following sections.

Table 2. Process for Developing a Reference Wetland Network.

General Steps	WNHP Approach
Identify Regional Wetland Types	• USNVC is used to classify wetland types • These are crosswalked to HGM and Cowardin • The crosswalk allows users to query database based on their classification needs
Identify Reference Domain	• Ecoregions • Biogeography embedded in USNVC classification
Identify Range of Conditions	• Ecological Integrity Assessment (EIA)
Conduct Inventory of Reference Wetlands	• WNHP element occurrences • Current grant inventory work (data gaps)
Designate Reference Standard Sites	• Best remaining examples • EORANKs / EIA • Protection status

3.1 Developing a Reference Wetland Network for Washington State

This section describes the use of data managed by WNHP to develop a network of *reference standard* sites that possess ecological and vegetation conditions best representing the historical or natural range of variation of Washington wetlands and riparian areas. While a reference network representing the full range of ecological conditions is desirable, reference standard wetlands are the most important part of a reference network as they allow immediate use for setting restoration benchmarks, management goals, mitigation standards, etc. In addition, WNHP's Biotics database is heavily skewed towards excellent to good condition sites, so the decision was made to focus only on reference standard wetlands. WNHP's Biotics database has 1,082 records of high-quality wetland types. Future work can build upon this foundation of reference standard sites to develop

a comprehensive reference network spanning the full range of ecological conditions present on the landscape.

3.1.1 Identify Regional Wetland Types

Reference standard wetlands identified in this report are based on two units (subgroups and associations) within the USNVC. The discussion below outlines the consideration given to existing classification schemes and the reasons for selecting subgroups and associations for cataloguing regional wetland types.

Background

Ecological classifications help wetland managers better understand natural variability within and among types. Standardized classification schemes are useful for constraining natural variability of ecosystems, thereby allowing users to effectively communicate, assess, and plan for conservation, management, and restoration of a given ecosystem type. In addition, because classification constrains natural variability within a given type, the ability to distinguish and attribute changes in ecological condition to anthropogenic stressors is made easier (i.e., the signal-to-noise ratio is increased).

Since classification objectives vary, there is no universally accepted approach to ecosystem classification (Whittaker 1962). Wetland classification has been approached from many different perspectives, including water chemistry, geomorphology, water source, nutrient status, landscape position, soil type, vegetation physiognomy, and vegetation composition (USEPA 2002). The most commonly used wetland classifications are Cowardin (Cowardin 1979) and HGM (Brinson 1993b).

The "Classification of Wetlands and Deepwater Habitats of the United States" system—commonly known as the Cowardin classification—was developed for resource managers to map wetlands and provide uniformity of concepts and terms (Cowardin et al. 1979). Cowardin is one of the most commonly used wetland classification schemes, at least for coarse analyses and development of mapping products. The structure of the classification allows it to be used at any of its four hierarchical levels. National Wetland Inventory maps use Cowardin as the basis for their map legend.

HGM emphasizes the hydrologic and geomorphic controls on wetlands (Brinson 1993b). HGM assumes that these abiotic characteristics are of primary importance for grouping wetlands with similar ecological functions. HGM classes are distinguished based on a wetland's position in the landscape (i.e., geomorphic setting), the source of its water, and the wetland's hydrodynamics (i.e. direction and fluctuation of water) (Brinson 1993b). HGM uses a hierarchical classification with seven major hydrogeomorphic wetland classes: Riverine, Depression, Slope, Flats (Organic Soil and Mineral Soil), and Fringe (Estuarine and Lacustrine). Within a specific geographic region, these classes can be further divided into regional subclasses. The Washington Department of Ecology has defined subclasses for some of the HGM classes which occur in the state. The classes and subclasses are grouped into domains (western vs. eastern Washington) and regions such as lowland, montane, Columbia Basin, etc. (Hruby et al. 1999; Hruby et al. 2014a,b; Sheldon et al. 2005).

WNHP uses the USNVC to catalogue and set conservation priorities for Washington's ecosystems. The USNVC is derived from the EcoVeg approach to classifying vegetation (Faber-Langendoen et al. 2014). EcoVeg and the USNVC classify vegetation according to shared physiognomy, floristics, biogeography, and ecological relationships (Faber-Langendoen et al. 2014). Such properties make the USNVC ideal for characterizing regional wetland types for conservation, restoration, and management objectives.

U.S. National Vegetation Classification (USNVC)

The USNVC has a hierarchical structure which provides a common language for the effective management and conservation of plant communities across the United States. It is supported by the Federal Geographic Data Committee (FGDC 2008), NatureServe (Faber-Langendoen et al. 2009c), and the Ecological Society of America (Jennings et al. 2009). The classification standard was developed over many years by the FGDC Vegetation Subcommittee (FGDC 2008), with members from diverse federal agencies, the Vegetation Panel of the Ecological Society of America, and NatureServe (http://usnvc.org/overview/). The USNVC is intended to allow federal agencies to produce uniform statistics about vegetation resources across the nation, facilitate interagency cooperation on vegetation management issues that transcend jurisdictional boundaries, and encourage non-Federal partners to utilize and contribute to a common system when working with their Federal partners.

The USNVC consists of eight levels (Figure **1**). The three upper levels are based primarily on physiognomic-structural characteristics within a global ecological context; the three middle levels incorporate diagnostic species and life forms sorted by biogeographic and regional ecological drivers; and the two lower levels—alliance and association—reflect floristic similarities based on regional, sub-regional and topoedaphic climate, substrates, hydrology, and disturbance regimes (Figure **1**; FGDC 2008; Faber-Langendoen et al. 2014). The association is the finest unit of the USNVC and has been used by WNHP as a primary unit for identification of wetland conservation priorities (e.g., Wetlands of High Conservation Value). Associations are defined by characteristic ranges of plant species composition, diagnostic plant species occurrence, habitat conditions and physiognomy that occurs within a narrow range of abiotic factors (Jennings et al. 2009; Faber-Langendoen et al. 2014).

There are 616 wetland and riparian associations in Washington State. These units reflect fine-scale ecological patterns and ensure that WNHP is considering numerous permutations of ecological settings and associated vegetation patterns. However, the large number of associations poses practical obstacles for many objectives, including establishment of a reference wetland network. As such, WNHP modified the USNVC to create a custom unit between the group and association level, called the subgroup.

USNVC Subgroups – a Modification of the USNVC

WNHP's modification of the USNVC for Washington's wetland and riparian areas is described in the report, *Ecological Classification of Native Wetland & Riparian Vegetation of Washington*. *A Guide to Wetland Subgroups* (Rocchio et al. *In Progress*). The goal was to identify a classification unit that enables WNHP to track association diversity within spatially explicit ecological templates (i.e. subgroups). The subgroup classification incorporates elements of Cowardin (Cowardin 1979) and HGM (Brinson 1993b) classifications. The primary objective of the classification is to ensure WNHP's efforts in prioritizing conservation targets are based on a comprehensive assessment of

the variety of ecological templates *and* associated biological diversity that characterize Washington's wetland resource. Accounting for both biotic and abiotic variation also improves the likelihood of conservation success in the face of climate change. It has been noted that without adequate protection of both biotic and abiotic variability, the ability of ecosystems to adapt to potential climate change effects are diminished (Whitlock 1992).

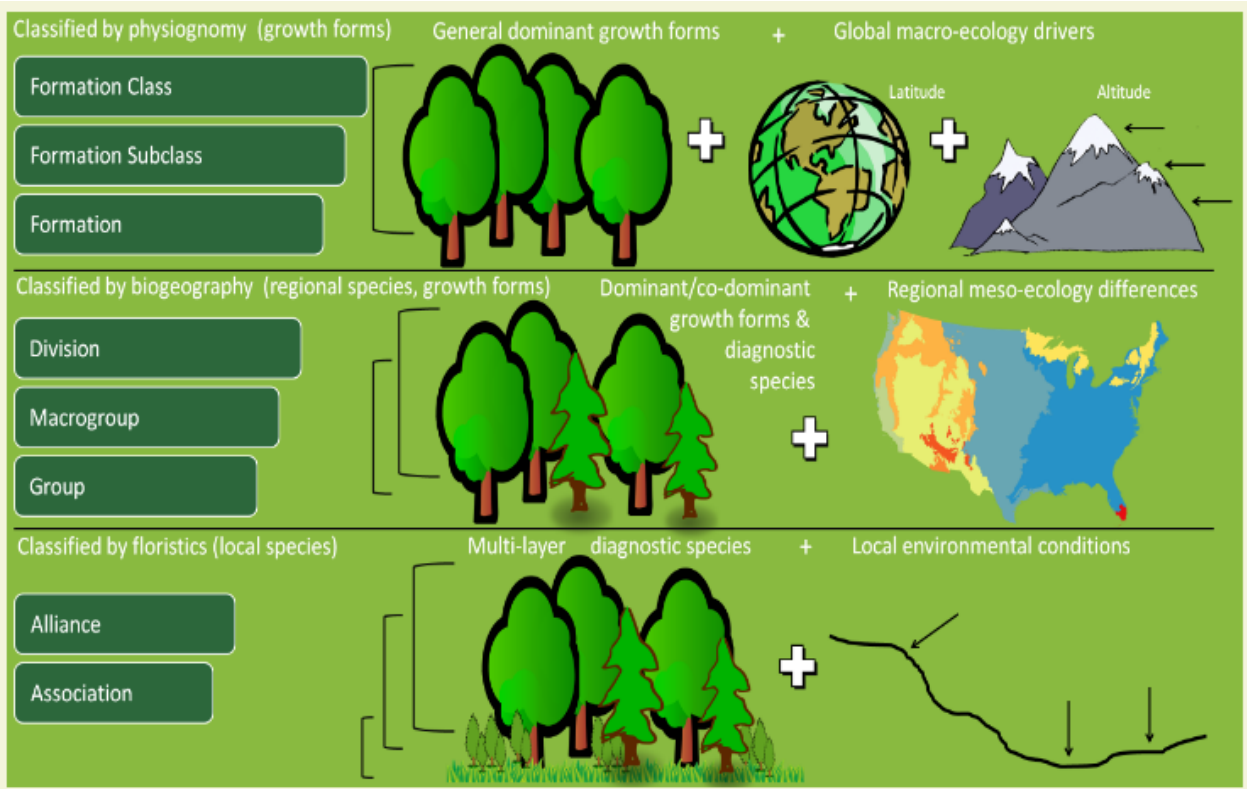

Figure 1. U.S. National Vegetation Classification Hierarchy (graphic courtesy of usnvc.org)

The *Ecological Classification of Native Wetland & Riparian Vegetation of Washington* differs from the official USNVC in two ways: (1) inclusion of the subgroup custom unit and (2) the inclusion of associations that have not yet been through the USNVC peer review process—and are thus considered "Provisional" types—but that WNHP has identified as occurring in Washington State (Jennings et al. 2009; Table **3**).

The subgroup is used by WNHP *in lieu* of alliances, the official USNVC level between groups and associations (
Figure 2). The alliance concepts currently in use do not meet WNHP's need for an ecological unit that explicitly encompasses primary ecological drivers. Thus, subgroups were incorporated into the USNVC to provide a coarser unit that aggregates wetland and riparian associations based on similar primary ecological drivers: landscape position, water source, water chemistry, and elevation. Subgroup concepts were developed by WNHP ecologists based on (1) scientific literature, (2) phytogeographic patterns, (3) vegetation plot data, and (4) their own field experience. Initial concepts were vetted during field work and adjusted according to observations of association relationships to these concepts. Exploratory multivariate analyses (PC-ORD;

McCune and Mefford, 2011) helped elucidate the ecological characteristics that best aggregate associations.
The USNVC is a nested hierarchy and thus subgroups and associations are strictly nested within a single USNVC group (Table **3**). However, counter to one of the USNVC principal rules, we allowed associations to occur in more than one subgroup. This one-to-many relationship between associations and ecological settings is one reason why WNHP felt the need to develop the subgroup concept. The subgroup will allow WNHP to track the various ecological settings on the landscape while associations provide the ability to track the biotic diversity within those settings.

Because the subgroups constrain both biotic and abiotic variability, they provide opportunities for characterizing reference standard conditions for relatively fine-scale patterns associated with primary ecological drivers. There are 106 native-dominated subgroups distributed across Washington State. While the number of subgroups is much higher than the number of HGM subclasses or Cowardin types found in the state, subgroups capture the level of biotic and abiotic detail necessary to guide wetland restoration, management, and conservation activities and ensure "no net loss" of wetland area and function (WDOE 2015).

Associations are also included in the list of references standard sites developed for this project. They are embedded within the appropriate subgroup at each site. Associations provide fine-scale ecological information, giving users more flexibility to define reference conditions.

Crosswalking USNVC Types to HGM
As previously noted, WNHP's Biotics database has 1,082 records of high-quality wetland types. Each of these records has been assigned a USNVC group, subgroup, and association, as well as HGM Class and Subclass. Therefore, this reference standard database can still be used if HGM classes are of primary interest for project objectives. Users can filter the reference standard wetland database according to a variety of classification units.

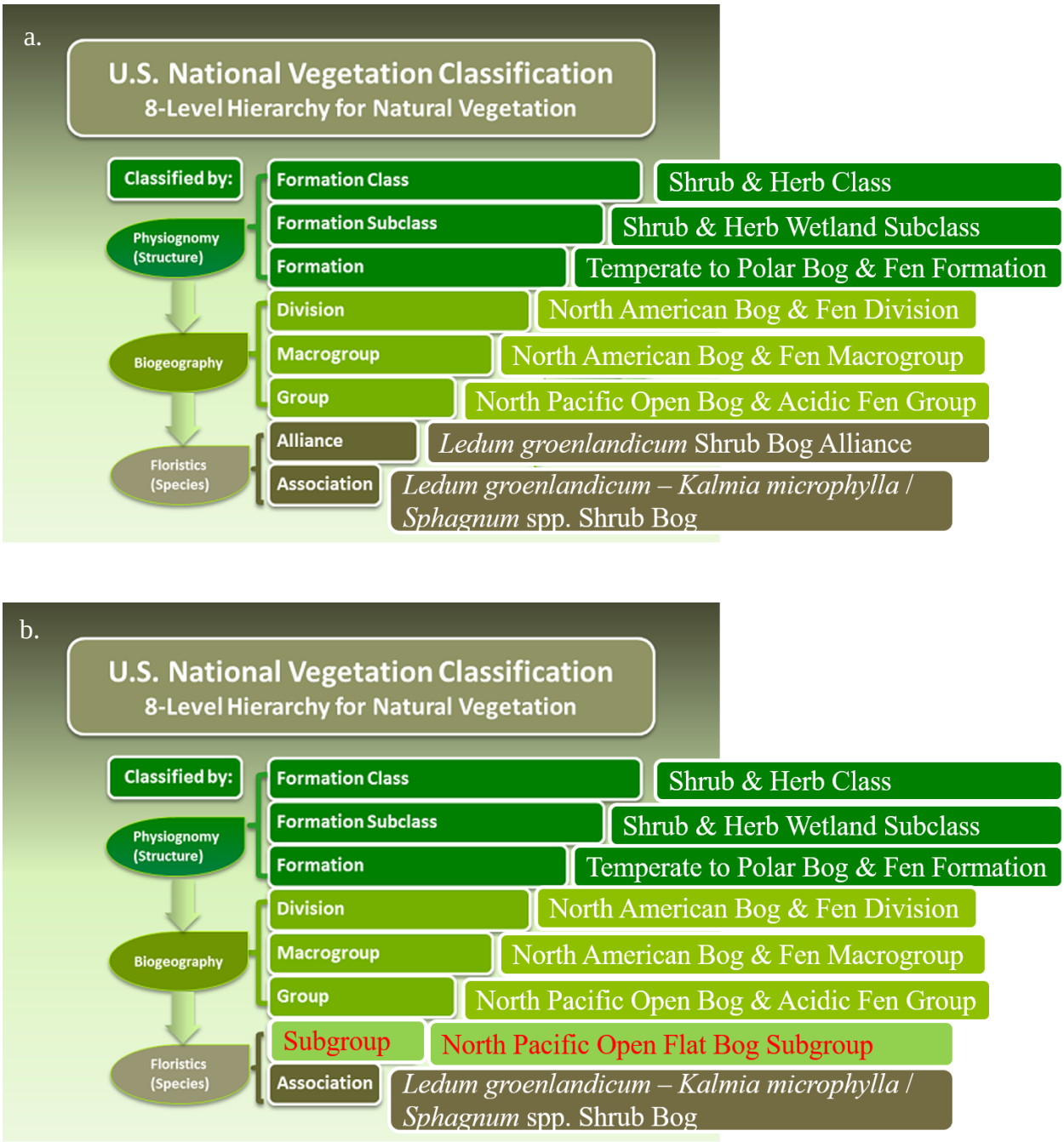

Figure 2. Example of the USNVC classification for the Shrub Bog Association using (a) the Official USNVC Hierarchy and (b) the custom subgroup unit used by WNHP in lieu of alliances (adapted from usnvc.org).

Table 3. Relationship of USNVC associations with subgroups in the North Pacific Acidic Open Bog & Fen Group. Associations are listed under each subgroup in which they occur.

North Pacific Acidic Open Bog & Fen group
North Pacific Lowland Poor Fen Subgroup
Carex (livida, utriculata) / Sphagnum spp. Fen
Carex cusickii - (Carex aquatilis var. dives) / Sphagnum spp. Fen
Carex lasiocarpa / (Sphagnum spp.*)* Fen [Provisional]
Carex utriculata - Carex aquatilis var. dives - Sanguisorba officinalis / Sphagnum spp. Fen
Juncus balticus - Comarum palustre / Sphagnum spp. Fen [Provisional]
Juncus supiniformis - (Carex livida, Rhynchospora alba) Fen
Myrica gale - Spiraea douglasii / Sphagnum spp. Fen
Myrica gale / Sanguisorba officinalis / Sphagnum spp. Fen
Spiraea douglasii / Sphagnum spp. Fen
North Pacific Montane Poor Fen Subgroup
Eriophorum angustifolium ssp. angustifolium / Sphagnum spp. Fen
Kalmia microphylla / Carex spp. - *Caltha leptosepala ssp. howellii / Sphagnum* spp. Fen
North Pacific Open Flat Bog Subgroup
Eriophorum chamissonis / Sphagnum spp. Bog & Acidic Fen
Kalmia microphylla - Ledum groenlandicum / Xerophyllum tenax Shrub Bog
Kalmia microphylla - Vaccinium oxycoccos / Sphagnum spp. Shrub Bog
Ledum groenlandicum - Gaultheria shallon / Sphagnum spp. Shrub Bog
Ledum groenlandicum - Kalmia microphylla / Sphagnum spp. Shrub Bog
Rhynchospora alba - (Vaccinium oxycoccos) / Sphagnum spp. Fen
North Pacific Open Transitional Bog Subgroup
Kalmia microphylla - Ledum groenlandicum - Gaultheria shallon - Pteridium aquilinum / Sphagnum spp. Shrub Bog
Kalmia microphylla - Ledum groenlandicum / Carex utriculata / Sphagnum spp. Shrub Bog
Kalmia microphylla - Vaccinium oxycoccos / Carex (livida, obnupta) / Sphagnum spp. Shrub Bog
Ledum groenlandicum - Myrica gale / Sphagnum spp. Shrub Bog
Ledum groenlandicum / Carex utriculata / Sphagnum spp. Shrub Bog
Ledum groenlandicum / Typha latifolia / Sphagnum spp. Shrub Bog [Provisional]
North Pacific Transitional Poor Fen Subgroup
Carex exsiccata Fen [Provisional]
Dulichium arundinaceum Pacific Coast Fen [Provisional]
Myrica gale / Carex (aquatilis var. dives, utriculata) Fen
Spiraea douglasii / Carex aquatilis var. dives Fen
North Pacific Raised Bog Subgroup
Kalmia microphylla - Vaccinium oxycoccos / Empetrum nigrum / Sphagnum spp. Shrub Bog

3.1.2 Identify Reference Domains

As with ecological classification, a reference domain constrains natural variability by reflecting shared primary ecological drivers of the wetland types within a region (Smith 2001). For example, the reference domain could be a watershed, physiographic region, floristic province, or ecoregion. Ecoregions are used here as the primary reference domain. However, biogeographic information embedded in the USNVC concepts provides another filter of natural variability.

Ecoregions as Reference Domains

Ecoregions reflect broad patterns of species composition and distribution, climate, landforms, geology, soils, and hydrology occurring on the landscape. WNHP uses ecoregions to help set conservation priorities by tracking the degree of protection and representation of rare species and ecosystems within each of the nine ecoregions found in Washington (WADNR 2007; 2011). The ecoregions used by WNHP are modified from Level 3 ecoregions identified by U.S. EPA (https://www.epa.gov/eco-research/ecoregions-north-america). The modifications were made in consultation with a variety of conservation partners, primarily The Nature Conservancy and the Washington Department of Fish and Wildlife, in order to better reflect local, on-the-ground expertise and finer boundary resolution (WADNR 2007). In conjunction with the USNVC classification, ecoregions offer a suitable scale for defining reference domains. Although finer-scale divisions such as watersheds might be of value, the combination of ecoregions and the biogeographic-ecological information embedded in USNVC units adequately constrains both regional and local variation in biotic and abiotic drivers of wetland diversity in Washington. The nine ecoregions (Figure **3**) are summarized below. Additional information is found in WADNR (2007).

Northwest Coast Ecoregion The Northwest Coast ecoregion includes most of the Olympic Peninsula of Washington, the coast mountain ranges extending down to central Oregon, and most of Vancouver Island, in British Columbia (Figure **3**). Precipitation ranges from 60 to 240 inches annually, mostly falling as rain from November through April. Due to a rain shadow effect, the northeastern Olympic Mountains receive the least precipitation of equivalent elevations anywhere in western Washington. Summer fog and cool temperatures are important climatic factors along the outer coast and adjacent valleys.

The Olympic Mountains occupy the northern portion of the ecoregion and extend to nearly 8,000 feet. They were formed from the uplift of sedimentary (e.g. sandstones, mudstones, and shales) and volcanic rocks which were deposited over millions of years on a seafloor off the continental shelf (McNulty 2003). Pleistocene glaciations, associated with both alpine and continental ice, dramatically eroded the Olympic Mountains into the jagged, steep topography characteristic of the contemporary landscape (McNulty 2003). The Willapa Hills occur in the southern portion of this ecoregion (within Washington) and form a continuous ridge from the Chehalis River Valley to the Columbia River. They range in elevation from 1,000 to 3,000 feet and have a rounded topography composed of old, well-weathered soils. During the Pleistocene, the Chehalis River Valley, which separates this portion of the ecoregion from the Olympic Mountains to the north, supported a major river draining meltwaters from the Puget ice lobe and from the western Cascade foothills.

Barrier beaches characterize the low-lying coastline of the Willapa Hills region, behind which there are major estuaries such as Grays Harbor and Willapa Bay, two of the largest estuaries on the west coast of North America (WADNR 2007). Peatlands, forested swamps, and marshes are

abundant in the western portion of the ecoregion. Forested, shrubland, and herbaceous tidal surge plain wetlands are found along the lower Chehalis River and Columbia River reaches. Montane wetlands include seeps & springs, marshes, wet meadows, and fens. Tidal salt and brackish marshes are especially abundant in Grays Harbor and Willapa Bay. The wetland flora is derived from the Vancouverian floristic province and many species in wetlands of the outer coast are at the southern extent of their range and/or disjunct from a more typical high elevation distribution (Figure **4**; Takhtajan 1986). The only known raised bog in the western conterminous United States is found in the ecoregion. Lowland peatlands and forested swamps have a unique floristic expression relative to those found elsewhere in Washington.

Puget Trough Ecoregion The Puget Trough consists of a broad, rolling landscape primarily occupying a continental glacial trough (from Thurston County to the north) and includes many islands, peninsulas, and bays in the Puget Sound area (Figure **3**). The northern portion of the ecoregion includes lowlands surrounding the Puget Sound. The southern half includes the upper basins of the Chehalis River and the Cowlitz River valleys and the northern Willamette Valley (Portland Basin) in Clark County. Relief is moderate and elevations are mostly below 1,000 feet. Annual precipitation ranges from 32 to 35 inches in the northern portion of the Puget Trough (from Seattle to the Canadian border) while precipitation increases in the southern portion to ~ 50 inches in Olympia and ~ 48 inches in Centralia (WRCC 2012). Precipitation mostly falls as rain, but an average of 10-20 inches of snow occasionally falls throughout the area.

Contemporary landscapes of the Puget Trough are primarily the result of the last continental glacier (the Cordilleran Ice Sheet) that moved through the region about 18,000 years ago. The ice advanced to just south of Olympia. Surface runoff from the Cascades was dammed by the ice sheet and/or diverted south along the flanks and around the terminus of the glacier south of Olympia, then out to the Pacific through the Chehalis River Valley. These events left a landscape almost entirely created by glacial deposition or erosion. South of these outwash areas, the topography is mostly a result of stream erosion. However, alpine glaciers and their associated outwash deposits are found in the Cowlitz River Valley and into the Columbia River (Pringle 2008). Some post-glacial alluvial erosion and deposition has modified the landscape in riverine settings. Kettle holes, glacial till, moraines, glacial scours, meltwater outwash, proglacial lake deposits, and contemporary alluvial and shoreline landforms affect the distribution of wetland types and distribution across the Puget Trough. Ice Age floods originating in eastern Washington and Idaho made their way through the Gorge and ponded in the Portland Basin, leaving well-sorted sand, clay, and gravel (WADNR 2012).

Estuaries are found along some inlets of Puget Sound. Marshes, swamps, riparian areas, and peatlands are very abundant across the landscape. Peatlands—especially flat bogs and acidic or poor fens—are concentrated in areas of past glaciation and are abundant relative to other ecoregions. Large, low-gradient rivers begin in adjacent mountains and flow through the ecoregion while small streams may originate at lower elevations. Lakes are numerous in the areas affected by past glaciation. Wet prairies are found in areas where glacial outwash or Missoula flood deposits left fine-textured silt and clay (i.e., Clark County). The wetland flora is derived from the Vancouverian floristic province (Figure **4**; Takhtajan 1986).

North Cascades Ecoregion The North Cascades ecoregion ranges from Snoqualmie Pass north into British Columbia and is the north section of the Cascade Range (Figure **3**; WADNR 2012; Tabor

and Haugerud 1999). The ecoregion is constrained to the east by the Cascade crest and to the west by lowlands of the Puget Trough ecoregion. Annual precipitation ranges from 60 to 160 inches (WADNR 2007; WRCC 2012). Precipitation at low elevations mostly consists of rain, high elevations have significant snowpack for many months, and middle elevations have significant snowpack which fluctuates over the course of the winter due to rain-on-snow events (Iachetti et al. 2006). Average snowfall ranges from 50 to 75 inches in the lower elevations and gradually increases with elevation to between 400 and 600 inches at 4,000 to 5,500 feet (WRCC 2012). Snowfall often continues until late spring, reaching maximum depths in early March (10-25 feet above 3,000 feet (WRCC 2012)). Above 5,000 feet, snow may remain until early July (WRCC 2012).

The North Cascades landscape is composed of highly dissected terrain primarily ranging from 1,000 and 7,000 feet in elevation (WADNR 2007). The highest peaks are volcanoes that reach to over 10,000 feet, while some valley bottoms may be as low as 500 feet. Glacially carved, U-shaped valleys are prominent as are steep-gradient small stream drainages (WADNR 2007). The North Cascades ecoregion is underlain by sedimentary and metamorphic rock in contrast to the predominance of volcanic strata in the West Cascades ecoregion to the south. The vertical distance from valley floor to the mountain peaks ranges from 4,000 to 6,000 feet, making the North Cascades one of the steepest mountain ranges in the conterminous United States (Tabor and Haugerud 1999). Mountain glaciation has occurred repeatedly over the last 120,000 years. During the Holocene, the cordilleran ice sheet flowed over most of the North Cascade range and greatly modified the North Cascade landscape. Today, the ecoregion has over 300 alpine glaciers, more than half of the total glaciers in the lower 48 states (WADNR 2012).

The steep topography limits wetland formation to areas affected by past glaciation, as well as along rivers, around lakes and ponds, or groundwater discharge sites. Small snowmelt basins are common at high elevations. Peatlands and forested swamps are found in areas of groundwater discharge, on alluvial terraces, and high-elevation basins. Natural lakes created by glacial processes are abundant. Marshes and wet meadows are found along riparian zones, beaver dams, and associated with depressions. The wetland flora is primarily derived from the Vancouverian floristic province, although elements of the Rocky Mountain floristic province may be present near the Cascade crest and within the rain shadow areas (Figure **4**; Takhtajan 1986).

West Cascades Ecoregion Within Washington, this mountainous ecoregion extends from Snoqualmie Pass south to the Columbia River and from the Cascade crest west to the Puget lowlands (Figure **3**). Elevations mostly range from 1,000 to 7,000 feet, with extremes of 14,410 feet at Mount Rainier and 50 feet at the Columbia River Gorge (WADNR 2007). Average annual precipitation ranges from 55 to 140 inches, mostly falling from October through April as snow in the higher elevations and rain in the lower elevations (WADNR 2007). Snowfall ranges from 50 to 75 inches in the lower elevations and gradually increases with elevation to between 400 and 600 inches at 4,000 to 5,500 feet (WRCC 2012). Snowfall often continues until late spring, reaching

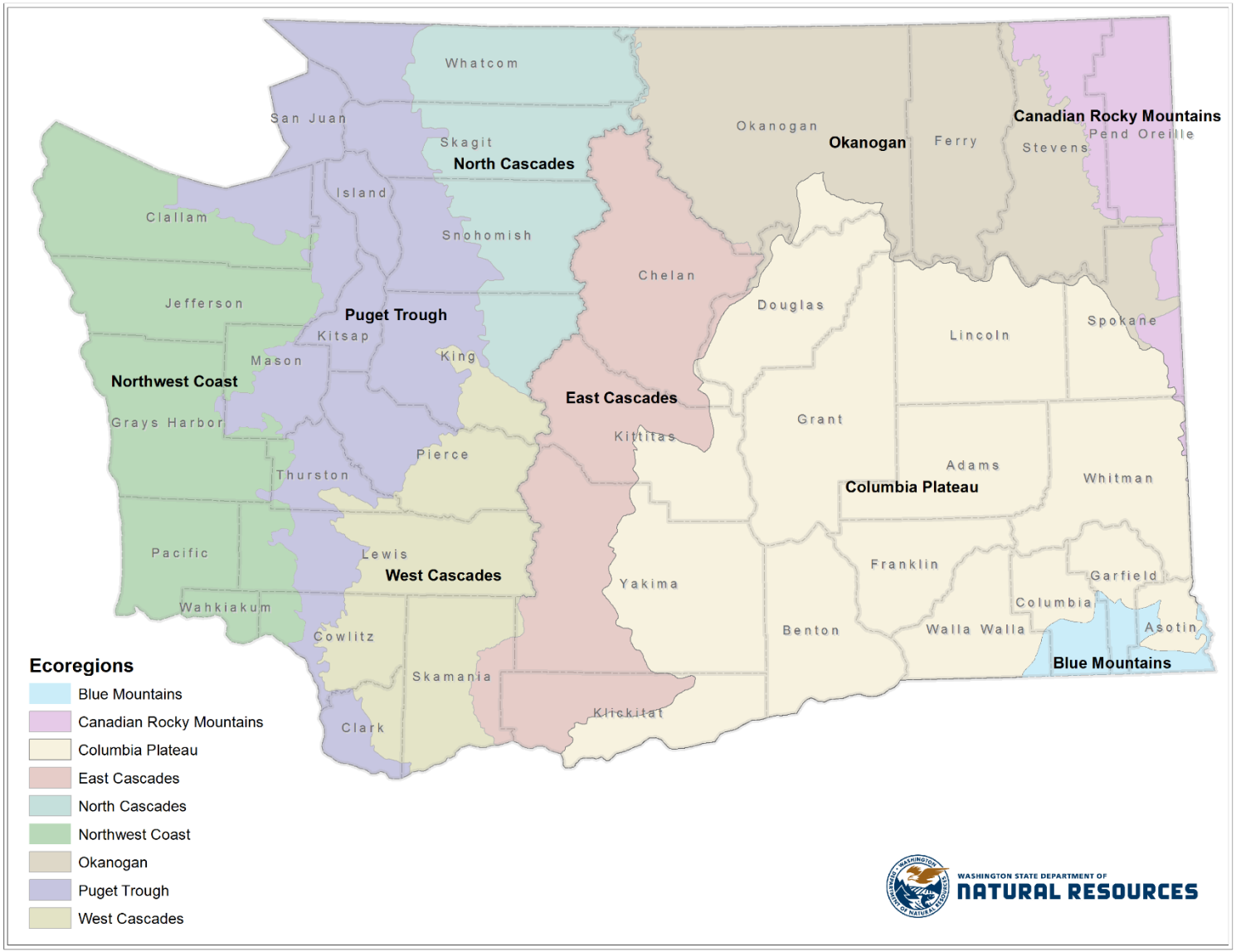

Figure 3. Ecoregions of Washington State.

Figure 4. Floristic Provinces Used in the U.S. National Vegetation Classification (as applied in Washington). Floristic provinces adapted from Takhtajan (1986). Figure adapted from Faber-Langendoen et al. 2016a.

maximum depths of 10-25 feet above 3,000 feet elevation in early March (WRCC 2012). Above 5,000 feet, snow may remain on the ground until early July (WRCC 2012). Middle elevations can have significant snow pack that fluctuates over the winter due to rain-on-snow events. Lower elevations accumulate little snow.

The ecoregion is characterized by steep ridges and river valleys in the west, a high plateau in the east, and both active and dormant volcanoes. The isolated volcanic peaks and associated high

plateaus extend above the surrounding steep mountain ridges which were formed primarily from extrusive volcanic rocks (WADNR 2007). The ecoregion is underlain by Cenozoic volcanics and much of the region has been affected by alpine glaciation. Alpine glaciation was widespread in the Pleistocene and the Cordilleran ice sheet pushed against the lower flanks of the northwestern portion of the ecoregion (Franklin and Dyrness 1988). Long lakes were formed in many of the lower mountain valleys due to the impoundment of rivers by the cordilleran ice sheet, with glaciolacustrine deposits marking their locations (Franklin and Dyrness 1988).

The steep topography limits wetland formation to areas affected by past glaciation, along rivers, around lakes and ponds, or groundwater discharge sites. Small snowmelt basins are common at high elevations. Peatlands and swamps are found in areas of groundwater discharge, on alluvial terraces, and high-elevation basins, but are not as abundant as in the Puget Trough. Natural lakes created by glacial processes are abundant throughout the ecoregion. Marshes and wet meadows are found along riparian zones, beaver dams, and associated with depressions. The wetland flora is derived from the Vancouverian floristic province (Figure **4**; Takhtajan 1986).

East Cascades Ecoregion The East Cascades ecoregion lies east of the Cascade crest, from Sawtooth Ridge near Lake Chelan south to the Oregon-California border (Figure **3**). Its eastern border follows the transition zone between montane forest and shrub-steppe. Climate varies dramatically from west to east, with cold temperature and high precipitation (120 inches/yr.) along the Cascade crest shifting to relatively warm temperatures and low precipitation (< 20 inches/yr.) along the foothills (WADNR 2007). Precipitation mostly occurs from November through April. Snowpack accumulates at higher elevations.

The ecoregion's topography has resulted from tectonic uplift and subsequent erosion by alpine glaciers and landslides. Coupled with volcanic activity, these processes have left rugged ridges, with broad valleys between, extending southeast to east from the Cascade crest (WADNR 2007). Isolated volcanic cones appear on the steep mountain ridges, but—with the exception of Mt. Adams—are not as high as those in the West Cascades ecoregion. Bedrock geology is varied, including large serpentine areas in the Wenatchee Mountains. Elevation ranges from 2,000 to 7,000 feet, with Mt. Adams rising to 12,276 feet. In general, mountain slopes are less steep and cut by fewer streams than those in the West Cascades ecoregion (WADNR 2007).

