

2019

# Classification of Native Vegetation of Oregon - 2019

Jimmy Kagan

*Oregon State University*, [jimmy.kagan@oregonstate.edu](mailto:jimmy.kagan@oregonstate.edu)

Rachel L. Brunner

*Portland State University*, [rbrunner@pdx.edu](mailto:rbrunner@pdx.edu)

John Christy

*Portland State University*, [john.christy@pdx.edu](mailto:john.christy@pdx.edu)

Follow this and additional works at: [https://pdxscholar.library.pdx.edu/naturalresources\\_pub](https://pdxscholar.library.pdx.edu/naturalresources_pub)



Part of the [Terrestrial and Aquatic Ecology Commons](#)

Let us know how access to this document benefits you.

---

## Citation Details

Kagan, Jimmy; Brunner, Rachel L.; and Christy, John, "Classification of Native Vegetation of Oregon - 2019" (2019). *Institute for Natural Resources Publications*. 50.

[https://pdxscholar.library.pdx.edu/naturalresources\\_pub/50](https://pdxscholar.library.pdx.edu/naturalresources_pub/50)

This Report is brought to you for free and open access. It has been accepted for inclusion in Institute for Natural Resources Publications by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: [pdxscholar@pdx.edu](mailto:pdxscholar@pdx.edu).

## CLASSIFICATION OF NATIVE VEGETATION OF OREGON – 2019

James S. Kagan, Rachel L. Brunner, and John A. Christy: Oregon Biodiversity Information Center

This classification is an update of the 2004 classification of native vegetation of Oregon by Kagan, Christy, Murray and Titus. As before, this classification lists the native plant associations known to occur in Oregon, and includes both successional and climax vegetation types that were part of the presettlement landscape of Oregon and can still be found in the state. It serves as an index to the diversity, distribution and relative rarity of the state's native plant associations, and as a guide to their literature. Published and unpublished reports supported by quantitative data were the primary sources for the classification. In order to accurately identify or describe a plant association, we recommend reading the written descriptions or keys presented in the references cited for each association.

This update incorporates recent classification efforts and scholarship, removes a handful of associations that are no longer present in Oregon, and reconciles the 2004 classification with the United States National Vegetation Classification (USNVC) version 2.02 (2018). The USNVC is a hierarchical plant community classification designed to standardize vegetation classification in the United States (Jennings et al. 2009). It employs a nested system of six physiognomic ranks and two floristically-defined ranks. Only associations, the finest level of that classification are described here. This list includes some newly described or provisional associations not included in the USNVC, which do not have standard USNVC codes.

Plant associations are listed by scientific name, followed by common name. Listings include the global and state rank of each association, a unique code linking to the National Vegetation Classification (USNVC), the Omernik based ecoregions in Oregon in which it occurs, and its distribution in other western states and provinces. Also included is a list of primary references in which the association was described. Sampling methods and concepts of species and associations differ greatly among researchers. Publications from other states or provinces in the Pacific Northwest are included for associations known to occur in, but not described from Oregon.

**Scientific Name** is the association name using scientific species names. Convention requires that species in different canopy layers are separated by a slash ("/"), while species in the same canopy layer are separated by a hyphen ("-"). Named taxa are not always dominant in the association. If the species in the name are not the dominant species, they signify indicator species or climax dominants. Parentheses are used to indicate species which can be important, but are not always present. Taxonomic nomenclature follows the PLANTS database (USDA NRCS 2019) for associations recognized in the USNVC and Oregon Flora (Jaster et al. 2017, version 1.7) otherwise, except where superseded by a differentially recognized taxon in the core habitat or current reference for an association (e.g. for hybridizing *Abies* species also present in adjacent states).

**Common Name** is the association name using common or vernacular names. Names of the associations are constructed following the same conventions used for scientific names.

**ELCODE** is the element code, a unique ten-byte alphanumeric code used to identify each plant association. An "element" is a plant, animal or plant association -- elements of natural diversity -- that is tracked according to standard protocols used by NatureServe, as well as all natural heritage programs and conservation data centers in North America.

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

**Ecoregions** identifies the Oregon ecoregion in which the plant association is known to occur. Oregon's eight primary ecoregions, identified by a two-letter code; BM = Blue Mountains, BR = Northern Basin and Range, CB = Columbia Basin, CR = Coast Range, EC = East slope of Cascade Range, KM = Klamath Mountains, WV = Willamette Valley, WC = West slope and crest of Cascade Range.

**W S & P** lists other western states and Canadian provinces where the association is known or likely to occur, represented by the standard postal state and province abbreviation. The states and provinces included are Alberta, Arizona, British Columbia, California, Colorado, Idaho, Montana, New Mexico, Nevada, Washington and Wyoming (AL, AZ, BC, CA, CO, ID, MT, NM, NV, WA, WY), with a + indicating a wider distribution.

**Wetland Type** lists the two letter code that corresponds to the type of wetland. AW = alkaline wetland, AB= aquatic bed, FE = fen, FW = forested wetland and riparian forest, FM = freshwater tidal marshes, HR = herbaceous riparian, SM = salt marshes and brackish marsh, SF = serpentine fen, SS = shrub swamp and riparian, SD = snowbed depression, SP = spring, VP = vernal pool, WM = wet meadow, WP = wet prairie. This field is blank for upland communities.

**References** cites published and unpublished sources, almost all of which contain some type of summarized plot data that describe the vegetation quantitatively. Some references may not contain quantitative data, but are based on plot data that are not summarized in the report. Full citations are listed at the end of the document.

## References

- T. Jaster, Meyers, S. C., and Sundberg, S., eds. 2017. Oregon Vascular Plant Checklist. Version 1.7. Corvallis, OR. [www.oregonflora.org/checklist.php](http://www.oregonflora.org/checklist.php). Accessed 2019-06-14.
- M. D. Jennings, Faber-Langendoen, D., Loucks, O., Peet, R, and Roberts, D. 2009. Standards for associations and alliances of the US National Vegetation Classification. *Ecological Monographs*. 79(2), 173-199. 10.1890/07-1804.1.
- United States Department of Agriculture, Natural Resources Conservation Service. 2019. The PLANTS Database National Plant Data Team. Greensboro, NC. [www.plants.usda.gov](http://www.plants.usda.gov). Accessed 2019-06-14.
- United States National Vegetation Classification. 2018. United States National Vegetation Classification Database, V2.02. Federal Geographic Data Committee, Vegetation Subcommittee, Washington DC. [www.usnvc.org](http://www.usnvc.org). Accessed 2018-03-08.

## To cite this document:

James S. Kagan, Rachel L. Brunner, and John A. Christy. 2019. Classification of the Native Vegetation of Oregon. Oregon Biodiversity Information Center, Portland, OR, USA. 109 pp.

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Abies amabilis</i> - ( <i>Pseudotsuga menziesii</i> ) / <i>Achlys triphylla</i> - <i>Tiarella trifoliata</i> var. <i>unifoliata</i> forest	Pacific silver fir - (Douglas-fir) / sweet after death - coolwort foamflower	CEGL005512	G4S4	WC	WA		Dyrness et al. 1974a: 48; Brockway et al. 1983: 61; Hemstrom et al. 1982: 41; Hemstrom et al. 1987: 124; Henderson et al. 1992: 100; Klinka et al. 1996: 153
<i>Abies amabilis</i> - ( <i>Pseudotsuga menziesii</i> ) / <i>Vaccinium membranaceum</i> / <i>Achlys triphylla</i> forest	Pacific silver fir - (Douglas-fir) / thin-leaved blueberry / vanillaleaf	CEGL005514	G4S4	WC	CA?, WA		Atzet et al. 1996
<i>Abies amabilis</i> - ( <i>Pseudotsuga menziesii</i> , <i>Abies procera</i> ) / <i>Vaccinium membranaceum</i> / <i>Xerophyllum tenax</i>	Pacific silver fir / thin-leaved blueberry / beargrass	CEGL000239	G4S4	WC	BC, WA		Dyrness et al. 1974a: 38; Brockway et al. 1983: 66; Hemstrom et al. 1982: 61; Hemstrom et al. 1987: 108; Henderson et al. 1992: 130; Marsh et al. 1987: 62
<i>Abies amabilis</i> - ( <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> ) / <i>Rhododendron macrophyllum</i>	Pacific silver fir (western hemlock, Douglas-fir) / western rhododendron	CEGL005548	G4S4	WC	WA		Hemstrom et al. 1982: 47, 57; Hemstrom et al. 1987: 146
<i>Abies amabilis</i> - ( <i>Tsuga heterophylla</i> ) / <i>Vaccinium membranaceum</i> / <i>Orthilia secunda</i> forest	Pacific silver fir - (western hemlock) / thin-leaved blueberry / queencup beadlily	CEGL005516	G4S4	WC	CA?, WA		Brockway et al. 1983: 65; Hemstrom et al. 1982: 59; Hemstrom et al. 1987: 112
<i>Abies amabilis</i> - <i>Abies concolor</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i>	Pacific silver fir - white fir / dwarf Oregongrape	CEGL000216	G4S3	KM, WC			Atzet and McCrimmon 1990: 230
<i>Abies amabilis</i> - <i>Abies concolor</i> / <i>Maianthemum stellatum</i>	Pacific silver fir - white fir / starry false Solomon's seal	CEGL000215	G3S3	WC			Hemstrom et al. 1987: 98
<i>Abies amabilis</i> - <i>Pseudotsuga menziesii</i> / <i>Achlys triphylla</i> forest	Pacific silver fir - Douglas-fir / vanillaleaf	CEGL005511	G4S4	WC	WA		Dyrness et al. 1974a: 21, 29, 44; Franklin et al. 1979; Henderson et al. 1992: 84; Atzet et al. 1996; Klinka et al. 1996: 153; Hemstrom et al. 1982: 43; Hemstrom et al. 1987: 158; Atzet and McCrimmon 1990: 76
<i>Abies amabilis</i> - <i>Pseudotsuga menziesii</i> / <i>Rhododendron macrophyllum</i> / <i>Cornus unalaschkensis</i> forest	Pacific silver fir - Douglas-fir / western rhododendron / twinflower	CEGL005513	G4S4	WC	WA		Meidinger et al. 2005; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Crawford et al. 2009; Bigley and Hull 1992
<i>Abies amabilis</i> - <i>Tsuga heterophylla</i> / <i>Rubus pedatus</i> - <i>Tiarella trifoliata</i> var. <i>unifoliata</i> forest	Pacific silver fir - western Hemlock / strawberry-leaf raspberry - oneleaf foamflower	CEGL005515	G3G4S3	WC	WA		Meidinger et al. 2005; Klinka et al. 1996; Henderson et al. 1992; Henderson et al. 1989; Hemstrom et al. 1987; Hemstrom et al. 1982; Green and Klinka 1994; Franklin et al. 1979; Dyrness et al. 1974a; Crawford et al. 2009; Brockway et al. 1983; Brockway and Topik 1984; Bigley and Hull 1992
<i>Abies amabilis</i> - <i>Tsuga heterophylla</i> / <i>Vaccinium membranaceum</i> / <i>Tiarella trifoliata</i>	Pacific silver fir / thin-leaved blueberry / coolwort foamflower	CEGL000237	G4S4	WC			Schuller 1978: 46; Atzet and McCrimmon 1990: 109
<i>Abies amabilis</i> - <i>Tsuga mertensiana</i> - ( <i>Abies x shastensis</i> ) / <i>Vaccinium membranaceum</i>	Pacific silver fir - mountain hemlock - Shasta red fir / thin-leaved blueberry	CEGL005521	G4S3	WC	WA		Atzet and McCrimmon 1990: 47
<i>Abies amabilis</i> - <i>Tsuga mertensiana</i> / <i>Menziesia ferruginea</i> forest	Pacific silver fir - mountain hemlock / rusty menziesia	CEGL005628	G4S3	EC, WC	WA		Meidinger et al. 2005; Lillybridge et al. 1995; Kovalchik 2001; Franklin et al. 1988; Diaz et al. 1997; del Moral et al. 1976; Crawford et al. 2009; Brockway et al. 1983
<i>Abies amabilis</i> - <i>Tsuga mertensiana</i> / <i>Oplopanax horridus</i> swamp forest	Pacific silver fir - mountain hemlock / devil's-club swamp forest	CEGL000507	G3G4S2	WC	WA	FW	Meidinger et al. 2005; Henderson et al. 1992; Henderson et al. 1985; Henderson and Peter 1984; Henderson and Peter 1983; Green and Klinka 1994; Crawford et al. 2009
<i>Abies amabilis</i> - <i>Tsuga mertensiana</i> / <i>Rhododendron albiflorum</i> / <i>Xerophyllum tenax</i>	Pacific silver fir - mountain hemlock / Cascades azalea / beargrass	CEGL000225	G5S4	WC	WA		Hemstrom et al. 1982:37; Hemstrom et al. 1987:116; Diaz et al. 1997
<i>Abies amabilis</i> - <i>Tsuga mertensiana</i> / <i>Vaccinium membranaceum</i> / <i>Rubus lasiococcus</i> forest	Pacific silver fir - mountain hemlock / thinleaf huckleberry / rough-fruit berry	CEGL005520	G4G5S4	WC	WA		Diaz et al. 1997: 81; Johnson et al. 1987; Brockway et al. 1983; Brockway and Topik 1984; Williams 1978: 74; Atzet and McCrimmon 1990: 71
<i>Abies amabilis</i> / <i>Gaultheria shallon</i> - <i>Rhododendron macrophyllum</i>	Pacific silver fir / salal - western rhododendron	CEGL000222	G4S4	WC			Hemstrom et al. 1982: 49; Hemstrom et al. 1987: 154
<i>Abies amabilis</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i>	Pacific silver fir / dwarf Oregongrape	CEGL000217	G4S4	WC	WA		Brockway et al. 1983: 56; Hemstrom et al. 1982: 53; Hemstrom et al. 1987: 132; Henderson et al. 1992: 86