The steep topography limits wetland formation to areas affected by past glaciation, along rivers, around lakes and ponds, or groundwater discharge sites. Peatlands and swamps are found in areas of groundwater discharge, on alluvial terraces, and high-elevation basins, but are not as abundant as in the Puget Trough. However, the abundance of montane fens around the base of Mount Adams may be the largest concentration of such wetlands in the Cascades. In this area, glacial scouring of volcanic fields left behind till and outwash materials suitable for wetland formation (Hildreth and Fierstein 1995). Natural lakes created by glacial processes are abundant throughout the ecoregion. Marshes and wet meadows are found along riparian zones, beaver dams, and associated with depressions. The wetland flora is derived from both the Vancouverian and Rocky Mountain floristic provinces (Figure **4**; Takhtajan 1986).

Okanogan Ecoregion The Okanogan ecoregion extends from the Cascade crest in the North Cascades east to the Selkirk Mountains and then continues north along the east slope of the Cascades into Canada and along the west slope of the Canadian Rockies to Kamloops, British

Columbia (Figure **3**; WADNR 2007). Sawtooth Ridge, northeast of Lake Chelan, defines the southwestern border of the ecoregion. The ecoregion includes the Methow and Okanogan valleys and the Okanogan Highlands east to the Colville and Spokane valleys (WADNR 2007). This ecoregion is less distinct than other ecoregions in Washington, being transitional between and sharing characteristics of adjacent areas. The ecoregion has the coldest climate in Washington due to exposure to arctic winter fronts. Summers are relatively hot and dry (Pryce et al. 2006). Annual precipitation varies from less than 12 inches in the Okanogan Valley to 50-90 inches at higher elevations, with most of the ecoregion receiving 14 to 24 inches/year (WADNR 2007). The western part of the ecoregion experiences a rain shadow effect from the North Cascades and is drier than the eastern portion, which is in a zone of increasing precipitation created by the Rocky Mountains (Pryce et al. 2006).

The western portion is the highest and most rugged part of the ecoregion, with peaks in the northeast Cascades rising to more than 9,400 feet. The central portion of the ecoregion is comprised of a series of low elevation valleys at about 750 feet. The eastern portion of the ecoregion is occupied by the Kettle Range and Huckleberry Mountains, both of which are rounded mountains with elevations up to 8,000 feet (WADNR 2012). Continental and alpine glaciers played a major role in shaping landforms across the ecoregion.

Montane fens are relatively common in the western portion of the ecoregion. The central portion supports a diversity of arid riparian vegetation and a high concentration of alkaline and saline wetlands, especially on the Omak Plateau. Many of these wetlands are known locally as "spotted lakes'. East of the Okanogan River Valley, wetlands are limited to riparian zones, groundwater discharge site and around lakes and pond shores. The Myer Creek watershed supports an abundance of wetlands affected by groundwater discharge from calcareous bedrock, including calcareous fens—one of the rarest wetland types in the state. The wetland flora is derived from the Rocky Mountain floristic province (Figure **4**; Takhtajan 1986) and many species more common in boreal wetlands reach the southern extent of their range in this ecoregion.

Canadian Rockies Ecoregion The Canadian Rockies ecoregion extends from northern Idaho and northwestern Montana, across the northeastern corner of Washington, and into southwestern Alberta and southeastern British Columbia (Figure **3**; Canadian Rocky Mountains Ecoregional Team 2004). Only a small portion occurs within Washington. Precipitation ranges from 18 inches along the Columbia River to about 80 inches in the Salmo-Priest Wilderness Area, with most of the ecoregion receiving between 24 and 34 inches. At mid to upper elevations, significant snowpack develops. The Washington portion of the ecoregion has a moist, inland maritime climate, supporting Vancouverian species such as *Thuja plicata* and *Tsuga heterophylla* (Kovalchik and Clausnitzer 2004).

The geology of the ecoregion is complex, containing sedimentary, igneous, and metamorphic bedrock (Canadian Rocky Mountains Ecoregional Team 2004). The mountains within the ecoregion are transitional between the western rolling Okanogan Highlands and the eastern higher ridges of the Selkirk Mountains (WADNR 2007). Wide valleys are also found in the ecoregion, especially along the Pend Oreille River. Most of the ecoregion was completely glaciated leaving ice-carved, U-shaped valleys filled with glaciofluvial deposits and moraines and isolated ice-sculpted mountain peaks (WADNR 2007). Elevation ranges from 1,300 feet at the Columbia River to more than 7,000 feet in the Salmo-Priest Wilderness Area (WADNR 2007).

Riparian wetlands are abundant along the Pend Oreille River and in other riparian valleys. Montane fens are found throughout higher elevations. The region supports two very unique fen types: calcareous fens and patterned fens. Calcareous fens are associated with groundwater discharging through calcareous bedrock. Patterned fens have a distinctive ridge/hollow pattern that forms perpendicular to water flow. These fens are more common in boreal regions and are at the southern edge of their distribution in Washington. Marshes and wet meadows are also found throughout the ecoregion. The wetland flora is derived from the Rocky Mountain floristic province (Figure **4**; Takhtajan 1986) and many species more common in boreal wetlands reach the southern extent of their range in this ecoregion.

Blue Mountains Ecoregion The Blue Mountains ecoregion extends from Idaho and Oregon into the southeast corner of Washington (Figure **3**; WADNR 2007). In Washington, the ecoregion includes the portion of the Blue Mountains occurring in Washington and the Grande Ronde and Snake River canyons north to just south of Clarkston (WADNR 2007). Precipitation ranges from less than 10 inches in the Grande Ronde River canyon to more than 50 inches in the Wenaha-Tucannon Wilderness Area. Most of the ecoregion receives between 14 and 24 inches. Much of the precipitation occurs as snow, although fall and spring rains are common, often creating floods.

The Blue Mountains were formed by uplift of Columbia River basalt flows which were simultaneously incised by the Grande Ronde and Snake Rivers (WADNR 2007). The Blue Mountains in Washington are flat plateaus above deep canyons. Elevation ranges from 750 feet along the Snake River to 6,387 feet, with most of the ecoregion between 2,000 and 4,000 feet.

Most wetlands in the ecoregions are found along riparian corridors and in areas of groundwater discharge. The northwest portion of the ecoregion supports unique riparian plant communities dominated by red alder (*Alnus rubra*). Riparian vegetation along the Grand Ronde and Snake rivers is confined to narrow areas along the river banks. More extensive riparian vegetation forms along Asotin Creek and similar drainages. The wetland flora is derived from the Rocky Mountain floristic province (Figure **4**; Takhtajan 1986).

Columbia Plateau Ecoregion The Columbia Plateau ecoregion occupies much of eastern Washington (Figure **3**). The area is bounded by the Cascades, Okanogan, Blue, and Rocky Mountains. This is the hottest and driest ecoregion in Washington. Annual precipitation increases west to east from about 6 inches along the Columbia River's Hanford Reach to 25 inches in the Palouse Hills (WADNR 2007). Most of the ecoregion receives between 8 and 14 inches/yr.

Columbia River basalt is the primary—almost exclusive—bedrock within the ecoregion. Windblown silts and volcanic ash cover extensive areas, forming rolling, deep, productive soils (WADNR 2007). Ice Age floods carved deep canyons and coulees through the basalt, scouring some areas of soils and vegetation and leaving exposed basalt. Dominant landforms include the Palouse Hills, Channeled Scablands, Yakima Fold Hills, Pasco Basin, Crab Creek, and the Frenchman Hills (WADNR 2007). The northern portion of Douglas County was exposed to continental glaciation, leaving a variety of glacial landforms. Elevations range from 160 feet along the Columbia River to nearly 4,000 feet on isolated hills such as Badger and Tekoa mountains (WADNR 2007).

Wetland diversity is surprisingly high for such an arid region. Most wetlands are associated with riparian zones or groundwater discharge. Within areas scoured by Ice Age floods, vernal pools are common. In areas affected by glaciation, alkaline depressions and playas are common. Saline wetlands are also common in the central portion of the ecoregion, many of which are a result of irrigation wastewater discharging along slope and bedrock breaks. Aspen stands are common in seeps in exposed basalt and in areas near lower treeline, especially near Spokane. Brackish and freshwater marshes are found in depressions and along stream corridors. Remnants of tufted hairgrass (*Deschampsia cespitosa*) meadows are scattered, but most have been replaced by nonnative species such as reed canarygrass (*Phalaris arundinacea*). A few floristically unique alkaline seeps/fens can be found at the periphery of the ecoregion. The wetland flora is derived from the Rocky Mountain floristic province and has affinities with wetland vegetation found throughout aridlands across the western United States (Figure **4**; Takhtajan 1986).

USNVC Biogeographic and Ecological Information as Reference Domains

As noted previously, the USNVC classifies vegetation according to shared physiognomy, floristics, biogeography, and ecological relationships (Faber-Langendoen et al. 2014). Biogeographic information embedded within the USNVC works in tandem with ecoregions to ensure that ecologically meaningful units and landscapes are used to develop the reference wetland network (Table **4**).

Table 4. Relationship between USNVC groups and Ecoregions

Biogeographic Component to USNVC Group	Relevant Ecoregions in Washington
Arid West	Columbia Plateau
North American Desert	Columbia Plateau
North Pacific	Puget Trough, Northwest Coast, North Cascades, West Cascades
Northern Rocky Mountain	Canadian Rockies
Rocky Mountain & Great Basin	Blue Mountains, Canadian Rockies, Columbia Plateau, East Cascades, and Okanogan
Temperate Pacific	Puget Trough and Northwest Coast
Vancouverian	Puget Trough, Northwest Coast, North Cascades, West Cascades
Western Montane-Subalpine	Blue Mountains, Canadian Rockies, East Cascades, and Okanogan
Western North American	Statewide

3.1.3 Defining the Reference Standard Criteria

Reference Standard Criteria

Reference standard conditions are the range of ecological characteristics associated with reference standard wetlands. In order to select reference standard wetlands, reference standard criteria must first be defined. To ensure compliance with the Clean Water Act's mandate to maintain the physical, chemical, and biological integrity of wetlands and water of the United States, 'least altered" has been recommended as the most effective reference standard criterion (Smith 2001). However, Hruby (1997) argued that "least altered" lessens the importance of altered or managed wetlands with higher level expressions of certain functions than typical for "least disturbed" wetlands. However, establishing a function-specific reference standard could be problematic given the complexity of wetland ecosystems across the landscape and the fact that such an approach does not comply with the objectives established in the Clean Water Act (Smith 2001).

For this project, the "least altered" approach is used. Specifically, we use the concept of minimally disturbed condition, or the ecological condition of sites in the absence of significant human disturbance (Stoddard et al. 2006). The inclusion of the qualifier of "significant" recognizes that most sites have likely been exposed to at least a minimal level of human stressors (e.g. atmospheric contaminants, initial climate change effects, etc.). The natural variation of minimally disturbed sites provides a baseline from which biotic or abiotic variables can be assessed to determine whether ecological integrity (i.e., structure, composition, and function) has been compromised at a site. The use of minimally disturbed sites makes it easier to separate the signal (response to human disturbance) from noise (natural variability) when sampling wetlands across a human disturbance gradient. If ecological response to stressors can be identified, better informed restoration, management, and protection projects can be implemented.

Given past and current land use practices, "minimally disturbed conditions" of certain wetland types may no longer exist on the landscape, nor considered restorable. In such cases, it may be appropriate to use best-attainable conditions as the reference standard (Smith et al. 1995). This approach is used for certain types in this project. For example, the best remaining wet prairies left in western Washington have experienced long-term degradation from human activities.

Using the Ecological Integrity Assessment Method to Measure the Reference Standard Criteria

For over thirty years, NatureServe and Natural Heritage Programs have advanced approaches for documenting the ecological integrity of individual occurrences of ecosystems (Faber-Langendoen et al. 2016b). The EORANK is an integral part of Natural Heritage Methodology, providing a succinct assessment of the ecological integrity of an element occurrence. EORANKs range from A (excellent integrity), B (good integrity), C (fair integrity), to D (poor integrity). Early methods for assigning an EORANK relied on qualitative, expert-based, narrative protocols such as the one presented in Table 5. In 2004, NatureServe and its network partners from state Natural Heritage Programs, in collaboration with a variety of agency partners, began development of a more systematic and transparent method to assess ecosystem condition. The result was the Ecological Integrity Assessment (EIA; Faber-Langendoen et al. 2016c). The EIA is used by NatureServe and the Natural Heritage network to assess "the structure, composition, function, and connectivity of an ecosystem as compared to reference ecosystems operating within the bounds of natural or historical disturbance regimes" (Faber-Langendoen et al. 2016c,d). The EIA method follows a

Table 5. Example of Narrative Element Occurrence Integrity Specifications (Appendix 11 of Floberg et al. 2004)

WILLAMETTE-PUGET-GEORGIA ECOREGION **CONIFEROUS FORESTED WETLANDS SPECIFICATIONS** Conifer swamps are mostly small patch size, occurring sporadically in glacial depressions, in river valleys, or around the edges of lakes and marshes. They were probably never common or extensive in the landscape.
MINIMUM SIZE: 0.1 ac/0.05 ha
SEPARATION DISTANCES: (1) substantial barriers to natural processes or species movement, including cultural vegetation greater than .25 km wide, major highways, urban development, large bodies of water, (2) different natural community wider than 0.5 km, (3) major break in topography, soils, geology, etc., especially one resulting in a hydrologic break. Justification: Conifer swamps are usually contiguous with other wetland types such as marshes or riparian stands because of similar hydrologic requirements and topography. They are usually round or elliptical, but may be linear when constrained or in narrow valleys or floodplains.
RANK.PROCEDURE: (1) condition, (2) landscape context, (3) size.
CONDITION.SPECS **A -rated condition:** Natural hydrologic regime intact. No or little evidence of alteration due to drainage, flood control, clearing, grazing, logging, fire suppression, etc. No or very few exotic species present with no potential for expansion. At least half of occurrence has old-growth stand of trees (>200 years old). **B -rated condition:** Natural hydrologic regime intact or altered by local drainage. Alteration from local drainage, clearing or logging is easily restorable by ceasing such activities. Few exotic species with little potential for expansion if restoration occurs. **C -rated condition:** Natural hydrologic regime altered by local drainage, local diking, or regional flood control dams. Alteration from local drainage, diking, clearing, grazing, logging, and fire suppression is extensive but potentially restorable over several decades. Alteration from regional flood control dams most likely not restorable. Exotic species widespread but potentially manageable with restoration of most natural processes. **D -rated condition:** Natural hydrologic regime or disturbance to site not restorable. System remains fundamentally compromised despite restoration of some processes. Occurrence on narrow floodplain or in narrow valley may be reduced to narrow strip with much edge effect. Exotic species may be dominant in understory, with little hope for control. Justification for AA@-rated criteria: Most conifer swamps in the Pacific Northwest depend on a perennial water and infrequent disturbance by windstorm, flood or fire. A-ranked Occurrences have these processes intact, with no or little history of logging, clearing or grazing. Historically, a major portion of occurrences at any one time would be old-growth in age, now this condition is very rare. Justification for AC/D@ threshold: C-ranked Occurrences have potential for restoration over several decades. D-ranked Occurrences have little or no potential for restoration because of extensive degradation. Riparian Occurrences along higher-order rivers are particularly impacted by flood control dams, and have the least likelihood of restoration unless dams are removed.
SIZE.SPECS **A -rated size:** Very large (> 200 ac/80 ha) **B -rated size:** Large (75-200 ac/30-80 ha)

C -rated size: Moderate (5-75 ac/2-30 ha)
D -rated size: Small (< 5 ac/2 ha)

Justification for AA@-rated criteria: Conifer swamps are usually composed of mosaics of different associations included in this group. Occurrences of this size may have high species diversity and are well buffered from edge effects.

Justification for AC/D@ threshold: C-ranked Occurrences may have moderate to high species diversity and may be well buffered from edge effect. D-ranked Occurrences occur in small patches surrounded by uplands, and are actually typical for some of the associations included in this group. Small sites generally have low species diversity and are vulnerable to edge effect.

LANDSCAPE.CONTEXT.SPECS

A -rated landscape context: Uplands surrounding Occurrence and the watershed are largely unaltered by urban or agricultural uses (>90% natural), and include few to no tree plantations or recent clearcuts. No barriers present. Connectivity of habitats allows natural processes and species migration to occur. If riparian, no regional flood control dam upstream.

B -rated landscape context: Uplands surrounding Occurrence and the watershed with moderate urban or agricultural alteration (60-90% natural), but retaining much connectivity, or uplands are heavily managed forest landscape with many tree plantations. Few barriers present. Some natural processes such as fire may be compromised. If riparian, no regional flood control dam upstream.

C -rated landscape context: Uplands surrounding Occurrence and/or the watershed are fragmented by alteration (20-60% natural), with limited connectivity. Some barriers are present, and natural processes few. If riparian, no regional flood control dam upstream.

D -rated landscape context: Uplands surrounding Occurrence and/or the watershed are mostly converted to agricultural or urban uses. Riparian Occurrence may be reduced to narrow strip with much edge effect. Connectivity and natural processes are nonexistent. If riparian, one or more regional flood control dams located upstream.

Justification for AA@-rated criteria: These are Occurrences with nearly intact watersheds and processes. Wetlands are fully connected with uplands, and fully buffered from upland influences.

Justification for AC/D@ threshold: C-ranked Occurrences have some limited buffering from upland influences. D-ranked Occurrences have no buffering, and are subject to siltation and pollution. Species diversity will be very low. Riparian occurrences depend upon flooding disrupted by large dams upstream.

multi-metric approach similar to the Index of Biotic Integrity (Karr & Chu 1999), methods used to establish Tiered Aquatic Life Use (Davies & Jackson 2006) frameworks for aquatic systems, and a variety of state-based wetland rapid assessment methods (Fennessy et al. 2007; Wardrop et al. 2013).

The EIA is intended to measure current ecological condition as compared to the reference standard via measures of biotic and abiotic condition, size, and landscape context (Harwell et al. 1999, Andreasen et al. 2001, Parrish et al. 2003). Each metric is rated by comparing measured values with values expected under relatively unimpaired (reference standard) conditions. The ratings may then be aggregated into an overall score. Thus, EIA assesses the degree to which current condition of a site deviates from the reference standard. A rating or score for individual metrics, as well as an overall index of ecological integrity, are presented in a scorecard matrix.

The A-D ratings in Table 6 show the overall conditions expected in wetlands and riparian areas across a range of anthropogenic disturbance gradients. As such, the "A" rating in Table 6 describes generic reference standard criteria used for this project. To assign an overall rank, a series of metrics are measured and then averaged (weighted averaging is used—see Rocchio et al. (2016) for details) into an overall score/rank. The generic conditions described in Table 6 are fleshed out with more specificity for the EIA metrics and associated ratings used for this project (Table 7). Whether expert driven protocols or EIA methods were used, the A ratings in Table 5 and Table 7 determined whether specific sites met reference standard criteria.

3.1.4 Inventory and Data Collection of Reference Standard Wetlands

Reference wetlands are the physical representation of the wetland reference network (Smith 2001). Data collected from these sites may be used to characterize the range of ecological conditions across the reference network, identify restoration benchmarks, and calibrate wetland assessment tools (Smith 2001). The identification of reference wetland locations typically begins with assessment of existing wetland maps, followed by field-based inventories. The objective is to identify sites representing a range of ecological conditions, from highly to minimally altered (Smith 2001). Reference wetland identification should also reflect the diversity of wetland types and variation within each type (Smith 2001). The size and heterogeneity of the reference domain also contributes to the scope and size of the reference network. In order to obtain adequate representation, large reference domains, like those used in this project, typically require more reference wetlands than smaller reference domains.

Using Washington Natural Heritage Program Data to Populate the Wetland Reference Standard Network

For this project, existing data managed by the Washington Natural Heritage Program (WNHP) is used to identify reference standard wetlands. Over the past 30 years, WNHP has inventoried in search of locations representing high-quality examples of Washington's wetland and riparian ecological types (Kunze 1984, 1986, 1987, 1988, 1989, 1990, 1991, Chappell 1999; Crawford 2003; Rocchio et al. 2015). Those efforts, coupled with data submitted to WNHP by conservation partners, have resulted in the documentation of 1,082 wetland

Table 6. Generic Reference Conditions as defined by the Ecological Integrity Assessment (adapted from Faber-Langendoen et al. 2012)

Rank	Description
A (intact, excellent integrity)	Occurrence or observation is believed, across the range of a type, to meet reference conditions with respect to major ecological factors functioning within the bounds of natural disturbance regimes. Characteristics include: • **landscape context** contains natural habitats that are essentially unfragmented (reflective of intact ecological processes) and with little to no anthropogenic stressors; • **condition**, including vegetation structure and composition, soil status, and hydrological function are well within natural ranges of variation; exotics (non-natives) appear absent; and a comprehensive set of key plant and animal indicators are present; • **size** is very large or much larger than the minimum dynamic area. [size is used for conservation prioritization]
B (minimally disturbed, good integrity)	Occurrence or observation is not among the highest quality examples, but nevertheless exhibits favorable characteristics with respect to major ecological factors functioning within the bounds of natural disturbance regimes. Characteristics include: • **landscape context** contains largely natural habitats that are minimally fragmented with few anthropogenic stressors; • **condition**, including vegetation structure and composition, soils, and hydrology are functioning within natural ranges of variation; invasives and/or other exotics (non-natives) are present in only minor amounts, or have minor negative impact; and many key plant and animal indicators are present; • **size** is large or above the minimum dynamic area. [size is used for conservation prioritization]
C (moderately disturbed, fair integrity)	Occurrence or observation has a number of unfavorable characteristics with respect to major ecological factors and natural disturbance regimes. Characteristics include: • **landscape context** contains natural habitats that are moderately fragmented, with several anthropogenic stressors; • **condition**, including vegetation structure and composition, soils, and hydrology are altered somewhat outside their natural range of variation; invasives and/or other exotics (non-natives) may be a sizeable minority of the species abundance, or have moderately negative impacts; and many key plant and animal indicators are absent; • **size** is small or near the minimum dynamic area. [size is used for conservation prioritization]
D (severely disturbed, poor integrity)	Occurrence or observation has severely altered characteristics with respect to major ecological factors (but is still identifiable to the type). Characteristics include: • **landscape context** contains little natural habitat and is very fragmented, with many anthropogenic stressors; • **condition**, including vegetation structure and composition, soils, and hydrology are severely altered well beyond their natural range of variation; invasives and/or other exotics (non-natives) exert a strong negative impact; and most, if not all, key plant and animal indicators are absent; • **size** is very small or well below the minimum dynamic area. [not required for EIA ratings]

Table 7. EIA Metrics and Ratings Used for Wetland & Riparian Areas in Washington State.

RANK FACTOR	MAJOR ECOLOGICAL FACTOR	METRIC NAME	METRIC RATING			
			A (intact; excellent integrity)	**B** (minimally disturbed; good integrity)	**C** (moderately disturbed; fair integrity)	**D** (severely disturbed; poor integrity)
LANDSCAPE CONTEXT	LANDSCAPE	L1. Contiguous Natural Land Cover	**Intact:** Embedded in 90-100% natural habitat around AA.	**Variegated:** Embedded in 60-90% natural habitat.	**Fragmented**: Embedded in 20-60% natural habitat.	**Relictual**: Embedded in <20% natural habitat.
		L2. Land Use Index	Average Land Use Score = 9.5-10	Average Land Use Score = 8.0-9.4	Average Land Use Score = 4.0-7.9	Average Land Use Score = <4.0
	BUFFER	B1. Perimeter with Natural Buffer	Buffer is 100% of perimeter.	Buffer is 75-99% of perimeter.	Buffer is 25–75% of perimeter.	Buffer is <25% of perimeter.
		B2. Width of Natural Buffer	Average buffer width is 100 m, adjusted for slope.	Average buffer width is 75-99 m, after adjusting for slope.	Average buffer width is 25-75 m, after adjusting for slope.	Average buffer width is <25 m, after adjusting for slope.
		B3. Condition of Natural Buffer	Buffer is characterized by abundant (>95%) cover of native vegetation, with intact soils, no evidence of loss in water quality and little or no trash or refuse.	Buffer is characterized by substantial (75–95%) cover of native vegetation, intact or moderately disrupted soils, minor evidence of loss in water quality, moderate or lesser amounts of trash or refuse, and minor intensity of human visitation or recreation.	Buffer is characterized by a low (25–75%) cover of native vegetation, barren ground and moderately to highly compacted or otherwise disrupted soils, moderate to strong evidence of loss in water quality, with moderate or greater amounts of trash or refuse, and moderate or greater intensity of human visitation or recreation.	Very low (<25%) cover of native plants, dominant (>75%) cover of nonnative plants, extensive barren ground and highly compacted or otherwise disrupted soils, moderate - great amounts of trash, moderate or greater intensity of human visitation or recreation, OR no buffer at all.
CONDITION	VEGETATION	V1. Native Plant Species Cover	>99% relative cover of native vascular plant species overall, or in the most critical layer (tree or shrub/herb), whichever is lower.	95-99% relative cover.	60-95% relative cover.	< 60% relative cover.
		V2. Invasive Nonnative Plant Species Cover	Invasive nonnative plant species absent or cover is very low (<1% absolute cover.	Invasive nonnative plant species in any stratum present but sporadic (1-4% cover).	Invasive nonnative plant species in any stratum somewhat abundant (5-30% cover).	Invasive nonnative plant species in any stratum very abundant (>30% cover).

RANK FACTOR	MAJOR ECOLOGICAL FACTOR	METRIC NAME	METRIC RATING			
			A (intact; excellent integrity)	**B** (minimally disturbed; good integrity)	**C** (moderately disturbed; fair integrity)	**D** (severely disturbed; poor integrity)
		V3. Native Plant Species Composition	Vegetation composition minimally to not disturbed.*	Vegetation composition with minor disturbed conditions.*	Vegetation composition with moderately disturbed conditions.*	Vegetation composition with severely disturbed conditions.*
		V4. Vegetation Structure	Vegetation structure is at or near minimally disturbed natural conditions. Little to no structural indicators of degradation evident.*	Vegetation structure shows minor alterations from minimally altered from minimally disturbed natural conditions. Structural indicators of degradation are minor (e.g., levels of grazing, mowing).*	Vegetation structure is moderately altered from minimally disturbed natural conditions. Structural indicators of degradation are moderate (e.g., levels of grazing, mowing).*	Vegetation structure is greatly altered from minimally disturbed natural conditions. Structural indicators of degradation are strong (e.g., levels of grazing, mowing).*
	HYDROLOGY	H1. Water Source	Water source is natural: site hydrology is dominated by precipitation, groundwater, or natural runoff from an adjacent freshwater body.*	Water source is mostly natural, but site directly receives occasional or small amounts of inflow from anthropogenic source.*	Water source is moderately impacted by anthropogenic sources, but are still a mix of natural and non-natural sources.*	Water source is substantially impacted by anthropogenic sources (e.g., urban runoff, direct irrigation, pumped water, artificially impounded water, or other artificial hydrology).*
		H2. Hydroperiod	Hydroperiod characterized by natural patterns associated with inundation – drawdown, saturation, and seepage discharge. (see field indicators table).*	Hydroperiod filling or inundation and drying patterns deviate moderately from natural conditions due to presence of stressors.*	Hydroperiod filling or inundation and drying patterns deviate moderately from natural conditions due to presence of stressors.*	Hydroperiod filling or inundation and drawdown of the AA deviate substantially from natural conditions from high intensity alterations.*

RANK FACTOR	MAJOR ECOLOGICAL FACTOR	METRIC NAME	METRIC RATING			
			A (intact; excellent integrity)	**B** (minimally disturbed; good integrity)	**C** (moderately disturbed; fair integrity)	**D** (severely disturbed; poor integrity)
		H3. Hydrologic Connectivity	No unnatural obstructions to lateral or vertical movement of ground or surface water.*	Minor restrictions to the lateral or vertical movement of ground or surface waters by unnatural features, such as levees or excessively high banks.*	Moderate restrictions to the lateral or vertical movement of ground or surface waters by unnatural features, such as levees or excessively high banks. Between 25-75% of the site is restricted by barriers to drainage.*	Essentially no hydrologic connection to adjacent wetlands or uplands. Greater than 75% of wetland is restricted by barriers to drainage.*
	SOIL	S1. Soil Condition	Little bare soil OR bare soil and soil disturbed areas are limited to naturally caused disturbances such as flood deposition or game trails.*	Small amounts of bare or disturbed soil are present, but the extent and impact is minimal.*	Moderate amounts of bare or disturbed soil are present, and the extent and impact is moderate.*	Substantial amounts of bare or disturbed soil are present, with extensive and long lasting impacts.*
SIZE	SIZE	Z1. Comparative Size (Patch Type)	Very Large	Large	Small	Very Small

*Indicates that the metric rating is only partly included here. For a full description of the metrics and ratings see Rocchio et al. 2016.

and riparian ecosystem element occurrences in WNHP's Biotics database (Figure **5**; Rocchio et al. 2015). These element occurrences are found at over 425 discrete wetland sites (i.e., a given wetland may have more than one element occurrence). The element occurrences are distributed across the state, but most occur in western Washington due to greater inventory effort in that area (Figure 5). Recent inventory (Rocchio et al. 2015) has placed emphasis in eastern Washington, but a paucity of element occurrences remains in many of the ecoregions east of the Cascade crest. Of those, the Columbia Basin has received the most inventory effort, but degradation from historical and ongoing land use has left few wetlands meeting element occurrence criteria (Crawford 2003). The other ecoregions have an abundance of U.S. Forest Service lands, which have typically not received as much inventory focus from WNHP. The East Cascades ecoregion is particularly lacking in the number of wetland and riparian element occurrences but, again, this is primarily a reflection of minimal inventory effort as opposed to absence of wetlands of significant conservation value.

In addition to spanning the state's ecoregions, the 1,082 element occurrences also represent a large proportion of the state's wetland ecosystem diversity (as measured by the USNVC subgroups and associations of the element occurrences). The element occurrences are documented at the USNVC association scale, but each occurrence has also been classified to its appropriate subgroup, so analysis of this dataset can focus on both subgroups and associations.

Each of the element occurrences has an EORANK, from A-D, reflecting its ecological integrity at the time of the inventory. Approximately 72% of the 1,082 of the element occurrence records in WNHP's database were assessed using the narrative protocols described above (e.g., Table 5). The remaining 27% were assessed using the EIA method (Table 7). Although the EIA method is more systematic and transparent, both approaches are based on similar concepts, definitions, and assumptions. Most importantly, both approaches share the same definition of reference standard. The EORANK was used to determine which element occurrences had the most intact ecological conditions and thus most closely met the reference standard criteria.

Because WNHP has focused its inventory efforts on sites with intact ecological integrity, the data included in WNHP Biotics database is heavily skewed toward the reference standard end of the reference gradient. This large and diverse dataset of high-quality wetlands provided an ideal foundation upon which a reference standard network could be built. Consequently, this project is only focused on identifying the locations of reference standard wetlands. Although identifying sites across the full range of ecological conditions is ideal, the level of additional effort needed to inventory enough wetlands to represent the full gradient of ecological conditions was not possible for this project.

3.1.5 Designate Reference Standard Wetlands

Although the 1,082 element occurrences discussed above represent the best known occurrences of wetland and riparian ecosystems in the state, additional criteria were used to pare that list down to a final list of reference standard wetlands. Although element occurrences are defined at the association level, subgroups were used to organize the designation of reference standard wetlands. Thus, each element occurrence was assigned to an appropriate subgroup and then each subgroup received the following considerations to ensure that reference standard sites:

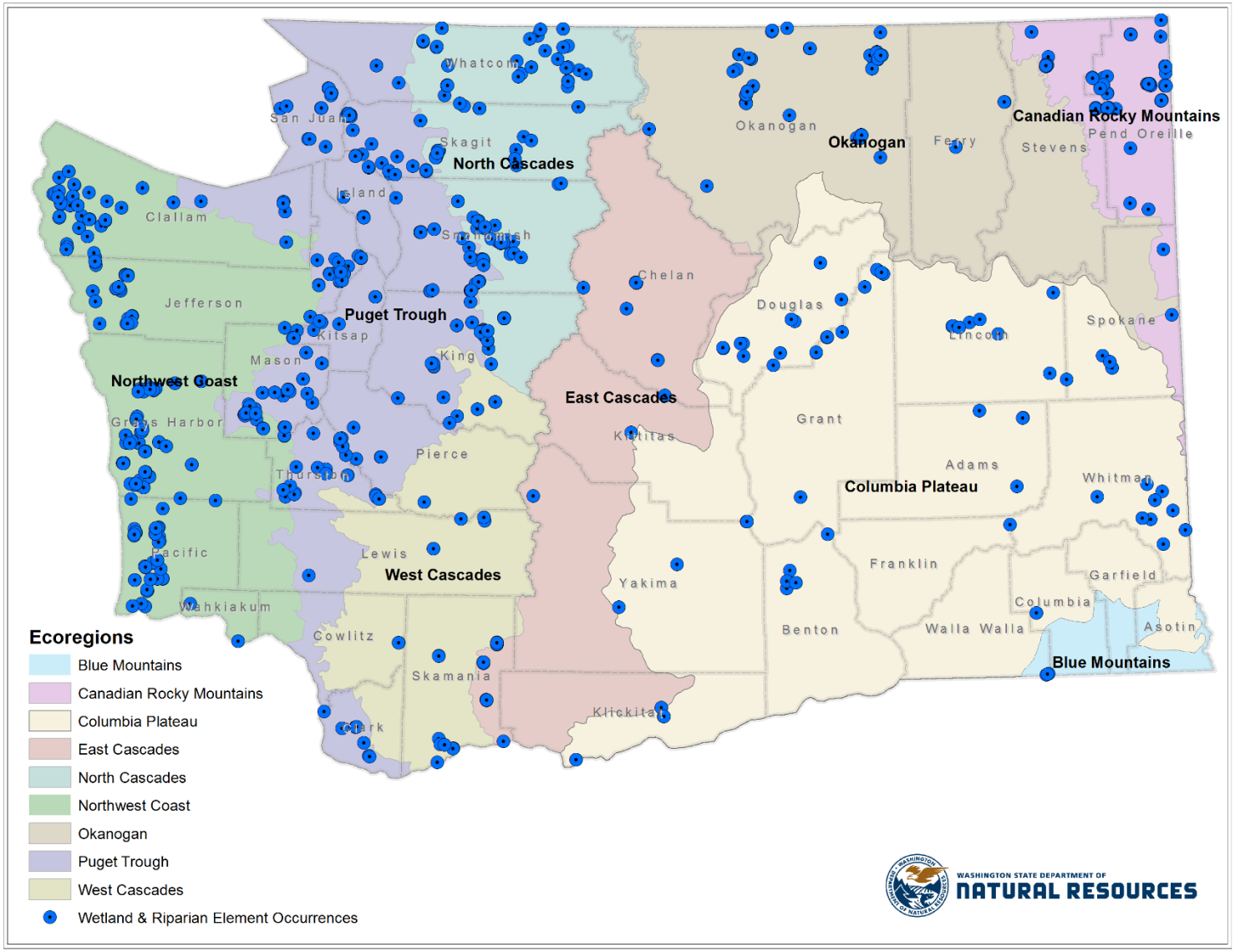

Figure 5. Location of Wetland and Riparian Element Occurrences in Washington

- reflect the diversity of wetland types (i.e. subgroups) in the state
- represent the best examples of a subgroup, regardless of current condition
- represent plant association diversity within each subgroup
- have long-term protection
- are publicly accessible (some sites may still require permission and/or permits)

The first consideration was to ensure that the reference standard network represents the diversity of wetland subgroups (per Rocchio et al. *In Progress*) in the state. Each of the 1,082 element occurrences were classified to the appropriate subgroup (Figure 6). Next, within each subgroup, the element occurrence with the highest quality EORANK (i.e., those occurrences closest to exhibiting the reference standard criteria) in each association were identified. For many subgroups, these were element occurrences with an EORANK of "A" (excellent integrity). However, because of varying degrees of loss and degradation on the landscape, not all wetlands are represented by examples functioning within the natural range of variability (e.g., wet prairies). For those wetland types, the highest ranked examples would qualify as reference standard sites for that wetland type. For example, the best quality example of wet prairie remaining in western Washington has an EORANK of "C" (fair integrity). Thus, although the site is significantly degraded relative to historical conditions, it is still the best remaining example of wet prairie and would be identified as a potential reference standard wetland.

Next, the degree of protection afforded to the element occurrences passing the previous filters were considered. Sites within Natural Area Preserves—or similarly protected areas where the primary objective is management for ecological values—were selected as reference standard sites since such sites are likely to persist in the long-term. If there were no element occurrences for a given subgroup in such areas, occurrences on public lands were selected. If no element occurrences met either of those criteria, occurrences on private lands may have been designated as reference standard wetlands. In all cases, interested researchers should always seek permission and permits prior to visiting any reference standard wetland.