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Abies amabilis</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i> - <i>Rhododendron macrophyllum</i>	Pacific silver fir / dwarf Oregon grape - western rhododendron	CEGL000218	G4S4	WC	WA?		Hemstrom et al. 1982: 55; Hemstrom et al. 1987: 150
<i>Abies amabilis</i> / <i>Menziesia ferruginea</i>	Pacific silver fir / fool's huckleberry	CEGL000224	G4S4	WC	WA		Brockway et al. 1983: 64; Hemstrom et al. 1982: 39; Hemstrom et al. 1987: 134
<i>Abies amabilis</i> / <i>Oplopanax horridus</i>	Pacific silver fir / devil's club	CEGL000004	G5S3S4	CR, WC	BC, WA	SS	Franklin et al. 1979; Hemstrom et al. 1982: 31; Brockway et al. 1983: 62; Hemstrom et al. 1987: 128; Henderson et al. 1989: 198; Henderson et al. 1992: 92; Brockway et al. 1983: 62; Klinka et al. 1996: 153
<i>Abies amabilis</i> / <i>Vaccinium membranaceum</i> / <i>Tiarella trifoliata</i> var. <i>unifoliata</i> - Valeriana sitchensis forest	Pacific silver fir / thinleaf huckleberry / oneleaf foamflower - Sitka valerian	CEGL005510	G4S4	WC	WA		Meidinger et al. 2005; Lillybridge et al. 1995; Klinka et al. 1996; Henderson et al. 1992; Henderson et al. 1989; Hemstrom et al. 1987; Hemstrom et al. 1982; Green and Klinka 1994; Franklin et al. 1979; Dyrness et al. 1974b; Brockway et al. 1983; Brockway and Topik 1984; Bigley and Hull 1992
<i>Abies amabilis</i> / <i>Vaccinium ovalifolium</i> Riparian Forest [Provisional]	Pacific silver fir / early blueberry	OR1003	G3S2	WC		FW	Murray 2000: 40; McCain 2004: 176
<i>Abies amabilis</i> / <i>Vaccinium scoparium</i>	Pacific silver fir / grouseberry	CEGL000238	G4S4	WC			Williams 1978: 76; Schuller 1978: 46
<i>Abies concolor</i> - <i>Abies x shastensis</i> / <i>Chimaphila umbellata</i>	white fir - Shasta red fir / prince's-pine	CEGL000030	G4S3	EC, WC	CA		Hopkins 1979b: 21; Atzet and McCrimmon 1990: 224; Atzet et al. 1996
<i>Abies concolor</i> - <i>Abies x shastensis</i> / <i>Quercus sadleriana</i>	white fir - Shasta red fir / Sadler oak	CEGL000032	G3S3	KM	CA?		Atzet and Wheeler 1984: 55; Atzet et al. 1996
<i>Abies concolor</i> - <i>Abies x shastensis</i> / sparse	white fir - Shasta red fir / sparse understory forest	CEGL000031	G3S3	KM, WC	CA?		Atzet and Wheeler 1984: 54; Atzet et al. 1996
<i>Abies concolor</i> - <i>Abies x shastensis</i> / <i>Symphoricarpos hesperius</i>	white fir - Shasta red fir / creeping snowberry	CEGL000033	G3S3	KM	CA		Atzet and Wheeler 1984: 27, 56
<i>Abies concolor</i> - <i>Pinus contorta</i> var. <i>latifolia</i> / <i>Carex inops</i> ssp. <i>inops</i> - <i>Achnatherum occidentale</i>	white fir - lodgepole pine / long-stolon sedge - western needlegrass	CEGL000256	G3S3	EC			Hopkins 1979a: 30
<i>Abies concolor</i> - <i>Pinus monticola</i> / <i>Ribes viscosissimum</i>	white fir - western white pine / sticky currant	CEGL000260	G3S3	EC	CA		Hopkins 1979a: 35
<i>Abies concolor</i> - <i>Pinus ponderosa</i> / <i>Amelanchier alnifolia</i>	white fir - ponderosa pine / serviceberry	CEGL000014	G2S2	EC	CA?		Hopkins 1979a: 34
<i>Abies concolor</i> - <i>Pinus ponderosa</i> / <i>Ceanothus velutinus</i>	white fir - ponderosa pine / snowbrush	CEGL000258	G3QS3	EC	CA?		Volland 1976: 68, 69, 70, 71; Hopkins 1979b: 17, 18
<i>Abies concolor</i> - <i>Pinus ponderosa</i> / <i>Purshia tridentata</i>	white fir - ponderosa pine / bitterbrush	CEGL000259	G3S3	EC	CA		Smith 1994b: 108; Volland 1976: 70
<i>Abies concolor</i> - <i>Pinus ponderosa</i> / <i>Symphoricarpos</i> spp.	white fir - ponderosa pine / snowberry	CEGL000018	G3S3	KM, EC	CA?		Hopkins 1979a: 31; Atzet and Wheeler 1984: 76
<i>Abies concolor</i> - <i>Pseudotsuga menziesii</i> / <i>Holodiscus discolor</i>	white fir - Douglas-fir / oceanspray	CEGL000021	G4S4	KM	CA?		Atzet and Wheeler 1984: 75, 213
<i>Abies concolor</i> - <i>Pseudotsuga menziesii</i> / <i>Mahonia aquifolium</i>	white fir - Douglas-fir / Piper Oregon grape	CEGL000020	G4S4	KM	CA?		Atzet and Wheeler 1984: 73, 214; Atzet and McCrimmon 1990: 289
<i>Abies concolor</i> - <i>Pseudotsuga menziesii</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i>	white fir - Douglas-fir / dwarf Oregon grape	CEGL000019	G4S4	KM	CA?		Atzet and Wheeler 1984: 65, 68, 71; Atzet and McCrimmon 1990: 284
<i>Abies concolor</i> - <i>Pseudotsuga menziesii</i> / <i>Whipplea modesta</i>	white fir - Douglas-fir / whipplevine	CEGL000022	G3S3	KM	CA?		Mitchell and Moir 1976: 50
<i>Abies concolor</i> - <i>Tsuga heterophylla</i> / <i>Acer circinatum</i>	white fir - western hemlock / vine maple	CEGL000029	G3S3	WC	CA?		Mitchell and Moir 1976: 50; Atzet and McCrimmon 1990: 236, 252

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Abies concolor / Acer glabrum	white fir / Rocky Mountain maple	CEGL000240	G4S4	KM, WC	AZ, CA?, CO, NM, NV?, UT		Atzet and Wheeler 1984: 70; Atzet and McCrimmon 1990: 260
Abies concolor / Amelanchier alnifolia - Corylus cornuta	white fir / serviceberry - hazel	CEGL000011	G3S3	KM, WC	CA?		Atzet and McCrimmon 1990: 276
Abies concolor / Amelanchier alnifolia / Anemone deltoidea	white fir / serviceberry / threelobed anemone	CEGL000010	G3S3	KM, WC	CA?		Atzet and McCrimmon 1990: 264
Abies concolor / Arctostaphylos uva-ursi forest	white Fir / kinnikinnick	CEGL000243	G5S3	KM, WC	CO, NM		Stuever and Hayden 1997a; Johnston 1987; DeVelice et al. 1986
Abies concolor / Ceanothus velutinus	white fir / snowbrush	CEGL000246	G3S3	EC	CA?		Dyrness 1960: 106; Dyrness and Youngberg 1966: 126; Volland 1976: 67, 68
Abies concolor / Chimaphila umbellata	white fir / prince's-pine	CEGL000015	G3S3	EC, KM, WC	CA?		McNeil 1975: 76; McNeil and Zobel 1980: 33; Atzet and McCrimmon 1990: 272
Abies concolor / Chrysolepis chrysophylla var. chrysophylla	white fir / golden chinquapin	CEGL000245	G3S3	EC	CA?		Hopkins 1979b: 20; Atzet and Wheeler 1984: 68
Abies concolor / Mahonia nervosa var. nervosa	white fir / dwarf Oregongrape	CEGL000012	G4S3	KM, WC	CA?		Atzet and Wheeler 1984: 69, 71; Atzet and McCrimmon 1990: 268
Abies concolor / Mahonia nervosa var. nervosa - Gaultheria shallon	white fir / dwarf Oregongrape - salal	CEGL000013	G3S3	KM, WC	CA?		Atzet and McCrimmon 1990: 256
Abies concolor / Maianthemum stellatum	white fir / starry false Solomon's seal	CEGL000025	G3S3	KM	CA?		Atzet and Wheeler 1984: 71
Abies concolor / Quercus sadleriana	white fir / Sadler oak	CEGL000023	G4S4	KM	CA?		Atzet and Wheeler 1984: 57, 58, 59, 60
Abies concolor / Rubus nivalis	white fir / snow dewberry	CEGL000024	G3S3	KM, WC			Atzet and McCrimmon 1990: 240
Abies concolor / Symphoricarpos albus	white fir / common snowberry	CEGL000026	G3S3	EC	CA?		Hopkins 1979b: 19
Abies concolor / Symphoricarpos mollis	white fir / creeping snowberry	CEGL000027	G3S3	EC, KM, WC	CA?		McNeil 1975: 72; Hopkins 1979a: 31; McNeil and Zobel 1980: 33; Atzet and Wheeler 1984: 77
Abies concolor / Taxus brevifolia	white fir / Pacific yew	CEGL000028	G3S2	KM, WC	CA?		Atzet and Wheeler 1984: 66
Abies concolor / Toxicodendron diversilobum	white fir / poison oak	CEGL000212	G4S4	KM	BC?, WA		Atzet and McCrimmon 1990: 280
Abies concolor / Vaccinium membranaceum	white fir / thin-leaved blueberry	CEGL000264	G3S3	KM, WC	CA?		Atzet and McCrimmon 1990: 244, 248
Abies grandis - Acer macrophyllum / Symphoricarpos albus	grand fir - bigleaf maple / snowberry	CEGL000519	G3QS2	WV	WA?		ORBIC unpubl. data
Abies grandis - Picea engelmannii / Maianthemum stellatum	grand fir - Engelmann spruce / starry false Solomon's seal	CEGL000278	G3S3	EC	CA		Topik et al. 1988: 107
Abies grandis - Taxus brevifolia	grand fir - Pacific yew	CEGL000283	G2S2	BM	ID, MT, WA		Johnson and Simon 1987: 286; Johnson and Clausnitzer 1992: 51, 53; Clausnitzer 1993: 8; Titus et al. 1998
Abies grandis - Tsuga heterophylla / Clintonia uniflora	grand fir - western hemlock / queencup beadlily	CEGL000286	G2S2	EC			Topik et al. 1988: 111
Abies grandis - Tsuga heterophylla / Polystichum munitum	grand fir - western hemlock / sword fern	CEGL000287	G2S2	WC, WV	WA		Parker 1982; Kagan 1987c
Abies grandis / Acer circinatum	grand fir / vine maple	CEGL000266	G4S3	CR, EC, WC	WA		Topik et al. 1988: 91
Abies grandis / Acer glabrum	grand fir / Rocky Mountain maple	CEGL000267	G3S3	BM	ID, WA	FW	Steele et al. 1981: 54; Johnson and Simon 1987: 310; Johnson and Clausnitzer 1992: 55; Clausnitzer 1993: 27; Crowe and Clausnitzer 1997: 58; Titus et al. 1998; Crowe et al. 2004: 304; Wells 2006: 54
Abies grandis / Achlys triphylla	grand fir / vanillaleaf	CEGL000268	G3S3	EC	WA		Topik et al. 1988: 95
Abies grandis / Arctostaphylos nevadensis woodland	grand fir / pinemat manzanita	CEGL000915	G2G3S2	EC	WA		Williams and Smith 1990; Topik et al. 1988; Topik 1989; Lillybridge et al. 1995; John and Tart 1986
Abies grandis / Asarum caudatum	grand fir / wild ginger	CEGL000269	G4S3	BM	ID, MT		Cooper et al. 1991: 61; Johnson and Clausnitzer 1992: 47

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Abies grandis</i> / <i>Athyrium filix-femina</i>	grand fir / ladyfern	CEGL000270	G3S3	BM	MT, WA	FW	Crowe and Clausnitzer 1997: 58; Crowe et al. 2004: 363, 423
<i>Abies grandis</i> / <i>Bromus vulgaris</i>	grand fir / Columbia brome	CEGL002601	G3S3	BM			Hall 1973: 37; Johnson and Clausnitzer 1992: 67
<i>Abies grandis</i> / <i>Calamagrostis rubescens</i>	grand fir / pinegrass	CEGL000916	G4?S3	BM	ID, MT, WA		Hall 1973: 32, 33; Steele et al. 1981: 50; Johnson and Simon 1987: 320; Topik 1989: 49; Johnson and Clausnitzer 1992: 71; Clausnitzer 1993: 159
<i>Abies grandis</i> / <i>Carex geyeri</i>	grand fir / elk sedge	CEGL000917	G3S3	BM, EC	WA		Williams 1978: 51; Topik et al. 1988: 71; Topik 1989: 53; Johnson and Clausnitzer 1992: 73; Clausnitzer 1993: 176
<i>Abies grandis</i> / <i>Chrysolepis chrysophylla</i> var. <i>chrysophylla</i>	grand fir / golden chinquapin	CEGL000038	G2S2	EC			Topik et al. 1988: 99
<i>Abies grandis</i> / <i>Clintonia uniflora</i>	grand fir / queencup beadlily	CEGL000272	G5S3	BM	ID, MT, WA		Steele et al. 1981: 58; Johnson and Simon 1987: 279; Cooper et al. 1991: 63; Johnson and Clausnitzer 1992: 57; Clausnitzer 1993: 46
<i>Abies grandis</i> / <i>Coptis occidentalis</i>	grand fir / goldthread	CEGL000273	G2S1	BM	ID		Steele et al. 1981: 58; Johnson and Simon 1987: 308
<i>Abies grandis</i> / <i>Crataegus douglasii</i> / <i>Carex leptopoda</i> Riparian Forest [Provisional]	Grand fir / Douglas hawthorn / slender-foot sedge	OR1004	G1S1	BM		FW	Wells 2006: 51
<i>Abies grandis</i> / <i>Gymnocarpium disjunctum</i> riparian forest [Provisional]	grand fir / oak fern	OR0002	G2S2	BM		FW	Johnson and Clausnitzer 1992: 45; Crowe and Clausnitzer 1997: 56; Crowe et al. 2004: 366
<i>Abies grandis</i> / <i>Holodiscus discolor</i>	grand fir / oceanspray	CEGL000274	G2G3S2	CR, EC, WC, WV	WA		Topik et al. 1988: 75; Topik 1989: 61; McCain and Diaz 2002a; McCain and Diaz 2002b
<i>Abies grandis</i> / <i>Linnaea borealis</i>	grand fir / twinflower	CEGL000275	G3S3	BM, EC	ID, MT, WA		Hall 1973: 37; Cole 1977b: 67; Ganskopp 1979: 84; Steele et al. 1981: 54; Cole 1982: 9; Johnson and Simon 1987: 298; Topik et al. 1988: 87; Cooper et al. 1991: 68; Johnson and Clausnitzer 1992: 59; Clausnitzer 1993: 66
<i>Abies grandis</i> / <i>Orthilia secunda</i> forest	grand fir / sidebells wintergreen	CEGL000279	G3S3	EC, WC	WA?		Wilson 1978; Topik et al. 1988
<i>Abies grandis</i> / <i>Physocarpus malvaceus</i>	grand fir / ninebark	CEGL000277	G3S3	BM	ID, MT, WA		Johnson and Simon 1987: 325; Cooper et al. 1991: 71
<i>Abies grandis</i> / <i>Polemonium pulcherrimum</i>	grand fir / skunk-leaved polemonium	CEGL000039	G3S3	EC	WA?		Williams 1978: 58; Topik et al. 1988: 103
<i>Abies grandis</i> / <i>Senecio triangularis</i>	grand fir / arrowleaf groundsel riparian	CEGL000280	G3S3	BM, EC	ID, MT	FW	Cooper et al. 1991: 60; Titus et al. 1998
<i>Abies grandis</i> / <i>Spiraea betulifolia</i>	grand fir / birchleaf spiraea	CEGL000281	G2S2	BM	ID, MT, WA		Steele et al. 1981: 52; Johnson and Simon 1987: 315; Cooper et al. 1991: 72; Johnson and Clausnitzer 1992: 69; Clausnitzer 1993: 141
<i>Abies grandis</i> / <i>Symphoricarpos albus</i>	grand fir / common snowberry	CEGL000282	G3S2	BM, EC	WA?	FW	Topik et al. 1988: 79; Crowe and Clausnitzer 1997: 60; Titus et al. 1998; Crowe et al. 2004: 307
<i>Abies grandis</i> / <i>Taxus brevifolia</i> Riparian Forest	Grand fir / Pacific yew	CEGL000283	G2S1	BM	ID, MT, WA	FW	Wells 2006: 49; Crawford and Johnson 1985; Cooper et al. 1987; Clausnitzer 1993; Crowe and Clausnitzer 1997; Daubenmire and Daubenmire 1968; Johnson and Simon 1987; Titus et al. 1998
<i>Abies grandis</i> / <i>Trautvetteria caroliniensis</i>	grand fir / false bugbane	CEGL000285	G3S3	BM	WA	FW	Johnson and Clausnitzer 1992: 49; Crowe and Clausnitzer 1997: 68; Murray 2000: 27, 28; Crowe et al. 2004: 320, 369
<i>Abies grandis</i> / <i>Trientalis latifolia</i>	grand fir / starflower	CEGL000040	G3S3	EC	WA		Topik et al. 1988: 83
<i>Abies grandis</i> / <i>Vaccinium membranaceum</i>	grand fir / thin-leaved blueberry	CEGL000290	G4S4	BM	WA		Hall 1973: 39; Cole 1977b: 82; Johnson and Simon 1987: 290; Johnson and Clausnitzer 1992: 61; Clausnitzer 1993: 87; Titus et al. 1998
<i>Abies grandis</i> / <i>Vaccinium scoparium</i>	grand fir / grouseberry	CEGL000292	G4S4	BM			Hall 1973: 39; Johnson and Clausnitzer 1992: 63, 65; Clausnitzer 1993: 125
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Calamagrostis canadensis</i>	subalpine fir - Engelmann spruce / bluejoint reedgrass	CEGL000300	G5S4	BM, EC	AB, CO, ID, MT, UT, WA?, WY	FW	Steele et al. 1981: 61; Steele et al. 1983: 45; Cooper et al. 1991: 46; Crowe and Clausnitzer 1997: 38; Titus et al. 1998; Crowe et al. 2004: 421

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Carex geyeri</i>	subalpine fir - Engelmann spruce / elk sedge	CEGL000304	G5S4	BM	CO, ID, MT, UT, WA, WY		Hall 1973: 42; Steele et al. 1981: 76; Steele et al. 1983: 59; Johnson and Clausnitzer 1992: 37
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Clintonia uniflora</i>	subalpine fir - Engelmann spruce / queencup beadlily	CEGL005912	G5S4	BM	AB, ID, MT, WA		Steele et al. 1981: 65; Johnson and Simon 1987: 262; Cooper et al. 1991: 50; Johnson and Clausnitzer 1992: 27
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Clintonia uniflora</i> - <i>Xerophyllum tenax</i> forest	subalpine fir - Engelmann spruce / queencup beadlily - beargrass	CEGL005892	G4G5S3	BM	AB, ID, MT, WA		Williams et al. 1995; Reid et al. 2004; Pfister et al. 1977; Ogilvie 1962; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Juniperus communis</i> woodland	subalpine fir - Engelmann spruce / common juniper	CEGL000919	G4G5S3	BM	AZ, CO, ID, MT, NM?, NV?, UT, WA, WY		Youngblood and Mauk 1985; Tirmenstein 1999a; Tendick et al. 2011a; Stuever and Hayden 1997a; Steele et al. 1983; Steele et al. 1981; Salas et al. 2010b; Salas et al. 2005; Roberts 1980; Reid and Hall 2010; Pfister et al. 1977; Moir and Ludwig 1979; Mauk and Henderson 1984; Larson and Moir 1987; Komarkova et al. 1988b; Kearsley et al. 2015; Jones and Ogle 2000; Johnston 1987; Johnston 1984; Hoffman and Alexander 1976; Henderson et al. 1989; Henderson et al. 1986; Crawford et al. 2009; Clagg 1975
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Menziesia ferruginea</i> - <i>Vaccinium scoparium</i> forest	Subalpine fir - Engelmann spruce / rusty menziesia - grouse whortleberry	CEGL005894	G3S2	BM	AB, BC, ID, MT, WA?		Williams et al. 1995; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Ogilvie 1962; Lillybridge et al. 1995; Hop et al. 2007; Holland and Coen 1982; Cooper et al. 1987; Achuff et al. 2002; Achuff et al. 1984b; Achuff et al. 1984a; Wells 2006: 40
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Menziesia ferruginea</i> / <i>Clintonia uniflora</i> forest	Subalpine fir - Engelmann spruce / rusty menziesia / queen's cup	CEGL005893	G4G5S2	BM	AB, ID, MT, WA?		Williams et al. 1995; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Ogilvie 1962; Hop et al. 2007; Cooper et al. 1987; Achuff et al. 2002
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Menziesia ferruginea</i> / <i>Xerophyllum tenax</i> forest	subalpine fir - Engelmann spruce / rusty menziesia / beargrass	CEGL005895	G4G5S2	BM	AB, ID, MT, WA		Williams et al. 1995; Steele et al. 1983; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Ogilvie 1962; Johnson and Simon 1987; Hop et al. 2007; Holland and Coen 1982; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Mertensia ciliata</i> swamp forest	subalpine fir / mountain bluebells	CEGL002663	G5S3	BM, EC	CO, MT?, NM, UT, WY?	FW	Johnson and Simon 1987: 275; Kovalchik 1993; Crowe and Clausnitzer 1997: 36; Titus et al. 1998
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Streptopus amplexifolius</i> swamp forest	subalpine fir - Engelmann spruce / clasping twisted-stalk swamp forest	CEGL000336	G4S3	BM	AB, ID, MT, UT, WA, WY	FW	Youngblood et al. 1985b; Youngblood and Mauk 1985; Steele et al. 1983; Steele et al. 1981; Reid et al. 2004; Padgett et al. 1989; Padgett et al. 1988b; Mauk and Henderson 1984; Kovalchik 1993; Johnson and Simon 1987; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991; Cooper et al. 1987; Cogan et al. 2005; Achuff et al. 2002
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Vaccinium membranaceum</i> / <i>Xerophyllum tenax</i> forest	subalpine fir - Engelmann spruce / thinleaf huckleberry / common beargrass	CEGL005917	G3S3	BM	AB, ID, MT, WA, WY		Williams et al. 1995; Williams et al. 1990b; Steele et al. 1983; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Hop et al. 2007; Cooper et al. 1987; Cogan et al. 2005
<i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Vaccinium membranaceum</i> Rocky Mountain forest	subalpine fir - Engelmann spruce / thinleaf huckleberry	CEGL000341	G5S3	BM	ID, MT, UT, WA?, WY		Terwilliger et al. 1979a; Steele et al. 1983; Steele et al. 1981; Pfister et al. 1977; Mauk and Henderson 1984; Kovalchik 2001; Kerr and Henderson 1979; Johnston 1987; Crowe et al. 2004; Cooper 1975; Cogan et al. 2005
<i>Abies lasiocarpa</i> - <i>Pseudotsuga menziesii</i> / <i>Acer circinatum</i> lava flow	subalpine fir - Douglas-fir / vine maple	CEGL000921	G4QS4	EC, WC			Roach 1952
<i>Abies lasiocarpa</i> - <i>Tsuga mertensiana</i> / <i>Festuca viridula</i> woodland	subalpine fir - mountain hemlock / green fescue	CEGL005639	GNR53	EC, WC	WA		Diaz et al. 1997: 43
<i>Abies lasiocarpa</i> - <i>Tsuga mertensiana</i> / <i>Rainiera stricta</i>	subalpine fir - mountain hemlock / tongue-leaf luina	OR0003	G4S3	EC	WA		Marsh et al. 1987: 72