3.2 Reference Standard Wetland Data Content, Storage, and Delivery

Spatial and tabular data associated with each element occurrence (whether or not designated as a reference standard wetland) are stored in two databases described below: (1) WNHP's Biotics database and (2) EcoObs.

3.2.1 Data Content and Storage

Biotics

Biotics 5 is an integrated, web-enabled platform for managing tabular and spatial data. Biotics 5 data is centralized in a shared "cloud" environment maintained by NatureServe. NatureServe and individual Natural Heritage Programs (including WNHP) use Biotics to manage all data related to Natural Heritage methodology and data standards. Biotics 5 is used to map locations of known rare plant and ecosystem locations with practical conservation value (element occurrences). Biotics 5 is also used to map current and potential conservation sites, and areas of land under protective management.

Site-specific data about reference standard wetlands identified in this project are maintained in Biotics. Data fields range from standard location information, associated watersheds, past observations and observers, species composition, site descriptions, soils, geology, threats,

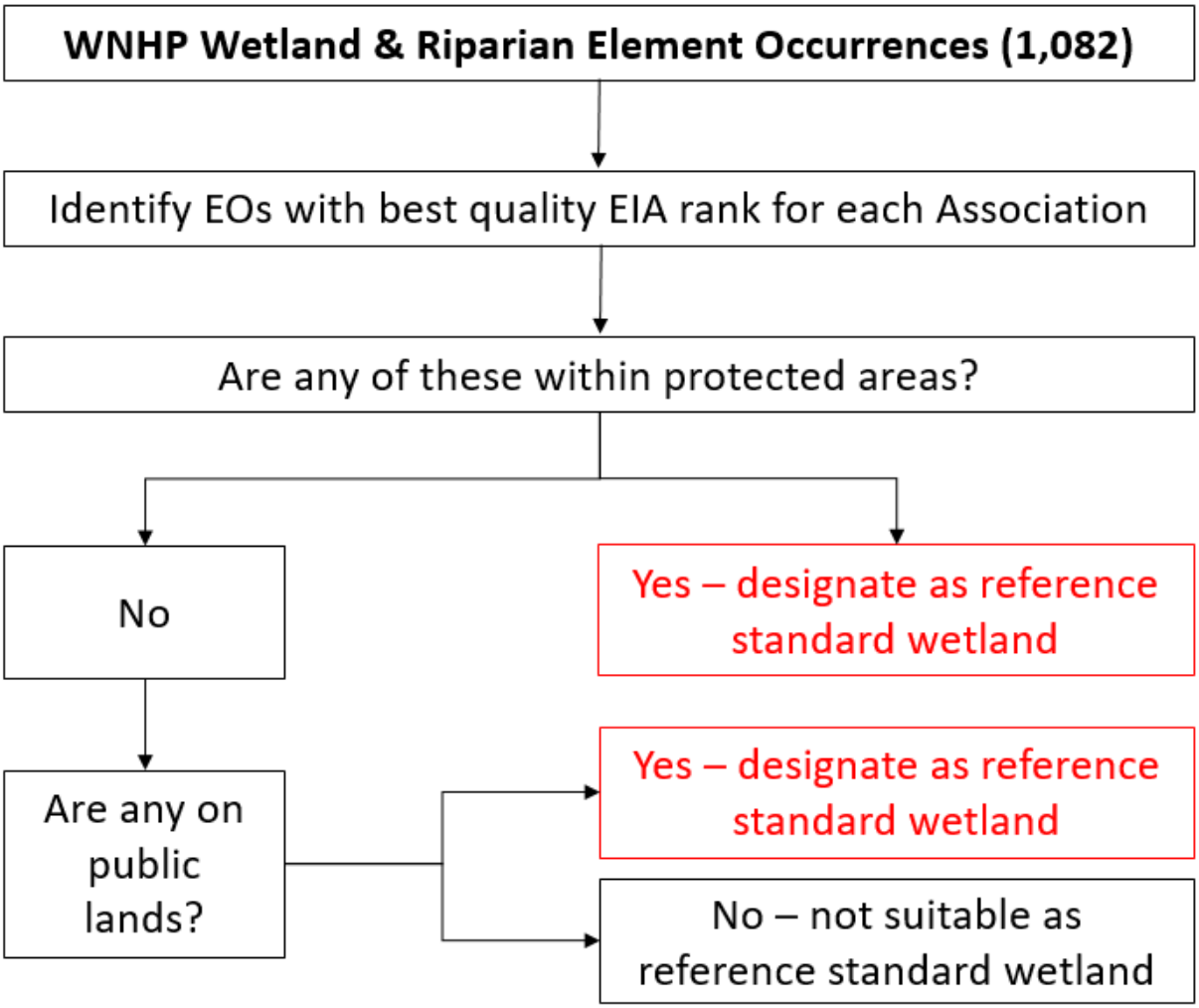

Figure 6. General Process for Selecting Reference Standard Wetlands from WNHP's Biotics Database

protection and management needs, etc. While the degree to which these fields are populated is variable but most records have some minimum information related to onsite ecological conditions.

EcoObs

EcoObs, or the Ecological Observation database, is used to manage basic site information, rapid and intensive data on vegetation, soils, hydrology, and information on indicators and metrics, including floristic quality indices (Faber-Langendoen et al. 2016c). EIA data is stored in EcoObs, including the automatic calculation of EIA roll-up scores and ranks. EcoObs can also produce site summaries of EIA data in a scorecard format. EcoObs is linked to NatureServe's Biotics database and managed by NatureServe staff, with users in a number of states.

4.0 Results and Conclusions

4.1 Reference Wetland Types

The full list of subgroups and associations are listed in Appendix A. Additional details about how these units fit into the USNVC hierarchy can be found in Rocchio et al. *In Progress*. A total of 106 subgroups and 616 associations have been identified as occurring in wetland and riparian areas in Washington. Many of these are found in multiple ecoregions.

4.2 Identifying the Range of Conditions

Figure 7 shows the distribution of ecological integrity (i.e. EORANKs) across the 1,082 element occurrences. 35% are considered to have excellent integrity (A rank), 33% have good integrity (B rank), 12% have fair integrity (C rank), 1% have poor integrity (D rank), and 18% lacked sufficient information to assess ecological integrity. As noted previously, WNHP's Biotics database is clearly skewed toward sites with excellent to good integrity (68% of total)—the primary reason this project focused on reference standard sites.

4.3 Reference Standard Wetlands

List of Reference Standard Wetlands

Table **8** summarizes the number of reference standard wetlands for each subgroup within each ecoregion. The subgroups are organized by general wetland types. The full list of reference standard wetlands, including down to the association level, as well as more detailed information for each site, are listed in Appendices A and B. The reference standard wetland database (Appendix B) allows users to filter reference standard sites based on various attributes such as HGM class/subclass, ecoregion, subgroup, association, county, watershed, etc. Pivot tables can also be used to create customized views of the database. The location of reference standard wetlands will also be incorporated into WNHP's Wetlands of High Conservation Value map viewer (http://www.dnr.wa.gov/NHPwetlandviewer).

Reference Standard Conditions

This project identifies specific reference standard sites for the various wetland types across the state, but does not quantitatively summarize data across reference standard wetlands. Rather, emphasis was placed on identifying reference standard sites where researchers could collect such information. Those interested in such data are encouraged to work with the respective landowners/managers of the wetlands of interest to gain access. That said, EIA rankings (Rocchio et al. 2016) provide broad descriptions of what the "reference standard condition" looks like for a given wetland type. Users looking for general, rapid measures of reference standard conditions should consult the EIA manual (Rocchio et al. 2016). For each metric, the "A rank" reflects the reference standard condition. In addition, the descriptions of each subgroup (found here: http://www.dnr.wa.gov/NHPwetlands) provide a qualitative characterization of landscape context, vegetation structure and composition, water source and hydrological regime, soil condition, and range of patch sizes of each subgroup.

Site-Specific Data

WNHP may have site-specific data for each reference standard wetland stored in Biotics and/or EcoObs databases. Such data might include vegetation plot data, notes concerning land use and anthropogenic stressors, EIA metric scores/ranks, management concerns, ecological setting, etc. Please contact WNHP for additional information.

4.4 Caveats of the Reference Standard Database

Although the reference standard database is the result of over 30 years of field-based inventory efforts, the list should not be interpreted as exhaustive. It is not based on a comprehensive inventory of sites that might possibly meet the reference standard criteria—WNHP ecologists have not surveyed every wetland in the state and there are undoubtedly additional sites that will be added to this database as new inventory is conducted. In addition, reference standard sites have not been identified for all wetland types. Future work by WNHP will seek to identify reference standard sites for these types.

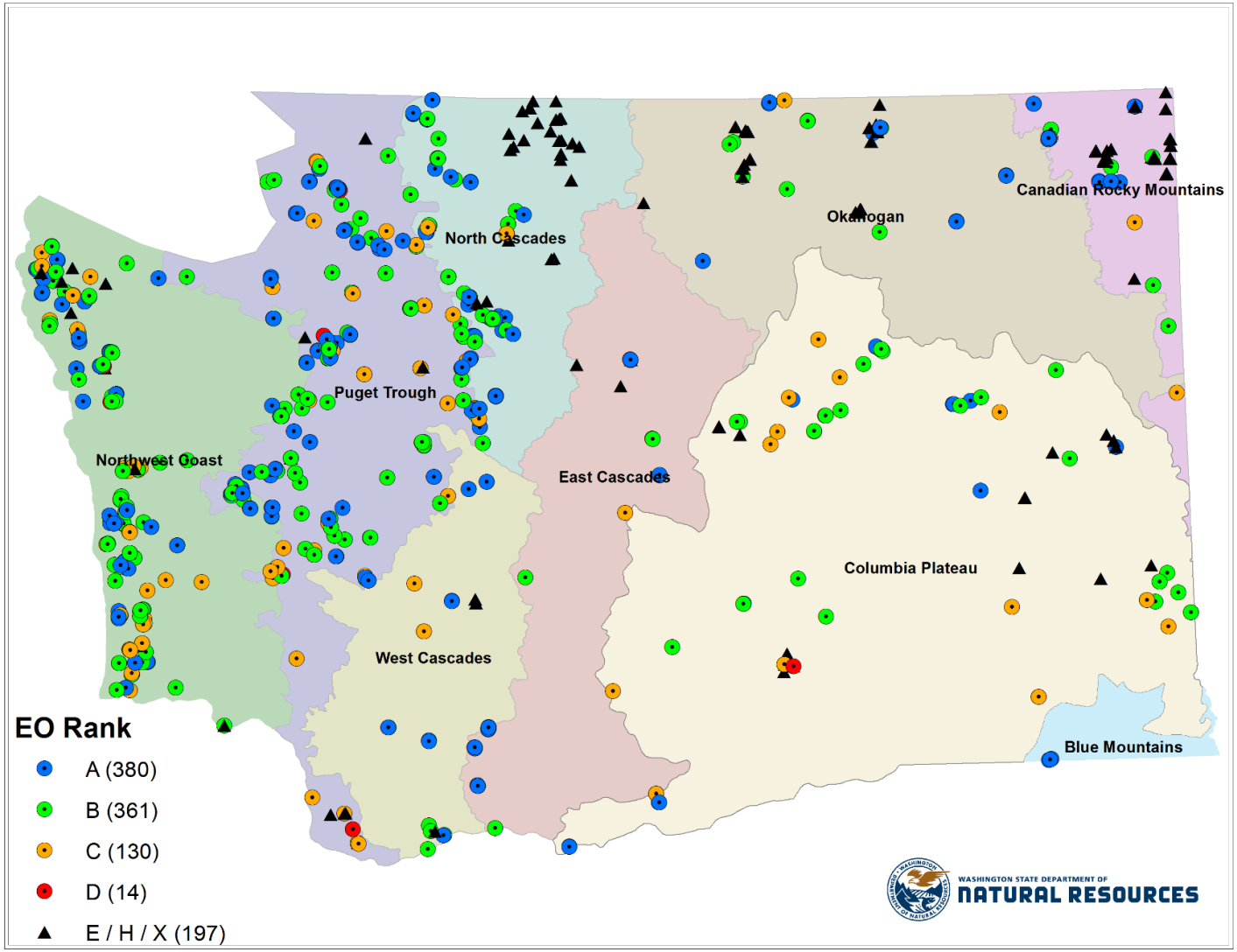

Figure 7. Range of Ecological Conditions of WNHP Element Occurrences. EORANK definitions: A = Excellent ecological integrity; B = good ecological integrity; C = fair ecological integrity; D = poor ecological integrity; E = extant but ecological integrity unknown; H = historical records and ecological integrity unknown; and X = extirpated

Table 8. Number of Reference Standard Sites by Ecoregion and Wetland Type

Blue Mountains Ecoregion	**# of Reference Standard Sites**
Riparian Forest	**3**
North Pacific Interior Montane Riparian Forest	3
Canadian Rocky Mountains Ecoregion	**# of Reference Standard Sites**
Aquatic Bed	
Intermountain & Montane West Freshwater Aquatic Vegetation	1
Fen	
Rocky Mountain Calcareous Fen	4
Rocky Mountain Intermediate Fen	28
Rocky Mountain Patterned Fen	3
Rocky Mountain Poor Fen	6
Rocky Mountain Shrub Carr	6
Forested Swamp	
Rocky Mountain Conifer Basin Swamp	1
Rocky Mountain Conifer Seepage Swamp	2
Marshes and Wet Meadows	
Columbia Plateau Basin Marsh	2
Rocky Mountain Montane Basin Marsh & Wet Meadow	10
Rocky Mountain Montane Streamside Marsh & Wet Meadow	2
Riparian Forest	
Rocky Mountain Headwater Riparian Forest	4
Rocky Mountain Perennial Riparian Forest	1
Riparian Shrubland	
Rocky Mountain Perennial Riparian Shrubland	1
Shrub Swamp	
Rocky Mountain Shrub Basin Swamp	4

Rocky Mountain Shrub Seepage Swamp	1
Columbia Plateau Ecoregion	**# of Reference Standard Sites**
Fen	
Columbia Plateau Alkaline Fen & Seep	4
Forested Swamp	
Columbia Plateau Forested Depressional Wetland	3
Interior Alkaline Wetland	
Columbia Plateau Alkaline Wet Meadow	4
Columbia Plateau Greasewood Flat	2
Columbia Plateau Salt Flat	2
Marshes and Wet Meadows	
Columbia Plateau Basin Marsh	5
Columbia Plateau Wet Meadow	1
Palouse Wet Meadow	1
Rocky Mountain Montane Basin Marsh & Wet Meadow	2
Riparian Forest	
Columbia Plateau Headwater Riparian Woodland	3
Columbia Plateau Intermittent Riparian Woodland	1
Columbia Plateau Perennial Riparian Woodland	4
Rocky Mountain Headwater Riparian Forest	4
Riparian Shrubland	
Columbia Plateau Headwater Riparian Shrubland	7
Columbia Plateau Intermittent Riparian Shrubland	4
Columbia Plateau Perennial Riparian Shrubland	9
Rocky Mountain Perennial Riparian Shrubland	1
Seep & Spring	
Columbia Plateau Seep & Spring	1

Vernal Pools	**7**
Columbia Plateau Vernal Pool	7
East Cascades Ecoregion	**# of Reference Standard Sites**
Fen	
North Pacific Montane Intermediate Fen	7
Rocky Mountain Intermediate Fen	7
Rocky Mountain Poor Fen	2
Rocky Mountain Shrub Carr	1
Forested Swamp	
North Pacific Conifer Seepage Swamp	2
Marshes and Wet Meadows	
Vancouverian Montane Basin Marsh & Wet Meadow	1
Riparian Forest	
Columbia Plateau Intermittent Riparian Woodland	1
Riparian Shrubland	
Vancouverian Headwater Riparian Shrubland	1
Seep & Spring	
Rocky Mountain Montane Seep & Spring	3
North Cascades Ecoregion	**# of Reference Standard Sites**
Aquatic Bed	
North Pacific Freshwater Aquatic Vegetation	1
Bog	
North Pacific Bog Woodland	2
North Pacific Open Flat Bog	1
North Pacific Open Transitional Bog	2
Fen	
North Pacific Lowland Intermediate Fen	2

North Pacific Lowland Poor Fen	3
North Pacific Montane Intermediate Fen	5
North Pacific Montane Poor Fen	4
North Pacific Serpentine Fen	3
Forested Swamp	
North Pacific Conifer Basin Swamp	2
North Pacific Conifer Seepage Swamp	11
Marshes and Wet Meadows	
Vancouverian Lagg Marsh	1
Vancouverian Lowland Basin Marsh	1
Vancouverian Montane Basin Marsh & Wet Meadow	7
Riparian Forest	
North Pacific Lowland Floodplain Forest	8
North Pacific Lowland Headwater Riparian Forest	1
Riparian Shrubland	
Vancouverian Headwater Riparian Shrubland	15
Seep & Spring	
Vancouverian Alpine-Subalpine Seep & Spring	11
Shrub Swamp	
Vancouverian Shrub Basin Swamp	1
Northwest Coast Ecoregion	**# of Reference Standard Sites**
Aquatic Bed	
North Pacific Freshwater Aquatic Vegetation	2
Bog	
North Pacific Coastal Bog Woodland	23
North Pacific Open Flat Bog	14
North Pacific Open Transitional Bog	8

North Pacific Raised Bog	2
North Pacific Raised Bog Woodland	1
Coastal Salt Marsh	
Temperate Pacific High Brackish Marsh	24
Temperate Pacific Low Salt Marsh	19
Fen	
North Pacific Lowland Intermediate Fen	5
North Pacific Lowland Poor Fen	18
North Pacific Transitional Poor Fen	2
Forested Swamp	
North Pacific Conifer Basin Swamp	5
North Pacific Conifer Seepage Swamp	6
Freshwater Tidal	
North Pacific Freshwater Tidal Surge Plain Forested Swamp	8
Vancouverian Freshwater Tidal Surge Plain Marsh	8
Vancouverian Tidal Surge Plain Shrub Swamp	2
Interdunal Wetland	**7**
North Pacific Interdunal Conifer Swamp	1
Vancouverian Interdunal Marsh	2
Vancouverian Interdunal Shrub Swamp	4
Marshes and Wet Meadows	
Vancouverian Lowland Basin Marsh	3
Riparian Forest	
North Pacific Lowland Floodplain Forest	1
Seep & Spring	
Vancouverian Lowland Seep & Spring	1
Shrub Swamp	

Vancouverian Lagg Shrub Swamp	1
Vancouverian Shrub Basin Swamp	7
Vancouverian Shrub Seepage Swamp	2
Okanogan Ecoregion	**# of Reference Standard Sites**
Fen	
Rocky Mountain Calcareous Fen	4
Rocky Mountain Calcareous Swamp	1
Rocky Mountain Intermediate Fen	18
Rocky Mountain Poor Fen	6
Rocky Mountain Shrub Carr	7
Forested Swamp	
Rocky Mountain Conifer Basin Swamp	2
Rocky Mountain Conifer Seepage Swamp	2
Interior Alkaline Wetland	
Columbia Plateau Alkaline Wet Meadow	1
Marshes and Wet Meadows	
Columbia Plateau Basin Marsh	2
Rocky Mountain Montane Basin Marsh & Wet Meadow	3
Riparian Forest	
Rocky Mountain Headwater Riparian Forest	2
Rocky Mountain Perennial Riparian Forest	2
Riparian Shrubland	
Columbia Plateau Perennial Riparian Shrubland	1
Rocky Mountain Headwater Riparian Shrubland	1
Vancouverian Headwater Riparian Shrubland	1
Seep & Spring	
Rocky Mountain Montane Seep & Spring	1

Shrub Swamp	
Rocky Mountain Shrub Basin Swamp	1
Puget Trough Ecoregion	**# of Reference Standard Sites**
Aquatic Bed	
North Pacific Freshwater Aquatic Vegetation	15
Bog	
North Pacific Bog Woodland	12
North Pacific Open Flat Bog	14
North Pacific Open Transitional Bog	3
Coastal Salt Marsh	
Temperate Pacific High Brackish Marsh	8
Temperate Pacific Low Salt Marsh	21
Temperate Pacific Tidal High Salinity Lagoon	2
Temperate Pacific Tidal Low Salinity Lagoon	1
Fen	
North Pacific Lowland Intermediate Fen	4
North Pacific Lowland Poor Fen	16
North Pacific Serpentine Fen	13
North Pacific Transitional Poor Fen	3
Forested Swamp	
North Pacific Conifer Basin Swamp	1
North Pacific Conifer Seepage Swamp	2
North Pacific Hardwood Basin Swamp	6
Freshwater Tidal	
Vancouverian Freshwater Tidal Surge Plain Marsh	2
Marshes and Wet Meadows	
Vancouverian Lowland Basin Marsh	11

Vancouverian Lowland Streamside Marsh	1
Vancouverian Montane Basin Marsh & Wet Meadow	1
Vancouverian Wet Prairie	6
Riparian Forest	
North Pacific Lowland Floodplain Forest	12
North Pacific Lowland Headwater Riparian Forest	1
Shrub Swamp	
Vancouverian Lagg Shrub Swamp	10
Vancouverian Shrub Basin Swamp	12
Vancouverian Shrub Seepage Swamp	1
West Cascades Ecoregion	**# of Reference Standard Sites**
Aquatic Bed	
North Pacific Freshwater Aquatic Vegetation	1
Fen	
North Pacific Lowland Intermediate Fen	1
North Pacific Lowland Poor Fen	2
North Pacific Montane Intermediate Fen	5
Forested Swamp	
North Pacific Conifer Seepage Swamp	2
North Pacific Hardwood Basin Swamp	1
North Pacific Hardwood Seepage Swamp	2
Marshes and Wet Meadows	
Vancouverian Lowland Basin Marsh	2
Vancouverian Montane Basin Marsh & Wet Meadow	3
Riparian Forest	
North Pacific Lowland Floodplain Forest	1
Riparian Shrubland	

Vancouverian Headwater Riparian Shrubland	1
Seep & Spring	
Vancouverian Alpine-Subalpine Seep & Spring	1
Vancouverian Lowland Seep & Spring	1
Shrub Swamp	
Rocky Mountain Shrub Basin Swamp	1
Vancouverian Shrub Basin Swamp	2

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Appendix A: Reference Standard Wetlands of Washington State

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Columbia Plateau Alkaline Fen & Seep								
Carex diandra / Hamatocaulis vernicosus Fen	B	Fishtrap Lake Bog	Spokane County	Bureau of Land Management	USDOI	022N040E S31	17060108 - Palouse	9225
Carex interior - Carex hystericina Seep	AB	Borden Springs	Yakima County	Yakima Training Center	USDOD	014N023E S06	17020016 - Upper Columbia-Priest Rapids	9080
Carex simulata Fen	C	Moxee Bog	Yakima County	Moxee Bog Preserve	TNC	012N019E S09	17030003 - Lower Yakima, Washington	9100
Eleocharis rostellata - Epipactis gigantea Seep	B	Borden Springs	Yakima County	Yakima Training Center	USDOD	014N023E S06	17020016 - Upper Columbia-Priest Rapids	9087
Columbia Plateau Alkaline Wet Meadow								
Distichlis spicata - (Scirpus nevadensis) Alkaline Wet Meadow	BC	Grand Coulee salt meadow	Grant County	State Trust Lands	WADNR	024N027E S16	17020014 - Banks Lake	8968
	B	Lake Lanore Depression	Grant County	Sun Lake Wildlife Area	USFWS	023N026E S12	17020014 - Banks Lake	8964
Distichlis spicata / Carex (praegracilis, douglasii) Alkaline Wet Meadow	no reference standard site identified							
Distichlis spicata Alkaline Wet Meadow	BC	Steamboat Rock State Park	Grant County	Steamboat Rock State Park	WDFW	027N030E S05 N2 | 027N030E S04 W2OFNW	17020014 - Banks Lake	5551
	AB	Borden Springs	Yakima County	Yakima Training Center	USDOD	014N023E S06	17020016 - Upper	9086

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
							Columbia-Priest Rapids	
Eleocharis rostellata Herbaceous Vegetation	BC	Wannacutt Lake	Okanogan County	n/a	Private	039N026E S11	17020006 - Okanogan	8945
Hordeum jubatum Great Basin Wet Meadow	no reference standard site identified							
Leymus cinereus - Carex praegracilis Alkaline Wet Meadow	no reference standard site identified							
Leymus cinereus - Distichlis spicata Alkaline Wet Meadow	no reference standard site identified							
Leymus cinereus Alkaline Wet Meadow	no reference standard site identified							
Puccinellia nuttalliana Alkaline Wet Meadow	no reference standard site identified							
Sporobolus airoides Northern Intermountain Alkaline Wet Meadow	no reference standard site identified							
Columbia Plateau Basin Marsh								
Carex atherodes Western Wet Meadow	B	Myers Creek	Okanogan County	n/a	Private	040N030E S15 | 040N030E S16	17020002 - Kettle	9218
Eleocharis palustris Arid Marsh	E	Pine Creek RNA	Spokane County	Pine Creek Research Natural Area (Turnbull National Wildlife Refuge)	USFWS	022N042E S05 | 022N042E S04 | 022N042E S08 | 022N042E S09 | 023N042E S32	17060109 - Rock	1395

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Castle Rock	Grant County	Castle Rock Natural Area Preserve | Steamboat Rock State Park	State Parks | BLM	028N030E S31 SE	17020014 - Banks Lake	3677
Schoenoplectus acutus Marsh	no reference standard site identified							
Schoenoplectus americanus Western Marsh	B	Lake Lenore	Grant County	Sun Lake Wildlife Area	USFWS	023N026E S12	17020014 - Banks Lake	8963
Schoenoplectus maritimus Marsh	C	Lenton Flat	Okanogan County	n/a	Private	040N025E S03 | 040N025E S10	17020007 - Similkameen	6371
Schoenoplectus tabernaemontani Temperate Marsh	A	Halliday Fen	Pend Oreille County	Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31	17010216 - Pend Oreille	9136
Scirpus microcarpus Marsh	no reference standard site identified							
Typha latifolia Western Marsh	E	Turnbull Pines RNA	Spokane County	Turnbull Pine Research Natural Area (Turnbull National Wildlife Refuge)	USFWS	023N041E S25	17010306 - Hangman | 17060108 - Palouse	1594
	E	Pine Creek RNA		Pine Creek Research Natural Area (Turnbull National Wildlife Refuge)	USFWS	022N042E S05 | 022N042E S04 | 022N042E S08 | 022N042E S09 |	17060109 - Rock	4051

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						023N042E S32		
	A	O'Toole Lake	Stevens County	State Trust Lands	WADNR	038N039E S16	17020001 - Franklin D. Roosevelt Lake	8982
Columbia Plateau Forested Depressional Wetland								
(Populus tremuloides) / Crataegus douglasii / Symphoricarpos albus Wet Shrubland	B	Hog Lake	Spokane County	Bureau of Land Management | n/a	USDOI | Private	022N040E S19	17060108 - Palouse	9261
Populus tremuloides / Calamagrostis canadensis Swamp Forest	no reference standard site identified							
Populus tremuloides / Carex pellita Swamp Forest	no reference standard site identified							
Populus tremuloides / Cornus sericea Riparian Forest	B	Hog Lake	Spokane County	Bureau of Land Management	USDOI	022N040E S19	17060108 - Palouse	9260
Populus tremuloides / Symphoricarpos albus Riparian Forest	B	Turnbull NWR	Spokane County	Turnbull National Wildlife Refuge	USFWS	023N042E S30	17060108 - Palouse	9257
Columbia Plateau Greasewood Flat								
Sarcobatus vermiculatus / Distichlis spicata Wet Shrubland	BC	Crab Creek NAP	Grant County	Lower Crab Creek Natural Area Preserve (Crab Creek State Wildlife Area)	WDFW	016N025E S25 | 016N026E S30	17020015 - Lower Crab	2484
	BC	Grand Coulee salt meadow		State Trust Lands	WADNR	024N027E S15 | 024N027E S16	17020014 - Banks Lake	8969
Sarcobatus vermiculatus / Leymus cinereus Shrubland	no reference standard site identified							
Columbia Plateau Headwater Riparian Shrubland								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
(Populus tremuloides) / Crataegus douglasii / Heracleum maximum Wet Shrubland	BC	Little Bald Butte Thicket	Whitman County	n/a	Private	013N046E S06 N2OFNE | 013N046E S05 | 014N046E S31	17060108 - Palouse	6976
(Populus tremuloides) / Crataegus douglasii / Symphoricarpos albus Wet Shrubland	BC	Campus Prairie BSA	Whitman County	Campus Prairie Biological Study Area	WSU	014N045E S04 NEOFNE | 014N045E S03 | 015N045E S33 | 015N045E S34	17060108 - Palouse	3689
	BC	Little Bald Butte Thicket		n/a	Private	013N046E S06 N2OFNE | 013N046E S05 | 014N046E S31	17060108 - Palouse	1130
Amelanchier alnifolia - Philadelphus lewisii / Pseudoroegneria spicata Wet Shrubland	no reference standard site identified							
Amelanchier alnifolia / Toxicodendron rydbergii Wet Shrubland	E	Lost Lake Creek	Adams County	State Trust Lands	WADNR	016N037E S16 SEOFSW | 016N037E S21	17060108 - Palouse	2871
Betula occidentalis / Cornus sericea Wet Shrubland	no reference standard site identified							
Betula occidentalis / Philadelphus lewisii Wet Shrubland	no reference standard site identified							
Betula occidentalis / Rosa woodsii Wet Shrubland	no reference standard site identified							
Celtis laevigata var. reticulata / Toxicodendron rydbergii Wet Scrub	no reference standard site identified							

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Crataegus douglasii / Rosa woodsii Wet Shrubland	C	Upper Alamota Canyon	Whitman County	n/a	Private	014N043E S12 S2OFS2 | 014N043E S11 SE	17060107 - Lower Snake-Tucannon	3819
Philadelphus lewisii / Clematis ligusticifolia Wet Shrubland	C	Benson Spring	Benton County	Saddle Mountain National Wildlife Refuge	USFWS	011N025E S10 | 011N025E S11	17030003 - Lower Yakima, Washington	9161
	C	Upper Snively Spring				011N025E S20	17030003 - Lower Yakima, Washington	9163
Philadelphus lewisii Wet Shrubland	no reference standard site identified							
Salix exigua / Mesic Graminoids Western Wet Shrubland	no reference standard site identified							
Columbia Plateau Headwater Riparian Woodland								
Alnus rhombifolia / Philadelphus lewisii Riparian Forest	AB	Badger Gulch Riparian	Klickitat County	Badger Gulch Natural Area Preserve	WADNR | Private	004N018E S10	17070101 - Middle Columbia-Lake Wallula	6872
Populus balsamifera ssp. trichocarpa - Alnus rhombifolia Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa - Betula occidentalis / Philadelphus lewisii Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Acer glabrum Riparian Woodland	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Alnus incana - Cornus sericea Riparian Forest	BC	Spring Creek	Lincoln County	Spring Creek Canyon Natural Area Preserve	WADNR	026N039E S16 SE	17010307 - Lower Spokane	4480
Populus balsamifera ssp. trichocarpa / Alnus incana Riparian Forest	no reference standard site identified							

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Populus balsamifera ssp. trichocarpa / Cornus sericea Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Crataegus douglasii Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Philadelphus lewisii Riparian Forest	no reference standard site identified							
Pseudotsuga menziesii / Symphoricarpos albus Riparian Woodland	no reference standard site identified							
Quercus garryana / Elymus glaucus Woodland	AB	Badger Gulch Riparian	Klickitat County	Badger Gulch Natural Area Preserve	WADNR	004N018E S10	17070101 - Middle Columbia-Lake Wallula	9075
Columbia Plateau Intermittent Riparian Shrubland								
Acer glabrum var. douglasii - (Symphoricarpos albus) Wet Shrubland	no reference standard site identified							
Amelanchier alnifolia - Philadelphus lewisii / Pseudoroegneria spicata Wet Shrubland	no reference standard site identified							
Amelanchier alnifolia / Toxicodendron rydbergii Wet Shrubland	no reference standard site identified							
Betula occidentalis - Celtis laevigata var. reticulata Wet Shrubland	no reference standard site identified							
Betula occidentalis / Crataegus douglasii Wet Shrubland	BC	Upper Alamota Canyon	Whitman County	n/a	Private	014N043E S12 S2OFS2 | 014N043E S11 SE	17060107 - Lower Snake-Tucannon	2393
Betula occidentalis / Equisetum arvense Wet Shrubland [Provisional]	no reference standard site identified							
Betula occidentalis / Philadelphus lewisii - Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Betula occidentalis / Rosa woodsii Wet Shrubland	no reference standard site identified							
Celtis laevigata var. reticulata / Philadelphus lewisii Wet Scrub	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Crataegus douglasii / Rosa woodsii Wet Shrubland	A	Titchenal Canyon	Douglas County	n/a	Private	024N022E S25 | 024N023E S30	17020012 - Moses Coulee	1124
Philadelphus lewisii / Clematis ligusticifolia Wet Shrubland	no reference standard site identified							
Philadelphus lewisii / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Philadelphus lewisii Wet Shrubland	B	Hanging Valley | Ladds Creek	Grant County	North Columbia Basin State Wildlife Area - Banks Lake Unit	WDFW	027N029E S28 SEOFSE	17020014 - Banks Lake	6376
Prunus virginiana Wet Shrubland	B	Titchenal Canyon	Douglas County	n/a	Private	024N023E S30	17020012 - Moses Coulee	9263
Columbia Plateau Oak Riparian Woodland								
Quercus garryana / Elymus glaucus Woodland	CD	Fort Simcoe Oaks	Yakima County	Fort Simcoe State Park	State Parks	010N016E S21 NW	17030003 - Lower Yakima, Washington	6382
Quercus garryana / Symphoricarpos albus Riparian Woodland	B	Columbia Tunnels	Skamania County	Columbia River Gorge National Scenic Area	Private	003N010E S29 NWOFNW	17070105 - Middle Columbia-Hood	4525
Columbia Plateau Western Juniper Riparian Woodland								
Juniperus occidentalis / Artemisia tridentata / Pseudoroegneria spicata Wooded Grassland	no reference standard site identified							
Juniperus occidentalis / Philadelphus lewisii - Salix lasiolepis Riparian Woodland [Provisional]	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Columbia Plateau Perennial Riparian Shrubland								
(Populus tremuloides) / Crataegus douglasii / Heracleum maximum Wet Shrubland	B	Rose Creek Preserve	Whitman County	Rose Creek Preserve	TNC	016N044E S36 S2OFSE	17060108 - Palouse	360
(Populus tremuloides) / Crataegus douglasii / Symphoricarpos albus Wet Shrubland	BC	Albion Eyebrow	Whitman County	n/a	Private	015N044E S15 S2OFNW	17060108 - Palouse	6867
Betula occidentalis / Cornus sericea Wet Shrubland	B	Coulee Creek	Okanogan County	Sinlahekin State Wildlife Area | Okanogan National Forest	WDFW | NPS	036N025E S27 | 036N025E S26	17020006 - Okanogan	8947
	B	Titchenal Canyon	Douglas County	n/a	Private	024N023E S30 N2	17020012 - Moses Coulee	1162
Betula occidentalis / Equisetum arvense Wet Shrubland [Provisional]	no reference standard site identified							
Betula occidentalis / Maianthemum stellatum Wet Shrubland	no reference standard site identified							
Betula occidentalis / Philadelphus lewisii - Symphoricarpos albus Wet Shrubland	B	McCartney Creek	Douglas County	n/a	Private	023N024E S12 SE | 023N025E S07 NW	17020012 - Moses Coulee	6806
Betula occidentalis / Philadelphus lewisii Wet Shrubland	no reference standard site identified							
Betula occidentalis / Rosa woodsii Wet Shrubland	no reference standard site identified							
Celtis laevigata var. reticulata / Philadelphus lewisii Wet Scrub	no reference standard site identified							
Crataegus douglasii / Rosa woodsii Wet Shrubland	no reference standard site identified							
Philadelphus lewisii / Clematis ligusticifolia Wet Shrubland	CD	McCartney Creek	Douglas County	n/a	Private	023N024E S12 SE | 023N025E S07 NW	17020012 - Moses Coulee	1456