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Abies lasiocarpa - Tsuga mertensiana / Vaccinium scoparium woodland	subalpine fir - mountain hemlock / grouse whortleberry	CEGL005522	G4S4	EC, WC	CA?, WA		Volland 1985; Volland 1976; Schuller 1978; Meidinger et al. 2005; Lillybridge et al. 1995; Johnson and Simon 1987; Johnson and Clausnitzer 1992; Hopkins 1979b; Hemstrom et al. 1987; Hemstrom et al. 1982; Franklin 1966; Diaz et al. 1997; Crawford et al. 2009; Atzet and McCrimmon 1990
Abies lasiocarpa / Athyrium filix-femina riparian forest	subalpine fir / ladyfern	OR1006	G2S2	BM	ID?, WA?	FW	Crowe and Clausnitzer 1997: 34; Kovalchik 1993: 64; Titus et al. 1998; Crowe et al. 2004: 416; Hansen et al. 1995; Crowe et al. 2004: 416
Abies lasiocarpa / Calamagrostis rubescens	subalpine fir / pinegrass	CEGL000301	G4G5S3	BM	ID?, MT, UT, WA, WY		Steele et al. 1981: 76; Steele et al. 1983: 57; Johnson and Simon 1987: 276
Abies lasiocarpa / Carex aquatilis var. aquatilis Swamp Forest	subalpine fir / aquatic sedge	CEGL002636	G4S4	BM	CO	FW	Crowe and Clausnitzer 1997: 38
Abies lasiocarpa / Coptis occidentalis forest	subalpine fir / Idaho goldthread	CEGL000308	G4SU	BM	ID		Steele et al. 1981
Abies lasiocarpa / Linnaea borealis	subalpine fir / twinflower	CEGL000315	G5S4	BM	AB, ID, MT, UT?, WA, WY		Steele et al. 1981: 68; Steele et al. 1983: 49; Johnson and Simon 1987: 268; Johnson and Clausnitzer 1992: 29
Abies lasiocarpa / Menziesia ferruginea	subalpine fir / fools huckleberry	CEGL000319	G5S1	BM	AB, BC, ID, MT, WA, WY		Steele et al. 1981: 65; Steele et al. 1983: 47; Johnson and Simon 1987: 238; Cooper et al. 1991: 52; Johnson and Clausnitzer 1992: 31
Abies lasiocarpa / Paxistima myrsinites	subalpine fir / Oregon boxwood	CEGL000324	G4S3	BM	WA		Head 1959; McLean 1970; Johnston 1987; Hess and Wasser 1982; Daubenmire and Daubenmire 1968; Williams and Lillybridge 1983
Abies lasiocarpa / Phyllodoce empetriformis	subalpine fir / pink mountain-heather	CEGL000920	G4QS4	BM	MT, WA		Head 1959: 34; Crawford et al. 2009; Clausnitzer and Zamora 1987; Chappell 2006b; Annable and Peterson 1988
Abies lasiocarpa / Rhododendron albiflorum / Rubus lasiococcus forest	subalpine fir / Cascades azalea / dwarf bramble	CEGL005635	G3S1	BM, WC	WA		Johnson and Clausnitzer 1992: 42; Meidinger et al. 2005; Henderson et al. 1989; Crawford et al. 2009
Abies lasiocarpa / Rhododendron columbianum Swamp Forest	Subalpine fir / western Labrador tea	CEGL000314	G4S2	BM	ID, MT, WA	FW	Crowe et al. 2004: 408, 412, 414
Abies lasiocarpa / Senecio triangularis - Micranthes odontoloma Swamp Forest [Provisional]	Subalpine fir / arrowleaf groundsel - stream saxifrage	OR1007	G4S3	BM, EC		FW	Crowe et al. 2004: 419
Abies lasiocarpa / Thalictrum occidentale	subalpine fir / western meadowrue	CEGL000338	G4S4	BM	ID, MT, WY		Cole 1977b: 71, 73, 76; Cole 1982: 10; Steele et al. 1983: 54
Abies lasiocarpa / Trautvetteria caroliniensis	subalpine fir / false bugbane	CEGL000339	G3S3	BM	CO, ID, WA	FW	Johnson and Clausnitzer 1992: 25; Kovalchik 1993: 72; Titus et al. 1998
Abies lasiocarpa / Vaccinium deliciosum woodland	subalpine fir / Cascade bilberry	CEGL005636	G4S2	EC, WC	WA		Wooten and Morrison 1995; Meidinger et al. 2005; Lillybridge et al. 1995; Crawford et al. 2009
Abies lasiocarpa / Vaccinium membranaceum	subalpine fir / thin-leaved blueberry	CEGL000342	G4S4	BM, EC	WA		Hall 1973: 40; Cole 1977b: 79, 80; Cole 1982: 12; Johnson and Simon 1987: 253; Johnson and Clausnitzer 1992: 33
Abies lasiocarpa / Vaccinium membranaceum / Valeriana sitchensis Riparian Forest	Subalpine fir / thin-leaved huckleberry / Sitka valerian	CEGL002612	G3S1	BM, WC	WA	FW	McCain 2004: 168; Wells 2006: 42; Fonda and Bliss 1969; Chappell 2006a; Chappell 2006b; Crawford et al. 2009
Abies lasiocarpa / Vaccinium scoparium	subalpine fir / grouseberry	CEGL000344	G5S4	BM	AZ?, CO, ID, MT, NM?, UT, WA, WY		Hall 1973: 41; Cole 1977b: 83; Steele et al. 1981: 74; Cole 1982: 13; Steele et al. 1983: 52; Johnson and Simon 1987: 244; Cooper et al. 1991: 57; Johnson and Clausnitzer 1992: 35
Abies lowiana - Pinus lambertiana - Pinus ponderosa / Arctostaphylos patula forest	white fir - sugar pine - ponderosa pine / greenleaf manzanita	CEGL000016	G3S3	EC, KM, WC	CA		Smith 1994b; Hopkins 1979a; Dealy 1971

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Abies lowiana</i> / <i>Toxicodendron diversilobum</i> forest	white Fir / Pacific poison-oak	CEGL000262	G4S4	KM	CA?		Atzet and McCrimmon 1990
<i>Abies magnifica</i> / <i>Arctostaphylos nevadensis</i> forest	California red Fir - pinemat manzanita	CEGL008611	G3S3	KM, EC	CA?		Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002
<i>Abies magnifica</i> / sparse understory forest	California red Fir / sparse understory forest	CEGL008609	G4S3	KM	CA		Sawyer et al. 2009; Potter 1998; Odion et al. 2013; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002
<i>Abies procera</i> / <i>Oxalis oregana</i>	noble fir / Oregon oxalis	CEGL003444	G1S1	CR			McCain and Diaz 2002b
<i>Abies x shastensis</i> - <i>Tsuga mertensiana</i> / <i>Arctostaphylos nevadensis</i>	Shasta red fir - mountain hemlock / pinemat manzanita	CEGL000035	G4S3	EC	CA		Hopkins 1979b: 23
<i>Abies x shastensis</i> / <i>Carex inops</i>	Shasta red fir / long-stolon sedge	CEGL000348	G4S3	EC	CA?		Hopkins 1979b: 22
<i>Abies x shastensis</i> / <i>Polemonium pulcherrimum</i>	Shasta red fir / skunk-leaved polemonium	CEGL000036	G3S3	KM	CA?		Atzet and Wheeler 1984: 25
<i>Abies x shastensis</i> / <i>Quercus sadleriana</i>	Shasta red fir / Sadler oak	CEGL000034	G4S3	KM	CA		Atzet and Wheeler 1984: 26
<i>Abies x shastensis</i> / <i>Vaccinium membranaceum</i> / <i>Chimaphila umbellata</i>	Shasta red fir / thin-leaved blueberry / prince's-pine	CEGL000037	G4S4	WC	CA		Atzet and McCrimmon 1990: 93; Atzet et al. 1996
<i>Acer circinatum</i> - <i>Corylus cornuta</i> / <i>Oxalis</i> Riparian Shrubland [Provisional]	Vine maple - California hazelnut - sorrel	OR1008	G3S3	CR		SS	McCain 2004: 231
<i>Acer circinatum</i> / <i>Athyrium filix-femina</i> - <i>Tolmiea menziesii</i>	vine maple / ladyfern - youth-on-age	CEGL003291	G5S3	WC, WV	WA	SS	Diaz and Mellen 1996: 95; Diaz and Mellen 1996; Hemstrom et al. 1987: 262, 263; Murray 2000: 23
<i>Acer glabrum</i>	Rocky Mountain maple	CEGL001062	G4?S2	BM	CA, CO, MT, NV, WY		Cole 1977b: 93; Cole 1982: 16
<i>Acer glabrum</i> - <i>Amelanchier alnifolia</i> - <i>Prunus virginiana</i>	Rocky Mountain maple - serviceberry - chokecherry mixed shrub bottomland	OR0004	G4S3	BM, BR, CP, EC	ID, NV, WA	SS	Crowe et al. 2004: 184; Kittel et al. 1999a; Hansen et al. 1995; Manning and Padgett 1995; Crawford 2001
<i>Acer glabrum</i> - <i>Philadelphus lewisii</i> - <i>Symphoricarpos albus</i> Riparian Shrubland [Provisional]	Rocky Mountain maple - mock orange - snowberry	OR1009	G3S1	BM		SS	Crowe et al. 2004: 184; Wells 2006: 114
<i>Acer macrophyllum</i> - <i>Alnus rubra</i> / <i>Polystichum munitum</i> - <i>Tellima grandiflora</i>	bigleaf maple - red alder / sword fern - fringecup	CEGL003334	G2G3S2S3	WV	BC, WA		Chappell 2001; Chappell 2006a
<i>Acer macrophyllum</i> - <i>Pseudotsuga menziesii</i> - <i>Umbellularia californica</i> / <i>Polystichum munitum</i>	bigleaf maple - Douglas-fir - California laurel / sword fern	CEGL000518	G3S3	KM	CA?		Titus 1998
<i>Acer macrophyllum</i> - <i>Pseudotsuga menziesii</i> / <i>Acer circinatum</i> / <i>Polystichum munitum</i>	bigleaf maple - Douglas-fir / vine maple / sword fern	CEGL003394	G4S4	CR, WC, WV	WA?		Hawk 1973: 57
<i>Acer macrophyllum</i> - <i>Pseudotsuga menziesii</i> / <i>Corylus cornuta</i> / <i>Hydrophyllum tenuipes</i>	bigleaf maple - Douglas-fir / hazelnut / Pacific waterleaf	CEGL000517	G3S2	WC, WV	BC?, WA?	FW	McCain and Christy 2005: 174
<i>Acer macrophyllum</i> / <i>Acer circinatum</i>	bigleaf maple / vine maple	CEGL000560	G4S3	WC, WV	BC?, WA	FW	Titus et al. 1996; McCain 2004: 119, 137
<i>Acer macrophyllum</i> / <i>Acer circinatum</i> - <i>Corylus cornuta</i> Riparian Forest [Provisional]	Bigleaf maple / vine maple - California hazelnut	OR1010	G3S3	WC		SS	McCain 2004: 139, 141, 143, 146
<i>Acer macrophyllum</i> / <i>Carex deweyana</i>	bigleaf maple / Dewey sedge	CEGL003297	G3S3	WV	BC	FW	Titus et al. 1996
<i>Acer macrophyllum</i> / <i>Corylus cornuta</i> - <i>Rubus spectabilis</i> Riparian Forest [Provisional]	Bigleaf maple / California hazelnut - salmonberry	OR1013	G3S3	CR		FW	McCain 2004: 242
<i>Acer macrophyllum</i> / <i>Rubus spectabilis</i>	bigleaf maple / salmonberry	CEGL000561	G4S2	WV	BC?, WA	FW	Titus et al. 1996
<i>Acer macrophyllum</i> / <i>Rubus ursinus</i> riparian forest	bigleaf maple / California blackberry riparian forest	CEGL003395	S3	CR, WV, WC	WA?	FW	Titus et al. 1996
<i>Acer macrophyllum</i> / <i>Symphoricarpos albus</i> / <i>Urtica dioica</i> ssp. <i>gracilis</i>	bigleaf maple / common snowberry / stinging nettle	CEGL003396	G3S3	WV	WA?		Titus et al. 1996; McCain 2004: 254, 261, 263, 279

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Acer macrophyllum</i> / <i>Urtica dioica</i> ssp. <i>gracilis</i>	bigleaf maple / stinging nettle	CEGL003397	G3S3	WV	BC, WA?		Titus et al. 1996; McCain 2004: 254
<i>Achnatherum lemmonii</i> / <i>Racomitrium ericoides</i>	Lemmon needlegrass / Racomitrium moss bald	CEGL001800	G1S1	WV			ORBIC unpubl. data
<i>Adiantum aleuticum</i> Wet Herbaceous Riparian [Provisional]	Northern maidenhair fern	OR1014	G4S3	BM, WC		HR	McCain 2004: 150; Crowe et al. 2004: 152
<i>Agrostis pallens</i> Grassland	thin bentgrass	CEGL001600	G1S1	BM	WA	WM	Hall 1973: 5; Crowe and Clausnitzer 1997: 201; Crowe et al. 2004: 137
<i>Allenrolfea occidentalis</i>	iodine bush playa	CEGL000988	G3S2	BR	AZ, CA, NM, NV, UT +	AW	Thomas et al. 2009a; Sawyer et al. 2009; Peterson 2008; Muldavin et al. 2000b; Griffiths 1902; Evens et al. 2014; Coles et al. 2009a; Buck-Diaz et al. 2012
<i>Allium validum</i> - <i>Carex scopulorum</i> Wet Meadow [Provisional]	Pacific swamp onion - mountain sedge	OR0005	G3S3	BM, EC	ID, WA	WM	Crowe and Clausnitzer 1997: 213; Titus et al. 1998; Crowe et al. 2004: 153, 155; Wells 2006: 152
<i>Alnus incana</i> - <i>Betula occidentalis</i>	mountain alder - western birch	CEGL001142	G2S1	BM, BR	CA?, CO, ID, MT?, UT?, WA, WY?	SP	Titus et al. 1998; Crowe et al. 2004: 223
<i>Alnus incana</i> - <i>Betula occidentalis</i> / <i>Carex amplifolia</i> Wet Shrubland [Provisional]	Mountain alder - water birch / big-leaf sedge	OR1016	G3S3	BM		SS	Crowe et al. 2004: 193; Wells 2006: 120
<i>Alnus incana</i> - <i>Cornus sericea</i>	mountain alder - creek dogwood	CEGL001145	G3S3	BM, BR, EC	CA, CO, ID, MT, NM, NV, UT, WA, WY?	SS	McNeil 1975: 85; Manning and Padgett 1991: 163; Crowe and Clausnitzer 1997: 134; Kovalchik 1993: 128; Moseley 1998: 28; Crowe et al. 2004: 217; Wells 2006: 100, 102, 105
<i>Alnus incana</i> - <i>Cornus sericea</i> - <i>Philadelphus lewisii</i> Wet Shrubland [Provisional]	Mountain alder - creek dogwood - Lewis' mockorange	OR1017	G2S2	BM		SS	Crowe et al. 2004: 224
<i>Alnus incana</i> - <i>Physocarpus capitatus</i> / <i>Equisetum arvense</i> - <i>Elymus glaucus</i> Shrubland [Provisional]	Mountain alder - Pacific ninebark / common horsetail - blue wildrye	OR0006	G3S2	BM, CP, EC	ID, WA	SS	Titus et al. 1998; Crowe et al. 2004: 219
<i>Alnus incana</i> - <i>Ribes</i> ( <i>inermis</i> , <i>hudsonianum</i> , <i>lacustre</i> ) Wet Shrubland	Mountain alder - gooseberry (white-stem gooseberry, stinking currant, swamp gooseberry )	CEGL001151	G3S2	BM, EC		SS	Crowe et al. 2004: 214; Youngblood et al. 1985a; Crowe and Clausnitzer 1997
<i>Alnus incana</i> - <i>Spiraea douglasii</i>	mountain alder - Douglas spiraea	CEGL001152	G3S2	BM, EC	CA, ID, WA	SS	Kovalchik 1987: 71; Kovalchik 1993: 122; Crowe et al. 2004: 212
<i>Alnus incana</i> - <i>Symphoricarpos albus</i>	mountain alder - common snowberry	CEGL001153	G3S2	BM, EC	CA?, WA	SS	Padgett 1981: 57; Kauffman 1982: 60; Kauffman et al. 1985: 17; Kovalchik 1987: 69; Crowe and Clausnitzer 1997: 140; Kovalchik 1993: 124; Crowe et al. 2004: 220; Wells 2006: 105
<i>Alnus incana</i> / <i>Athyrium filix-femina</i>	mountain alder / ladyfern	CEGL002628	G3S3	BM	BC?, CA?, ID, MT?, WA	SS	Crowe and Clausnitzer 1997: 130; Kovalchik 1993: 118; Crowe et al. 2004: 201
<i>Alnus incana</i> / <i>Calamagrostis canadensis</i>	mountain alder / bluejoint reedgrass	CEGL001143	G3S3	BM	CO?, ID, MT, NM, WA, WY	SS	Padgett et al. 1989: 51; Crowe and Clausnitzer 1997: 147; Kovalchik 1993: 110; Crowe et al. 2004: 198
<i>Alnus incana</i> / <i>Carex</i> ( <i>aquatilis</i> , <i>kelloggii</i> , <i>luzulina</i> , <i>pellita</i> ) wet shrubland	mountain alder / sedge wet shrub	CEGL001144	G3S3	BM, EC	ID?, MT, WA	SS	Kauffman 1982: 60, 65; Kauffman et al. 1985: 17; Kovalchik 1987: 67, 73, 137; Padgett et al. 1989: 51; Evenden 1990: 33, 35; Crowe and Clausnitzer 1997: 126, 128, 142, 146; Kovalchik 1993: 114; Titus et al. 1998; Crowe et al. 2004: 197, 199

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Alnus incana</i> / <i>Equisetum arvense</i>	mountain alder / common horsetail	CEGL001146	G3S3	BM	BC?, CA?, CO, ID, UT, WA, WY	SS	Crowe and Clausnitzer 1997: 138; Kovalchik 1993: 120; Padgett et al. 1989: 49; Crowe et al. 2004: 204; Wells 2006: 104
<i>Alnus incana</i> / <i>Glyceria striata</i>	mountain alder / fowl mannagrass	CEGL000228	G3S3	BM	ID, WA, WY	SS	Kovalchik 1987: 73; Padgett et al. 1989: 51; Crowe and Clausnitzer 1997: 116, 132, 148; Kovalchik 1993: 126; Crowe et al. 2004: 206; McCain et al. 2014: 62; Wells 2006: 104
<i>Alnus incana</i> / mesic forbs wet shrubland	mountain alder / mesic forb	CEGL001147	G3S3	BM	CA, CO, ID, MT, NV, UT, WA, WY	SS	Crowe and Clausnitzer 1997: 148; Titus et al. 1998; Padgett et al. 1989; Murray 2000: 30; Christy 2004: 36; Crowe et al. 2004: 209, 210; Odion et al. 2013: 95
<i>Alnus incana</i> / <i>Ribes</i> (inermis, hudsonianum, lacustre)	mountain alder - currant (stinking currant - swamp gooseberry)	CEGL001151	G3S3	BM, EC	BC?, ID, WA, WY?	SS	Kovalchik 1987: 67; Crowe and Clausnitzer 1997: 136
<i>Alnus incana</i> / <i>Scirpus microcarpus</i>	mountain alder / smallfruited bulrush	CEGL000481	G2S2	BM, CP, EC	WA	SS	Titus et al. 1998; Crowe et al. 2004: 195
<i>Alnus rhombifolia</i> / <i>Acer circinatum</i> Riparian Forest [Provisional]	White alder / vine maple	OR1019	G1S1	EC		FW	Crowe et al. 2004: 361
<i>Alnus rhombifolia</i> / <i>Amelanchier alnifolia</i>	white alder / serviceberry	CEGL000631	G3S3	BM, CP	CA?, ID	FW	Miller 1976: 138
<i>Alnus rhombifolia</i> / <i>Betula occidentalis</i>	white alder / western birch	CEGL000632	G1S1	BM, BR, CP	ID, WA	FW	Daubenmire 1970: 60; Titus et al. 1998; Crowe et al. 2004: 359
<i>Alnus rhombifolia</i> / <i>Carex nudata</i>	white alder / torrent sedge	OR0007	G1S1	BM, CP	WA	FW	Crowe et al. 2004: 353
<i>Alnus rhombifolia</i> / <i>Celtis laevigata</i> var. <i>reticulata</i>	white alder / netleaf hackberry	CEGL000633	G1S1	BM, BR, CP	ID, WA	FW	Miller 1976: 132; Crowe et al. 2004: 356
<i>Alnus rhombifolia</i> / <i>Cornus sericea</i> ssp. <i>sericea</i>	white alder / red-osier dogwood	OR1022	G2S2	BM, BR, CP, EC	ID, WA	FW	Moseley 1998: 42; Titus et al. 1998; Crowe et al. 2004: 357, 360; Wells 2006: 72, 74
<i>Alnus rhombifolia</i> / <i>Crataegus douglasii</i>	white alder / black hawthorn	OR0009	G1S1	BM, CP	WA?	FW	Crowe et al. 2004: 360
<i>Alnus rhombifolia</i> / <i>Philadelphus lewisii</i> riparian forest	white alder / mockorange	CEGL000634	G1S1	BM, BR, CP	CA?, ID, WA	FW	Miller 1976: 136; Moseley 1998: 19; Titus et al. 1998; Crowe et al. 2004: 354; Wells 2006: 72, 74
<i>Alnus rhombifolia</i> / <i>Prunus virginiana</i>	white alder / chokecherry	CEGL000635	G2S1	BM, BR, CP	ID	FW	Miller 1976: 140
<i>Alnus rhombifolia</i> / <i>Rosa woodsii</i>	white alder / Wood's rose	CEGL000636	G1S1	BM, BR, CP	CA?, ID	FW	Miller 1976: 137
<i>Alnus rhombifolia</i> alluvial bar Riparian Forest [Provisional]	White alder alluvial bar	OR1023	G3S3	BM, BR, CP	ID?	FW	Crowe et al. 2004: 351
( <i>Alnus rubra</i> - <i>Abies amabilis</i> ) / <i>Rubus spectabilis</i> - <i>Vaccinium ovalifolium</i> / <i>Lysichiton americanus</i> Riparian Forest [Provisional]	Red alder - silver fir / salmonberry - early blueberry / skunk cabbage	OR1001	G2S2	WC		FW	McCain 2004: 170
<i>Alnus rubra</i> - <i>Acer macrophyllum</i> / <i>Rubus spectabilis</i> Riparian Forest	Red alder - bigleaf maple / salmonberry	OR0008	G4S3	WC	WA	FW	Murray 2000: 42; McCain 2004: 78, 80, 90
( <i>Alnus rubra</i> - <i>Populus trichocarpa</i> ) / <i>Rubus spectabilis</i> / <i>Hydrophyllum tenuipes</i> Riparian Forest [Provisional]	Red alder - black cottonwood / salmonberry / Pacific waterleaf	OR1002	G2S2	WV		FW	McCain 2004: 269
<i>Alnus rubra</i> / <i>Acer circinatum</i> / <i>Claytonia sibirica</i>	red Alder / vine maple / Siberian springbeauty	CEGL003298	G4G5S4	CR, WC, WV	WA	FW	Diaz and Mellen 1996: 43; Titus et al. 1996
<i>Alnus rubra</i> / <i>Athyrium filix-femina</i> - <i>Asarum caudatum</i>	red alder / ladyfern - wild ginger swamp	CEGL000008	G1S1	BM	ID, WA	FW	Crowe et al. 2004: 377; Crowe and Clausnitzer 1997; Bailey et al. 1994
<i>Alnus rubra</i> / <i>Athyrium filix-femina</i> - <i>Lysichiton americanus</i> swamp forest	red alder / ladyfern - skunk cabbage	CEGL003388	G3S3	WC, WV	AK?, BC?, WA	FW	Henderson 1970: 42; Henderson 1979: 200; Kunze 1994: 32; Titus et al. 1996; Christy 2004: 21; Crowe and Clausnitzer 1997: 100; Titus et al. 1998; Murray 2000: 41