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Philadelphus lewisii / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Philadelphus lewisii Wet Shrubland	no reference standard site identified							
Rhamnus alnifolia Riparian Wet Shrubland	no reference standard site identified							
Salix (melanopsis, sitchensis) Alluvial Bar Shrubland	no reference standard site identified							
Salix exigua / Equisetum arvense Wet Shrubland	B	Dryfalls Pothole	Grant County	State Trust Lands	WADNR	024N028E S08	17020014 - Banks Lake	8972
Salix exigua / Gravel Bar Wet Shrubland	no reference standard site identified							
Salix exigua Riparian Wet Shrubland	C	Palouse Canyon	Franklin County	Palouse Falls State Park	State Parks	014N036E S13 | 014N037E S18 W2 | 014N036E S01 | 014N036E S12 E2 | 014N037E S19 | 014N037E S30	17060108 - Palouse	5408
Salix lasiolepis / Barren Ground Wet Shrubland	no reference standard site identified							
Salix lucida ssp. caudata Wet Shrubland	C	Upper Alamota Canyon	Whitman County	n/a	Private	014N043E S12 S2OFS2 | 014N043E S11 SE	17060107 - Lower Snake-Tucannon	3304
Salix lutea - Salix exigua Wet Shrubland	no reference standard site identified							
Salix lutea / Cornus sericea Wet Shrubland	C	Rock Island Creek	Douglas County	State Trust Lands	WADNR	024N021E S36	17020010 - Upper Columbia-Entiat	9164

Columbia Plateau Perennial Riparian Woodland

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Acer macrophyllum / Holodiscus discolor Riparian Woodland	no reference standard site identified							
Alnus rhombifolia / Betula occidentalis Riparian Forest	no reference standard site identified							
Alnus rhombifolia / Celtis laevigata var. reticulata Riparian Forest	no reference standard site identified							
Alnus rhombifolia / Cornus sericea Riparian Forest	no reference standard site identified							
Alnus rhombifolia / Equisetum arvense Riparian Forest	no reference standard site identified							
Alnus rhombifolia / Philadelphus lewisii Riparian Forest	no reference standard site identified							
Pinus ponderosa / Lomatium nudicaule Riparian Woodland	no reference standard site identified							
Pinus ponderosa / Symphoricarpos albus Riparian Woodland	BC	Northrup Creek Riparian	Grant County	Steamboat Rock State Park	WDFW	027N030E S04	17020014 - Banks Lake	3846
Populus balsamifera (ssp. trichocarpa, ssp. balsamifera) / Symphoricarpos (albus, oreophilus, occidentalis) Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa - Alnus rhombifolia Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa - Betula occidentalis / Philadelphus lewisii Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Acer glabrum Riparian Woodland	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Alnus incana - Cornus sericea Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Alnus incana Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Cicuta douglasii Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Populus balsamifera ssp. trichocarpa / Cornus sericea Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Crataegus douglasii Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Equisetum hyemale Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Juniperus scopulorum Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Philadelphus lewisii Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Salix exigua Riparian Forest	C	Dry Creek	Benton County	Rattlesnake Hills Research Natural Area (Arid Lands Ecology Reserve)	USFWS	012N025E S21 S2 | 012N025E S20 SEOFSE | 012N025E S29 N2OFNE	17030003 - Lower Yakima, Washington	4124
	CD	Snively Spring				011N025E S08	17030003 - Lower Yakima, Washington	1314
Populus balsamifera ssp. trichocarpa / Salix lucida ssp. caudata Riparian Woodland	no reference standard site identified							
Pseudotsuga menziesii / Symphoricarpos albus Riparian Woodland	no reference standard site identified							
Pseudotsuga menziesii / Trautvetteria caroliniensis Riparian Woodland	no reference standard site identified							
Quercus garryana / Corylus cornuta - Symphoricarpos albus Riparian Woodland	no reference standard site identified							
Quercus garryana / Symphoricarpos albus Riparian Woodland	no reference standard site identified							
Salix amygdaloides / Salix exigua Riparian Woodland	C	Dutch Henry Draw	Douglas County	Moses Coulee Preserve	TNC	025N025E S15 SWOFSE	17020012 - Moses Coulee	3524

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Columbia Plateau Salt Flat								
Distichlis spicata Alkaline Wet Meadow	BC	Grand Coule Salt Meadow	Grant County	State Trust Lands	WADNR	024N027E S16 SEOFSE	17020014 - Banks Lake	5110
	A	Hatten Rd	Lincoln County	Swanson Lakes State Wildlife Area	WDFW	025N034E S31	17020013 - Upper Crab	8938
Puccinellia nuttalliana Alkaline Wet Meadow	no reference standard site identified							
Salicornia rubra Salt Flat	no reference standard site identified							
Spartina gracilis Alkaline Wet Meadow	no reference standard site identified							
Suaeda (calceoliformis, moquinii) Salt Flat	no reference standard site identified							
Columbia Plateau Seep & Spring								
Carex nebrascensis - Argentina anserina Wet Meadow	no reference standard site identified							
Carex pellita - Argentina anserina Wet Meadow	no reference standard site identified							
Carex pellita - Eleocharis palustris Marsh	no reference standard site identified							
Carex praegracilis Wet Meadow	no reference standard site identified							
Carex utriculata - Mimulus guttatus Marsh [Provisional]	no reference standard site identified							
Deschampsia caespitosa - Juncus balticus Wet Meadow	C	Kruger Meadow	Lincoln County	State Trust Lands	WADNR	024N036E S16 SEOFNE | 024N036E S15	17020013 - Upper Crab	4053
Equisetum arvense - Juncus balticus Wet Meadow	no reference standard site identified							
Hordeum brachyantherum Lowland Wet Meadow	no reference standard site identified							
Juncus balticus - Argentina anserina Wet Meadow	no reference standard site identified							
Phragmites australis ssp. americanus Western Native Marsh	no reference standard site identified							
Scirpus microcarpus Marsh	no reference standard site identified							

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Columbia Plateau Streamside Marsh								
Bolboschoenus fluviatilis Western Marsh	no reference standard site identified							
Carex nebrascensis - Argentina anserina Wet Meadow	no reference standard site identified							
Carex pellita - Argentina anserina Wet Meadow	no reference standard site identified							
Carex pellita - Eleocharis palustris Marsh	no reference standard site identified							
Carex utriculata - Mimulus guttatus Marsh [Provisional]	no reference standard site identified							
Eleocharis palustris Arid Marsh	no reference standard site identified							
Equisetum arvense - Juncus balticus Wet Meadow	no reference standard site identified							
Juncus balticus - Argentina anserina Wet Meadow	no reference standard site identified							
Phragmites australis ssp. americanus Western Native Marsh	no reference standard site identified							
Schoenoplectus acutus Marsh	no reference standard site identified							
Scirpus microcarpus Marsh	no reference standard site identified							
Spartina pectinata Western Wet Meadow	no reference standard site identified							
Typha latifolia Western Marsh	no reference standard site identified							
Columbia Plateau Vernal Pool								
Danthonia unispicata - Poa secunda Wet Meadow	no reference standard site identified							
Deschampsia danthonioides - Grindelia (hirsutula, squarrosa) Vernal Pool [Provisional]	no reference standard site identified							
Deschampsia danthonioides - Juncus bufonius Vernal Pool [Provisional]	no reference standard site identified							
Deschampsia danthonioides Vernal Pool [Provisional]	E	Stubblefield, Turnbull NWR	Spokane County	Turbull National Wildlife Refuge	USFWS	022N042E S16	17060109 - Rock	9113

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	BC	Seven Springs Dairy Rd | Swanson Lakes WA	Lincoln County	Swanson Lakes State Wildlife Area	WDFW	024N034E S04	17020013 - Upper Crab	8931
	B	Horsethief Lake State Park	Klickitat County	Columbia River Gorge National Scenic Area | Columbia Hills Historical State Park	State Parks	002N014E S19	17070105 - Middle Columbia-Hood	8967
Eleocharis macrostachya - (Eleocharis acicularis, Carex douglasii) Vernal Pool	no reference standard site identified							
Eleocharis palustris Vernal Pool	AB	Marcellus Shrub-steppe	Adams County	Marcellus Shrub Steppe Natural Area Preserve	WADNR	020N035E S10 | 020N035E S16 | 020N035E S17 | 020N035E S20 | 020N035E S21 | 020N035E S22 | 020N035E S15	17020013 - Upper Crab | 17020015 - Lower Crab	5457
	A	Grant road windmill	Lincoln County	Swanson Lakes State Wildlife Area	WDFW	025N034E S36 | 025N034E S25	17020013 - Upper Crab	8936
	A	Hatton-Hanley vernal pool				025N034E S31 | 024N034E S06 | 025N034E S32	17020013 - Upper Crab	8942

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Horsethief vernal pool	Klickitat County	Columbia River Gorge National Scenic Area | Columbia Hills Historical State Park	State Parks	002N014E S19	17070105 - Middle Columbia-Hood	8966
Navarretia leucocephala - Plagiobothrys leptocladus - (Downingia spp.) Vernal Pool	no reference standard site identified							
Polygonum polygaloides Vernal Pool	no reference standard site identified							
Columbia Plateau Wash								
No associations identified	no reference standard site identified							
Columbia Plateau Wet Meadow								
Apocynum cannabinum - Artemisia (lindleyana, ludoviciana) Wet Meadow	no reference standard site identified							
Artemisia ludoviciana Wet Meadow	no reference standard site identified							
Carex praegracilis Wet Meadow	B	Hatton - Hanley	Lincoln County	Swanson Lakes State Wildlife Area	WDFW	025N034E S31	17020013 - Upper Crab	8940
Hordeum brachyantherum Lowland Wet Meadow	no reference standard site identified							
Juncus balticus - Argentina anserina Wet Meadow	no reference standard site identified							
Lomatium grayi Wet Meadow	no reference standard site identified							
Columbia Plateau Wooded Vernal Pool								
Pinus ponderosa / Camassia quamash Woodland	no reference standard site identified							
Pinus ponderosa / Lomatium nudicaule Woodland	no reference standard site identified							
Intermountain & Montane West Freshwater Aquatic Vegetation								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Azolla (filiculoides, mexicana) Aquatic Vegetation	no reference standard site identified							
Callitriche (heterophylla, palustris) Aquatic Vegetation	no reference standard site identified							
Ceratophyllum demersum Western Aquatic Vegetation	no reference standard site identified							
Elodea canadensis Aquatic Vegetation	no reference standard site identified							
Menyanthes trifoliata Aquatic Vegetation	no reference standard site identified							
Nuphar polysepala Aquatic Vegetation	AB	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30 SEOFSW	17020003 - Colville	3294
Polygonum amphibium Aquatic Vegetation [Placeholder]	no reference standard site identified							
Potamogeton (foliosus, gramineus) - (Stuckenia filiformis) Aquatic Vegetation	no reference standard site identified							
Potamogeton amplifolius Aquatic Vegetation	no reference standard site identified							
Potamogeton natans Aquatic Vegetation	no reference standard site identified							
Ranunculus aquatilis Aquatic Vegetation	no reference standard site identified							
Sparganium angustifolium Aquatic Vegetation	no reference standard site identified							
Sparganium eurycarpum Aquatic Vegetation	no reference standard site identified							
North Pacific Bog Woodland								
Pinus contorta var. contorta - Betula papyrifera / Ledum groenlandicum Treed Bog [Provisional]	no reference standard site identified							
	A	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks	034N001E S35 W2	17110019 - Puget Sound	63

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Pinus contorta var. contorta / Ledum groenlandicum / Sphagnum spp. Treed Bog	AB	Tony's Bog		Dugalla Bay State Park	State Parks	033N002E S16 SW | 033N002E S21 NWOFNW	17110019 - Puget Sound	675
	A	Cranberry Lake, Mason County	Mason County	n/a	Private	021N003W S30 N2 | 021N003W S29 | 021N003W S28	17110019 - Puget Sound	4607
	A	Shumocher Creek		Shumacher Creek Natural Area Preserve	WADNR	021N003W S16 N2	17110019 - Puget Sound	1773
	A	Wood's Lake	Snohomish County	State Trust Lands	WADNR	028N008E S07 SW | 028N007E S12 E2OFSE | 028N008E S18 NWOFNW | 028N007E S13	17110009 - Skykomish	6898
Pinus monticola / Ledum groenlandicum / Sphagnum spp. Treed Bog	no reference standard site identified							
Tsuga heterophylla - (Thuja plicata) / Ledum groenlandicum / Sphagnum spp. Treed Bog	A	Johnson Creek Island Bog	Skagit County	n/a	Private	033N004E S14 N2	17110007 - Lower Skagit	1134
	A	Black Diamond Lake	King County	n/a	Private	021N006E S22 SEOFNE | 021N006E S23 NWOFNW | 021N006E S14 | 021N006E S15	17110013 - Duwamish	1049

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Kings Lake Bog		Kings Lake Bog Natural Area Preserve	WADNR	024N008E S04 E2OFNE | 025N008E S33 SEOFSE | 025N008E S34 SWOFSW | 024N008E S03 W2OFW2	17110010 - Snoqualmie	1000
	AB	Snoqualmie Bog		Snoqualmie Bog Natural Area Preserve	WADNR | Private	025N009E S11 E2OFSW | 025N009E S14	17110010 - Snoqualmie	6566
	AB	Collage Bog	Mason County	n/a	Private	020N005W S26 NW	17100104 - Lower Chehalis	1135
	A	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S10	17110009 - Skykomish	8765
	AB	Robe Bog		State Trust Lands | n/a	WADNR | Private	030N008E S08 N2	17110008 - Stillaguamish	5536
Tsuga heterophylla - (Thuja plicata) / Sphagnum spp. Treed Bog	A	Black Diamond Lake	King County	n/a	Private	021N006E S22 SEOFNE | 021N006E S23 NWOFNW | 021N006E S14 | 021N006E S15	17110013 - Duwamish	3995
	B	Lake Desire Bog Forest		McGarvey Park Open Space | Private	Municipal | Private	023N005E S25 SE	17110012 - Lake Washington	5731
North Pacific Coastal Bog Woodland								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Pinus contorta var. contorta - Thuja plicata / Myrica gale / Sphagnum spp. Treed Fen	BC	Copalis River Headwaters	Grays Harbor County	Copalis River Preserve	TNC	021N010W S29 NE | 021N010W S28 SWOFNW | 021N010W S20	17100102 - Queets-Quinault	4478
	AB	Patricia's Bog		North Bay Natural Area Preserve	WADNR	018N011W S18 | 018N012W S13 E2 | 018N011W S17	17100105 - Grays Harbor	286
	A	Allens Slough	Clallam County	Olympic National Park	NPS	030N015W S31 SE | 030N015W S32 | 029N015W S05 NW	17100101 - Hoh-Quillayute	2238
Pinus contorta var. contorta - Tsuga heterophylla / Gaultheria shallon / Sphagnum spp. Treed Bog	B	Carlisle Bog	Grays Harbor County	Carlisle Bog Natural Area Preserve	WADNR	019N011W S17 | 019N011W S18 NE | 019N011W S08	17100102 - Queets-Quinault	5308
	B	Queets Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 NWOFSE	17100102 - Queets-Quinault	696
	A	Crowberry Bog	Jefferson County	Crowberry Bog Natural Area Preserve	WADNR	027N012W S25 | 027N012W S36	17100101 - Hoh-Quillayute	8753
Pinus contorta var. contorta / Ledum glandulosum / Sphagnum spp. Treed Bog	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Pinus contorta var. contorta / Ledum groenlandicum / Sphagnum spp. Treed Bog	B	Loomis Lake	Pacific County	Land Trust | n/a	Private	011N011W S28 W2OFE2 | 011N011W S21 W2OFSE | 011N011W S33 W2OFNE	17100106 - Willapa Bay	1170
Thuja plicata - Tsuga heterophylla / Lysichiton americanus / Sphagnum spp. Treed Fen	A	Abbey Bog	Jefferson County	Olympic National Park	NPS	026N013W S32 | 026N013W S29	17100101 - Hoh-Quillayute	8766
	AB	Kalaloch Bog Forest				024N013W S15 | 024N013W S22 | 024N013W S10 | 024N013W S09 | 024N013W S16	17100102 - Queets-Quinault	5985
	A	Steamboat Creek Bog Forest				025N013W S16 W2 | 025N013W S17 NEOFNE | 025N013W S08 SEOFSE | 025N013W S09 W2	17100101 - Hoh-Quillayute	882
	B	McKinnon Creek Bog Forest		Clearwater Bogs Natural Area Preserve	WADNR	024N011W S06 E2 | 024N011W S07	17100102 - Queets-Quinault	988

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Upper Bog				024N011W S05 NE | 025N011W S33 S2 | 024N011W S06 | 025N011W S32 | 024N011W S04	17100102 - Queets-Quinault	3118
	A	Goodmand Creek		State Trust Lands	WADNR	027N013W S08 | 027N013W S05	17100101 - Hoh-Quillayute	3475
Tsuga heterophylla - (Thuja plicata) / Ledum groenlandicum / Carex (obnupta, utriculata) / Sphagnum spp. Treed Bog	A	Ahlstroms Prairie	Clallam County	Olympic National Park	NPS	031N016W S25 | 031N016W S26 | 031N016W S36	17100101 - Hoh-Quillayute	8749
	A	Rooses Prairie				031N016W S25 | 031N016W S24 SEOFSW	17100101 - Hoh-Quillayute	2089
	A	Sand Point Trail Fen				031N015W S31	17100101 - Hoh-Quillayute	9208
	AB	Murdock Bog		State Trust Lands	WADNR	031N009W S30 S2	17110021 - Crescent-Hoko	4361
	A	Abbey Bog	Jefferson County	Olympic National Park	NPS	026N013W S32 | 026N013W S29	17100101 - Hoh-Quillayute	8769

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Hoh Bog		Crowberry Bog Natural Area Preserve	WADNR	027N011W S31 W2 | 027N012W S36	17100101 - Hoh-Quillayute	4665
	B	Hoh Bog			Private	027N011W S31 | 027N012W S36	17100101 - Hoh-Quillayute	8895
	AB	South Nolan old-growth		South Nemah Natural Resources Conservation Area	WADNR	026N012W S21 S2	17100101 - Hoh-Quillayute	1199
Tsuga heterophylla - (Thuja plicata) / Ledum groenlandicum / Sphagnum spp. Treed Bog	A	Cranberry Lake, Clallam County	Clallam County	Cranberry Bog Special Interest Area (Olympic National Forest)	USFS	029N003W S19	17110020 - Dungeness-Elwha	367
	AB	Devils Lake	Jefferson County	Devils Lake Natural Resources Conservation Area	WADNR	027N002W S36 NW | 027N002W S35	17110018 - Hood Canal	4493
North Pacific Conifer Basin Swamp								
Abies amabilis / Gymnocarpium dryopteris Swamp Forest	no reference standard site identified							
Picea sitchensis - Alnus rubra / Lysichiton americanus - Chrysosplenium glechomifolium Swamp Forest	AB	Goodmand Creek	Jefferson County	State Trust Lands	WADNR	027N013W S17 | 027N013W S16 W2 | 027N013W S18	17100101 - Hoh-Quillayute	2496

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Picea sitchensis / Carex obnupta - Lysichiton americanus Swamp Forest	E	Seafield Lake to Quillayute River | Kayostle Beach	Clallam County	Olympic National Park	NPS	029N015W S07 | 029N015W S20 | 031N016W S13 | 029N015W S29 | 030N015W S32 | 030N015W S30 | 029N015W S33 | 031N016W S24 | 030N015W S07 | 029N015W S34 | 029N015W S18 | 030N016W S01 | 030N016W S24 | 031N016W S35 | 031N015W S29 | 030N016W S12	17100101 - Hoh-Quillayute	713
	B	South Nemah NRCA	Pacific County	South Nemah Natural Resources Conservation Area	WADNR	011N010W S02 N2 | 011N010W S01 W2OFW2 | 011N010W	17100106 - Willapa Bay	1310

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						S11 | 012N010W S35		
Thuja plicata - Tsuga heterophylla / Lysichiton americanus Swamp Forest	B	Hilt Creek Swamp	Skagit County	n/a	Private	034N010E S18 E2OFE2 | 034N010E S17	17110006 - Sauk	733
	E	Stetattle Creek Drainage	Whatcom County	Stetattle Creek Research Natural Area (North Cascades National Park)	NPS	038N012E S26 | 038N013E S30 | 037N012E S04 | 038N012E S32 | 037N012E S49 | 038N012E S20 | 037N013E S04 | 039N012E S35 | 038N013E S08 | 038N013E S06 | 038N012E S04 | 038N012E S19 | 037N012E S39 | 037N012E S03 |	17110005 - Upper Skagit	2527

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						037N012E S46 | 038N012E S25		
Tsuga heterophylla - Thuja plicata / Gaultheria shallon / Lysichiton americanus Swamp Forest	B	Thunder Bench	Clallam County	Olympic National Park	NPS	028N015W S26 NW | 028N015W S23 | 028N015W S27 | 028N015W S22	17100101 - Hoh-Quillayute	5820
	B	Dry Creek	Clallam | Jefferson County	State Trust Lands	WADNR	028N013W S32 S2 | 028N013W S31 SEOFSE | 027N013W S05 N2 | 027N013W S06 NEOFNE	17100101 - Hoh-Quillayute	3730
Tsuga heterophylla - Thuja plicata / Vaccinium ovalifolium - Gaultheria	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
shallon / Lysichiton americanus Woodland								
North Pacific Conifer Seepage Swamp								
Abies amabilis / Gymnocarpium dryopteris Swamp Forest	no reference standard site identified							
Abies amabilis / Oplopanax horridus Swamp Forest	A	Arlecho Creek	Whatcom County	Arlecho Creek Forest Reserve	Private | TNC	037N006E S20 S2 | 037N006E S21 SW | 037N006E S28 NW | 037N006E S29 N2OFNE	17110004 - Nooksack	719
	AB	Williamson Creek	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S11 NE | 029N009E S12 W2OFNW | 029N009E S02 SE | 029N009E S01	17110009 - Skykomish	4974
	AB	Greider Lakes			WADNR| Private	029N010E S30 S2 | 029N009E S25 E2OFSE | 029N009E S36 NEOFNE	17110009 - Skykomish	1210

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Williamson Creek		Morning Star Natural Resources Conservation Area | Mount Baker-Snoqualmie National Forest)	WADNR| USFS	029N010E S07 | 029N010E S08 W2 | 029N019E S18 NE | 029N010E S06 SE | 029N009E S12 | 029N009E S13 | 029N010E S05 | 029N010E S17 | 029N010E S18	17110009 - Skykomish	2778
Picea sitchensis - Alnus rubra / Lysichiton americanus - Chrysosplenium glechomifolium Swamp Forest	no reference standard site identified							
Picea sitchensis - Tsuga heterophylla - (Alnus rubra) / Oplopanax horridus / Polystichum munitum Swamp Forest	no reference standard site identified							
Picea sitchensis / Carex obnupta - Lysichiton americanus Swamp Forest	AB	Hogan's Corner Wetland	Grays Harbor County	n/a	Private	018N012W S14 | 018N012W S24 | 018N012W S23 | 018N012W S13 SW | 018N012W S22 | 018N012W S26 |	17100102 - Queets-Quinault | 17100105 - Grays Harbor	5414

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						018N012W S27		
Picea sitchensis / Rubus spectabilis Riparian Forest	E	Long Creek	Snohomish County	Long Creek Research Natural Area (Mount Baker-Snoqualmie National Forest)	USFS	030N009E S17	17110008 - Stillaguamish	3815
Pinus contorta var. contorta - Thuja plicata / Alnus incana / Carex (aquatilis var. dives, echinata ssp. echinata) Swamp Forest	A	South Prairie Fen	Skamania County	South Prairie Special Interest Area (Gifford Pinchot National Forest)	USFS	005N009E S20	17070105 - Middle Columbia-Hood	8796
Thuja plicata - Tsuga heterophylla / Lysichiton americanus Swamp Forest	A	Snoqualmie Bog	King County	Snoqualmie Bog Natural Area Preserve	WADNR	025N009E S11 S2 | 025N009E S14	17110010 - Snoqualmie	5509
	A	Sumas Mountain	Whatcom County	State Trust Lands	WADNR	040N005E S30 S2	17110001 - Fraser	3332
	A	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S10	17110009 - Skykomish	8764
	A	North & South Langfield Fens	Skamania County	Gifford Pinchot National Forest	USFS	007N009E S19	17070105 - Middle Columbia-Hood	8801

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Cranberry Marsh #5	Mason County	n/a	Private	020N005W S30 SEOFNE | 020N005W S29	17100104 - Lower Chehalis	5680
Tsuga heterophylla - (Pseudotsuga menziesii - Thuja plicata) / Polystichum munitum - Athyrium filix-femina Swamp Forest	B	Charley Creek	King County	Charley Creek Natural Area Preserve	WADNR	020N008E S08 | 020N008E S03 | 020N008E S16 NWOFNE | 021N008E S33 S2OFS2 | 020N008E S10 W2 | 020N008E S04 | 020N008E S09 | 020N008E S05	17110013 - Duwamish	7109
Tsuga heterophylla - Abies amabilis / Vaccinium alaskaense / Lysichiton americanus Swamp Forest	B	Dailey Prairie	Whatcom County	Dailey Prairie Natural Area Preserve	WADNR	037N006E S04 SE	17110004 - Nooksack	8741
Tsuga heterophylla - Pseudotsuga menziesii - (Thuja plicata) / Oplopanax horridus / Polystichum munitum Swamp Forest	A	Charley Creek	King County	Charley Creek Natural Area Preserve	WADNR	020N008E S08 | 020N008E S03 | 020N008E S05 | 020N008E S16 NWOFNE | 021N008E S33 S2OFS2 | 020N008E S10 W2 |	17110013 - Duwamish	7111

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						020N008E S04 | 020N008E S09		
	A?	Solo Point	Pierce County	Joint Base Lewis McChord	USDOD	019N001E S12 | 019N001E S38 S2OFS2	17110019 - Puget Sound	399
	E	Twenty-two Creek	Snohomish County	Lake Twenty-two Research Natural Area (Mount Baker-Snoqualmie National Forest)	USFS	030N008E S22 | 030N008E S16 | 030N008E S23 | 030N008E S14 | 030N008E S26 | 030N008E S27 | 030N008E S21 | 030N008E S15	17110008 - Stillaguamish	6768

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Lake Twenty-Two				030N008E S22 | 030N008E S15 | 030N008E S16 | 030N008E S23 | 030N008E S14 | 030N008E S26 | 030N008E S27 | 030N008E S21	17110008 - Stillaguamish	5493
Tsuga heterophylla - Thuja plicata / Gaultheria shallon / Lysichiton americanus Swamp Forest	B	Steamboat Creek Bog Forest	Jefferson County	Olympic National Park	NPS	025N013W S16 W2 | 025N013W S17 NEOFNE | 025N013W S08 SEOFSE | 025N013W S09 W2	17100101 - Hoh-Quillayute	293
	BC	Lower Bog		Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 SEOFNW	17100102 - Queets-Quinault	4065
	A	South Nolan old-growth		South Nolan Natural Resources Conservation Area	WADNR	026N012W S21	17100101 - Hoh-Quillayute	8761

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Goodmand Creek		State Trust Lands	WADNR	027N013W S08 | 027N013W S07 E2 | 027N013W S05 S2 | 027N013W S09 S2OFSW | 027N013W S16 NW | 027N013W S06 | 027N013W S17	17100101 - Hoh-Quillayute	574
	B	South Nolan old-growth		South Nemah Natural Resources Conservation Area	WADNR	026N012E S22 | 026N012E S15 | 026N012E S21	17100101 - Hoh-Quillayute	5319
Tsuga heterophylla - Thuja plicata / Vaccinium ovalifolium - Gaultheria shallon / Lysichiton americanus Woodland	no reference standard site identified							
Tsuga mertensiana - Abies amabilis / Caltha leptosepala ssp. howellii Swamp Forest	A	Illabot Creek	Skagit County	Skagit Bald Eagle Natural Area Preserve	WADNR	035N010E S36 SE | 035N010E S35 | 035N010E S26 | 035N010E S25 | 035N011E S31 | 034N010E S01	17110005 - Upper Skagit	2428

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Boardman	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S15 N2OFN2 | 029N009E S10 SW | 029N009E S09 S2 | 029N009E S16 N2OFN2 | 029N009E S08 | 029N009E S11 | 029N009E S14 | 029N009E S17	17110008 - Stillaguamish | 17110009 - Skykomish | 17110011 - Snohomish	4140
North Pacific Eelgrass Bed								
Zostera Pacific Submersed Vegetation	no reference standard site identified							
North Pacific Freshwater Aquatic Vegetation								
Azolla (filiculoides, mexicana) Aquatic Vegetation	no reference standard site identified							
Brasenia schreberi Western Aquatic Vegetation	AB	Wentworth Lake	Clallam County	n/a	Private	029N014W S20 NE | 029N014W S17 S2OFS2	17100101 - Hoh-Quillayute	3961
Callitriche (heterophylla, palustris) Aquatic Vegetation	no reference standard site identified							
Ceratophyllum demersum Western Aquatic Vegetation	no reference standard site identified							
Elodea canadensis Aquatic Vegetation	no reference standard site identified							
Fontinalis antipyretica (var. antipyretica, var. oregonensis) Nonvascular Aquatic Vegetation	no reference standard site identified							
Isoetes echinospora - (Lobelia dortmanna) Aquatic Vegetation	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Lemna minor Aquatic Vegetation	B	Beaver Creek	Whatcom County	State Trust Lands | n/a	WADNR | Private	037N003E S01 NW | 038N003E S36 SWOFSW | 038N003E S35 SEOFSE	17110002 - Strait of Georgia	3541
Menyanthes trifoliata Aquatic Vegetation	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks | Private	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	5544
Myriophyllum hippuroides Aquatic Vegetation	no reference standard site identified							
Myriophyllum sibiricum Aquatic Vegetation	no reference standard site identified							
Nuphar polysepala Aquatic Vegetation	A	Cypress Wetland #5	Skagit County	Cypress Highlands Natural Area Preserve	WADNR	036N001E S29 NW	17110002 - Strait of Georgia	4977
	AB	Upper Cypress Lake				036N001E S29 SE	17110002 - Strait of Georgia	4026
	A	Homestead Lake		Cypress Island Natural Resources Conservation Area	WADNR	036N001E S29 SE	17110002 - Strait of Georgia	6812
	AB	Homestead Meadow				036N001E S29 SE	17110002 - Strait of Georgia	4403
	A	Cross Island Fen		State Trust Lands	WADNR	036N001E S28 | 036N001E S29	17110002 - Strait of Georgia	8860

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Killebrew Lake	San Juan County	Killebrew Lake Natural Area Preserve	WDFW	036N002W S14 E2 | 036N002W S13 SWOFSW	17110003 - San Juan Islands	2399
	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	6948
	A	Sumas Mountain	Whatcom County	State Trust Lands	WADNR	040N005E S31 N2 | 040N005E S30 E2	17110001 - Fraser | 17110004 - Nooksack	2185
	A	Thorndyke Lake	Jefferson County	n/a	Private	027N001E S19 NW	17110018 - Hood Canal	2158
	AB	Double Yolk Bog	Mason County	n/a	Private	020N005W S15 SE | 020N005W S14	17100104 - Lower Chehalis	2186
Polygonum amphibium Aquatic Vegetation [Placeholder]	no reference standard site identified							
Potamogeton natans Aquatic Vegetation	A	Bald Hill Gorge	Thurston County	Bald Hill Natural Area Preserve	WADNR	015N003E S04 N2OFN2 | 016N003E S33 S2OFS2	17110015 - Nisqually	5598
Ranunculus aquatilis Aquatic Vegetation	no reference standard site identified							
Sagittaria latifolia Aquatic Vegetation	no reference standard site identified							
Schoenoplectus subterminalis Aquatic Vegetation	AB	Ericsons Lagoon	Clallam County	Olympic National Park	NPS	030N015W S08 NW	17100101 - Hoh-Quillayute	3175
	AB	West Meridian Marsh	Jefferson County	n/a	Private	027N001W S01 NE	17110018 - Hood Canal	4337

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Foram Pond	Mason County	n/a	Private	021N004W S23 SEOFNW	17110017 - Skokomish	968
	A	Ink Blot		Ink Blot Natural Area Preserve	WADNR | Private	021N004W S19 S2	17110017 - Skokomish	3842
Sparganium angustifolium Aquatic Vegetation	B	Stossel Creek Wetland #1	King County	State Trust Lands	WADNR	026N007E S13 SE	17110010 - Snoqualmie	1446
Sparganium eurycarpum Aquatic Vegetation	no reference standard site identified							
Utricularia macrorhiza Aquatic Vegetation	no reference standard site identified							
Wolffia (borealis, columbiana) Aquatic Vegetation	no reference standard site identified							
North Pacific Freshwater Tidal Surge Plain Forested Swamp								
Alnus rubra / Rubus spectabilis / Carex obnupta - Lysichiton americanus Swamp Forest	AB	East Fork Hoquiam River	Grays Harbor County	n/a	Private	018N010W S24 W2 | 018N010W S25 | 018N010W S13	17100105 - Grays Harbor	796
Picea sitchensis / Carex obnupta - Lysichiton americanus Swamp Forest	AB	ELK RIVER & ANDREWS CREEK	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S26 | 016N011W S25 SW | 016N011W S27 | 016N011W S34 E2	17100105 - Grays Harbor	2325
	AB	E Fork Hoquiam River Surge Plain #56		n/a	Private	018N010W S24 W2 | 018N010W S25 | 018N010W S13	17100105 - Grays Harbor	2130

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Hamma Hamma River Delta	Mason County	n/a	Private	024N003W S27 NE | 024N003W S26 NW	17110018 - Hood Canal	1715
Picea sitchensis / Cornus sericea / Lysichiton americanus Swamp Forest	AB	Cranberry Creek	Grays Harbor County	n/a	Private	018N012W S02 | 018N012W S03 | 018N012W S10 | 018N012W S11	17100102 - Queets-Quinault	3444
	AB	Chehalis River Surge Plain		Chehalis River Surge Plain Natural Area Preserve	WADNR | Private	017N008W S20 | 017N008W S15 | 017N008W S16 | 017N008W S17 | 017N008W S18 | 017N008W S19 | 017N008W S21 | 017N008W S22 | 017N008W S14 | 017N008W S23 | 017N008W S28 | 017N008W S29 | 017N009W S13 |	17100104 - Lower Chehalis	4817

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						017N009W S24 | 017N008W S10		
Populus balsamifera ssp. trichocarpa - Acer macrophyllum / Symphoricarpos albus Riparian Forest	B	White Island	Wahkiakum County	White Island Natural Area Preserve	WDFW	008N005W S30 | 008N005W S29 W2OFW2	17080003 - Lower Columbia-Clatskanie	7040
Populus balsamifera ssp. trichocarpa / Cornus sericea / Impatiens capensis Riparian Forest	E	White Island	Wahkiakum County	White Island Natural Area Preserve	WDFW	008N005W S30 | 008N005W S29	17080003 - Lower Columbia-Clatskanie	3402
North Pacific Hardwood Basin Swamp								
Alnus rubra / Athyrium filix-femina - Lysichiton americanus Swamp Forest	AB	Woods Lake	Snohomish County	State Trust Lands	WADNR	028N008E S07	17110009 - Skykomish	8846
	A	Cedar Flats RNA	Skamania County	Cedar Flats Research Natural Area (Gifford Pinchot National Forest)	USFS	007N006E S12 | 007N006E S11	17080002 - Lewis	8772

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus rubra / Glyceria striata Riparian Woodland	no reference standard site identified							
Alnus rubra / Rubus spectabilis / Carex obnupta - Lysichiton americanus Swamp Forest	B	Hoypus Hill	Island County	Hoypus Point Natural Forest Area (Deception Pass State Park)	State Parks	034N002E S30 S2OFSW | 034N002E S31 N2OFNW	17110019 - Puget Sound	4694
	AB	Shumocher Creek	Mason County	Shumacher Creek Natural Area Preserve	WADNR	021N003W S16 | 021N003W S10 | 021N003W S15	17110019 - Puget Sound	3020
Fraxinus latifolia / Carex obnupta Swamp Forest	C	Spurgeon Creek	Thurston County	Joint Base Lewis McChord	USDOD	017N001W S22 N2OFN2 | 017N001W S21	17110016 - Deschutes	546
Fraxinus latifolia / Spiraea douglasii Riparian Forest	B	Mud Lake Kettles	Mason County	n/a	Private	019N004W S20 | 019N004W S19 | 019N004W S18 | 019N004W S17	17100104 - Lower Chehalis	8830
	BC	Fort Lewis Access Bog	Thurston County	n/a	Private	017N001W S27 W2	17110016 - Deschutes	5069
North Pacific Hardwood Seepage Swamp								
Alnus rubra / Athyrium filix-femina - Lysichiton americanus Swamp Forest	B	North Fork Green River Fen	King County	State Trust Lands	WADNR	021N009E S28	17110013 - Duwamish	8779