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Alnus rubra</i> / <i>Cornus sericea</i> [Provisional]	red alder / creek dogwood	OR0010	G3S2	BM, EC, WC	WA	FW	Crowe and Clausnitzer 1997: 100; Titus et al. 1998; Crowe et al. 2004: 381
<i>Alnus rubra</i> / <i>Elymus glaucus</i>	red alder / blue wildrye	CEGL003398	G4S3	CR, WC, WV	WA	FW	Diaz and Mellen 1996: 47, 103; Fonda 1974: 930; McCain 2004: 74
<i>Alnus rubra</i> / <i>Oplopanax horridus</i> - <i>Rubus spectabilis</i>	red alder / devil's club - salmonberry	CEGL003399	G4G5S3	WC	BC?, WA	FW	Diaz and Mellen 1996: 51; Murray 2000: 43; McCain 2004: 161
<i>Alnus rubra</i> / <i>Oxalis (oregana, trilliifolia)</i>	red Alder / (redwood sorrel, threel leaf woodsorrel)	CEGL003400	G4S4	CR, WC, WV	WA	FW	Diaz and Mellen 1996: 55; McCain 2004: 105, 123, 126, 129, 131
<i>Alnus rubra</i> / <i>Petasites frigidus</i> var. <i>palmatus</i> Riparian Forest	red alder / Arctic sweet-colt's-foot	CEGL003401	G4S3	BM, EC, WC	WA	FW	Crowe and Clausnitzer 1997: 100; Diaz and Mellen 1996: 59; Crowe et al. 2004: 379
<i>Alnus rubra</i> / <i>Physocarpus capitatus</i> - <i>Philadelphus lewisii</i>	red alder / Pacific ninebark - Lewis' mock orange	CEGL000002	G1S1	BM, EC, WC	ID?, WA	FW	Crowe and Clausnitzer 1997: 98; Titus et al. 1998; Crowe et al. 2004: 375
<i>Alnus rubra</i> / <i>Polystichum munitum</i>	red alder / sword fern	CEGL000638	G4S4	CR, WC, WV	BC?, CA, WA		Rocchio et al. 2012; Kagan et al. 2012; Henderson et al. 1986; del Moral and Long 1977; Crawford et al. 2009; Chappell 2006b; Chappell 2001; Agee 1987
<i>Alnus rubra</i> / <i>Rubus parviflorus</i>	red alder / thimbleberry	CEGL003402	G4S4	CR, WC, WV	WA	FW	Diaz and Mellen 1996: 63
<i>Alnus rubra</i> / <i>Rubus spectabilis</i>	red alder / salmonberry	CEGL000639	G4G5S4	CR, WC, WV	BC?, CA, WA	FW	Henderson 1970: 42; Kunze 1994: 32; Diaz and Mellen 1996: 67, 71; Titus et al. 1996
<i>Alnus rubra</i> / <i>Rubus spectabilis</i> - <i>Sambucus racemosa</i> riparian forest	red Alder / salmonberry - red elderberry riparian forest	CEGL003463	G3G4S4	CR, WV	CA, WA?	FW	Crowe et al. 2004; Crowe and Clausnitzer 1997; Bailey et al. 1994
<i>Alnus rubra</i> / <i>Rubus spectabilis</i> / <i>Carex obnupta</i> - <i>Lysichiton americanus</i>	red alder / salmonberry / slough sedge - skunk cabbage	CEGL003389	G3G4S3	CR, WC, WV	BC?, CA?, WA	FW	Henderson 1970: 42; Henderson 1979: 200; Kunze 1994: 98; Klinka et al. 1996: 153; Christy et al. 1998: 64; Christy 2001a: 10; Christy 2004: 22
<i>Alnus rubra</i> / <i>Salix lasiolepis</i> riparian forest	red Alder / arroyo willow riparian forest	CEGL003163	G4S3	CR, WC, WV	CA, WA?	FW	Schirokauer et al. 2003; Sawyer et al. 2009
<i>Alnus rubra</i> / <i>Stachys chamissonis</i> var. <i>cooleyae</i> - <i>Tolmiea menziesii</i>	red Alder / Cooley's hedge-nettle - piggyback plant	CEGL003403	G4S4	CR, WC, WV	BC?, WA	FW	Diaz and Mellen 1996: 75, 79
<i>Alnus rubra</i> / <i>Symphoricarpos albus</i> Riparian Forest [Provisional]	red alder / common snowberry	OR0011	G2S1	BM	ID?, WA	FW	Crowe and Clausnitzer 1997: 100; Titus et al. 1998; Crowe et al. 2004: 382; Wells 2006: 69
<i>Alnus viridis</i> ssp. <i>sinuata</i>	Sitka alder shrubland	CEGL001154	G5S5	BM	AK, ID?, MT, WA	SS	Cole 1977b: 99; Cole 1982: 17; Johnson and Clausnitzer 1992: 148; Titus et al. 1998
<i>Alnus viridis</i> ssp. <i>sinuata</i> - <i>Acer circinatum</i>	Sitka alder - vine maple	CEGL001155	G4S3	WC	WA	SS	del Moral 1973
<i>Alnus viridis</i> ssp. <i>sinuata</i> - <i>Oplopanax horridus</i> Shrub Swamp	Sitka alder - devil's club	CEGL001157	G4G5S4	BM, WC	BC, WA	SS	Daubenmire and Daubenmire 1968: 50; Williams and Winward 1976: 40; Williams 1978: 83; Hemstrom et al. 1987: 258; Brett et al. 1998: 31; Diaz and Mellen 1996: 119
<i>Alnus viridis</i> ssp. <i>sinuata</i> - <i>Rubus spectabilis</i> Wet Shrubland [Provisional]	Sitka Alder / salmonberry	OR1026	G3S3	WC		SS	Murray 2000: 32; McCain 2004: 108; McCain et al. 2014: 66; Diaz and Mellen 1996: 111; Diaz and Mellen 1996: 111
<i>Alnus viridis</i> ssp. <i>sinuata</i> / <i>Athyrium filix-femina</i> - <i>Cinna latifolia</i>	Sitka alder / ladyfern - drooping woodreed wet shrubland	CEGL001156	G4S3	BM, WC	BC?, CA, ID, MT, WA	SS	Kovalchik 1993: 133, 135; Crowe and Clausnitzer 1997: 122, 124, 146; Titus et al. 1998; Crowe et al. 2004: 241, 244; Wells 2006: 99
<i>Alnus viridis</i> ssp. <i>sinuata</i> / <i>Lysichiton americanus</i> Wet Shrubland [Provisional]	Sitka alder / skunk cabbage	OR1027	G3S3	WC		SS	Christy 2004: 37
<i>Alnus viridis</i> ssp. <i>sinuata</i> / mesic forbs wet shrubland	Sitka alder / mesic forbs wet shrubland	CEGL002633	G4S3	BM, WC	AB?, ID?, MT, WA	SS	Reid et al. 2004; Kovalchik 1993; Hop et al. 2007; Erixson et al. 2011b; Crowe and Clausnitzer 1997; Crowe et al. 2004: 236

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Alnus viridis</i> ssp. <i>sinuata</i> / <i>Rubus</i> ( <i>lasiococcus</i> , <i>parviflorus</i> ) wet shrubland	Sitka alder / blackberry wet shrubland	CEGL002602	G4S4	BM	ID?	SS	Titus et al. 1998; Johnson and Clausnitzer 1992: 148
<i>Alopecurus aequalis</i> Marsh [Provisional]	Short-awn foxtail	OR1028	G4S3	BR		FM	Christy 2016: 12
<i>Alopecurus saccatus</i> - <i>Plagiobothrys bracteatus</i> Vernal Pool [Provisional]	Saccate foxtail - bracted popcorn flower	OR1029	G2S2	KM	CA?	VP	Titus and Christy 2017: 6; Hirsch and Riefler 1981: 9, 10; Meinke and Magee 1986; Titus and Christy 1996b
<i>Arctostaphylos patula</i> / <i>Ceanothus velutinus</i> - <i>Ceanothus prostratus</i>	greenleaf manzanita - snowbrush ceanothus - prostrate ceanothus shrubland	CEGL000957	G3S2	EC, KM, WC	CA?, NV		Townsend 1966
<i>Arctostaphylos patula</i> Sierran chaparral shrubland	greenleaf manzanita Sierran chaparral shrubland	CEGL005820	G5?S3	EC, KM, WC	CA		Sawyer et al. 2009; Odion et al. 2013; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; DiPaolo et al. 2015
<i>Arctostaphylos viscida</i> - <i>Ceanothus cuneatus</i> / <i>Festuca idahoensis</i> - <i>Achnatherum lemmonii</i>	sticky manzanita - buckbrush chaparral	CEGL000959	G2S2	KM	CA?		Atzet and Wheeler 1984; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Detling 1961; Barbour and Major 1988
<i>Aristida purpurea</i> var. <i>longiseta</i> - <i>Sporobolus cryptandrus</i>	red threeawn - sand dropseed	CEGL001515	G1S1	BM	ID?, WA		Johnson and Simon 1987
<i>Artemisia arbuscula</i> - <i>Purshia tridentata</i> / <i>Pseudoroegneria spicata</i> - <i>Festuca idahoensis</i>	low sagebrush - bitterbrush / bluebunch wheatgrass - Idaho fescue	CEGL001518	G3S3	BM, BR, EC	NV		Dealy 1971:67; Segura-Bustamante 1970; Peterson 2008
<i>Artemisia arbuscula</i> / <i>Festuca idahoensis</i>	low sagebrush / Idaho fescue	CEGL001409	G5S3	BR, EC	CA?, CO, ID, MT, NV, UT?, WA, WY		Dealy 1971: 80; Volland 1976: 25; Hopkins 1979a: 17; Hopkins 1979b: 10; Day and Wright 1985: 4; Zamora and Tueller 1973; Tweit and Houston 1980; Sabinske 1978; Mueggler and Stewart 1980; Lewis 1975a; Lewis 1971; Jones 1992b; Hironaka et al. 1983; Hall 1973; Cogan et al. 2005; Blackburn et al. 1969c; Blackburn et al. 1969a; Blackburn et al. 1968b
<i>Artemisia arbuscula</i> / <i>Poa secunda</i>	low sagebrush / Sandberg bluegrass	CEGL001411	G5S5	BM, BR, EC	CA, ID, NV		Dealy 1971: 85, 89; Hopkins 1979a: 10, 15; Day and Wright 1985: 3; Heinze et al. 1962; Blackburn et al. 1969c; Blackburn et al. 1969b; Blackburn et al. 1969a; Blackburn et al. 1968b; Blackburn et al. 1968a; Bell et al. 2009
<i>Artemisia arbuscula</i> / <i>Pseudoroegneria spicata</i>	low sagebrush / bluebunch wheatgrass	CEGL001412	G5S3	BM, BR, EC	ID, MT, NM?, NV, WA, WY		Hall 1973: 14; Zamora and Tueller 1973; Tiedemann and Klock 1977; Schulz and Hall 2011; Schuller and Evans 1986; Peterson 2008; Mueggler and Stewart 1980; Lewis 1975a; Jensen et al. 1988b; Jensen et al. 1988a; Hironaka et al. 1983; Cogan et al. 2012; Cogan et al. 2005; Blackburn et al. 1971; Bell et al. 2009
<i>Artemisia arbuscula</i> ssp. <i>longicaulis</i> / <i>Elymus elymoides</i> shrubland	Lahontan sagebrush / squirreltail shrubland	CEGL002986	G3S1	BR	CA?, NV		Winward and McArthur 1995; Sawyer et al. 2009
<i>Artemisia arbuscula</i> ssp. <i>longiloba</i> / <i>Festuca idahoensis</i> shrub grassland	alkali sagebrush / Idaho fescue shrub grassland	CEGL001522	G2S1	BR	ID, MT, NV, WY		Zamora and Tueller 1973; Tisdale et al. 1965; Schlatterer 1972; Mueggler and Stewart 1980; Jensen et al. 1988a; Hironaka et al. 1983; Caicco and Wellner 1983h; Bell et al. 2009
<i>Artemisia cana</i> / <i>Poa fendleriana</i>	silver sagebrush / fendler bluegrass playa	CEGL001071	G2G3S2	BR	CO, UT?		Turner 1969; Tiedemann et al. 1987; Johnston 1987; Hess 1981; Francis 1983
<i>Artemisia cana</i> - <i>Artemisia tridentata</i> ssp. <i>vaseyiana</i> / <i>Poa cusickii</i>	silver sagebrush - mountain big sagebrush / Cusick's bluegrass	CEGL001549	G2S2	BM, BR, EC	CA?, NV?		Kovalchik 1987; Kartesz 1999; Crowe et al. 2004: 236
<i>Artemisia cana</i> (ssp. <i>bolanderi</i> , ssp. <i>viscidula</i> ) / <i>Poa secunda</i>	silver sagebrush / Nevada bluegrass	CEGL001548	G2S1	BR	CA?, NV?	AW	Titus 1995a; Moseley 1998: 46; Titus et al. 1998
<i>Artemisia cana</i> / <i>Deschampsia cespitosa</i>	Silver sagebrush / tufted hairgrass	CEGL001074	G2S2	BM, BR, EC	ID, UT, WY	AW	Youngblood et al. 1985a; Padgett et al. 1989; Padgett et al. 1988b; Mutz and Graham 1982; Hansen et al. 1995; Crowe et al. 2004: 232; Crowe and Clausnitzer 1997; Beetle 1961
<i>Artemisia cana</i> / <i>Eleocharis palustris</i>	silver sagebrush / common spikerush playa	CEGL002987	G3S2	BM, BR	NV?	AW	Titus 1995a; Titus et al. 1998
<i>Artemisia cana</i> / <i>Leymus cinereus</i>	silver sagebrush / basin wildrye	CEGL001460	G1S1	BR	CA, MT, NV?	AW	Kagan and Seyer 1982