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Nisqually Fen	Pierce County	Mount Rainier National Park	NPS	015N007E S35	17110015 - Nisqually	8817
Alnus rubra / Glyceria striata Riparian Woodland	no reference standard site identified							
Alnus rubra / Rubus spectabilis / Carex obnupta - Lysichiton americanus Swamp Forest	no reference standard site identified							
Alnus rubra / Rubus spectabilis / Chrysosplenium glechomifolium Riparian Forest	no reference standard site identified							
Populus tremuloides / Carex obnupta Swamp Forest	no reference standard site identified							
North Pacific Interdunal Conifer Swamp								
Pinus contorta var. contorta / Carex obnupta Swamp Forest	A	Leadbetter Point	Pacific County	Willapa National Wildlife Refuge	USFWS	013N011W S20 | 013N011W S16 | 013N011W S29 | 013N011W S08 | 013N011W S17	17100106 - Willapa Bay	8774
North Pacific Interior Montane Riparian Forest								
Alnus rubra / Alluvial Bar Riparian Forest	no reference standard site identified							
Alnus rubra / Athyrium filix-femina - Asarum caudatum Swamp Forest	A	Mill Creek watershed	Walla Walla County	Umatilla National Forest	USFS	006N038E S12 | 006N038E S13	17070102 - Walla Walla	8986
Alnus rubra / Athyrium filix-femina Riparian Forest	no reference standard site identified							
Alnus rubra / Cornus sericea Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus rubra / Petasites frigidus Riparian Forest	A	Mill Creek	Walla Walla County	Umatilla National Forest	USFS	006N038E S14	17070102 - Walla Walla	8987
Alnus rubra / Physocarpus capitatus - Philadelphus lewisii Swamp Forest	A	Mill Creek watershed	Columbia | Walla Walla County	Umatilla National Forest	USFS	006N039E S06 | 006N038E S14 | 006N038E S12 | 006N038E S13 | 006N038E S01 | 006N039E S18	17070102 - Walla Walla	8985
Alnus rubra / Symphoricarpos albus Riparian Forest	no reference standard site identified							
North Pacific Intertidal Flat								
No associations identified	no reference standard site identified							
North Pacific Lowland Floodplain Forest								
Acer macrophyllum / Polystichum munitum - Tolmiea menziesii Riparian Forest	no reference standard site identified							
Acer macrophyllum / Rubus spectabilis Riparian Forest	E	Baker River Drainage	Whatcom County	North Cascades National Park	NPS	038N010E S17 | 038N010E S21 | 038N010E S09 | 038N010E S20 | 038N010E S08 | 038N010E S18 | 038N010E	17110005 - Upper Skagit	5111

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						S16 | 038N010E S07		
	BC	Ellsworth Woods	Pierce County	Ellsworth Woods Controled Use Area (Joint Base Lewis McChord)	USDOD	018N002E S31 | 018N002E S32 SWOFNW	17110015 - Nisqually	2482
Acer macrophyllum / Rubus ursinus Riparian Forest	no reference standard site identified							
Acer macrophyllum / Symphoricarpos albus / Urtica dioica ssp. gracilis Riparian Forest	no reference standard site identified							
Acer macrophyllum / Urtica dioica ssp. gracilis Riparian Forest	no reference standard site identified							
Alnus rubra / Acer circinatum / Claytonia sibirica Riparian Forest	no reference standard site identified							
Alnus rubra / Acer circinatum Riparian Forest	no reference standard site identified							
Alnus rubra / Achlys triphylla Riparian Forest	no reference standard site identified							
Alnus rubra / Alnus viridis ssp. sinuata Riparian Forest	no reference standard site identified							
Alnus rubra / Elymus glaucus Riparian Forest	no reference standard site identified							
Alnus rubra / Oplopanax horridus - Rubus spectabilis Riparian Forest	no reference standard site identified							
Alnus rubra / Oplopanax horridus / Athyrium filix-femina Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus rubra / Oxalis (oregana, trilliifolia) Riparian Forest	no reference standard site identified							
Alnus rubra / Rubus parviflorus Riparian Forest	no reference standard site identified							
Alnus rubra / Rubus spectabilis Riparian Forest	E	Baker River Drainage	Whatcom County	North Cascades National Park	NPS	039N011E S07 | 039N011E S29 | 038N010E S34 | 038N010E S28 | 038N011E S28 | 038N011E S22 | 039N010E S16 | 039N010E S12 | 038N010E S21 | 039N010E S31 | 039N011E S17 | 038N010E S35 | 038N010E S22 | 038N010E S13 | 038N010E S01 | 039N010E S24	17110005 - Upper Skagit	6772

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	McMillan Creek				038N012E S02 | 039N012E S35 | 038N012E S11 | 039N012E S34 | 038N012E S12 | 038N012E S01 | 038N012E S03 | 039N012E S36	17110005 - Upper Skagit	544
	E	Big Beaver Creek Drainage		Ross Lake National Recreation Area | Big Beaver Research Natural Area (North Cascades National Park)	NPS	038N013E S14 | 038N013E S12 | 038N013E S11 | 038N013E S23 | 038N013E S15 | 038N013E S22 | 038N013E S13 | 038N013E S10	17110005 - Upper Skagit	3866
	BC	Cosgrave Hill	Pierce | Thurston County	Joint Base Lewis McChord	USDOD	018N001E S09 | 018N001E S16 N2OFN2 | 018N001E S43	17110015 - Nisqually	6413

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus rubra / Stachys chamissonis var. cooleyae - Tolmiea menziesii Riparian Forest	no reference standard site identified							
Fraxinus latifolia - (Populus balsamifera ssp. trichocarpa) / Cornus sericea Riparian Forest	C	Thirteenth Division Prairie	Pierce County	Thirteenth Division Prairie Controled Use Area (Joint Base Lewis McChord)	USDOD	018N003E S28 | 018N003E S33 NEOFNE	17110015 - Nisqually	5382
	BC	Pierce Island Preserve	Skamania County	Pierce Island Preserve (Columbia River Gorge National Scenic Area)	TNC	002N006E S36 NW | 002N006E S25	17080001 - Lower Columbia-Sandy	985
Fraxinus latifolia - Populus balsamifera ssp. trichocarpa / Acer circinatum Riparian Forest	no reference standard site identified							
Fraxinus latifolia - Populus balsamifera ssp. trichocarpa / Corylus cornuta - Physocarpus capitatus Riparian Forest	no reference standard site identified							
Fraxinus latifolia - Populus balsamifera ssp. trichocarpa / Rubus spectabilis Riparian Forest	no reference standard site identified							
Fraxinus latifolia - Populus balsamifera ssp. trichocarpa / Symphoricarpos albus Riparian Forest	no reference standard site identified							
Fraxinus latifolia / Carex deweyana - Urtica dioica Riparian Forest	CD	Drews Prairie	Lewis County	n/a	Private	011N002W S02 SE | 011N002W S42 SW | 011N002W S38 NW | 011N002W S01 |	17080005 - Lower Cowlitz	1226

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						011N002W S11		
Fraxinus latifolia / Symphoricarpos albus Riparian Forest	BC	Ellsworth Woods	Pierce County	Ellsworth Woods Controled Use Area (Joint Base Lewis McChord)	USDOD	018N002E S31 | 018N002E S32 SWOFNW	17110015 - Nisqually	2893
Picea sitchensis / Scirpus microcarpus Riparian Woodland	no reference standard site identified							
Populus balsamifera ssp. trichocarpa - Acer macrophyllum / Equisetum hyemale Riparian Forest	BC	Carter Woods	Pierce County	Nisqually River Floodplain Controlled Use Area (Joint Base Lewis McChord)	USDOD	018N001E S27 | 018N001E S22 | 018N001E S21 E2OFE2 | 018N001E S34 NE | 018N001E S35 NE | 018N001E S26 SWOFSW	17110015 - Nisqually	5641
	BC	Cosgrave Hill	Pierce | Thurston County	Nisqually River Floodplain Controlled Use Area (Joint Base Lewis McChord)	USDOD	018N001E S09 | 018N001E S16 N2OFN2 | 018N001E S43	17110015 - Nisqually	1565

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Populus balsamifera ssp. trichocarpa - Acer macrophyllum / Symphoricarpos albus Riparian Forest	E	Ross Lake NRA	Skagit County	North Cascades National Park	NPS	036N013E S05 | 036N013E S04 | 036N013E S08 | 036N012E S11 | 036N013E S29 | 037N012E S49 | 036N013E S15 | 036N013E S24 | 036N013E S27 | 037N012E S55 | 037N013E S29 | 037N013E S42 | 036N013E S12 | 036N013E S20 | 037N012E S46 | 037N012E S54	17110005 - Upper Skagit	6391
	B?	Lower Illabot Creek		Bald Eagle Natural Area	WDFW	035N010E S27	17110005 - Upper Skagit	8827

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	BC	Carter Woods	Pierce County	Nisqually River Floodplain Controlled Use Area (Joint Base Lewis McChord)	USDOD	018N001E S27 | 018N001E S22 | 018N001E S21 E2OFE2 | 018N001E S34 NE | 018N001E S35 NE | 018N001E S26 SWOFSW	17110015 - Nisqually	1953
	BC	Cosgrave Hill	Pierce | Thurston County	Nisqually River Floodplain Controlled Use Area (Joint Base Lewis McChord)	USDOD	018N001E S09 | 018N001E S16 N2OFN2 | 018N001E S43	17110015 - Nisqually	5562
Populus balsamifera ssp. trichocarpa - Alnus rubra / Carex obnupta Riparian Woodland	no reference standard site identified							
Populus balsamifera ssp. trichocarpa - Alnus rubra / Rubus spectabilis Riparian Forest	BC	Wynoochee Oxbow	Grays Harbor County	n/a	Private	021N008W S01 | 021N008W S02	17100104 - Lower Chehalis	8850

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Baker River Drainage	Whatcom County	North Cascades National Park	NPS	038N010E S01 | 038N010E S22 | 039N011E S07 | 039N011E S29 | 038N010E S21 | 038N010E S13 | 039N010E S31 | 039N011E S17 | 038N010E S35 | 038N010E S34 | 038N010E S28 | 038N011E S28 | 038N011E S22 | 039N010E S16 | 039N010E S12 | 039N010E S24	17110005 - Upper Skagit	148
	B	North Fork Nooksack River		State Trust Lands	WADNR	039N005E S01 | 039N005E S02	17110004 - Nooksack	8755

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Populus balsamifera ssp. trichocarpa - Alnus rubra / Symphoricarpos albus Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa - Picea sitchensis - (Acer macrophyllum) / Oxalis oregana Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Cornus sericea / Carex obnupta Riparian Forest	no reference standard site identified							
Quercus garryana - (Fraxinus latifolia) / Symphoricarpos albus Riparian Forest	BC	Thirteenth Division Prairie	Pierce County	Thirteenth Division Prairie Controled Use Area (Joint Base Lewis McChord)	USDOD	018N003E S28 | 018N003E S33 NEOFNE	17110015 - Nisqually	3843
	B	Scatter Creek	Thurston County	Scatter Creek State Wildlife Area	WDFW	016N003W S35 | 016N003W S36 NWOFSW | 016N003W S51 S2OFS2 | 016N003W S50 NWOFNW | 016N002W S39 | 016N002W S41 | 016N002W S44 | 016N002W S31	17100103 - Upper Chehalis	4336

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Salix lucida ssp. lasiandra / Salix fluviatilis Swamp Woodland	C	Bachelor Island	Clark County	Ridgefield National Wildlife Refuge	USFWS	004N001W S11 | 004N001W S14 | 004N001W S15 | 004N001W S39 | 004N001W S37	17080001 - Lower Columbia-Sandy	2504
Salix lucida ssp. lasiandra / Urtica dioica ssp. gracilis Swamp Woodland	no reference standard site identified							
North Pacific Lowland Headwater Riparian Forest								
Acer macrophyllum / Oxalis oregana Riparian Forest	no reference standard site identified							
Alnus rubra / Oplopanax horridus - Rubus spectabilis Riparian Forest	no reference standard site identified							
Alnus rubra / Oplopanax horridus / Athyrium filix-femina Riparian Forest	no reference standard site identified							
Alnus rubra / Rubus parviflorus Riparian Forest	no reference standard site identified							
Alnus rubra / Rubus spectabilis Riparian Forest	AB	Black Diamond Lake	King County	n/a	Private	021N006E S22 SEOFNE | 021N006E S23 NWOFNW | 021N006E S14 | 021N006E S15	17110013 - Duwamish	2671
Fraxinus latifolia / Carex deweyana - Urtica dioica Riparian Forest	no reference standard site identified							
Populus balsamifera ssp. trichocarpa / Oplopanax horridus Riparian Woodland	no reference standard site identified							
North Pacific Lowland Intermediate Fen								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Carex aquatilis var. dives - Carex utriculata Fen	BC	Carlisle Bog	Grays Harbor County	Carlisle Bog Natural Area Preserve	WADNR	019N011W S17 NW | 019N011W S07 SW | 019N011W S08 | 019N011W S18 NE | 019N011W S04 | 019N011W S05 | 019N011W S09	17100102 - Queets-Quinault	4372
	B	Donkey Creek oxbow		n/a	Private	021N009W S09 S2	17100105 - Grays Harbor	7033
	AB	Wilderness Marsh				019N011W S27 S2 | 019N011W S34 N2 | 019N011W S35	17100105 - Grays Harbor	4603
	A?	Mt Constitution Pocket Wetlands	San Juan County	Moran State Park	State Parks	037N001W S33 | 037N001W S28 | 037N001W S29	17110003 - San Juan Islands	8864
	AB	Ericsons Lagoon	Clallam County	Olympic National Park	NPS	030N015W S08 NW	17100101 - Hoh-Quillayute	569
	B	Robe Bog	Snohomish County	State Trust Lands | n/a	WADNR | Private	030N008E S08 N2	17110008 - Stillaguamish	2907

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Carex aquatilis var. dives - Comarum palustre Fen	BC	Cub Creek	Snohomish County	Naval Radio Station Reservation	USDOD	031N007E S05 W2 | 031N007E S07 E2 | 031N007E S08 NWOFNW | 031N007E S17 NWOFNW | 031N007E S18 NEOFNE | 032N007E S32 SWOFSW | 031N007E S06	17110008 - Stillaguamish	1767
Carex aquatilis var. dives Fen	A	Devils Lake	Jefferson County	Devils Lake Natural Resources Conservation Area	WADNR	027N002W S36 NW | 027N002W S35 | 027N002W S26 | 027N002W S25	17110018 - Hood Canal	3608
Carex cusickii - (Menyanthes trifoliata) Fen	A	Nisqually Fen	Pierce County	Mount Rainier National Park	NPS	015N007E S35	17110015 - Nisqually	8816
	A	Elbow Lake	Thurston County	Elbow Lake State Park	WDFW	016N003E S32 N2 | 016N003E S29	17110015 - Nisqually	3722
	A	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S10	17110009 - Skykomish	8768

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Ledum groenlandicum / Carex cusickii Shrub Fen [Provisional]	B	Killebrew Lake	San Juan County	Killebrew Lake Natural Area Preserve	WDFW	036N002W S14 E2	17110003 - San Juan Islands	3671
North Pacific Lowland Poor Fen								
Carex (livida, utriculata) / Sphagnum spp. Fen	A	Lower Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 SEOFNW	17100102 - Queets-Quinault	3028
		Sand Point Trail Fen	Clallam County	Olympic National Park	NPS	031N015W S31	17100101 - Hoh-Quillayute	9209
		Snoqualmie Bog	King County	Snoqualmie Bog Natural Area Preserve	WADNR	025N009E S11 NEOFSW	17110010 - Snoqualmie	2616
		Upper Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S05 NE | 025N011W S33 SW	17100102 - Queets-Quinault	5240
	BC	Ahlstroms Prairie	Clallam County	Olympic National Park	NPS	031N016W S25 SW	17100101 - Hoh-Quillayute	6899
	E	South Nolan Creek	Jefferson County	State Trust Lands	WADNR	026N012W S26 W2 | 026N012W S27 NE	17100102 - Queets-Quinault	6291
Carex cusickii - (Carex aquatilis var. dives) / Sphagnum spp. Fen	A?	North Morrow Lake	Mason County	State Trust Lands | n/a	WADNR | Private	020N005W S16 N2 | 020N005W S09	17100104 - Lower Chehalis	4915
	AB	Lost Lake 2	Snohomish County	n/a	Private	027N008E S16 W2	17110009 - Skykomish	891
	B	Killebrew Lake	San Juan County	Killebrew Lake Natural Area Preserve	WDFW	036N002W S14 E2	17110003 - San Juan Islands	2151

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
		Summit Lake	San Juan County	Moran State Park	State Parks	037N001W S21	17110003 - San Juan Islands	8785
Carex exsiccata Fen [Provisional]	A	Ink Blot	Mason County	Ink Blot Natural Area Preserve	WADNR | Private	021N004W S19 S2	17110017 - Skokomish	3883
		James Pond	Clallam County	Olympic National Park	NPS	028N015W S23 N2 | 028N015W S22	17100101 - Hoh-Quillayute	5395
Carex exsiccata Marsh	AB	Cache Pond	Whatcom County	n/a	Private	040N006E S06 N2OFSW	17110004 - Nooksack	3160
		Twin Lakes	Jefferson County	n/a	Private	028N001E S31 SW | 027N001E S06 N2OFNW | 028N001W S36	17110018 - Hood Canal	5903
Carex lasiocarpa / (Sphagnum spp.) Fen [Provisional]	A	Snoqualmie Bog	King County	Snoqualmie Bog Natural Area Preserve	WADNR	025N009E S11 NEOFSW	17110010 - Snoqualmie	2317
Carex utriculata - Carex aquatilis var. dives - Sanguisorba officinalis / Sphagnum spp. Fen	A	Allens Slough	Clallam County	Olympic National Park	NPS	030N015W S31 SE | 030N015W S32 W2 | 029N015W S05 NW	17100101 - Hoh-Quillayute	6884

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AC	Carlisle Bog	Grays Harbor County	Carlisle Bog Natural Area Preserve	WADNR	019N011W S17 | 019N011W S18 NE | 019N011W S08 | 019N011W S07 SE | 019N011W S04 | 019N011W S05 | 019N011W S09	17100102 - Queets-Quinault	4882
	B	Queets Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 NWOFSE	17100102 - Queets-Quinault	873
Dulichium arundinaceum Pacific Coast Fen [Provisional]	A	Bald Hill Gorge	Thurston County	Bald Hill Natural Area Preserve	WADNR	015N003E S04 N2OFN2 | 016N003E S33 S2OFS2	17110015 - Nisqually	738
		Cedar Flats RNA	Skamania County	Cedar Flats Research Natural Area (Gifford Pinchot National Forest)	USFS	007N006E S12 | 007N006E S11	17080002 - Lewis	8773
		Ink Blot	Mason County	Ink Blot Natural Area Preserve	WADNR | Private	021N004W S19 S2	17110017 - Skokomish	1457
		Thorndyke Lake	Jefferson County	n/a	Private	027N001E S19 NW	17110018 - Hood Canal	2183
	AB	Double Yolk Bog	Mason County	n/a	Private	020N005W S15	17100104 - Lower Chehalis	8756

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
		Twin Lakes	Jefferson County	n/a	Private	028N001W S36 | 028N001E S31 SW | 027N001E S06 N2OFNW	17110018 - Hood Canal	646
Juncus balticus - Comarum palustre / Sphagnum spp. Fen [Provisional]	AB	Twin Lakes	Jefferson County	n/a	Private	028N001E S31 SW | 027N001E S06 N2OFNW | 028N001W S36	17110018 - Hood Canal	4302
		West Meridian Marsh	Jefferson County	n/a	Private	027N001W S01 NE	17110018 - Hood Canal	2552
	B	North Morrow Lake	Mason County	n/a	Private	020N005W S16 N2 | 020N005W S09	17100104 - Lower Chehalis	834
Myrica gale / Carex (aquatilis var. dives, utriculata) Fen	A	Patricia's Bog	Grays Harbor County	North Bay Natural Area Preserve	WADNR	018N011W S18 | 018N012W S13 E2 | 018N011W S17	17100105 - Grays Harbor	1169
	AB	Cranberry Creek	Grays Harbor County	n/a	Private	018N012W S02 | 018N012W S03 | 018N012W S10 | 018N012W S11	17100102 - Queets-Quinault	7025
		Ericsons Lagoon	Clallam County	Olympic National Park	NPS	030N015W S08 NW	17100101 - Hoh-Quillayute	4020

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
		Wilderness Marsh	Grays Harbor County	n/a	Private	019N011W S27 S2 | 019N011W S34 N2 | 019N011W S35	17100105 - Grays Harbor	2047
Juncus supiniformis - (Carex livida, Rhynchospora alba) Fen	no reference standard site identified							
Myrica gale - Spiraea douglasii / Sphagnum spp. Fen	no reference standard site identified							
Myrica gale / Sanguisorba officinalis / Sphagnum spp. Fen	A	Allens Slough	Clallam County	Olympic National Park	NPS	030N015W S31 SE | 030N015W S32 W2 | 029N015W S05 NW	17100101 - Hoh-Quillayute	6783
	AB	Patricia's Bog	Grays Harbor County	North Bay Natural Area Preserve	WADNR	018N011W S18 | 018N012W S13 E2 | 018N011W S17	17100105 - Grays Harbor	734
	B	Carlisle Bog	Grays Harbor County	Carlisle Bog Natural Area Preserve	WADNR	019N011W S17 | 019N011W S18 NE | 019N011W S08 | 019N011W S07 SE | 019N011W S04 | 019N011W S05 | 019N011W S09	17100102 - Queets-Quinault	1932

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
		Moclips Marsh	Grays Harbor County	n/a	Private	021N011W S34 NWOFNW | 021N011W S33 NE | 021N011W S27 SWOFSW | 021N011W S28 SEOFSE	17100102 - Queets-Quinault	4472
Spiraea douglasii / Sphagnum spp. Fen	A	Double Yolk Bog	Mason County	n/a	Private	020N005W S15 SE | 020N005W S14 SW	17100104 - Lower Chehalis	3708
		Ink Blot	Mason County	Ink Blot Natural Area Preserve	Private | WADNR	021N004W S19 S2	17110017 - Skokomish	776
	AB	Iverson Bog	Clallam County	n/a	Private	029N013W S09 SE | 029N013W S16 NE	17100101 - Hoh-Quillayute	2678
	B	Mason Lake Road & Highway 3	Mason County	n/a	Private	021N002W S21 SWOFNE	17110019 - Puget Sound	2679
North Pacific Montane Headwater Riparian Forest								
Abies amabilis - Picea engelmannii / Vaccinium membranaceum Riparian Forest	no reference standard site identified							
Abies amabilis / Athyrium filix-femina Riparian Forest	no reference standard site identified							
Abies amabilis / Oplopanax horridus Swamp Forest	no reference standard site identified							
Tsuga mertensiana - Abies amabilis / Oplopanax horridus Swamp Forest	no reference standard site identified							
North Pacific Montane Intermediate Fen								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Betula glandulosa / Carex aquatilis var. dives Shrub Fen	A	Swampy Meadows South	Skamania County	Gifford Pinchot National Forest	USFS	008N009E S23	17070105 - Middle Columbia-Hood	8793
Carex (aquatilis var. dives, nigricans, utriculata) - Caltha leptosepala ssp. howellii Fen [Provisional]	AB	Crater Lake	King County	Mount Si Natural Resources Conservation Area	WADNR	024N008E S36 NWOFSE	17110010 - Snoqualmie	91
	A	North Fork Green River Fen		State Trust Lands	WADNR	021N009E S28	17110013 - Duwamish	8780
	A	Upper Boardman Bog	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S15 N2OFNE | 029N009E S10 S2	17110008 - Stillaguamish	4751
Carex aquatilis var. dives - (Eleocharis quinqueflora) Fen	B	Dailey Prairie	Whatcom County	Dailey Prairie Natural Area Preserve	WADNR	037N006E S04 NWOFSE	17110004 - Nooksack	8742
	BC	Bald Mountain Trail Wetland	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N008E S01 SE | 029N008E S12 NEOFNE	17110008 - Stillaguamish	3861
	A	Swampy Meadows North	Skamania County	Gifford Pinchot National Forest	USFS	008N009E S14 | 008N009E S23	17070105 - Middle Columbia-Hood	8813
	A	Swampy Meadows South				008N009E S23	17070105 - Middle Columbia-Hood	8797

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Carex aquatilis var. dives Fen	B	Dailey Prairie	Whatcom County	Dailey Prairie Natural Area Preserve	WADNR	037N006E S04 NWOFSE	17110004 - Nooksack	1461
	A	North & South Langfield Fens	Skamania County	Gifford Pinchot National Forest	USFS	007N009E S19	17070105 - Middle Columbia-Hood	8802
	A	Goat Marsh RNA	Cowlitz County	Goat Marsh Research Natural Area (Gifford Pinchot National Forest)	USFS	008N004E S23 W2 | 008N004E S14 SWOFSW | 008N004E S22 E2OFSE | 008N004E S26 NEOFNW	17080005 - Lower Cowlitz	5441
Carex cusickii - (Menyanthes trifoliata) Fen	no reference standard site identified							
Carex luzulina Pacific Coast Fen	no reference standard site identified							
Carex scopulorum - Eleocharis quinqueflora Fen [Provisional]	no reference standard site identified							
Carex utriculata Pacific Coast Marsh	A	Goat Marsh RNA	Cowlitz County	Goat Marsh Research Natural Area (Gifford Pinchot National Forest)	USFS	008N004E S23 W2 | 008N004E S14 SWOFSW | 008N004E S22 E2OFSE | 008N004E S26 NEOFNW	17080005 - Lower Cowlitz	3640
Equisetum arvense Fen [Provisional]	no reference standard site identified							
Trichophorum caespitosum Pacific Fen	A	Swampy Meadows South	Skamania County	Gifford Pinchot National Forest	USFS	008N009E S23	17070105 - Middle Columbia-Hood	8799

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Vaccinium uliginosum / Carex aquatilis var. dives Shrub Fen	A	South Prairie Fen	Skamania County	South Prairie Special Interest Area (Gifford Pinchot National Forest)	USFS	005N009E S20 | 005N009E S21	17070105 - Middle Columbia-Hood	8790
	A	North & South Langfield Fens		Gifford Pinchot National Forest	USFS	007N009E S19	17070105 - Middle Columbia-Hood	8803
	A	Swampy Meadows North				008N009E S14 | 008N009E S23	17070105 - Middle Columbia-Hood	8815
	A	Swampy Meadows South				008N009E S23	17070105 - Middle Columbia-Hood	8798
North Pacific Montane Poor Fen								
Eriophorum angustifolium ssp. angustifolium / Sphagnum spp. Fen	B	Dixie Lake	Skagit County	n/a	Private	034N006E S19 | 034N005E S24	17110007 - Lower Skagit	4903
Kalmia microphylla / Carex spp. - Caltha leptosepala ssp. howellii / Sphagnum spp. Fen	A	Wagner/Gordon Lakes	Skagit County	State Trust Lands	WADNR	034N005E S36	17110008 - Stillaguamish	8823
	B	Dailey Prairie	Whatcom County	Dailey Prairie Natural Area Preserve	WADNR	037N006E S04 NWOFSE	17110004 - Nooksack	963
	AB	Old Pilchuk Ski Area	Snohomish County	Mount Baker-Snoqualmie National Forest	USFS	030N008E S20	17110008 - Stillaguamish	8782
North Pacific Montane Riparian Forest								
Abies amabilis - Picea engelmannii / Vaccinium membranaceum Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Abies amabilis - Tsuga heterophylla / Tiarella trifoliata var. unifoliata Riparian Forest	no reference standard site identified							
Abies amabilis / Acer circinatum Riparian Forest	no reference standard site identified							
Abies amabilis / Athyrium filix-femina Riparian Forest	no reference standard site identified							
Abies amabilis / Oplopanax horridus Swamp Forest	no reference standard site identified							
Abies amabilis / Rubus spectabilis - Vaccinium alaskaense Riparian Forest [Provisional]	no reference standard site identified							
Abies lasiocarpa / Rubus spectabilis Riparian Forest [Provisional]	no reference standard site identified							
Alnus rubra / Vaccinium ovalifolium / Trautvetteria caroliniensis Riparian Forest	no reference standard site identified							
Thuja plicata / Athyrium filix-femina - Stachys chamissonis var. cooleyae Riparian Forest	no reference standard site identified							
Thuja plicata / Rubus spectabilis / Oxalis oregana Riparian Forest	no reference standard site identified							
North Pacific Open Flat Bog								
Eriophorum chamissonis / Sphagnum spp. Bog & Acidic Fen	A	Elk Lake	Clallam County	n/a	Private	031N015W S12 W2	17100101 - Hoh-Quillayute	3034
	A	Cranberry Lake, Clallam County		Cranberry Bog Special Interest Area (Olympic National Forest)	USFS	029N003W S19 | 029N003W S30	17110020 - Dungeness-Elwha	6361
Kalmia microphylla - Ledum groenlandicum / Xerophyllum tenax Shrub Bog	A	Rooses Prairie	Clallam County	Olympic National Park	NPS	031N016W S25 | 031N016W S24 SEOFSW	17100101 - Hoh-Quillayute	1028

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Iverson Bog		n/a	Private	029N013W S09 SE | 029N013W S16 NE	17100101 - Hoh-Quillayute	6780
	A	Crowberry Bog	Jefferson County	Crowberry Bog Natural Area Preserve	WADNR	027N012W S36	17100101 - Hoh-Quillayute	8893
	B	Cranberry Marsh #4	Mason County	n/a	Private	020N005W S29 SEOFNE | 020N005W S28	17100104 - Lower Chehalis	2271
Kalmia microphylla - Vaccinium oxycoccos / Sphagnum spp. Shrub Bog	B	Summit Lake	San Juan County	Moran State Park	State Parks	037N001W S28 | 037N001W S29 | 037N001W S21	17110003 - San Juan Islands	8784
	A	Elk Lake	Clallam County	n/a	Private	031N015W S12	17100101 - Hoh-Quillayute	8820
	AB	Cranberry Lake, Clallam County		Cranberry Bog Special Interest Area (Olympic National Forest)	USFS	029N003W S19	17110020 - Dungeness-Elwha	2790
	AB	Murdock Bog		State Trust Lands	WADNR	031N009W S30 S2	17110021 - Crescent-Hoko	3210
	AB	Twin Lakes	Mason County	State Trust Lands | n/a	WADNR | Private	023N002W S17 E2 | 023N002W S16 NW | 023N002W S20	17110018 - Hood Canal	4966
	AB	Lost Lake 2	Snohomish County	n/a	Private	027N008E S16 W2	17110009 - Skykomish	6952

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Ledum groenlandicum - Gaultheria shallon / Sphagnum spp. Shrub Bog	no reference standard site identified							
Ledum groenlandicum - Kalmia microphylla / Sphagnum spp. Shrub Bog	A	Patricia's Bog	Grays Harbor County	North Bay Natural Area Preserve	WADNR	018N011W S18 | 018N012W S13 E2 | 018N011W S17	17100105 - Grays Harbor	3483
	A	Johnson Creek Island Bog	Skagit County	n/a	Private	033N004E S14 N2	17110007 - Lower Skagit	314
	B	Summer Lake - South				033N005E S21 SWOFSE | 033N005E S28 NWOFNE	17110007 - Lower Skagit	8734
	A	Sleeper Bog	Island County	Dugalla Bay State Park	WDFW	033N002E S21 NW	17110019 - Puget Sound	2861
	AB	Kings Lake Bog	King County	Kings Lake Bog Natural Area Preserve	WADNR	024N008E S03 W2OFW2 | 024N008E S04 E2OFNE | 025N008E S33 SEOFSE | 025N008E S34 SWOFSW	17110010 - Snoqualmie	3734
	A	Cranberry Lake, Mason County	Mason County	n/a	Private	021N003W S30 N2 | 021N003W S29 | 021N003W S28	17110019 - Puget Sound	4103

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Cranberry Marsh #1				020N005W S29 SWOFSW	17100104 - Lower Chehalis	5446
	B	Cranberry Marsh #3				020N005W S29 NWOFNW	17100104 - Lower Chehalis	5220
	B	Elwell Creek	Snohomish County	State Trust Lands	WADNR	027N007E S36 E2	17110009 - Skykomish | 17110010 - Snoqualmie	2649
	B	Loomis Lake	Pacific County	n/a	Private	011N011W S28 W2OFE2 | 011N011W S21 W2OFSE | 011N011W S33 W2OFNE	17100106 - Willapa Bay	2997
Rhynchospora alba - (Vaccinium oxycoccos) / Sphagnum spp. Fen	AC	Carlisle Bog	Grays Harbor County	Carlisle Bog Natural Area Preserve	WADNR	019N011W S17 | 019N011W S18 NE | 019N011W S08 | 019N011W S07 SE | 019N011W S04 | 019N011W S05 | 019N011W S09	17100102 - Queets-Quinault	2728

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Kings Lake Bog	King County	Kings Lake Bog Natural Area Preserve	WADNR	024N008E S03 W2OFW2 | 024N008E S04 E2OFNE | 025N008E S33 SEOFSE | 025N008E S34 SWOFSW	17110010 - Snoqualmie	3447
	AB	Snoqualmie Bog		Snoqualmie Bog Natural Area Preserve	WADNR	025N009E S11 NEOFSW	17110010 - Snoqualmie	4659
	A	Sand Point Trail Fen	Clallam County	Olympic National Park	NPS	031N015W S31	17100101 - Hoh-Quillayute	9210
	A	Lower Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 SEOFNW	17100102 - Queets-Quinault	3575
	A	Upper Bog				024N011W S05 NE | 025N011W S33 SW	17100102 - Queets-Quinault	2809
	B	Elwell Creek	Snohomish County	State Trust Lands	WADNR	027N007E S36 E2	17110009 - Skykomish | 17110010 - Snoqualmie	3628
North Pacific Open Transitional Bog								
Kalmia microphylla - Ledum groenlandicum - Gaultheria shallon - Pteridium aquilinum / Sphagnum spp. Shrub Bog	no reference standard site identified							
Kalmia microphylla - Ledum groenlandicum / Carex utriculata / Sphagnum spp. Shrub Bog	A	Lower Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 SEOFNW	17100102 - Queets-Quinault	2291

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Kalmia microphylla - Vaccinium oxycoccos / Carex (livida, obnupta) / Sphagnum spp. Shrub Bog	A	Cape Alava Prairie	Clallam County	Olympic National Park	NPS	031N016W S26 E2	17100101 - Hoh-Quillayute	3844
	B	Trout Creek Bog		n/a	Private	031N015W S26 SEOFSE | 031N015W S25 SWOFSW | 031N015W S35	17100101 - Hoh-Quillayute	4756
	B	Queets Bog	Jefferson County	Clearwater Bogs Natural Area Preserve	WADNR	024N011W S18 NWOFSE	17100102 - Queets-Quinault	4169
Ledum groenlandicum - Myrica gale / Sphagnum spp. Shrub Bog	AC	Carlisle Bog	Grays Harbor County	Carlisle Bog Natural Area Preserve	WADNR | Grays Harbor Co. | private	019N011W S17 | 019N011W S18 NE | 019N011W S08 | 019N011W S07 SE | 019N011W S04 | 019N011W S05 | 019N011W S09	17100102 - Queets-Quinault	6652
	A	Patricia's Bog		North Bay Natural Area Preserve	WADNR	018N011W S18 | 018N012W S13 E2 | 018N011W S17	17100105 - Grays Harbor	46
	A	Elk Lake	Clallam County	n/a	Private	031N015W S01 | 031N015W S12 |	17100101 - Hoh-Quillayute	8819

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						031N015W S11 | 031N015W S02		
	AB	Wentworth Lake				029N014W S20 NE | 029N014W S17 S2OFS2	17100101 - Hoh-Quillayute	4951
Ledum groenlandicum / Carex utriculata / Sphagnum spp. Shrub Bog	A	Snoqualmie Bog	King County	Snoqualmie Bog Natural Area Preserve	WADNR	025N009E S11 NEOFSW	17110010 - Snoqualmie	559
	AB	Cranberry Marsh #2	Mason County	n/a	Private	020N005W S30 SEOFSE | 020N005W S29 | 020N005W S31 | 020N005W S32	17100104 - Lower Chehalis	3345
	AB	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S10	17110009 - Skykomish	8770
	AB	Robe Bog		State Trust Lands | n/a	WADNR | Private	030N008E S08 N2	17110008 - Stillaguamish	6316
Ledum groenlandicum / Typha latifolia / Sphagnum spp. Shrub Bog [Provisional]	A	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S10	17110009 - Skykomish	8771
North Pacific Raised Bog								
Kalmia microphylla - Vaccinium oxycoccos / Empetrum nigrum / Sphagnum spp. Shrub Bog	A	Crowberry Bog	Jefferson County	Crowberry Bog Natural Area Preserve	WADNR	027N012W S36 NW	17100101 - Hoh-Quillayute	749

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Hoh Bog			Private	027N011W S31 W2 | 027N012W S36	17100101 - Hoh-Quillayute	6315
North Pacific Raised Bog Woodland								
Pinus contorta var. contorta / Ledum groenlandicum / Xerophyllum tenax / Sphagnum spp. Treed Bog	A	Crowberry Bog	Jefferson County	Crowberry Bog Natural Area Preserve	WADNR	027N012W S36 NW	17100101 - Hoh-Quillayute	6307
North Pacific Serpentine Fen								
Carex interior - Hypericum anagalloides Fen	A	Sumas Mountain	Whatcom County	State Trust Lands	WADNR	040N005E S31 N2 | 040N005E S30 E2	17110001 - Fraser | 17110004 - Nooksack	766
Carex obnupta - (Carex cusickii) Fen	A	Aloof Pond	Skagit County	Cypress Highlands Natural Area Preserve	WADNR	036N001E S29 NW	17110002 - Strait of Georgia	268
	A	Homestead Lake		Cypress Island Natural Resources Conservation Area	WADNR	036N001E S29 SE	17110002 - Strait of Georgia	2743
	AB	Homestead Meadow				036N001E S29 SE	17110002 - Strait of Georgia	6384
	BC	Paper Birch Fen				036N001E S31 NWOFNE	17110002 - Strait of Georgia	2305
Eriophorum chamissonis - Carex interior Fen	A	Cross Island Fen	Skagit County	State Trust Lands	WADNR	036N001E S29 | 036N001E S28	17110002 - Strait of Georgia	8862

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Sumas Mountain	Whatcom County	State Trust Lands	WADNR	040N005E S31 N2 | 040N005E S30 E2	17110001 - Fraser | 17110004 - Nooksack	6213
Juncus balticus - Festuca rubra - Carex cusickii Fen [Provisional]	AB	Upper Cypress Lake	Skagit County	Cypress Highlands Natural Area Preserve	WADNR	036N001E S29 SE	17110002 - Strait of Georgia	1096
	A	Cross Island Fen		Cypress Island Natural Resources Conservation Area	WADNR	036N001E S29 | 036N001E S28	17110002 - Strait of Georgia	8861
	A	Homestead Lake				036N001E S29 SE	17110002 - Strait of Georgia	5475
	A	Homestead Meadow				036N001E S29 SE	17110002 - Strait of Georgia	2550
	B	Paper Birch Fen				036N001E S31 NWOFNE	17110002 - Strait of Georgia	5952
Ledum groenlandicum / Carex (cusickii, interior, utriculata) - Festuca rubra Shrub Fen [Provisional]	A	Upper Cypress Lake	Skagit County	Cypress Highlands Natural Area Preserve	WADNR	036N001E S29 SE	17110002 - Strait of Georgia	5198
	A	Homestead Lake		State Trust Lands	WADNR	036N001E S29	17110002 - Strait of Georgia	8852
	A	Sumas Mountain	Whatcom County	State Trust Lands	WADNR	040N005E S31 N2 | 040N005E S30 E2	17110001 - Fraser | 17110004 - Nooksack	2194

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Spiraea douglasii / Carex obnupta Shrub Fen [Provisional]	A	Homestead Lake	Skagit County	Cypress Island Natural Resources Conservation Area	WADNR	036N001E S29 SE	17110002 - Strait of Georgia	4373
North Pacific Transitional Poor Fen								
Carex exsiccata Fen [Provisional]	no reference standard site identified							
Dulichium arundinaceum Pacific Coast Fen [Provisional]	no reference standard site identified							
Myrica gale / Carex (aquatilis var. dives, utriculata) Fen	BC	Moclips Marsh	Grays Harbor County	n/a	Private	021N011W S34 NWOFNW | 021N011W S33 | 021N011W S27 | 021N011W S28	17100102 - Queets-Quinault	4930
Spiraea douglasii / Carex aquatilis var. dives Fen	A	Allens Slough	Clallam County	Olympic National Park	NPS	030N015W S31 SE | 030N015W S32 W2 | 029N015W S05 NW	17100101 - Hoh-Quillayute	6517
		Beargrass Bog	Mason County	n/a	Private	020N005W S21 NWOFNE	17100104 - Lower Chehalis	5252
	AB	Cranberry Marsh #3	Mason County	n/a	Private	020N005W S29 NWOFNW	17100104 - Lower Chehalis	2448
	B	Cranberry Marsh #2	Mason County	n/a	Private	020N005W S30 SEOFSE | 020N005W S29 | 020N005W S31 |	17100104 - Lower Chehalis	6434

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						020N005W S32		
North Pacific Vernal Pool								
Plagiobothrys scouleri - Plantago bigelovii Vernal Pool	no reference standard site identified							
North Pacific Wooded Vernal Pool								
No associations identified	no reference standard site identified							
Palouse Wet Meadow								
Camassia quamash Rocky Mountain Wet Meadow	AB	Stubblefield, Turnbull NWR	Spokane County	Turnbull National Wildlife Refuge	USFWS	022N042E S16	17060109 - Rock	9112
Carex nebrascensis - Carex pellita - Juncus balticus Wet Meadow	no reference standard site identified							
Danthonia californica - Senecio hydrophiloides Wet Meadow	no reference standard site identified							
Deschampsia caespitosa - Carex nebrascensis Wet Meadow	no reference standard site identified							
Deschampsia caespitosa - Danthonia spp. Rocky Mountain Wet Meadow	no reference standard site identified							
Eleocharis palustris Marsh	no reference standard site identified							
Wyethia amplexicaulis Wet Meadow	no reference standard site identified							
Rocky Mountain Alpine-Subalpine Seep & Spring								
Caltha leptosepala Wet Meadow	no reference standard site identified							
Cassiope mertensiana - Carex nigricans Alpine Wet Dwarf-shrubland	no reference standard site identified							
Kalmia microphylla / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Phyllodoce empetriformis / Vaccinium deliciosum / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							
Saxifraga odontoloma - Senecio triangularis Wet Meadow	no reference standard site identified							
Senecio triangularis Wet Meadow	no reference standard site identified							
Rocky Mountain Alpine-Subalpine Snowmelt Basin								
Caltha leptosepala Wet Meadow	no reference standard site identified							
Carex illota Wet Meadow	no reference standard site identified							
Carex nigricans Wet Meadow	no reference standard site identified							
Carex spectabilis - Potentilla flabellifolia Alpine Wet Meadow	no reference standard site identified							
Cassiope mertensiana - Carex nigricans Alpine Wet Dwarf-shrubland	no reference standard site identified							
Kalmia microphylla / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							
Phyllodoce empetriformis / Vaccinium deliciosum / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							
Rocky Mountain Alpine-Subalpine Streamside Meadow								
Cassiope mertensiana - Carex nigricans Alpine Wet Dwarf-shrubland	no reference standard site identified							
Mimulus lewisii Wet Meadow	no reference standard site identified							
Phyllodoce empetriformis / Vaccinium deliciosum / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							
Saxifraga odontoloma - Senecio triangularis Wet Meadow	no reference standard site identified							
Senecio triangularis Wet Meadow	no reference standard site identified							
Rocky Mountain Calcareous Fen								
Betula glandulosa / Carex lasiocarpa Shrub Fen	A	Lost Lake Fen	Okanogan County	Lost Lake Wetland Preserve	Private	039N030E S28 | 039N030E	17020002 - Kettle	9142

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						S29 | 039N030E S33		
	A	Halliday Fen	Pend Oreille County	Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31	17010216 - Pend Oreille	9135
Carex buxbaumii Fen	no reference standard site identified							
Carex cusickii Fen	A	Halliday Fen	Pend Oreille County	Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31 NEOFSW	17010216 - Pend Oreille	3511
Carex lasiocarpa Fen	A	Lost Lake Fen	Okanogan County	Okanogan National Forest	USFS	039N030E S28 | 039N030E S33	17020002 - Kettle	9143
	A	Halliday Fen	Pend Oreille County	Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31	17010216 - Pend Oreille	9134
Eleocharis rostellata Fen	A	Halliday Fen	Pend Oreille County	Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31	17010216 - Pend Oreille	9133
Picea engelmannii / Betula glandulosa / Tomentypnum nitens Treed Fen	A	Buster Mountain Fen	Okanogan County	Okanogan National Forest	USFS	039N030E S17	17020002 - Kettle	9149

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Lost Lake Fen		Lost Lake Wetland Preserve	Private	039N030E S28 | 039N030E S29 | 039N030E S33	17020002 - Kettle	9141
Rocky Mountain Calcareous Swamp								
Picea engelmannii / Carex interior Swamp Forest	A	Lost Lake Fen	Okanogan County	Lost Lake Wetland Preserve	Private	039N030E S28 | 039N030E S33	17020002 - Kettle	9144
Rocky Mountain Conifer Basin Swamp								
Abies lasiocarpa - Picea engelmannii / Calamagrostis canadensis Swamp Forest	no reference standard site identified							
Picea engelmannii - Thuja plicata / Equisetum arvense Swamp Forest	no reference standard site identified							
Picea engelmannii - Tsuga heterophylla / Lysichiton americanus Swamp Forest	no reference standard site identified							
Picea engelmannii / Carex scopulorum var. prionophylla Swamp Woodland	AB	Chopaka Triangle	Okanogan County	Chopaka Mountain Natural Area Preserve	WADNR	040N024E S14 N2 | 040N024E S11 E2 | 040N024E S02 E2 | 040N024E S01 | 040N024E S12	17020007 - Similkameen	680
Picea engelmannii / Equisetum arvense Swamp Forest	BC	Chewack River	Okanogan County	Okanogan National Forest	USFS	038N022E S12 SW | 038N022E S11 | 038N022E S39	17020008 - Methow	3080
Pinus contorta / Spiraea douglasii Swamp Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Thuja plicata / Athyrium filix-femina Swamp Forest	E	Leola & Deemer Creek Interfluve Site	Pend Oreille County	Colville National Forest	USFS	039N045E S03 NWOFSE	17010216 - Pend Oreille	4935
Rocky Mountain Conifer Seepage Swamp								
Abies lasiocarpa - Picea engelmannii / Calamagrostis canadensis Swamp Forest	no reference standard site identified							
Picea (engelmannii x glauca, engelmannii) / Carex disperma Swamp Forest	no reference standard site identified							
Picea engelmannii - Thuja plicata / Equisetum arvense Swamp Forest	no reference standard site identified							
Picea engelmannii - Tsuga heterophylla / Lysichiton americanus Swamp Forest	no reference standard site identified							
Picea engelmannii / Carex scopulorum var. prionophylla Swamp Woodland	A	Bonaparte Fen	Okanogan County	Okanogan National Forest	USFS	038N030E S07	17020002 - Kettle	9152
	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24 | 037N044E S23 | 037N044E S25 | 037N045E S19 | 037N045E S30	17010216 - Pend Oreille	1913
Picea engelmannii / Equisetum arvense Swamp Forest	A	Chopaka Triangle	Okanogan County	Chopaka Mountain Natural Area Preserve	WADNR	040N024E S11 E2 | 040N024E S02 | 040N024E S14	17020007 - Similkameen	5955
	A	Sema Meadows	Pend Oreille County	Colville National Forest	USFS	037N045E S26	17010215 - Priest	9181

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Pinus contorta / Spiraea douglasii Swamp Forest	no reference standard site identified							
Thuja plicata / Athyrium filix-femina Swamp Forest	no reference standard site identified							
Rocky Mountain Hardwood Basin Swamp								
Betula papyrifera / Alnus incana Swamp Forest	no reference standard site identified							
Betula papyrifera / Aralia nudicaulis Swamp Forest	no reference standard site identified							
Betula papyrifera / Cornus canadensis Swamp Forest	no reference standard site identified							
Betula papyrifera / Cornus sericea Swamp Forest	no reference standard site identified							
Rocky Mountain Hardwood Seepage Swamp								
Betula papyrifera / Alnus incana Swamp Forest	no reference standard site identified							
Rocky Mountain Headwater Riparian Forest								
Abies grandis / Athyrium filix-femina Riparian Forest	no reference standard site identified							
Abies grandis / Gymnocarpium dryopteris Riparian Forest	no reference standard site identified							
Abies grandis / Symphoricarpos albus Riparian Forest	no reference standard site identified							
Abies grandis / Trautvetteria caroliniensis Forest	no reference standard site identified							
Abies lasiocarpa - Picea engelmannii / Oplopanax horridus Swamp Forest	no reference standard site identified							
Abies lasiocarpa - Picea engelmannii / Streptopus amplexifolius Swamp Forest	no reference standard site identified							
Abies lasiocarpa / Athyrium filix-femina Riparian Woodland	no reference standard site identified							
Abies lasiocarpa / Gymnocarpium dryopteris Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Abies lasiocarpa / Ledum glandulosum Swamp Forest	AB	Chopaka Triangle	Okanogan County	Chopaka Mountain Natural Area Preserve	WADNR	040N024E S14 N2 | 040N024E S11 E2 | 040N024E S02 E2 | 040N024E S01 | 040N024E S12	17020007 - Similkameen	771
Abies lasiocarpa / Rhododendron albiflorum / Luzula glabrata var. hitchcockii Riparian Forest	E	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S23 NEOFNE	17010216 - Pend Oreille	895
Abies lasiocarpa / Rhododendron albiflorum / Senecio triangularis Riparian Woodland	no reference standard site identified							
Abies lasiocarpa / Rubus lasiococcus Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Senecio triangularis - Saxifraga odontoloma Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Trautvetteria caroliniensis Swamp Forest	no reference standard site identified							
Larix lyallii / Cassiope mertensiana - Phyllodoce empetriformis Riparian Woodland	no reference standard site identified							
Picea engelmannii - (Abies lasiocarpa) / Trollius laxus Riparian Forest	no reference standard site identified							
Picea engelmannii - Abies lasiocarpa / Valeriana sitchensis Riparian Forest	no reference standard site identified							
Picea engelmannii / Alnus viridis ssp. sinuata Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Picea engelmannii / Aralia nudicaulis Riparian Forest	no reference standard site identified							
Picea engelmannii / Athyrium filix-femina Riparian Woodland	no reference standard site identified							
Picea engelmannii / Cornus canadensis Riparian Forest	no reference standard site identified							
Picea engelmannii / Cornus sericea Swamp Woodland	B	Box Canyon	Okanogan County	Okanogan National Forest	USFS	039N030E S22	17020002 - Kettle	8950
Populus tremuloides / Cornus sericea Riparian Forest	E	Cow Creek Canyon	Adams County	n/a	Private	020N037E S35 W2	17060108 - Palouse	919
	B	Titchenal Canyon	Douglas County	n/a	Private	024N023E S30	17020012 - Moses Coulee	9262
Populus tremuloides / Symphoricarpos albus Riparian Forest	AB	Hanging Garden	Douglas County	n/a	Private	025N025E S23	17020012 - Moses Coulee	8965
	A	Titchenal Canyon				024N023E S30 W2	17020012 - Moses Coulee	4501
Thuja plicata - Tsuga heterophylla / Oplopanax horridus Rocky Mountain Swamp Forest	E	Roosevelt Grove Ancient Cedars	Pend Oreille County	Roosevelt Grove of Ancient Cedars Proposed Special Interest Area (Kaniksu National Forest)	USFS	038N045E S26	17010215 - Priest	2357
	E	Salmo RNA		Salmo Research Natural Area (Colville National Forest)	USFS	040N045E S10	17010216 - Pend Oreille	5103
Thuja plicata / Paxistima myrsinites / Clintonia uniflora Riparian Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Tsuga heterophylla / Gymnocarpium dryopteris Riparian Forest	BC	Mount Spokane State Park	Spokane County	Mount Spokane State Park	State Parks	028N045E S08 SEOFSE | 028N045E S09 SWOFSW | 028N045E S17 NEOFNE	17010214 - Pend Oreille Lake	890
Rocky Mountain Headwater Riparian Shrubland								
Alnus incana / Glyceria striata Wet Shrubland	no reference standard site identified							
Alnus incana / Gymnocarpium dryopteris Wet Shrubland	no reference standard site identified							
Alnus incana / Mesic Forbs Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata - Cornus sericea Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata - Ribes lacustre Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Alluvial Bar Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Athyrium filix-femina - Cinna latifolia Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Mesic Forbs Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata Shrub Swamp	E	Early Winters Proposed Research Natural Area	Okanogan County	Early Winters Proposed Research Natural Area (Okanogan National Forest)	USFS	035N018E S17	17020008 - Methow	4679

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Ross Lake NRA	Skagit County	North Cascades National Park	NPS	036N013E S05 | 036N013E S04 | 036N013E S08 | 036N012E S11 | 036N013E S29 | 037N012E S49 | 036N013E S15 | 036N013E S24 | 036N013E S27 | 037N012E S55 | 037N013E S29 | 037N013E S42 | 036N013E S12 | 036N013E S20 | 037N012E S46 | 037N012E S54	17110005 - Upper Skagit	1271

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Baker River Drainage	Whatcom County	North Cascades National Park	NPS	038N010E S01 | 038N010E S21 | 038N010E S13 | 039N010E S31 | 039N011E S17 | 038N010E S35 | 038N010E S22 | 039N011E S07 | 039N011E S29 | 038N010E S34 | 038N010E S28 | 039N010E S22 | 038N010E S14 | 039N011E S32 | 039N010E S34 | 038N010E S26	17110005 - Upper Skagit	3834

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Chilliwack River Drainage				040N011E S17 | 040N011E S18 | 040N011E S07 | 040N010E S13 | 040N011E S20 | 040N011E S08 | 040N011E S19	17110001 - Fraser	197
	E	McMillan Creek Drainage				038N012E S02 | 039N012E S35 | 038N012E S11 | 039N012E S34 | 038N012E S01 | 038N012E S10 | 038N012E S03	17110005 - Upper Skagit	6716
	E	N Fork Nooksack River Drainage				039N010E S30 | 039N010E S31 | 039N009E S36 | 039N010E S29 | 039N009E S25 |	17110004 - Nooksack	4975

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						039N010E S32 | 039N010E S19 | 039N009E S24 | 039N010E S20		
	E	Luca Creek Drainage				039N012E S20 | 039N011E S12 | 039N012E S35 | 039N012E S12 | 040N012E S35 | 038N012E S04 | 040N011E S36 | 040N012E S32 | 038N012E S08 | 039N012E S03 | 040N012E S34 | 039N012E S06 | 040N011E S35 | 038N012E S17 |	17110005 - Upper Skagit	6412

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						039N012E S29 | 039N012E S24		
	E	Stetattle Creek Drainage		Stetattle Creek Research Natural Area (North Cascades National Park)	NPS	038N012E S26 | 038N013E S30 | 037N012E S04 | 038N012E S32 | 037N012E S49 | 038N012E S20 | 037N013E S04 | 039N012E S35 | 038N011E S24 | 038N012E S27 |	17110005 - Upper Skagit	511

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						037N012E S45 | 038N013E S17 | 037N012E S37 | 037N012E S05 | 038N013E S04 | 038N013E S21		
Cornus sericea / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Cornus sericea Rocky Mountain Wet Shrubland	no reference standard site identified							
Rhododendron albiflorum Wet Shrubland [Provisional]	no reference standard site identified							
Ribes lacustre / Cinna latifolia Wet Shrubland	no reference standard site identified							
Salix boothii / Mesic Forbs Wet Shrubland	no reference standard site identified							
Salix scouleriana / Elymus glaucus Wet Shrubland	no reference standard site identified							
Salix scouleriana / Paxistima myrsinites Wet Shrubland	no reference standard site identified							
Salix sitchensis - (Alnus incana) / Angelica arguta Wet Shrubland	no reference standard site identified							
Rocky Mountain Intermediate Fen								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Betula glandulosa / Calamagrostis canadensis Shrub Fen	A	Rufus Meadows	Pend Oreille County	Colville National Forest	USFS	036N042E S26	17010216 - Pend Oreille	9103
	A	Sema Meadows		Kaniksu National Forest	USFS	037N045E S23	17010215 - Priest	9174
Betula glandulosa / Carex aquatilis var. dives Shrub Fen	A	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30	17020003 - Colville	8953
Betula glandulosa / Carex lasiocarpa Shrub Fen	A	Rufus Meadows	Pend Oreille County	Colville National Forest	USFS	036N042E S26	17010216 - Pend Oreille	9104
	A	Sema Meadows				037N045E S23 | 037N045E S26	17010215 - Priest	9176
	B	Diamond Lake Bog		n/a	Private	030N044E S03 SE | 030N044E S10 | 030N044E S11 | 030N044E S02	17010308 - Little Spokane	1311
Betula glandulosa / Carex utriculata Shrub Fen	A	Headwaters Sinlahekin Creek	Okanogan County	Colville National Forest	USFS	037N023E S02 | 037N023E S11	17020007 - Similkameen | 17020008 - Methow	9184
	B	Long Swamp		Okanogan National Forest	USFS	039N023E S27	17020007 - Similkameen	9123
	A	Deerhorn Meadows	Pend Oreille County	Colville National Forest	USFS	036N045E S15	17010215 - Priest	9153
	A	Sema Meadows				037N045E S26 |	17010215 - Priest	9175

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						037N045E S23		
	A	Rufus Meadows		Colville National Forest | State Trust Lands	USFS | WADNR	036N042E S26 | 036N042E S27	17010216 - Pend Oreille	9105
Carex aquatilis var. aquatilis Fen	A	Bonaparte Fen	Okanogan County	Okanogan National Forest	USFS	038N030E S07	17020002 - Kettle	9150
	A	Sema Meadows	Pend Oreille County	Colville National Forest	USFS	037N045E S26	17010215 - Priest	9179
	A	Bunchgrass Meadows RNA		Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S23 SEOFNE | 037N044E S24	17010216 - Pend Oreille	3929
Carex buxbaumii Fen	B	Lost Creek	Okanogan County	Colville National Forest	USFS	035N029E S34	17020004 - Sanpoil	9171
	B	Long Swamp		Okanogan National Forest	USFS	039N023E S27	17020007 - Similkameen	9122
	A	Fish Lake Bog RNA	Chelan County	Fish Lake Bog Research Natural Area (Wencatchee National Forest)	USFS	027N017E S21	17020011 - Wenatchee	9092
Carex canescens Fen	no reference standard site identified							
Carex cusickii Fen	A	Deerhorn Meadows	Pend Oreille County	Kaniksu National Forest	USFS	036N045E S15	17010215 - Priest	9160

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30 SEOFSW	17020003 - Colville	4144
	A	Onion Ridge		State Trust Lands	WADNR	038N039E S16	17020001 - Franklin D. Roosevelt Lake	8980
Carex diandra / Hamatocaulis vernicosus Fen	A	Fish Lake Bog RNA	Chelan County	Fish Lake Bog Research Natural Area (Wencatchee National Forest)	USFS	027N017E S21	17020011 - Wenatchee	9090
Carex lasiocarpa Fen	A	Swampy Meadows South	Skamania County	Gifford Pinchot National Forest	USFS	008N009E S23	17070105 - Middle Columbia-Hood	8794
	A	ROGER LAKE RNA	Okanogan County	Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	9189
	A	Deerhorn Meadows	Pend Oreille County	Colville National Forest	USFS	036N045E S22 | 036N045E S15	17010215 - Priest	9156
	B	Rufus Meadows				036N042E S26 S2 | 036N042E S27	17010216 - Pend Oreille	930

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Diamond Lake Bog		n/a	Private	030N044E S03 SE | 030N044E S10 | 030N044E S11 | 030N044E S02	17010308 - Little Spokane	2352
	AB	Elbow Lake	Stevens County	Colville National Forest	USFS	040N038E S21	17020001 - Franklin D. Roosevelt Lake	8958
Carex limosa Fen	A	South Prairie Fen	Skamania County	South Prairie Special Interest Area (Gifford Pinchot National Forest)	USFS	005N009E S20	17070105 - Middle Columbia-Hood	8787
	A	Headwaters Sinlahekin Creek	Okanogan County	Colville National Forest	USFS	037N023E S02 | 037N023E S11	17020007 - Similkameen	9186
	B	Long Swamp		Okanogan National Forest	USFS	039N023E S27	17020007 - Similkameen	9121
Carex luzulina Rocky Mountain Fen	no reference standard site identified							
Carex rostrata Fen	A	Deerhorn Meadows	Pend Oreille County	Colville National Forest	USFS	036N045E S15	17010215 - Priest	9158
Carex scopulorum var. prionophylla Fen	A	Bonaparte Fen	Okanogan County	Okanogan National Forest	USFS	038N030E S07	17020002 - Kettle	9151

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S23 | 037N044E S24	17010216 - Pend Oreille	9198
Carex simulata Fen	A	Diamond Lake Bog	Pend Oreille County	n/a	Private	030N044E S10 | 030N044E S03	17010308 - Little Spokane	9258
Carex utriculata Fen	A	Long Swamp	Okanogan County	Okanogan National Forest	USFS	039N023E S21 | 039N023E S27 | 039N023E S28	17020007 - Similkameen | 17020008 - Methow	9124
	A	Windy Creek Fen				039N022E S40 | 039N023E S18 | 039N023E S19 | 039N022E S39	17020008 - Methow	9117
	A	ROGER LAKE RNA		Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	6648

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24	17010216 - Pend Oreille	9204
Deschampsia caespitosa - (Ligusticum grayi) Fen	no reference standard site identified							
Deschampsia caespitosa - (Symphyotrichum spathulatum) Fen	no reference standard site identified							
Deschampsia caespitosa - Carex aquatilis var. aquatilis Fen	no reference standard site identified							
Deschampsia caespitosa Fen	B	Cedar Creek PRNA	Yakima County	Cedar Creek Proposed Research Natural Area (Wenatchee National Forest)	USFS	016N011E S27 N2OFSE	17030002 - Naches	5823
Eleocharis quinqueflora Fen	A	Parachute Meadows	Okanogan County	Colville National Forest	USFS	037N023E S16	17020008 - Methow	9194
	A	Deerhorn Meadows	Pend Oreille County	Colville National Forest	USFS	036N045E S22 | 036N045E S15	17010215 - Priest	9159
	A	Sema Meadows				037N045E S26	17010215 - Priest	9178

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Bunchgrass Meadows RNA		Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24 | 037N044E S25 | 037N045E S19 | 037N045E S30	17010216 - Pend Oreille	9206
	A	Rufus Meadows		Colville National Forest | State Trust Lands	USFS | WADNR	036N042E S26 | 036N042E S27	17010216 - Pend Oreille	9106
	A	South Prairie Fen	Skamania County	South Prairie Special Interest Area (Gifford Pinchot National Forest)	USFS	005N009E S20 | 005N009E S21	17070105 - Middle Columbia-Hood	8789
Eriophorum angustifolium ssp. angustifolium - Eleocharis quinqueflora / Sphagnum spp. Fen	A	South Prairie Fen	Skamania County	South Prairie Special Interest Area (Gifford Pinchot National Forest)	USFS	005N009E S20 | 005N009E S21	17070105 - Middle Columbia-Hood	8788
	A	Lower Stewart Meadow	Pend Oreille County	Colville National Forest	USFS	037N042E S28 | 037N042E S29	17010216 - Pend Oreille	9098
Salix (farriae, planifolia) / Carex utriculata Shrub Fen	A	Headwaters Sinlahekin Creek	Okanogan County	Colville National Forest	USFS	037N023E S02	17020007 - Similkameen	9183

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	ROGER LAKE RNA		Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	9191
Salix farriae / Eleocharis quinqueflora Shrub Fen	AB	Tiffany Meadows	Okanogan County	Colville National Forest	USFS	037N023E S21 | 037N023E S20	17020008 - Methow	9187
	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24	17010216 - Pend Oreille	9203
Salix planifolia / Carex scopulorum Shrub Fen	AB	Parachute Meadows	Okanogan County	Colville National Forest	USFS	037N023E S16	17020008 - Methow	9195
	AB	Tiffany Meadows		Okanogan National Forest	USFS	037N023E S21 NEOFSW | 037N023E S20	17020008 - Methow	1709
Rocky Mountain Intermediate Riparian Forest								
Abies grandis / Symphoricarpos albus Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Ledum glandulosum Swamp Forest	no reference standard site identified							
Abies lasiocarpa / Rhododendron albiflorum / Senecio triangularis Riparian Woodland	no reference standard site identified							
Abies lasiocarpa / Trautvetteria caroliniensis Swamp Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Pinus ponderosa - Quercus garryana / Symphoricarpos albus Riparian Woodland	no reference standard site identified							
Pinus ponderosa / Camassia quamash Riparian Woodland	no reference standard site identified							
Pinus ponderosa / Symphoricarpos albus Riparian Woodland	no reference standard site identified							
Rocky Mountain Intermediate Riparian Shrubland								
Alnus incana / Spiraea douglasii Wet Shrubland	no reference standard site identified							
Alnus incana / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Athyrium filix-femina - Cinna latifolia Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Mesic Forbs Wet Shrubland	no reference standard site identified							
Cornus sericea / Athyrium filix-femina Wet Shrubland	no reference standard site identified							
Cornus sericea / Heracleum maximum Wet Shrubland	no reference standard site identified							
Cornus sericea / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Cornus sericea Rocky Mountain Wet Shrubland	no reference standard site identified							
Rocky Mountain Montane Basin Marsh & Wet Meadow								
Calamagrostis canadensis Western Wet Meadow	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24	17010216 - Pend Oreille	5917

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Rufus Meadows		Colville National Forest | State Trust Lands	USFS | WADNR	036N042E S26	17010216 - Pend Oreille	9108
Camassia quamash Rocky Mountain Wet Meadow	no reference standard site identified							
Carex amplifolia Wet Meadow	no reference standard site identified							
Carex aperta Rocky Mountain Wet Meadow	no reference standard site identified							
Carex aquatilis Wet Meadow	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24	17010216 - Pend Oreille	9201
Carex lacustris Western Marsh	AB	Nile Lake	Pend Oreille County	Colville National Forest	USFS	037N042E S35	17010216 - Pend Oreille	9216
	B	Stecker Fen				037N042E S02	17010216 - Pend Oreille	9130
Carex lenticularis var. lipocarpa Marsh	no reference standard site identified							
Carex nebrascensis Wet Meadow	no reference standard site identified							
Carex pellita Wet Meadow	AB	North Fork Libby Creek	Okanogan County	Okanogan National Forest	USFS	032N021E S17	17020008 - Methow	8952
	B	Castle Rock	Grant County	Bureau of Land Management	USDOI	028N030E S31	17020014 - Banks Lake	8944
Carex scopulorum var. bracteosa Wet Meadow	AB	Chopaka Triangle	Okanogan County	Chopaka Mountain Natural Area Preserve	WADNR	040N024E S14 N2 | 040N024E S11 E2 | 040N024E S02 E2 | 040N024E S01 |	17020007 - Similkameen	3141

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						040N024E S12		
Carex utriculata Rocky Mountain Marsh [Provisional]	A	Lost Lake Fen	Okanogan County	Lost Lake Wetland Preserve	Private	039N030E S28 | 039N030E S29	17020002 - Kettle	9139
	A	Rufus Meadows	Pend Oreille County	Colville National Forest | State Trust Lands	USFS | WADNR	036N042E S26	17010216 - Pend Oreille	9107
	AB	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30 SEOFSW	17020003 - Colville	6210
Carex vesicaria Wet Meadow	no reference standard site identified							
Danthonia californica - Senecio hydrophiloides Wet Meadow	no reference standard site identified							
Danthonia intermedia Wet Meadow	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24	17010216 - Pend Oreille	9202
Deschampsia caespitosa - Danthonia spp. Rocky Mountain Wet Meadow	no reference standard site identified							
Deschampsia caespitosa Wet Meadow	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Eleocharis palustris Marsh	A	Onion Ridge	Stevens County	State Trust Lands	WADNR	038N039E S16	17020001 - Franklin D. Roosevelt Lake	8981
Equisetum fluviatile Marsh	no reference standard site identified							
Glyceria borealis Marsh	B	Findley Lake	Spokane County	Turnbull Pine Research Natural Area (Turnbull National Wildlife Refuge)	USFWS	023N041E S25	17010306 - Hangman | 17060108 - Palouse	9256
	B	Big Meadows	Pend Oreille County	Colville National Forest	USFS	037N041E S01	17020001 - Franklin D. Roosevelt Lake	9084
Glyceria elata Marsh [Provisional]	no reference standard site identified							
Glyceria grandis Marsh	no reference standard site identified							
Glyceria striata Wet Meadow	no reference standard site identified							
Juncus balticus Wet Meadow	no reference standard site identified							
Torreyochloa pallida var. pauciflora Marsh	no reference standard site identified							
Rocky Mountain Montane Seep & Spring								
Athyrium filix-femina - Gymnocarpium dryopteris Wet Meadow [Provisional]	no reference standard site identified							
Calamagrostis canadensis Western Wet Meadow	no reference standard site identified							
Carex amplifolia Wet Meadow	no reference standard site identified							
Carex aquatilis Wet Meadow	no reference standard site identified							
Carex nebrascensis Wet Meadow	no reference standard site identified							
Carex pellita Wet Meadow	no reference standard site identified							
Carex scopulorum var. bracteosa Wet Meadow	A	Haney Meadow	Kittitas County	Wenatchee National Forest	USFS	021N018E S13	17030001 - Upper Yakima	9096

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Danthonia intermedia Wet Meadow	AB	Parachute Meadows	Okanogan County	Colville National Forest	USFS	037N023E S16	17020008 - Methow	9196
Deschampsia caespitosa - Carex nebrascensis Wet Meadow	B	Camas Meadows (Larkspur Meadows)	Chelan County	Camas Meadows Natural Area Preserve	WADNR	023N018E S22	17020011 - Wenatchee	9088
Deschampsia caespitosa Wet Meadow	AB	Haney Meadow	Kittitas County	Wenatchee National Forest	USFS	021N018E S13	17030001 - Upper Yakima	9094
Equisetum arvense Wet Meadow	no reference standard site identified							
Glyceria elata Marsh [Provisional]	no reference standard site identified							
Glyceria striata Wet Meadow	no reference standard site identified							
Juncus balticus Wet Meadow	no reference standard site identified							
Mimulus guttatus - (Mimulus spp.) Seep	no reference standard site identified							
Wyethia amplexicaulis Wet Meadow	no reference standard site identified							
Rocky Mountain Montane Streamside Marsh & Wet Meadow								
Adiantum pedatum Rocky Mountain Seep	no reference standard site identified							
Athyrium filix-femina - Gymnocarpium dryopteris Wet Meadow [Provisional]	no reference standard site identified							
Calamagrostis canadensis Western Wet Meadow	no reference standard site identified							
Carex aquatilis Wet Meadow	no reference standard site identified							
Carex lenticularis var. lipocarpa Marsh	no reference standard site identified							
Carex nebrascensis Wet Meadow	no reference standard site identified							
Carex pellita Wet Meadow	no reference standard site identified							
Carex scopulorum var. bracteosa Wet Meadow	no reference standard site identified							
Carex utriculata Rocky Mountain Marsh [Provisional]	no reference standard site identified							
Carex vesicaria Wet Meadow	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Danthonia intermedia Wet Meadow	no reference standard site identified							
Deschampsia caespitosa - Carex nebrascensis Wet Meadow	no reference standard site identified							
Deschampsia caespitosa Wet Meadow	no reference standard site identified							
Eleocharis palustris Marsh	no reference standard site identified							
Equisetum arvense Wet Meadow	no reference standard site identified							
Equisetum fluviatile Marsh	A	Halliday Fen	Pend Oreille County	Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31	17010216 - Pend Oreille	9132
	AB	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30 SEOFSW	17020003 - Colville	4673
Glyceria striata Wet Meadow	no reference standard site identified							
Juncus balticus Wet Meadow	no reference standard site identified							
Torreyochloa pallida var. pauciflora Marsh	no reference standard site identified							
Veronica americana Marsh	no reference standard site identified							
Rocky Mountain Patterned Fen								
Betula glandulosa / Calamagrostis canadensis Shrub Fen	no reference standard site identified							
Carex limosa Fen	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24 | 037N044E S25 | 037N045E S19 | 037N045E S30	17010216 - Pend Oreille	9205