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Artemisia cana</i> / <i>Muhlenbergia richardsonis</i>	silver sagebrush / mat muhly playa	CEGL001743	G3S3	BR	CA, ID, NV	AW	Dealy 1971: 93; Manning and Padgett 1991: 222; Moseley 1998: 46
<i>Artemisia cana</i> / <i>Poa fendleriana</i>	silver sagebrush / fendler bluegrass playa	CEGL001551	G2S2	BM, BR, EC	CA?, NV?	AW	Christy and Cornelius 1980; Padgett 1981: 58; Kovalchik 1987: 65; Titus et al. 1998
<i>Artemisia ludoviciana</i> Herbaceous Riparian [Provisional]	Prairie sage	OR1030	G4S2	BM	ID?, WA?	HR	Crowe et al. 2004: 157; Wells 2006: 159
<i>Artemisia nova</i> / <i>Poa secunda</i>	black sagebrush / Sandberg bluegrass	CEGL001423	G3S2	BR	CA?, CO, ID, NV, UT?		Tendick et al. 2010; Rust 1999; Peterson 2008; Hironaka et al. 1983; Coles et al. 2010; Caicco and Wellner 1983f
<i>Artemisia nova</i> / <i>Pseudoroegneria spicata</i>	black sagebrush / bluebunch wheatgrass	CEGL001424	G4G5S2	BR	CO, ID, MT, NV, UT, WY		Zamora and Tueller 1973; Tweit and Houston 1980; Stevens et al. 2015; Schulz and Hall 2011; Robertson et al. 1966; Peterson 2008; Knight et al. 1987; Jones and Ogle 2000; Jones 1992b; Johnston 1987; Hughes 1977; Hironaka et al. 1983; Friesen et al. 2010; Fisser 1970; Fisser 1962; Coles et al. 2008a; Cogan et al. 2012; Blackburn et al. 1971; Blackburn et al. 1968c; Baker and Kennedy 1985; Baker 1983c
<i>Artemisia papposa</i> / <i>Danthonia californica</i> - <i>Festuca idahoensis</i>	Owyhee sagebrush playa	CEGL002991	G2S1	BM	ID		Moseley 1998: 47
<i>Artemisia rigida</i> / <i>Festuca idahoensis</i> shrub grassland	scabland sagebrush / Idaho fescue shrub grassland	CEGL002995	G2S2	BM, BR, CP	ID		ORBIC unpubl. data
<i>Artemisia rigida</i> / <i>Poa secunda</i>	rigid sagebrush / Sandberg bluegrass	CEGL001528	G4S4	BM, BR, CP	ID, WA		Daubenmire 1970; Hall 1973: 13, 47; Ganskopp 1979: 46, 100; Copeland 1980b: 58; Johnson and Simon 1987: 138; Easterly and Salstrom 1997: 32
<i>Artemisia rigida</i> / <i>Pseudoroegneria spicata</i>	rigid sagebrush / bluebunch wheatgrass	CEGL001529	G3S3	BM, BR			ORBIC unpubl. data
<i>Artemisia tridentata</i> - <i>Atriplex canescens</i> - <i>Sarcobatus vermiculatus</i> / ( <i>Achnatherum hymenoides</i> ) shrubland	big sagebrush - fourwing saltbush - greasewood / (Indian ricegrass) shrubland	CEGL001355	G3S2	BR	CA?, NV		Schulz and Hall 2011; Price et al. 1981; Peterson 2008
<i>Artemisia tridentata</i> (ssp. <i>tridentata</i> , ssp. <i>xericensis</i> ) / <i>Pseudoroegneria spicata</i> shrub grassland	(basin big sagebrush, Foothill big sagebrush) / bluebunch wheatgrass shrub grassland	CEGL001018	GUS1	BR	CA, CO?, ID, MT, NV, UT, WA, WY		Tweit and Houston 1980; Mueggler and Stewart 1980; Mooney 1985; Jones and Ogle 2000; Johnston 1987; Jensen et al. 1988a; Hironaka et al. 1983; Hansen et al. 1984; DiPaolo et al. 2015; Daubenmire 1988; Daubenmire 1970; Cooper et al. 1999; Coles et al. 2011; Caicco and Wellner 1983k; Bell et al. 2009
<i>Artemisia tridentata</i> ssp. <i>tridentata</i> / <i>Festuca idahoensis</i>	basin big sagebrush / Idaho fescue	CEGL001014	G4?S1	BM, BR, CP	ID, MT, NV		Jensen et al. 1988a; Hironaka et al. 1983; Cooper et al. 1999; Bell et al. 2009
<i>Artemisia tridentata</i> ssp. <i>tridentata</i> / <i>Hesperostipa comata</i> shrubland	basin big sagebrush / needle-and-thread	CEGL002966	G4?SH	BM, BR, CP	BC?, CA?, CO, ID, MT, NV, UT, WA		Daubenmire 1970; Hironaka et al. 1983: 29; Easterly and Salstrom 1997: 23
<i>Artemisia tridentata</i> ssp. <i>tridentata</i> / <i>Leymus cinereus</i>	basin big sagebrush / basin wildrye	CEGL001016	G2S1	BM, BR, CP	CA, CO, ID, MT, NV, WA, WY		Moseley 1998: 29; Hess 1981; Friesen et al. 2010; Coles et al. 2008a; Cogan et al. 2012; Bell et al. 2009; Baker and Kennedy 1985; Baker 1983b; Baker 1982b; Jones and Ogle 2000; Jones and Fertig 1996; Johnston 1987
<i>Artemisia tridentata</i> ssp. <i>tridentata</i> / <i>Poa secunda</i> - <i>Pseudoroegneria spicata</i>	basin big sagebrush / Sandberg bluegrass - bluebunch wheatgrass Palouse prairie	CEGL001019	G1S1	CP	WA?		Easterly and Salstrom 1997: 14
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> - <i>Ephedra viridis</i>	mountain big sagebrush - green Mormon tea	CEGL001649	G2G4S1	BR	NV?, UT		Van Pelt 1978
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> - <i>Purshia tridentata</i> / <i>Pseudoroegneria spicata</i>	mountain big sagebrush - bitterbrush / bluebunch wheatgrass	CEGL001032	G5?S4	BR, EC	ID, NV, WY		Dealy 1971: 69

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> - <i>Symphoricarpos oreophilus</i> / <i>Bromus carinatus</i> shrubland	mountain big sagebrush - mountain snowberry / California brome shrubland	CEGL001035	G4QS3	BR	ID, NV, UT?, WY		Jensen et al. 1988b; Jensen et al. 1988a; Cogan et al. 2005
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> - <i>Symphoricarpos oreophilus</i> / <i>Festuca idahoensis</i> shrubland	mountain big sagebrush - mountain snowberry / Idaho fescue shrubland	CEGL001036	G4S3	BR	ID, MT, NV, WY		Tueller and Eckert 1987; Schulz and Hall 2011; Jones 1992b; Hironaka et al. 1983; Cooper et al. 1999; Cogan et al. 2005; Caicco and Wellner 1983a
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> / <i>Achnatherum occidentale</i> s	mountain big sagebrush / western needlegrass	CEGL001033	G2S2	BR, EC	CA?, ID?, NV?		Dealy 1971: 74; Volland 1976: 27; Day and Wright 1985: 3; Johnson and Clausnitzer 1992: 147
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> / <i>Carex geyeri</i>	mountain big sagebrush / elk sedge	CEGL001532	G3S3	BM, BR, EC	CO, ID, NV?, WY		Hall 1973: 44; Johnson and Simon 1987: 162; Johnson and Clausnitzer 1992: 137
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> / <i>Festuca idahoensis</i>	mountain big sagebrush / Idaho fescue	CEGL001533	G5S3	BM, BR, EC	AB?, CA?, CO, ID, MT, NV, UT?, WA, WY		Volland 1976: 26; Hopkins 1979a: 14; Johnson and Simon 1987: 163; Johnson and Clausnitzer 1992: 139
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> / <i>Poa secunda</i>	mountain big sagebrush / Sandberg bluegrass	CEGL001029	G3SU	BM, BR, EC	CO, ID, NV, WY		Hall 1973: 15; Day and Wright 1985: 3
<i>Artemisia tridentata</i> ssp. <i>vaseyana</i> / <i>Pseudoroegneria spicata</i>	mountain big sagebrush / bluebunch wheatgrass	CEGL001030	G5S3	BM, BR, EC	CO, ID, MT, NV, UT?, WY		Volland 1976: 30; Hall 1973: 15; Hopkins 1979a: 14; Day and Wright 1985: 2
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> - <i>Purshia tridentata</i> / <i>Pseudoroegneria spicata</i> - <i>Festuca idahoensis</i>	Wyoming big sagebrush - bitterbrush / bluebunch wheatgrass - Idaho fescue	CEGL001050	G3QS3	BM, BR, CP, EC	CA?, CO, ID		Day and Wright 1985: 3; Johnson and Simon 1987: 163
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Achnatherum thurberiana</i>	Wyoming big sagebrush / Thurber needlegrass	CEGL001052	G3S3	BM, BR, CP, EC	CA, ID, NV		Peterson 2008; Murphy and Rust 2000; Hironaka et al. 1983; Caicco and Wellner 1983j; Caicco and Wellner 1983i; Blackburn et al. 1971; Blackburn et al. 1968b; Bell et al. 2009
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Carex filifolia</i> shrubland	Wyoming big sagebrush / threadleaf sedge shrubland	CEGL001042	G1QS1	BM	ID, MT, WY?		Caicco and Wellner 1983k
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Elymus elymoides</i> shrubland	Wyoming big sagebrush / squirreltail shrubland	CEGL001043	G4G5S4	BM, BR, CP, EC	CO, ID, NV, WY		Peterson 2008; Jensen et al. 1988b; Jensen et al. 1988a; Hironaka et al. 1983; Coles et al. 2008a
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Festuca idahoensis</i>	Wyoming big sagebrush / Idaho fescue	CEGL005478	G4S2	BM, BR, CP, EC	AB?, BC?, CA?, CO, ID, MT, NV, WY		Doescher et al. 1986; Bell et al. 2009
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Hesperostipa comata</i>	Wyoming big sagebrush / needle-and-thread	CEGL001051	G2S2	BM, BR, CP, EC	ID, NV, UT?, WA		Winward 1970; Peterson 2008; Hironaka et al. 1983; Erixson et al. 2011b; Erixson and Cogan 2009; Caicco and Wellner 1983k; Bell et al. 2009
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Poa secunda</i>	Wyoming big sagebrush / Sandberg bluegrass	CEGL001049	G4S4	BR	CA?, CO, ID, MT, NV, WA, WY		Peterson 2008; Jensen et al. 1988b; Jensen et al. 1988a; Hironaka et al. 1983; Friesen et al. 2010; Erixson and Cogan 2009; Coles et al. 2010; Coles et al. 2008a; Caicco and Wellner 1983l; Bell et al. 2009