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Carex rostrata Fen	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S24	17010216 - Pend Oreille	9200
Carex utriculata / Sphagnum spp. Fen	no reference standard site identified							
Carex utriculata Fen	no reference standard site identified							
Eriophorum angustifolium ssp. angustifolium - Eleocharis quinqueflora / Sphagnum spp. Fen	A	Bunchgrass Meadows RNA	Pend Oreille County	Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S25 | 037N045E S19 | 037N045E S30 | 037N044E S23 | 037N044E S24	17010216 - Pend Oreille	9217
Rocky Mountain Perennial Riparian Forest								
Abies grandis - Thuja plicata / Alnus viridis ssp. sinuata / Achlys triphylla Riparian Forest	B	Onion Ridge - Alice Mae Mountain	Stevens County	State Trust Lands | Private	WADNR | Private	039N039E S34 S2 | 038N039E S03 N2OFN2	17020001 - Franklin D. Roosevelt Lake	3204
Abies grandis / Achlys triphylla Forest	no reference standard site identified							
Abies grandis / Athyrium filix-femina Riparian Forest	no reference standard site identified							
Abies grandis / Gymnocarpium dryopteris Riparian Forest	no reference standard site identified							
Abies grandis / Symphoricarpos albus Riparian Forest	no reference standard site identified							
Abies lasiocarpa - Picea engelmannii / Oplopanax horridus Swamp Forest	no reference standard site identified							
Abies lasiocarpa / Athyrium filix-femina Riparian Woodland	A	S Buster Mountain	Okanogan County	Okanogan National Forest	USFS	039N030E S30 |	17020002 - Kettle	8948

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						039N030E S31		
Abies lasiocarpa / Gymnocarpium dryopteris Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Ledum glandulosum Swamp Forest	no reference standard site identified							
Abies lasiocarpa / Rhododendron albiflorum / Luzula glabrata var. hitchcockii Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Rubus lasiococcus Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Senecio triangularis - Saxifraga odontoloma Riparian Forest	no reference standard site identified							
Abies lasiocarpa / Trautvetteria caroliniensis Swamp Forest	no reference standard site identified							
Abies lasiocarpa / Vaccinium caespitosum Riparian Forest	no reference standard site identified							
Picea engelmannii - (Abies lasiocarpa) / Trollius laxus Riparian Forest	no reference standard site identified							
Picea engelmannii - Abies lasiocarpa / Valeriana sitchensis Riparian Forest	no reference standard site identified							
Picea engelmannii - Thuja plicata / Vaccinium membranaceum Riparian Forest	no reference standard site identified							
Picea engelmannii / Alnus viridis ssp. sinuata Riparian Forest	no reference standard site identified							
Picea engelmannii / Athyrium filix-femina Riparian Woodland	no reference standard site identified							
Picea engelmannii / Cornus canadensis Riparian Forest	no reference standard site identified							
Picea engelmannii / Cornus sericea Swamp Woodland	A	Buster Mountain Fen	Okanogan County	Colville National Forest	USFS	039N030E S17	17020002 - Kettle	9148
Picea engelmannii / Gymnocarpium dryopteris Riparian Forest [Provisional]	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Pinus ponderosa / Crataegus douglasii Riparian Woodland	no reference standard site identified							
Populus tremuloides / Cornus sericea Riparian Forest	no reference standard site identified							
Populus tremuloides / Symphoricarpos albus Riparian Forest	no reference standard site identified							
Thuja plicata - (Abies grandis) / Acer circinatum Riparian Forest	no reference standard site identified							
Thuja plicata - Tsuga heterophylla / Oplopanax horridus Rocky Mountain Swamp Forest	no reference standard site identified							
Thuja plicata / Alnus incana Riparian Forest	no reference standard site identified							
Thuja plicata / Gymnocarpium dryopteris Riparian Forest	no reference standard site identified							
Thuja plicata / Paxistima myrsinites / Clintonia uniflora Riparian Forest	no reference standard site identified							
Tsuga heterophylla / Acer circinatum Riparian Forest	no reference standard site identified							
Tsuga heterophylla / Gymnocarpium dryopteris Riparian Forest	no reference standard site identified							
Rocky Mountain Perennial Riparian Shrubland								
Alnus incana - Betula occidentalis Wet Shrubland	no reference standard site identified							
Alnus incana / Alluvial Bar Wet Shrubland	no reference standard site identified							
Alnus incana / Athyrium filix-femina Wet Shrubland	no reference standard site identified							
Alnus incana / Calamagrostis canadensis Wet Shrubland	no reference standard site identified							
Alnus incana / Carex (bolanderi, infirminervia, leptopoda) Wet Shrubland	no reference standard site identified							
Alnus incana / Carex pellita Wet Shrubland	no reference standard site identified							
Alnus incana / Carex utriculata Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus incana / Cornus sericea Wet Shrubland	no reference standard site identified							
Alnus incana / Equisetum arvense Wet Shrubland	no reference standard site identified							
Alnus incana / Glyceria striata Wet Shrubland	no reference standard site identified							
Alnus incana / Gymnocarpium dryopteris Wet Shrubland	no reference standard site identified							
Alnus incana / Mesic Forbs Wet Shrubland	no reference standard site identified							
Alnus incana / Ribes (inerme, hudsonianum, lacustre) Wet Shrubland	no reference standard site identified							
Alnus incana / Salix lutea Wet Shrubland	no reference standard site identified							
Alnus incana / Senecio triangularis Wet Shrubland	no reference standard site identified							
Alnus incana / Spiraea douglasii Wet Shrubland	no reference standard site identified							
Alnus incana / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata - Cornus sericea Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata - Ribes lacustre Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Alluvial Bar Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Mesic Forbs Wet Shrubland	no reference standard site identified							
Cornus sericea / Athyrium filix-femina Wet Shrubland	no reference standard site identified							
Cornus serIcea / Equisetum arvense Wet Shrubland	no reference standard site identified							
Cornus sericea / Symphoricarpos albus Wet Shrubland	no reference standard site identified							
Cornus sericea Rocky Mountain Wet Shrubland	E	Cow Creek Canyon	Adams County	n/a	Private	020N037E S35 NW	17060108 - Palouse	4245

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Onion Ridge	Stevens County	State Trust Lands	WADNR	038N039E S16	17020001 - Franklin D. Roosevelt Lake	8975
Crataegus douglasii / Spiraea douglasii Wet Shrubland	no reference standard site identified							
Dasiphora fruticosa ssp. floribunda / Deschampsia caespitosa Wet Shrubland	no reference standard site identified							
Salix (boothii, geyeriana) / Carex aquatilis Wet Shrubland	no reference standard site identified							
Salix commutata / Senecio triangularis Wet Shrubland	no reference standard site identified							
Salix drummondiana / Carex scopulorum var. prionophylla Wet Shrubland	no reference standard site identified							
Salix scouleriana / Paxistima myrsinites Wet Shrubland	no reference standard site identified							
Salix sitchensis - (Alnus incana) / Angelica arguta Wet Shrubland	no reference standard site identified							
Salix sitchensis / Glyceria elata Wet Shrubland	no reference standard site identified							
Vaccinium caespitosum - (Salix farriae) / Danthonia intermedia Wet Shrubland	no reference standard site identified							
Rocky Mountain Poor Fen								
Carex limosa / Sphagnum spp. Fen	A	ROGER LAKE RNA	Okanogan County	Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	9192

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Huff Lake	Pend Oreille County	Huff Lake Proposed Special Interest Area (Kaniksu National Forest)	USFS	037N045E S02	17010215 - Priest	4981
	A	Bunchgrass Meadows RNA		Bunchgrass Meadows Research Natural Area (Colville National Forest)	USFS	037N044E S23 | 037N044E S24	17010216 - Pend Oreille	9197
	A	Fish Lake Bog RNA	Chelan County	Fish Lake Bog Research Natural Area (Wencatchee National Forest)	USFS	027N017E S21	17020011 - Wenatchee	9091
Carex utriculata / Sphagnum spp. Fen	A	ROGER LAKE RNA	Okanogan County	Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	9190
	AB	Bisbee Meadow	Ferry County	Colville National Forest	USFS	036N037E S08	17020001 - Franklin D. Roosevelt Lake	8961
Dulichium arundinaceum Shore Fen	no reference standard site identified							
Pinus contorta / Betula glandulosa / Carex utriculata Treed Fen	A	Long Swamp	Okanogan County	Okanogan National Forest	USFS	039N023E S27	17020007 - Similkameen	9126
	A	Windy Creek Fen				039N022E S39 |	17020008 - Methow	9119

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						039N023E S18		
	A	Sema Meadows	Pend Oreille County	Colville National Forest	USFS	037N045E S26	17010215 - Priest	9177
	A	Rufus Meadows		State Trust Lands	WADNR	036N042E S26 | 036N042E S27	17010216 - Pend Oreille	9109
Pinus contorta / Calamagrostis canadensis Treed Fen	A	Windy Creek Fen	Okanogan County	Okanogan National Forest	USFS	039N022E S39 | 039N023E S18 | 039N023E S19	17020008 - Methow	9120
	A	Sema Meadows	Pend Oreille County	Colville National Forest	USFS	037N045E S23	17010215 - Priest	9173
Rhynchospora alba / Sphagnum spp. Rocky Mountain Fen [Provisional]	A	Sema Meadows	Pend Oreille County	Colville National Forest	USFS	037N045E S26	17010215 - Priest	9180
Salix pedicellaris / Rhynchospora alba / Sphagnum Shrub Fen	A	Fish Lake Bog RNA	Chelan County	Fish Lake Bog Research Natural Area (Wencatchee National Forest)	USFS	027N017E S21	17020011 - Wenatchee	9093
Rocky Mountain Shrub Basin Swamp								
Alnus incana / Athyrium filix-femina Wet Shrubland	no reference standard site identified							
Alnus incana / Calamagrostis canadensis Wet Shrubland	A	Swampy Meadows North	Skamania County	Gifford Pinchot National Forest	USFS	008N009E S14 | 008N009E S23	17070105 - Middle Columbia-Hood	8811
Alnus incana / Carex scopulorum var. prionophylla Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus incana / Carex utriculata Wet Shrubland	no reference standard site identified							
Alnus incana / Cornus sericea Wet Shrubland	AB	Onion Ridge	Stevens County	State Trust Lands	WADNR	038N039E S16	17020001 - Franklin D. Roosevelt Lake	8978
Alnus incana / Equisetum arvense Wet Shrubland	no reference standard site identified							
Alnus incana / Glyceria striata Wet Shrubland	B	Big Meadows	Pend Oreille County	Colville National Forest	USFS	037N041E S01	17020001 - Franklin D. Roosevelt Lake	9079
	AB	Elbow Lake	Stevens County	Colville National Forest	USFS	040N038E S21	17020001 - Franklin D. Roosevelt Lake	8959
Alnus incana / Lysichiton americanus Wet Shrubland	B	Bisbee Meadow	Ferry County	Colville National Forest	USFS	036N037E S08	17020001 - Franklin D. Roosevelt Lake	8962
Alnus incana / Mesic Forbs Wet Shrubland	no reference standard site identified							
Alnus incana / Spiraea douglasii Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Mesic Forbs Wet Shrubland	no reference standard site identified							
Cornus sericea Rocky Mountain Wet Shrubland	no reference standard site identified							
Crataegus douglasii / Spiraea douglasii Wet Shrubland	no reference standard site identified							
Salix drummondiana / Carex scopulorum var. prionophylla Wet Shrubland	no reference standard site identified							
Salix sitchensis / Glyceria elata Wet Shrubland	no reference standard site identified							
Spiraea douglasii - (Salix sitchensis, drummondiana) Shrub Swamp	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Spiraea douglasii / Calamagrostis canadensis Shrub Swamp	no reference standard site identified							
Rocky Mountain Shrub Carr								
Alnus incana / Athyrium filix-femina Wet Shrubland	AB	North Fork Ruby Creek	Pend Oreille County	Colville National Forest	USFS	036N043E S31 | 036N043E S30	17010216 - Pend Oreille	8956
Alnus incana / Calamagrostis canadensis Wet Shrubland								
Alnus incana / Carex (aquatilis, lenticularis, luzulina, pellita) Wet Shrubland	A	North Langfield Fen	Skamania County	Gifford Pinchot National Forest	USFS	007N009E S19	17070105 - Middle Columbia-Hood	8804
Alnus incana / Carex amplifolia Wet Shrubland	no reference standard site identified							
Alnus incana / Carex scopulorum var. prionophylla Wet Shrubland	no reference standard site identified							
Alnus incana / Carex utriculata Wet Shrubland	B	Deerhorn Meadows	Pend Oreille County	Colville National Forest	USFS	036N045E S15 | 036N045E S22	17010215 - Priest	9155
	A	Halliday Fen		Halliday Fen Research Natural Area (Colville National Forest)	USFS	040N044E S31 NEOFSW	17010216 - Pend Oreille	3817
	AB	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30 SEOFSW | 036N042E S31	17020003 - Colville	3395
Alnus incana / Equisetum arvense Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus incana / Glyceria striata Wet Shrubland	no reference standard site identified							
Alnus incana / Lysichiton americanus Wet Shrubland	no reference standard site identified							
Alnus incana / Mesic Forbs Wet Shrubland	no reference standard site identified							
Alnus incana / Scirpus microcarpus Wet Shrubland	B	Deerhorn Meadows	Pend Oreille County	Colville National Forest	USFS	036N045E S15	17010215 - Priest	9154
	A	Little Pend Oreille River	Stevens County	Little Pend Oreille River Natural Area Preserve	WADNR	036N042E S30	17020003 - Colville	8955
Alnus incana / Senecio triangularis Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Mesic Forbs Wet Shrubland	no reference standard site identified							
Cornus sericea / Saxifraga odontoloma Wet Shrubland	no reference standard site identified							
Dasiphora fruticosa ssp. floribunda / Deschampsia caespitosa Wet Shrubland	no reference standard site identified							
Salix (boothii, geyeriana) / Carex aquatilis Wet Shrubland	A	Lost Lake Fen	Okanogan County	Lost Lake Wetland Preserve	Private	039N030E S28 | 039N030E S29	17020002 - Kettle	9140
Salix bebbiana / Mesic Graminoids Wet Shrubland	no reference standard site identified							
Salix boothii / Mesic Forbs Wet Shrubland	no reference standard site identified							
Salix commutata / Carex scopulorum Wet Shrubland	no reference standard site identified							
Salix commutata / Senecio triangularis Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Salix drummondiana / Calamagrostis canadensis Wet Shrubland	BC	Barnell Meadows	Okanogan County	Colville National Forest	USFS	035N029E S27 | 035N029E S34 | 035N029E S35	17020004 - Sanpoil	9168
	B	Rufus Meadows	Pend Oreille County	Colville National Forest	USFS	036N042E S26 S2 | 036N042E S27	17010216 - Pend Oreille	5558
Salix drummondiana / Carex utriculata Wet Shrubland	AB	Rufus Meadows	Pend Oreille County	Colville National Forest	USFS	036N042E S26 S2 | 036N042E S27	17010216 - Pend Oreille	3518
	AB	Lost Creek	Okanogan County	Colville National Forest	USFS	035N029E S34	17020004 - Sanpoil	9172
	A	Long Swamp		Okanogan National Forest	USFS	039N023E S21 | 039N023E S27 | 039N023E S28	17020007 - Similkameen | 17020008 - Methow	9125
	A	ROGER LAKE RNA		Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	9193
Salix drummondiana / Carex scopulorum var. prionophylla Wet Shrubland	B	ROGER LAKE RNA	Okanogan County	Roger Lake Research Natural Area (Okanogan National Forest)	USFS	036N023E S40	17020008 - Methow	1232
Salix drummondiana / Carex utriculata Wet Shrubland	AB	Box Canyon	Okanogan County	Okanogan National Forest	USFS	039N030E S22 | 039N030E S21	17020002 - Kettle	8951

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Spiraea douglasii - (Salix sitchensis, drummondiana) Shrub Swamp	no reference standard site identified							
Spiraea douglasii / Calamagrostis canadensis Shrub Swamp	no reference standard site identified							
Vaccinium caespitosum - (Salix farriae) / Danthonia intermedia Wet Shrubland	no reference standard site identified							
Rocky Mountain Shrub Seepage Swamp								
Alnus incana / Carex utriculata Wet Shrubland	no reference standard site identified							
Alnus incana / Cornus sericea Wet Shrubland	no reference standard site identified							
Alnus incana / Glyceria striata Wet Shrubland	no reference standard site identified							
Alnus incana / Mesic Forbs Wet Shrubland	no reference standard site identified							
Alnus incana / Scirpus microcarpus Wet Shrubland	no reference standard site identified							
Alnus viridis ssp. sinuata / Athyrium filix-femina - Cinna latifolia Wet Shrubland	no reference standard site identified							
Cornus sericea / Heracleum maximum Wet Shrubland	no reference standard site identified							
Rocky Mountain Waterfall & Spray Zone								
Sullivantia hapemanii - Mimulus spp. Wet Rock Vegetation	no reference standard site identified							
Rocky Mountain Wet Cliff								
Sullivantia hapemanii - Mimulus spp. Wet Rock Vegetation	no reference standard site identified							
Rocky Mountain Xeroriparian Forest								
Abies amabilis - (Pseudotsuga menziesii) / Vaccinium membranceum / Achlys triphylla Forest	no reference standard site identified							
Abies amabilis / Menziesia ferruginea Forest	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Abies amabilis / Rhododendron albiflorum Forest	no reference standard site identified							
Abies grandis / Acer circinatum Forest	no reference standard site identified							
Abies grandis / Acer glabrum Forest	no reference standard site identified							
Abies lasiocarpa / Cornus canadensis Forest	no reference standard site identified							
Abies lasiocarpa / Paxistima myrsinites Woodland	no reference standard site identified							
Abies lasiocarpa / Vaccinium membranaceum Forest	no reference standard site identified							
Picea engelmannii / Cornus canadensis Riparian Forest	no reference standard site identified							
Picea engelmannii / Gymnocarpium dryopteris Riparian Forest [Provisional]	no reference standard site identified							
Thuja plicata / Aralia nudicaulis Forest	no reference standard site identified							
Thuja plicata / Asarum caudatum Forest	no reference standard site identified							
Thuja plicata / Clintonia uniflora Forest	no reference standard site identified							
Tsuga heterophylla / Aralia nudicaulis Forest	no reference standard site identified							
Tsuga heterophylla / Asarum caudatum Forest	no reference standard site identified							
Tsuga heterophylla / Clintonia uniflora Forest	no reference standard site identified							
Tsuga mertensiana - Abies amabilis / Vaccinium alaskaense / Rubus pedatus Forest	no reference standard site identified							
Tsuga mertensiana / Phyllodoce empetriformis - Vaccinium deliciosum Woodland	no reference standard site identified							
Temperate Pacific Freshwater Tidal Surge Plain Mudflat								
Bidens frondosa Mudflat	no reference standard site identified							
Eleocharis obtusa Mudflat	no reference standard site identified							
Eleocharis ovata - Ludwigia palustris Mudflat	no reference standard site identified							
Temperate Pacific High Brackish Marsh								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Argentina egedii - Juncus balticus Salt Marsh	BC	Beardslee Slough	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S15 | 016N011W S15 | 016N011W S14 SW | 016N011W S16 SE | 016N011W S21 N2 | 016N011W S22 NW	17100105 - Grays Harbor	554
	A	ELK RIVER & ANDREWS CREEK				016N011W S26 | 016N011W S27 | 016N011W S34 E2	17100105 - Grays Harbor	5239
	A	Mallards Slough				016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	2984

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	BC					016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	3534
	B	Bone River	Pacific County	Bone River Natural Area Preserve	WADNR	014N010W S34 | 014N010W S36 | 014N010W S26 S2OFSW | 014N010W S35 | 014N010W S33 | 014N010W S27 | 014N010W S38	17100106 - Willapa Bay	5245
	BC	Niawiakum River		Niawiakum River Natural Area Preserve | Niawiakum River Preserve	WADNR | TNC	013N010W S10 | 013N010W S15 NE | 013N010W S03 | 013N010W S09 | 013N010W S11 | 013N010W S14 |	17100106 - Willapa Bay	592

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						013N010W S16		
Argentina egedii - Symphyotrichum subspicatum Salt Marsh	BC	Johns River	Grays Harbor County	Johns River State Wildlife Area	WDFW	016N010W S07 | 016N011W S12	17100105 - Grays Harbor	2145
	BC	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S07 | 033N003E S08 SW | 033N003E S17 | 033N003E S18 NE | 033N002E S12	17110007 - Lower Skagit | 17110019 - Puget Sound	4533
Calamagrostis nutkaensis - Argentina egedii - Juncus balticus Salt Marsh	AB	ELK RIVER & ANDREWS CREEK	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S26 | 016N011W S25 SW | 016N011W S27 | 016N011W S34 E2	17100105 - Grays Harbor	5116
	BC	Johns River		Johns River State Wildlife Area	WDFW	016N010W S07 | 016N011W S12	17100105 - Grays Harbor	3116

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Deschampsia caespitosa - (Carex lyngbyei, Distichlis spicata) Salt Marsh	A	N Shore Rod & Gun Club	Grays Harbor County	North Bay Natural Area Preserve	Private | WADNR	018N012W S23 | 018N012W S13 S2OFS2 | 018N011W S18 S2OFS2 | 018N011W S17 S2OFSW | 018N012W S24 N2OFN2 | 018N012W S26 W2OFW2	17100105 - Grays Harbor	4156
						018N012W S23 | 018N012W S26 | 018N012W S24 | 018N011W S21 | 018N011W S17	17100105 - Grays Harbor	4960
	BC	North Shore Rod & Gun Club				018N012W S23 | 018N012W S13 | 018N012W S26 | 018N012W S24 | 018N011W S18 | 018N011W S17	17100105 - Grays Harbor	706

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Beardslee Slough		Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S15 | 016N011W S15 | 016N011W S14 SW | 016N011W S16 SE | 016N011W S21 N2 | 016N011W S22 NW	17100105 - Grays Harbor	846
	A	ELK RIVER & ANDREWS CREEK				016N011W S26 | 016N011W S27	17100105 - Grays Harbor	5757
	B					016N011W S27	17100105 - Grays Harbor	917
	A	Mallards Slough				016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	4155
	A	Skookum Inlet	Mason County	Skookum Inlet Natural Area Preserve	WADNR	019N003W S17 N2	17110019 - Puget Sound	3490
	AB					019N003W S17 N2	17110019 - Puget Sound	7007

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Bone River	Pacific County	Bone River Natural Area Preserve	WADNR	014N010W S34 | 014N010W S33 E2OFSE | 013N010W S04 N2OFNE	17100106 - Willapa Bay	6822
	B	Leadbetter Point		Leadbetter Point RNA (Willapa National Wildlife Refuge)	USFWS	013N011W S08 E2OFE2 | 013N011W S17 NEOFNE | 013N011W S16 W2 | 013N011W S04 SW | 013N011W S09	17100106 - Willapa Bay	2473
	AB	South Long Island Salt Marsh		Willapa National Wildlife Refuge	USFWS	011N010W S20 S2 | 011N010W S29 N2	17100106 - Willapa Bay	2449
Deschampsia caespitosa - Argentina egedii Salt Marsh	A	ELK RIVER & ANDREWS CREEK	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S26 | 016N011W S27 | 016N011W S34 E2	17100105 - Grays Harbor	4094
	AB					016N011W S26 | 016N011W S25 SW | 016N011W S27 | 016N011W S34 E2	17100105 - Grays Harbor	94

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Kennedy Creek	Mason County	Kennedy Creek Natural Area Preserve	Private	019N003W S32 NE	17110019 - Puget Sound	309
	B	Nisqually River Delta	Thurston County	Nisqually Delta Research Natural Area (Billy Frank Jr. Nisqually National Wildlife Refuge) | Nisqually River State Wildlife Area	USFWS | WDFW	019N001E S32	17110015 - Nisqually | 17110019 - Puget Sound	5209
	B	Bone River	Pacific County	Bone River Natural Area Preserve	WADNR	014N010W S34 | 013N010W S04 | 014N010W S33 | 014N010W S35	17100106 - Willapa Bay	1877
	B	Niawiakum River		Niawiakum River Natural Area Preserve | Niawiakum River Preserve	WADNR | TNC	013N010W S10 | 013N010W S15 NE | 013N010W S16 | 013N010W S04 | 013N010W S09	17100106 - Willapa Bay	2558
Deschampsia caespitosa - Sidalcea hendersonii Salt Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Festuca rubra - (Argentina egedii) Salt Marsh	AB	Skookum Inlet	Mason County	Skookum Inlet Natural Area Preserve	WADNR	019N003W S17 N2	17110019 - Puget Sound	2499
	B	Nisqually River Delta	Thurston County	Nisqually Delta Research Natural Area (Billy Frank Jr. Nisqually National Wildlife Refuge) | Nisqually River State Wildlife Area	USFWS | WDFW	019N001E S32	17110015 - Nisqually | 17110019 - Puget Sound	4828
Festuca rubra - Juncus lesueurii Salt Marsh	BC	Leadbetter Point	Pacific County	Leadbetter Point RNA (Willapa National Wildlife Refuge)	USFWS	013N011W S17 NEOFNE | 013N011W S16 W2 | 013N011W S04 SW | 013N011W S05 SE | 013N011W S09	17100106 - Willapa Bay	1394
Schoenoplectus (acutus, tabernaemontani) Tidal Marsh	B	Thorndyke Bay	Jefferson County	n/a	Private	027N001W S24 SE	17110018 - Hood Canal	3317
Temperate Pacific Low Salt Marsh								
Carex lyngbyei - (Distichlis spicata, Triglochin maritima) Salt Marsh	A	N Shore Rod & Gun Club	Grays Harbor County	North Bay Natural Area Preserve	Private | WADNR	018N012W S23 | 018N012W S26 | 018N012W S24 | 018N011W	17100105 - Grays Harbor	3840

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						S21 | 018N011W S17		
	A	Union River	Mason County	Union River State Wildlife Area | n/a	WDFW | Private	023N001W S31 SE | 023N001W S32 | 022N001W S05 | 022N001W S06	17110018 - Hood Canal	481
	AB	Johnson's Landing	Pacific County	n/a	Private	011N010W S24 | 011N010W S13 S2 | 011N010W S14 S2 | 011N010W S23 E2 | 011N009W S19 | 011N009W S30	17100106 - Willapa Bay	6655
	B	Bear River		Willapa National Wildlife Refuge	USFWS | Private	010N010W S18 E2 | 010N010W S05 SW | 010N010W S07 E2 | 010N010W S08 NW	17100106 - Willapa Bay	3839
Carex lyngbyei - Argentina egedii Salt Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Distichlis spicata - (Salicornia virginica) Salt Marsh	A	N Shore Rod & Gun Club	Grays Harbor County	North Bay Natural Area Preserve	Private | WADNR	018N012W S23 | 018N012W S26 | 018N012W S24 | 018N011W S21 | 018N011W S17	17100105 - Grays Harbor	3981
	A	Mallards Slough		Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	3051
	A	Dungeness Spit / Graveyard Spit	Clallam County	Graveyard Spit Research Natural Area (Dungeness National Wildlife Refuge)	USFWS	031N004W S24 | 031N004W S25 NW | 031N004W S13 S2OFS2 | 031N004W S26	17110020 - Dungeness-Elwha	624
	A	Tarboo Bay	Jefferson County	Dabob Bay Natural Area Preserve	WADNR | Private	027N001W S09	17110018 - Hood Canal	1771

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Lynch Cove	Mason County	n/a	Private	023N001W S31 SE | 023N001W S32 | 022N001W S05 | 022N001W S06	17110018 - Hood Canal	1464
	A	Skookum Inlet		Skookum Inlet Natural Area Preserve	WADNR	019N003W S17 N2	17110019 - Puget Sound	6900
	A	Nisqually River Delta	Pierce | Thurston County	Nisqually Delta Research Natural Area (Billy Frank Jr. Nisqually National Wildlife Refuge)	USFWS	019N001E S32 | 019N001E S31 | 019N001E S33 W2 | 018N001E S06 W2 | 018N001E S38	17110015 - Nisqually | 17110019 - Puget Sound	6332
Glaux maritima Salt Marsh	A	Beardslee Slough	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S15 | 016N011W S15 | 016N011W S14 SW | 016N011W S16 SE | 016N011W S21 N2 | 016N011W S22 NW	17100105 - Grays Harbor	1954

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Johns River		Johns River State Wildlife Area	WDFW	017N011W S36 SW | 017N011W S35 SE | 016N011W S02 NE	17100105 - Grays Harbor	6278
	B	Duckabush River Delta	Jefferson County	n/a	Private	025N002W S21 NE | 025N002W S16 SE	17110018 - Hood Canal	1868
	A	Hamma Hamma River Delta	Mason County	n/a	Private	024N003W S27 NE | 024N003W S26 NW	17110018 - Hood Canal	4263
Ruppia maritima Tidal Marsh	no reference standard site identified							
Salicornia (bigelovii, virginica) Tidal Salt Marsh	no reference standard site identified							
Salicornia virginica - Distichlis spicata - Triglochin maritima - (Jaumea carnosa) Salt Marsh	A	Mallards Slough	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	3231
	A	Lynch Cove	Mason County	n/a	Private	023N001W S31 SE | 023N001W S32 | 022N001W S05 | 022N001W S06	17110018 - Hood Canal	6109

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Kennedy Creek		Kennedy Creek Natural Area Preserve	WADNR	019N003W S32 NE	17110019 - Puget Sound	5617
	A	Skookum Inlet		Skookum Inlet Natural Area Preserve	WADNR	019N003W S17 N2	17110019 - Puget Sound	4404
	B	Bone River	Pacific County	Bone River Natural Area Preserve	WADNR	014N010W S34 | 014N010W S33 E2OFSE | 013N010W S04 N2OFNE	17100106 - Willapa Bay	3492
	BC	Niawiakum River		Niawiakum River Natural Area Preserve | Niawiakum River Preserve	WADNR | TNC	013N010W S10 | 013N010W S09 | 013N010W S14 | 013N010W S15 NE	17100106 - Willapa Bay	3685
	AB	South Long Island Salt Marsh		Willapa National Wildlife Refuge	USFWS	011N010W S20 S2 | 011N010W S29 N2	17100106 - Willapa Bay	1086
	A	Nisqually River Delta	Pierce | Thurston County	Nisqually Delta Research Natural Area (Billy Frank Jr. Nisqually National Wildlife Refuge) | Nisqually River State Wildlife Area	USFWS | WDFW	019N001E S32 | 019N001E S31 | 019N001E S33 W2 | 018N001E S06 W2 | 018N001E S38	17110015 - Nisqually | 17110019 - Puget Sound	3703

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Salicornia virginica Tidal Salt Marsh	A	Mallards Slough	Grays Harbor County	Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	2012
	BC	The Sink		Johns River State Wildlife Area	WDFW	017N012W S23 | 017N012W S27 NE	17100105 - Grays Harbor	5359
	AB	Third Lagoon	San Juan County	Cattle Point Natural Resource Conservation Area | San Juan Island National Historical Park	WADNR | NPS	034N002W S07 NE | 034N002W S08	17110003 - San Juan Islands	2676
	A	Dungeness Spit / Graveyard Spit	Clallam County	Graveyard Spit Research Natural Area (Dungeness National Wildlife Refuge)	USFWS	031N004W S24 | 031N004W S25 NW | 031N004W S13 S2OFS2	17110020 - Dungeness-Elwha	976
	A	Dungeness Spit / Graveyard Spit	Clallam County	Graveyard Spit Research Natural Area (Dungeness National Wildlife Refuge)	USFWS	031N004W S24 | 031N004W S25 NW | 031N004W S13 S2OFS2 |	17110020 - Dungeness-Elwha	3848

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						031N004W S26		
	A	Tarboo Bay	Jefferson County	Dabob Bay Natural Area Preserve	WADNR	027N001W S09 | 027N001W S16 NE | 027N001W S04	17110018 - Hood Canal	6600
	A	Nisqually River Delta	Pierce | Thurston County	Nisqually Delta Research Natural Area (Billy Frank Jr. Nisqually National Wildlife Refuge) | Nisqually River State Wildlife Area	USFWS | WDFW	019N001E S32 | 019N001E S31 | 019N001E S33 W2 | 018N001E S06 W2 | 018N001E S38	17110015 - Nisqually | 17110019 - Puget Sound	4016

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Schoenoplectus (americanus, pungens) Tidal Salt Marsh	A	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S35 | 033N003E S27 | 033N003E S26 W2 | 033N003E S22 S2 | 033N003E S21 | 032N003E S11 | 032N003E S10 E2 | 032N003E S02 | 032N003E S01 | 032N003E S12 | 033N003E S07 | 033N003E S08 | 033N003E S17 | 033N003E S18	17110007 - Lower Skagit | 17110019 - Puget Sound	2200
	BC	Cape Disappointment Salt Marshes	Pacific County	Cape Disappointment State Park	State Parks	009N011W S04 W2 | 009N011W S09 N2	17080006 - Lower Columbia	4846

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Chinook / Wallacut Marsh		Chinook River State Wildlife Area	WDFW	009N010W S06 | 010N011W S34 | 010N011W S35 N2 | 010N011W S36 | 010N010W S31 SW | 009N010W S07 NE | 009N010W S08 | 009N010W S17	17080006 - Lower Columbia	6857
Schoenoplectus maritimus Tidal Salt Marsh	A	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S08 | 033N003E S16 | 033N003E S07 | 033N003E S17 | 033N003E S18 N2 | 033N003E S21 | 033N003E S22 | 033N003E S25 | 033N003E S26 | 033N003E S35 | 033N003E S36 |	17110007 - Lower Skagit | 17110019 - Puget Sound	5450

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						033N002E S12 | 032N003E S11 E2 | 032N003E S12		
	B	Foulweather Bluff	Kitsap County	Foulweather Bluff Preserve	TNC	028N002E S18 NWOFNW	17110018 - Hood Canal	5226
Triglochin maritima - (Salicornia virginica) Salt Marsh	A	N Shore Rod & Gun Club	Grays Harbor County	North Bay Natural Area Preserve	Private | WADNR	018N012W S23 | 018N012W S26 | 018N012W S24 | 018N011W S21 | 018N011W S17	17100105 - Grays Harbor	530

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Mallards Slough		Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S20 | 016N011W S21 S2 | 016N011W S22 SW | 016N011W S27 NW | 016N011W S28 N2 | 016N011W S29	17100105 - Grays Harbor	2092
	A	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S07 | 033N003E S17 | 033N003E S18 N2 | 033N003E S21 | 033N003E S22 | 033N003E S25 | 033N003E S26 | 033N003E S35 | 033N003E S36 | 033N002E S12 | 032N003E S11 E2 | 032N003E S12 | 033N003E S08 |	17110007 - Lower Skagit | 17110019 - Puget Sound	2589

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						033N003E S16		
	B	Bone River	Pacific County	Bone River Natural Area Preserve	WADNR	014N010W S34 | 014N010W S33 E2OFSE | 013N010W S04 N2OFNE	17100106 - Willapa Bay	6511
	AB	South Long Island Salt Marsh		Willapa National Wildlife Refuge	USFWS	011N010W S20 S2 | 011N010W S29 N2	17100106 - Willapa Bay	5910
Temperate Pacific Lowland Freshwater Wet Mudflat								
Bidens cernua Mudflat	no reference standard site identified							
Bidens frondosa Mudflat	no reference standard site identified							
Eleocharis obtusa Mudflat	no reference standard site identified							
Eleocharis ovata - Ludwigia palustris Mudflat	no reference standard site identified							
Eragrostis hypnoides - Gnaphalium palustre Mudflat	no reference standard site identified							
Euthamia occidentalis Mudflat	no reference standard site identified							
Lilaeopsis occidentalis Mudflat	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Temperate Pacific Tidal High Salinity Lagoon								
High Salinity Lagoon PTN	A	Third Lagoon	San Juan County	Cattle Point Natural Resource Conservation Area | San Juan Island National Historical Park	WADNR | NPS	034N002W S07 NE | 034N002W S08	17110003 - San Juan Islands	1481
	A	Jakle's Lagoon		San Juan Island National Historical Park	NPS	034N002W S07 N2	17110003 - San Juan Islands	4626
Temperate Pacific Tidal Low Salinity Lagoon								
Schoenoplectus (acutus, tabernaemontani) Tidal Marsh	C	Aleck Bay Lagoon	San Juan County	n/a	Private	034N001W S19 NW | 034N002W S24 NE	17110003 - San Juan Islands	248
Vancouverian Alpine-Subalpine Seep & Spring								
Caltha leptosepala Wet Meadow	A	Bear Meadows	Skagit County	State Trust Lands	WADNR	036N008E S07 | 036N008E S17 | 036N008E S08 | 036N008E S18	17110005 - Upper Skagit	8778
	A	Wagner/Gordon Lakes				034N005E S36 E2	17110008 - Stillaguamish	3664
	AB	Crater Lake	King County	Mount Si Natural Resources Conservation Area	WADNR	024N008E S36 NWOFSE	17110010 - Snoqualmie	5495

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Upper Boardman Bog	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S15 N2OFNE | 029N009E S10 S2	17110008 - Stillaguamish	551
Carex nigricans - (Petasites frigidus var. frigidus) / Philonotis fontana Seep [Provisional]	no reference standard site identified							
Carex nigricans Wet Meadow	A	Respite Pond	Skagit County	n/a	Private	036N007E S06	17110004 - Nooksack	8833
	E	Copper Mountain	Whatcom County	North Cascades National Park	NPS	040N010E S23 | 040N010E S15 | 040N010E S27 | 040N010E S13 | 040N010E S25 | 040N010E S14 | 040N010E S26 | 040N010E S22 | 040N010E S24	17110001 - Fraser	5538

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Davis Peak South				037N012E S02 | 038N013E S32 | 038N012E S35 | 037N012E S14 | 037N013E S06 | 038N012E S30 | 038N013E S19 | 037N012E S40 | 037N011E S01 | 038N013E S20 | 037N013E S09 | 038N012E S16 | 038N013E S34 | 037N012E S11 | 037N013E S39 | 038N012E S28	17110005 - Upper Skagit	6428

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Redface Mountain				039N011E S10 | 039N011E S17 | 039N011E S12 | 040N011E S26 | 039N011E S07 | 040N012E S20 | 039N011E S29 | 040N011E S30 | 040N011E S36 | 039N010E S12 | 040N012E S32 | 040N011E S23 | 039N010E S24 | 040N012E S19 | 039N012E S06 | 040N011E S35	17110005 - Upper Skagit	1119

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	E	Silver Lake RNA		Silver Lake Research Natural Area (North Cascades National Park)	NPS	040N012E S04 | 040N012E S03	17110005 - Upper Skagit	3605
	BC	Cutthroat Lakes and Kettles	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S09 S2 | 029N009E S16 N2 | 029N009E S15	17110008 - Stillaguamish	3242
	E	Green Mountain Proposed Research Natural Area		Green Mountain Proposed Research Natural Area (Mount Baker-Snoqualmie National Forest)	USFS	032N012E S10 | 032N012E S14 | 032N012E S16 | 032N012E S15 | 032N012E S11 | 032N012E S04 | 032N012E S09 | 032N012E S02 | 032N012E S03	17110006 - Sauk	4080
	E	Butter Creek	Lewis County	Butter Creek Research Natural Area (Mount Rainier National Park)	NPS	015N008E S36 | 015N008E S45	17080004 - Upper Cowlitz	3368

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Kalmia microphylla / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							
Marchantia polymorpha - Philonotis fontana Seep	no reference standard site identified							
Polytrichum commune Seep	no reference standard site identified							
Vancouverian Alpine-Subalpine Snowmelt Basin								
Caltha leptosepala Wet Meadow	no reference standard site identified							
Carex nigricans Wet Meadow	no reference standard site identified							
Kalmia microphylla / Carex nigricans Wet Dwarf-shrubland	no reference standard site identified							
Senecio triangularis Wet Meadow	no reference standard site identified							
Vancouverian Alpine-Subalpine Streamside Meadow								
Saxifraga odontoloma - Senecio triangularis Wet Meadow	no reference standard site identified							
Senecio triangularis Wet Meadow	no reference standard site identified							
Vancouverian Freshwater Tidal Surge Plain Marsh								
Athyrium filix-femina Coastal Marsh	AB	E Fork Hoquiam River Surge Plain #56	Grays Harbor County	n/a	Private	018N010W S24 W2 | 018N010W S25 | 018N010W S13	17100105 - Grays Harbor	3198
	BC	New London Surge Plain				018N010W S16 E2 | 018N010W S15 W2 | 018N010W S09	17100105 - Grays Harbor	4364

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	AB	Chehalis River Surge Plain		Chehalis River Surge Plain Natural Area Preserve	WADNR | Private	017N008W S20 | 017N008W S15 | 017N008W S16 | 017N008W S17 | 017N008W S18 | 017N008W S19 | 017N008W S21 | 017N008W S22 | 017N008W S23 | 017N008W S28 | 017N008W S29 | 017N009W S13 | 017N009W S24 | 017N008W S14 | 017N008W S10	17100104 - Lower Chehalis	2138
Caltha palustris - Lysichiton americanus Marsh	no reference standard site identified							
Carex interrupta Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Carex lyngbyei Salt Marsh	A	N Shore Rod & Gun Club	Grays Harbor County	North Bay Natural Area Preserve	Private | WADNR	018N012W S23 | 018N012W S26 | 018N012W S24 | 018N011W S21 | 018N011W S17	17100105 - Grays Harbor	952
	A	ELK RIVER & ANDREWS CREEK		Elk River Natural Resources Conservation Area	Private | WADNR	016N011W S26 | 016N011W S27	17100105 - Grays Harbor	876
	AB	Chehalis River Surge Plain		Chehalis River Surge Plain Natural Area Preserve	WADNR | Private	017N008W S20 | 017N008W S15 | 017N008W S16 | 017N008W S17 | 017N008W S18 | 017N008W S19 | 017N008W S21 | 017N008W S22 | 017N008W S14 | 017N008W S23 | 017N008W S28 |	17100104 - Lower Chehalis	4675

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						017N008W S29 | 017N009W S13 | 017N009W S24 | 017N008W S10		
	A	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S07 | 033N003E S17 | 033N003E S18 N2 | 033N003E S21 | 033N003E S22 | 033N003E S25 | 033N003E S26 | 033N003E S35 | 033N003E S36 | 033N002E S12 | 032N003E	17110007 - Lower Skagit | 17110019 - Puget Sound	2543

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						S11 E2 | 032N003E S12 | 033N003E S08 | 033N003E S16		
						033N003E S35 | 033N003E S27 | 033N003E S26 W2 | 033N003E S22 S2 | 033N003E S21 | 032N003E S11 | 032N003E S10 E2 | 032N003E S02 | 032N003E S01 | 032N003E S12 | 033N003E	17110007 - Lower Skagit | 17110019 - Puget Sound	4165

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						S07 | 033N003E S08 | 033N003E S17 | 033N003E S18		
	AB	Chinook / Wallacut Marsh	Pacific County	Chinook River State Wildlife Area	WDFW	009N010W S06 | 010N011W S34 | 010N011W S35 N2 | 010N011W S36 | 010N010W S31 SW | 009N010W S07 NE | 009N010W S08 | 009N010W S17	17080006 - Lower Columbia	5165
Carex obnupta Wet Meadow	no reference standard site identified							
Eleocharis palustris Pacific Coast Marsh	no reference standard site identified							
Equisetum fluviatile Pacific Coast Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Schoenoplectus (acutus, tabernaemontani) Pacific Coast Marsh	AB	Chehalis River Surge Plain	Grays Harbor County	Chehalis River Surge Plain Natural Area Preserve	Private | WADNR	017N008W S20 | 017N008W S15 | 017N008W S16 | 017N008W S17 | 017N008W S18 | 017N008W S19 | 017N008W S21 | 017N008W S22 | 017N008W S14 | 017N008W S23 | 017N008W S28 | 017N008W S29 | 017N009W S13 | 017N009W S24 | 017N008W S10	17100104 - Lower Chehalis	586
Typha latifolia Pacific Coast Marsh	no reference standard site identified							
Vancouverian Headwater Riparian Shrubland								
(Rubus spectabilis) / Athyrium filix-femina Wet Shrubland	no reference standard site identified							
Acer circinatum - Rubus parviflorus Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Acer circinatum / Athyrium filix-femina - Tolmiea menziesii Shrub Swamp	A	Greider Lakes	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S36 E2 | 029N010E S31 W2OFW2	17110009 - Skykomish	1937
Acer circinatum Wet Shrubland	E	Baker River Drainage	Whatcom County	North Cascades National Park	NPS	038N010E S01	17110005 - Upper Skagit	2500
	E	Chilliwack River Drainage				040N011E S17 | 040N011E S18	17110001 - Fraser	1165
	E	Little Beaver Creek Drainage				040N012E S35	17110005 - Upper Skagit	6700
	E	Big Beaver Creek Drainage		Ross Lake National Recreation Area | Big Beaver Research Natural Area (North Cascades National Park)	NPS	038N013E S09 | 038N013E S08	17110005 - Upper Skagit	5336
	E	Chiwaukum Creek RNA	Chelan County	Chiwaukam Research Natural Area (Wenatchee National Forest)	USFS	026N016E S36 SEOFNW	17020011 - Wenatchee	4281

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Alnus viridis ssp. sinuata / Acer circinatum Shrub Swamp	AB	Boardman	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S08 SE | 029N009E S09 NWOFSW	17110008 - Stillaguamish	3046
	A	Elk Basin				028N010E S03	17110009 - Skykomish	5743
	E	Green Mountain Proposed Research Natural Area		Green Mountain Proposed Research Natural Area (Mount Baker-Snoqualmie National Forest)	USFS	032N012E S09 | 032N012E S17 | 032N012E S16 | 032N012E S08 | 032N012E S05 | 032N012E S15 | 032N012E S04 | 032N012E S10 | 032N012E S03	17110006 - Sauk	3309
	E	Butter Creek	Lewis County	Butter Creek Research Natural Area (Mount Rainier National Park)	NPS	015N008E S36 | 015N008E S45	17080004 - Upper Cowlitz	1997
Alnus viridis ssp. sinuata / Oplopanax horridus Shrub Swamp	no reference standard site identified							
Alnus viridis ssp. sinuata / Rubus spectabilis / Athyrium filix-femina Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Cornus sericea Pacific Coast Wet Shrubland [Provisional]	no reference standard site identified							
Cupressus nootkatensis / Oplopanax horridus - (Alnus viridis ssp. sinuata) Swamp Forest	no reference standard site identified							
Oplopanax horridus Interior Wet Shrubland	A	Bisbee Meadow	Ferry County	Colville National Forest	USFS	036N037E S08	17020001 - Franklin D. Roosevelt Lake	8960
Oplopanax horridus Pacific Coast Wet Shrubland	no reference standard site identified							
Rubus spectabilis - Ribes hudsonianum Wet Shrubland	no reference standard site identified							
Rubus spectabilis Wet Shrubland	no reference standard site identified							
Vancouverian Interdunal Marsh								
Carex obnupta - Argentina egedii ssp. egedii Wet Meadow	A	Leadbetter Point	Pacific County	Willapa National Wildlife Refuge	USFWS	013N011W S05 | 013N011W S04 | 013N011W S20 | 013N011W S16 | 013N011W S29 | 013N011W S08 | 013N011W S17	17100106 - Willapa Bay	8775
Juncus falcatus - Juncus (lesueurii, nevadensis) Wet Meadow	AB	Leadbetter Point	Pacific County	Willapa National Wildlife Refuge	USFWS	(blank)	17100106 - Willapa Bay	8777
Vancouverian Interdunal Shrub Swamp								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Malus fusca - (Salix hookeriana) / Carex obnupta Shrub Swamp	BC	Loomis Lake	Pacific County	Land Trust | n/a	Private	011N011W S28 W2OFE2 | 011N011W S21 W2OFSE | 011N011W S33 W2OFNE	17100106 - Willapa Bay	5301
Salix hookeriana - Spiraea douglasii Shrub Swamp	BC	Loomis Lake	Pacific County	Land Trust | n/a	Private	011N011W S28 W2OFE2 | 011N011W S21 W2OFSE | 011N011W S33 W2OFNE	17100106 - Willapa Bay	5323
Salix hookeriana / Carex obnupta - (Argentina egedii ssp. egedii) Shrub Swamp	B	South Beach State Park	Pacific County	Grayland Beach State Park	State Parks	015N011W S18 | 015N011W S19	17100106 - Willapa Bay	8834
	A	Leadbetter Point		Willapa National Wildlife Refuge	USFWS	013N011W S05 | 013N011W S04 | 013N011W S20 | 013N011W S16 | 013N011W S29 | 013N011W S08 | 013N011W S17	17100106 - Willapa Bay	8776
Spiraea douglasii Wet Shrubland	no reference standard site identified							
Vancouverian Lagg Marsh								
Carex exsiccata Marsh	no reference standard site identified							
Carex obnupta Wet Meadow	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Typha latifolia Pacific Coast Marsh	AB	Maud Lake	King County	n/a	Private	025N008E S36 SEOFSW | 024N008E S01 N2OFNW	17110010 - Snoqualmie	1901
Vancouverian Lagg Shrub Swamp								
Alnus (incana, viridis ssp. sinuata) / Lysichiton americanus - Oenanthe sarmentosa Shrub Swamp	A	Cranberry Lake, Mason County	Mason County	n/a	Private	021N003W S30 N2 | 021N003W S29 | 021N003W S28	17110019 - Puget Sound	5854
	AB	Shumocher Creek	Mason County	Shumacher Creek Natural Area Preserve	WADNR	021N003W S16 | 021N003W S10 | 021N003W S15	17110019 - Puget Sound	2540
Cornus sericea - Salix spp. - Spiraea douglasii Wet Shrubland	B	Lake Desire Bog Forest	King County	McGarvey Park Open Space | Private	Municipal | Private	023N005E S25	17110012 - Lake Washington	8757
Malus fusca Shrub Swamp	A	Allens Slough	Clallam County	Olympic National Park	NPS	030N015W S31 SE | 030N015W S32 W2 | 029N015W S05 NW	17100101 - Hoh-Quillayute	386
	A	Thorndyke Lake	Jefferson County	n/a	Private	027N001E S19 NW	17110018 - Hood Canal	315
	AB	Collage Bog	Mason County	n/a	Private	020N005W S26 NW	17100104 - Lower Chehalis | 17110019 - Puget Sound	2286

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Salix spp. - Spiraea douglasii / Carex (aquatilis var. dives, obnupta, utriculata) Wet Shrubland	B	Cranberry Marsh #2	Mason County	n/a	Private	020N005W S30 SEOFSE | 020N005W S29 | 020N005W S31 | 020N005W S32	17100104 - Lower Chehalis	3666
	AB	Cranberry Marsh #3				020N005W S29 NWOFNW	17100104 - Lower Chehalis	5624
Spiraea douglasii Wet Shrubland	AB	Kings Lake Bog	King County	Kings Lake Bog Natural Area Preserve	WADNR	024N008E S03 W2OFW2 | 024N008E S04 E2OFNE | 025N008E S33 SEOFSE | 025N008E S34 SWOFSW	17110010 - Snoqualmie	482
	AB	Twin Lakes	Jefferson County	n/a	Private	028N001E S31 SW | 027N001E S06 N2OFNW | 028N001W S36	17110018 - Hood Canal	6897
	A	Beargrass Bog	Mason County	n/a	Private	020N005W S16 SE | 020N005W S21 NWOFNE	17100104 - Lower Chehalis	4992
Vancouverian Lowland Basin Marsh								
Carex aperta Lowland Wet Meadow	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Carex exsiccata Marsh	AB	Mud Lake Kettles	Mason County	n/a	Private	019N004W S18 SE | 019N004W S17 | 019N004W S20 NW | 019N004W S19 NE	17100104 - Lower Chehalis	590
Carex obnupta - (Carex aquatilis var. dives, utriculata) Marsh	A	James Pond	Clallam County	Olympic National Park	NPS	028N015W S23 N2 | 028N015W S22	17100101 - Hoh-Quillayute	4339
	B	Thunder Bench				028N015W S26 NW | 028N015W S23 | 028N015W S27 | 028N015W S22	17100101 - Hoh-Quillayute	5968
Carex obnupta Wet Meadow	no reference standard site identified							
Eleocharis palustris Pacific Coast Marsh	A	Goat Marsh RNA	Cowlitz County	Goat Marsh Research Natural Area (Gifford Pinchot National Forest)	USFS	008N004E S23 W2 | 008N004E S14 SWOFSW | 008N004E S22 E2OFSE | 008N004E S26 NEOFNW	17080005 - Lower Cowlitz	862
Equisetum fluviatile Pacific Coast Marsh	B	Swan Bay	Clallam County	Olympic National Park	NPS	030N015W S11 W2 | 030N015W S14 N2OFNW	17100101 - Hoh-Quillayute	933
Equisetum telmateia Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Glyceria striata Pacific Coast Marsh	A	North Fork Nooksack River	Whatcom County	State Trust Lands	WADNR	039N005E S01 | 039N005E S02	17110004 - Nooksack	8760
Hippuris vulgaris Aquatic Vegetation	AB	Killebrew Lake	San Juan County	Killebrew Lake Natural Area Preserve	WDFW	036N002W S14 E2 | 036N002W S13 SWOFSW	17110003 - San Juan Islands	27
	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	6016
Juncus articulatus Wet Meadow	no reference standard site identified							
Juncus balticus Pacific Coast Wet Meadow	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks | Private	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	4871
Juncus bufonius Marsh	no reference standard site identified							
Juncus effusus var. brunneus Pacific Coast Wet Meadow	no reference standard site identified							
Ludwigia palustris - Polygonum hydropiperoides Marsh	no reference standard site identified							
Oenanthe sarmentosa Marsh	no reference standard site identified							
Paspalum distichum Marsh	no reference standard site identified							
Ranunculus flammula - Juncus nevadensis - Carex lenticularis Marsh	no reference standard site identified							

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Schoenoplectus (acutus, tabernaemontani) Pacific Coast Marsh	A	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S07 | 033N003E S17 | 033N003E S18 N2 | 033N003E S21 | 033N003E S22 | 033N003E S25 | 033N003E S26 | 033N003E S35 | 033N003E S36 | 033N002E S12 | 032N003E S11 E2 | 032N003E S12 | 033N003E S08 | 033N003E S16	17110007 - Lower Skagit | 17110019 - Puget Sound	1782
	A	Thorndyke Lake	Jefferson County	n/a	Private	027N001E S19 NW	17110018 - Hood Canal	2866
	AB	Foulweather Bluff	Kitsap County	Foulweather Bluff Preserve	TNC	028N002E S18 NWOFNW	17110018 - Hood Canal	4434
Scirpus atrocinctus Marsh [Provisional]	no reference standard site identified							
Scirpus microcarpus Pacific Coast Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Typha latifolia Pacific Coast Marsh	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks | Private	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	3244
	A	Elbow Lake	Thurston County	Elbow Lake State Park	WDFW	016N003E S32 N2 | 016N003E S29	17110015 - Nisqually	4255
	A	Bald Hill Gorge		Bald Hill Natural Area Preserve	WADNR	015N003E S04 N2OFN2 | 016N003E S33 S2OFS2	17110015 - Nisqually	3398
	AB	Elwell Creek	Snohomish County	State Trust Lands	WADNR	027N007E S36 E2 | 027N008E S31	17110009 - Skykomish	3914
	AB	Foulweather Bluff	Kitsap County	Foulweather Bluff Preserve	TNC	028N002E S18 NWOFNW	17110018 - Hood Canal	2463
Vancouverian Lowland Seep & Spring								
Equisetum telmateia Marsh	no reference standard site identified							
Juncus balticus Pacific Coast Wet Meadow	no reference standard site identified							
Juncus effusus var. brunneus Pacific Coast Wet Meadow	no reference standard site identified							
Mimulus guttatus Seep [Provisional]	A	Hamma Hamma Balds	Mason County	Olympic National Forest	USFS	024N003W S08 NW | 024N003W S07 NEOFNE | 024N003W S37 | 024N003W S38	17110018 - Hood Canal	5004

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	B	Birkenfeld Mountain	Skamania County	Columbia River Gorge National Scenic Area	Private	003N007E S31 S2OFNW	17080001 - Lower Columbia-Sandy	679
Scirpus microcarpus Pacific Coast Marsh	no reference standard site identified							
Vancouverian Lowland Streamside Marsh								
Adiantum pedatum Pacific Coast Seep [Provisional]	no reference standard site identified							
Carex interrupta Marsh	no reference standard site identified							
Deschampsia caespitosa - Artemisia lindleyana Wet Meadow	no reference standard site identified							
Equisetum telmateia Marsh	no reference standard site identified							
Juncus bufonius Marsh	no reference standard site identified							
Paspalum distichum Marsh	no reference standard site identified							
Petasites frigidus Marsh	no reference standard site identified							
Scirpus microcarpus Pacific Coast Marsh	no reference standard site identified							
Stachys ciliata Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Typha latifolia Pacific Coast Marsh	AB	Skagit River Delta	Skagit County	Skagit State Wildlife Area	WDFW	033N003E S36 | 033N003E S35 NE | 033N003E S26 | 033N003E S25 S2 | 033N003E S22 SE | 033N003E S21 N2 | 033N003E S17 | 033N003E S16 SW | 032N003E S12 NW | 032N003E S01 | 033N004E S31 W2 | 032N003E S11 | 033N003E S23	17110007 - Lower Skagit | 17110019 - Puget Sound	6
Vancouverian Montane Basin Marsh & Wet Meadow								
Calamagrostis canadensis Western Wet Meadow	B	Dailey Prairie	Whatcom County	Dailey Prairie Natural Area Preserve	WADNR	037N006E S04 NWOFSE	17110004 - Nooksack	4015
	AB	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S10	17110009 - Skykomish	8767

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Goat Marsh RNA	Cowlitz County	Goat Marsh Research Natural Area (Gifford Pinchot National Forest)	USFS	008N004E S23 W2 | 008N004E S14 SWOFSW | 008N004E S22 E2OFSE | 008N004E S26 NEOFNW	17080005 - Lower Cowlitz	974
Carex aquatilis Wet Meadow	no reference standard site identified							
Carex exsiccata Montane Marsh [Provisional]	A	South Prairie	Skamania County	South Prairie Special Interest Area (Gifford Pinchot National Forest)	USFS	005N009E S20	17070105 - Middle Columbia-Hood	8791
Carex lenticularis var. lipocarpa Marsh	A	Respite Pond	Skagit County	n/a	Private	036N007E S06 SEOFNE	17110004 - Nooksack	1357
	AB	Bear Meadows		State Trust Lands | n/a	WADNR | Private	036N008E S07 E2OFSE | 036N008E S08 W2OFSW | 036N008E S18 NEOFNE	17110005 - Upper Skagit	1792
	A	Upper Boardman Bog	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S15 N2OFNE | 029N009E S10 S2	17110008 - Stillaguamish	5777

	EOR ANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Goat Marsh RNA	Cowlitz County	Goat Marsh Research Natural Area (Gifford Pinchot National Forest)	USFS	008N004E S23 W2 | 008N004E S14 SWOFSW | 008N004E S22 E2OFSE | 008N004E S26 NEOFNW	17080005 - Lower Cowlitz	3445
Carex pellita Wet Meadow	B	Dailey Prairie	Whatcom County	Dailey Prairie Natural Area Preserve	WADNR	037N006E S04 NWOFSE	17110004 - Nooksack	6981
Deschampsia caespitosa Wet Meadow	A	Upper Boardman Bog	Snohomish County	Morning Star Natural Resources Conservation Area	WADNR	029N009E S15 N2OFNE | 029N009E S10 S2	17110008 - Stillaguamish	7049
Eleocharis acicularis Marsh	no reference standard site identified							
Lysichiton americanus Marsh	A	Sumas Mountain	Whatcom County	State Trust Lands	WADNR	040N005E S31 N2 | 040N005E S30 E2	17110001 - Fraser | 17110004 - Nooksack	3255
Saussurea americana - Heracleum maximum Wet Meadow	no reference standard site identified							
Vancouverian Montane Seep & Spring								
Carex scopulorum var. bracteosa Wet Meadow	no reference standard site identified							
Equisetum arvense Wet Meadow	no reference standard site identified							
Vancouverian Montane Streamside Marsh & Wet Meadow								
Carex lenticularis var. lipocarpa Marsh	no reference standard site identified							
Corydalis scouleri Wet Meadow	no reference standard site identified							
Equisetum arvense Wet Meadow	no reference standard site identified							
Mimulus guttatus Marsh	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Trautvetteria caroliniensis - (Senecio triangularis) Wet Meadow	no reference standard site identified							
Vancouverian Perennial Riparian Shrubland								
Acer circinatum - Alnus incana Wet Shrubland	no reference standard site identified							
Alnus (incana, viridis ssp. sinuata) / Lysichiton americanus - Oenanthe sarmentosa Shrub Swamp	no reference standard site identified							
Alnus viridis ssp. sinuata / Oplopanax horridus Shrub Swamp	no reference standard site identified							
Cornus sericea - Salix spp. - Spiraea douglasii Wet Shrubland	no reference standard site identified							
Cornus sericea Pacific Coast Wet Shrubland [Provisional]	no reference standard site identified							
Physocarpus capitatus Wet Shrubland	no reference standard site identified							
Ribes bracteosum - Rubus spectabilis Wet Shrubland	no reference standard site identified							
Ribes bracteosum / Athyrium filix-femina Wet Shrubland	no reference standard site identified							
Salix (hookeriana, lucida ssp. lasiandra, sitchensis) Wet Shrubland [Provisional]	no reference standard site identified							
Salix hookeriana - (Salix sitchensis) Wet Shrubland	no reference standard site identified							
Salix sitchensis / Equisetum arvense - Petasites frigidus Wet Shrubland	no reference standard site identified							
Salix sitchensis Wet Shrubland	no reference standard site identified							
Spiraea douglasii Inland Maritime Wet Shrubland	no reference standard site identified							
Spiraea douglasii Wet Shrubland	no reference standard site identified							
Vancouverian Shrub Basin Swamp								
Cornus sericea - Salix spp. - Spiraea douglasii Wet Shrubland	AB	Black Diamond Lake	King County	n/a	Private	021N006E S22 SEOFNE | 021N006E S23	17110013 - Duwamish	1488

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
						NWOFNW | 021N006E S14 | 021N006E S15		
	A	Cranberry Marsh #5	Mason County	n/a	Private	020N005W S30 SEOFNE | 020N005W S29	17100104 - Lower Chehalis	2022
Malus fusca - (Salix hookeriana) / Carex obnupta Shrub Swamp	no reference standard site identified							
Malus fusca / Boykinia major / Carex obnupta Shrub Swamp	no reference standard site identified							
Malus fusca Shrub Swamp	B	Swan Bay	Clallam County	Olympic National Park	NPS	030N015W S11 W2 | 030N015W S14 N2OFNW	17100101 - Hoh-Quillayute	217
	BC	Cub Creek	Snohomish County	Naval Radio Station Reservation	USDOD	031N007E S05 W2 | 031N007E S07 E2 | 031N007E S08 NWOFNW | 031N007E S17 NWOFNW | 031N007E S18 NEOFNE | 032N007E S32 SWOFSW | 031N007E S06	17110008 - Stillaguamish	5194

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	C	Umbrella Bay	Clallam County	Olympic National Park	NPS	030N015W S03 S2 | 030N015W S04 SEOFSE | 030N015W S10 N2	17100101 - Hoh-Quillayute	1761
Myrica gale / Boykinia intermedia - Deschampsia caespitosa Shrub Swamp	B	Swan Bay	Clallam County	Olympic National Park	NPS	030N015W S11 W2 | 030N015W S14 N2OFNW	17100101 - Hoh-Quillayute	3960
Physocarpus capitatus Wet Shrubland	no reference standard site identified							
Salix (hookeriana, lucida ssp. lasiandra, sitchensis) Wet Shrubland [Provisional]	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks | Private	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	4755
	A	Mud Lake Kettles	Mason County	n/a	Private	019N004W S18 SE | 019N004W S17 | 019N004W S20 NW | 019N004W S19 NE	17100104 - Lower Chehalis	2094
	AB	Elwell Creek	Snohomish County	State Trust Lands	WADNR	027N007E S36 E2	17110009 - Skykomish	5790
	B	Stossel Creek Wetland #1	King County	State Trust Lands	WADNR	026N007E S13 SE | 026N007E S24	17110010 - Snoqualmie	130
Salix geyeriana - Salix hookeriana Wet Shrubland	no reference standard site identified							
Salix hookeriana - (Salix sitchensis) Wet Shrubland	no reference standard site identified							

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Salix hookeriana - Spiraea douglasii Shrub Swamp	no reference standard site identified							
Salix sitchensis Wet Shrubland	A	Goat Marsh RNA	Cowlitz County	Goat Marsh Research Natural Area (Gifford Pinchot National Forest)	USFS	008N004E S23 W2 | 008N004E S14 SWOFSW | 008N004E S22 E2OFSE | 008N004E S26 NEOFNW	17080005 - Lower Cowlitz	1569
Salix spp. - Spiraea douglasii / Carex (aquatilis var. dives, obnupta, utriculata) Wet Shrubland	B	Humptulips Willow Wetland	Grays Harbor County	n/a	Private	019N011W S22 S2 | 019N011W S27 NW	17100105 - Grays Harbor	406
	AB	Wilderness Marsh				019N011W S27 S2 | 019N011W S34 N2 | 019N011W S35	17100105 - Grays Harbor	1562
	AB	Marsh Creek	Snohomish County	Marsh Creek Proposed Natural Area Preserve	WADNR | County	028N008E S09 | 028N008E S10	17110009 - Skykomish	8763
Spiraea douglasii Inland Maritime Wet Shrubland	no reference standard site identified							
Spiraea douglasii Wet Shrubland	AB	Cranberry Lake Bog	Island County	Deception Pass State Park	State Parks | Private	034N001E S35 W2 | 034N001E S34 E2OFE2 | 033N001E S03 NE	17110019 - Puget Sound	5302
	A	Thorndyke Lake	Jefferson County	n/a	Private	027N001E S19 NW	17110018 - Hood Canal	6295

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	A	Devils Lake		Devils Lake Natural Resources Conservation Area	WADNR	027N002W S36 NW | 027N002W S35 | 027N002W S26 | 027N002W S25	17110018 - Hood Canal	6091
	AB	Double Yolk Bog	Mason County	n/a	Private	020N005W S15 SE | 020N005W S14 SW	17100104 - Lower Chehalis	5949
	A	Bald Hill Gorge	Thurston County	Bald Hill Natural Area Preserve	WADNR	015N003E S04 N2OFN2 | 016N003E S33 S2OFS2	17110015 - Nisqually	3774
	B	Elwell Creek	Snohomish County	State Trust Lands	WADNR	027N007E S36 E2	17110009 - Skykomish	872
	AB	Wilderness Marsh	Grays Harbor County	n/a	Private	019N011W S27 S2 | 019N011W S34 N2 | 019N011W S35	17100105 - Grays Harbor	4963
	B	Griffin Creek Marsh	King County	n/a	Private	025N008E S19 W2 | 025N008E S18 SWOFSW | 025N008E S30 NWOFNE | 025N007E S13	17110010 - Snoqualmie	6885
Vancouverian Shrub Seepage Swamp								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Myrica gale / Boykinia intermedia - Carex obnupta Shrub Swamp	C	Lake Hancock	Island County	Lake Hancock Preserve (Naval Air Station Whidbey Island)	USDOD	030N002E S08 N2OFNW | 030N002E S06 | 030N002E S05	17110019 - Puget Sound	2323
	A	Patricia's Bog	Grays Harbor County	North Bay Natural Area Preserve	WADNR	018N011W S18 | 018N012W S13 E2 | 018N011W S17	17100105 - Grays Harbor	4170
Myrica gale / Lysichiton americanus Shrub Swamp	AB	Hogan's Corner Wetland		n/a	Private	018N012W S23 | 018N012W S13 SW | 018N012W S22 | 018N012W S26 | 018N012W S27 | 018N012W S14 | 018N012W S24	17100102 - Queets-Quinault | 17100105 - Grays Harbor	5
Salix commutata Wet Shrubland	no reference standard site identified							
Salix sitchensis Wet Shrubland	no reference standard site identified							
Spiraea douglasii Inland Maritime Wet Shrubland	no reference standard site identified							

Vancouverian Tidal Surge Plain Shrub Swamp

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
Cornus sericea - Salix (hookeriana, sitchensis) Shrub Swamp	AB	Chehalis River Surge Plain	Grays Harbor County	Chehalis River Surge Plain Natural Area Preserve	WADNR | Private	017N008W S20 | 017N008W S15 | 017N008W S16 | 017N008W S17 | 017N008W S18 | 017N008W S19 | 017N008W S21 | 017N008W S22 | 017N008W S14 | 017N008W S23 | 017N008W S28 | 017N008W S29 | 017N009W S13 | 017N009W S24 | 017N008W S10	17100104 - Lower Chehalis	820
Malus fusca - (Salix hookeriana) / Carex obnupta Shrub Swamp	B	New London Surge Plain	Grays Harbor County	n/a	Private	018N010W S16 E2 | 018N010W S15 W2 | 018N010W S09	17100105 - Grays Harbor	1899
Vancouverian Waterfall & Spray Zones								

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
No associations identified	no reference standard site identified							
Vancouverian Wet Bald								
Camassia quamash - Triteleia hyacinthina Wet Bald	no reference standard site identified							
Mimulus guttatus - Triteleia hyacinthina Wet Bald	no reference standard site identified							
Triteleia hyacinthina Wet Bald	no reference standard site identified							
Vancouverian Wet Cliff								
No associations identified	no reference standard site identified							
Vancouverian Wet Prairie								
Camassia quamash Lowland Wet Prairie	no reference standard site identified							
Carex densa - Deschampsia caespitosa Wet Prairie	C	Lacamas Meadow	Clark County	Lacamas Prairie Natural Area Preserve	Private	002N003E S51 S2 | 002N003E S52	17080001 - Lower Columbia-Sandy	925
Carex densa - Eleocharis palustris Wet Prairie	no reference standard site identified							
Carex deweyana ssp. leptopoda Wet Prairie [Provisional]	no reference standard site identified							
Carex feta Wet Prairie [Provisional]	no reference standard site identified							
Carex pachystachya Wet Prairie	no reference standard site identified							
Carex pellita Wet Prairie	C	Lacamas Meadow	Clark County	Lacamas Prairie Natural Area Preserve	WADNR	002N003E S51 | 002N003E S52	17080001 - Lower Columbia-Sandy	9097
Carex unilateralis - Hordeum brachyantherum Wet Prairie	CD	Scatter Creek State Wildlife Area	Thurston County	Scatter Creek State Wildlife Area	WDFW	016N003W S35	17100103 - Upper Chehalis	8758
Deschampsia caespitosa - Danthonia californica Wet Prairie	D	Scatter Creek State Wildlife Area	Thurston County	Scatter Creek State Wildlife Area	WDFW	016N003W S51	17100103 - Upper Chehalis	8759

	EORANK	Survey Site	County	Managed Area Name	Owner	TRS	Watershed	EOID
	CD	Remy Farm	Clark County	Remy Farm Mitigation Bank	Municipal | Private	003N002E S03 | 003N002E S04	17080001 - Lower Columbia-Sandy	8828
Eleocharis palustris - Carex unilateralis Wet Prairie	CD	Remy Farm	Clark County	Remy Farm Mitigation Bank	Municipal | Private	003N002E S03 | 003N002E S04	17080001 - Lower Columbia-Sandy	9078
Isoetes nuttallii Wet Prairie	no reference standard site identified							
Paspalum distichum Marsh	no reference standard site identified							
Rosa nutkana / Deschampsia caespitosa Wet Shrubland	no reference standard site identified							

Appendix B: Washington Reference Standard Wetlands Database

The database is an accompanying Microsoft Excel workbook.