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> / <i>Pseudoroegneria spicata</i>	Wyoming big sagebrush / bluebunch wheatgrass	CEGL001535	G4S3	BM, BR, CP, EC	AZ?, BC?, CA, CO, ID, MT, NM?, NV, UT?, WA, WY +		Head 1959: 24; Tweit and Houston 1980; Tisdale 1947; Tiedemann et al. 1987; Thilenius et al. 1995; Strong 1980; Rice et al. 2012b; Peterson 2008; Mueggler and Stewart 1980; McLean 1970; Knight et al. 1987; Jones and Ogle 2000; Jones 1992b; Johnston 1987; Hironaka et al. 1983; Hess 1981; Hansen and Hoffman 1988; Fisser 1970; Fisser 1964; Faber-Langendoen 2001; Eckert 1957; DeVelice and Lesica 1993; Daubenmire 1988; Cooper et al. 1995; Brown 1971; Blackburn et al. 1968b; Blackburn 1967; Baker and Kennedy 1985; Baker 1983c
<i>Artemisia tridentata</i> var. <i>wyomingensis</i> - <i>Peraphyllum ramosissimum</i> / <i>Festuca idahoensis</i>	Wyoming big sagebrush - squawapple / Idaho fescue	CEGL001048	G2S2	BM, BR	CA?		Dealy et al. 1981: 48
<i>Artemisia tripartita</i> / <i>Festuca idahoensis</i>	threetip sagebrush / Idaho fescue	CEGL001536	G3S2	BM, BR	CO, ID, MT, WA		Daubenmire 1970; Day and Wright 1985: 3
<i>Artemisia tripartita</i> / <i>Pseudoroegneria spicata</i>	threetip sagebrush / bluebunch wheatgrass	CEGL001538	G2G3S1	BM, BR	BC, ID, MT, WA		Daubenmire 1970
<i>Artemisia tripartita</i> ssp. <i>tripartita</i> / <i>Hesperostipa comata</i> shrub grassland	Threetip sagebrush / needle-and-thread shrub grassland	CEGL001539	G2S1	BM, BR	BC?, ID, WA, WY		Reid et al. 1994; McLean 1970; McLean 1969; Hironaka et al. 1983; Daubenmire 1970; Cogan et al. 2005; Bell et al. 2009
<i>Athyrium filix-femina</i> - <i>Glyceria striata</i> - <i>Senecio triangularis</i> [Provisional]	Lady fern - fowl mannagrass - arrowleaf groundsel	OR1031	G4S3	BM, EC, WC	WA	HR	Crowe et al. 2004: 156
<i>Athyrium filix-femina</i> - <i>Scirpus microcarpus</i> Marsh [Provisional]	Lady fern	OR1032	G4S3	CR		FM	Christy 2004: 67
<i>Atriplex canescens</i> - <i>Sarcobatus vermiculatus</i> / ( <i>Achnatherum hymenoides</i> )	fourwing saltbush - greasewood / (Indian ricegrass) dunes	CEGL001046	G5S2	BR	CA?, CO, ID, NV, UT		Price and Seibert 1981: 19; Tendick et al. 2017; Tendick et al. 2010; Schulz and Hall 2011; Poulton 1955; Peterson 2008; Johnston 2001; Johnston 1987; Ferchau 1973; Erixson and Cogan 2009; Coles et al. 2010; Bell et al. 2009; Baker 1982b
<i>Atriplex confertifolia</i> - <i>Artemisia tridentata</i> ssp. <i>wyomingensis</i>	shadscale - Wyoming big sagebrush rimrock and ashbeds	CEGL001040	G4S4	BR	CA, CO, MT, UT, WY? +		Von Loh et al. 2008; Von Loh et al. 2007; Stevens et al. 2015; Knight et al. 1987; DeVelice and Lesica 1993; Coles et al. 2008a; Brown 1971
<i>Atriplex confertifolia</i> - <i>Sarcobatus vermiculatus</i> / ( <i>Achnatherum hymenoides</i> )	shadscale - black greasewood / (Indian ricegrass)	CEGL001313	G5S3	BR	AZ, CA, CO, NV, UT, WY		Von Loh et al. 2007; Tendick et al. 2012; Romme et al. 1993; Peterson 2008; Miller et al. 1977; Friesen et al. 2010; Fenemore 1970; Clark et al. 2009
<i>Atriplex confertifolia</i> / <i>Achnatherum hymenoides</i>	shadscale / Indian ricegrass	CEGL001311	G3S3	BR	CA?, CO, ID, NV, UT, WY?		Young et al. 1986; Ward et al. 1974; Tendick et al. 2017; Rust et al. 2000b; Romme et al. 1993; Rickard and Beatley 1965; Peterson 2008; Moseley 1987b; Moseley 1987a; Keammerer 1977; Keammerer 1974b; Erixson and Cogan 2009; Coles et al. 2008a; Clark et al. 2009; Caicco and Wellner 1983g; Blackburn et al. 1969b; Blackburn et al. 1968a; Baker 1982b
<i>Atriplex confertifolia</i> / <i>Elymus elymoides</i>	shadscale / bottlebrush squirreltail	CEGL001302	G3G5S3	BR	ID, NV, UT		Vest 1962b; Peterson 2008;
<i>Atriplex confertifolia</i> / <i>Pseudoroegneria spicata</i> shrubland	shadscale / bluebunch wheatgrass	CEGL001312	G3S1	BR	CO, ID, NV?, WY?		Baker and Kennedy 1985; Baker 1983c; Baker 1983b; Baker 1982b
<i>Atriplex confertifolia</i> sparse shrubland	shadscale sparse shrubland	CEGL003830	G4S2	BR	NM, NV, UT		Tendick et al. 2017; Tendick et al. 2012; Peterson 2008; Muldavin et al. 1998d
<i>Atriplex gardneri</i> / <i>Achnatherum hymenoides</i>	saltsage / Indian ricegrass	CEGL001444	G3S3	BR	CO, MT, UT, WY		Singh and West 1971; Romme et al. 1993; DeVelice 1992; Cooper et al. 1995; Clark et al. 2009; Baker and Kennedy 1985; Baker 1983c
<i>Azolla</i> ( <i>filiculoides</i> , <i>mexicana</i> )	water-fern aquatic bed	CEGL003017	G4S4	CR, WV	CA, WA	AB	Christy 2004: 68; Titus and Christy 1997; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; McCain and Christy 2005; Kagan et al. 2012; Buck-Diaz et al. 2012

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Baccharis pilularis - Frangula californica - Rubus parviflorus	coyotebrush - California buckthorn coastal headland shrubland	CEGL003191	G2S1	CR	CA		Schirokauer et al. 2003; Sawyer et al. 2009
Baccharis pilularis / Artemisia pycnocephala - Scrophularia californica	coyotebrush / beach wormwood coastal dune shrubland	CEGL001426	G1G2S1	CR	CA		Wiedemann 1984; Alpert 1984
Baccharis pilularis / Deschampsia cespitosa shrubland	coyotebrush / tufted hairgrass shrubland	CEGL003188	G2S1	CR	CA		Schirokauer et al. 2003; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Elliott and Wehausen 1974
Betula glandulosa / Carex aquatilis var. dives Wet Shrubland [Provisional]	Dwarf birch / Sitka sedge	OR1033	G3S2	WC	WA?	FE	Murray 2000: 44; Christy 2004: 39
Betula nana / Carex utriculata	bog birch / beaked sedge	CEGL001079	G4?S3	BR, EC, WC	AB, CA?, ID, MT	FE	Seyer 1979: 117; Jankovsky-Jones et al. 1999; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991
Betula occidentalis - Celtis laevigata var. reticulata wet shrubland	water birch - netleaf hackberry wet shrubland	CEGL003450	G2S2	BM, CP	ID?, WA?	SS	Crowe et al. 2004
Betula occidentalis - Cornus sericea	western birch - creek dogwood	CEGL001161	G3S2	BM, EC	CA, CO, ID, MT, NM, NV, UT, WA, WY +	SS	Manning and Padgett 1989: 33; Padgett et al. 1989: 52; Titus et al. 1998
Betula occidentalis - Crataegus douglasii	western birch - black hawthorn	CEGL001081	G2S1	BM, BR, CP	ID, WA	SS	Moseley 1986; Evans 1989a
Betula occidentalis / Maianthemum stellatum wet shrubland	water birch / starry false lily-of-the-valley wet shrubland	CEGL001162	G4S2	EC	CA, CO, ID, NV, UT, WA	SS	Titus et al. 1998
Betula occidentalis / Philadelphus lewisii - Symphoricarpos albus wet shrubland	western birch - mockorange - snowberry	CEGL000489	G2S2	BM, CP, EC	WA	SS	Crowe et al. 2004: 175; Crowe and Clausnitzer 1997: 164; Crowe et al. 2004: 175; Wells 2006: 106
Betula occidentalis / Philadelphus lewisii wet shrubland	western birch - mockorange	CEGL002668	G2S2	BM, BR, CP	ID, WA	SS	Moseley 1998: 42; Titus et al. 1998; Crowe et al. 2004: 174
Betula occidentalis wet shrubland	water birch wet shrubland	CEGL001080	G2S2	BM, BR	AB, CO, ID, MT, NV, UT, WA, WY	SS	Weixelman et al. 1996; Tendick et al. 2011b; Romme et al. 1993; Rice et al. 2012c; Reid et al. 2004; Padgett et al. 1989; Manning and Padgett 1995; Kittel and Lederer 1993; Jones 1992b; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991; Hansen and Hall 2002; Hall and Hansen 1997; Evans 1989a; Crowe et al. 2004; Crowe and Clausnitzer 1997; Coles et al. 2008a; Clark et al. 2009; Chadde et al. 1988
Bidens cernua	nodding beggars-tick marsh	CEGL003324	G3S3	CR, WV	WA	FM	Christy and Putera 1993: 40; Kunze 1994: 44; Christy 2004: 69; Murray 2000; McCain and Christy 2005
Bidens frondosa Marsh [Provisional]	Leafy beggars-tick	OR1035	G4S4	CR, WV		FM	Christy 2004: 70
Bistorta bistortoides - Ranunculus macounii Wet Meadow [Provisional]	American bistort - Macoun's buttercup	OR1036	G4S4	BM, BR		WM	Evenden 1990: 50
Bolboschoenus maritimus tidal salt marsh	cosmopolitan bulrush tidal salt marsh	CEGL003287	G3S2	CR	BC?, CA, WA	SM	Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Rodwell 1995b; Pickart 2006; Holland 1986b; Eilers 1976; Eilers 1975a: 225; Dethier 1990; Copass and Ramm-Granberg 2016a
Boykinia major Fen [Provisional]	Large boykinia	OR1038	G4S2	CR, WC		FE	Murray 2000: 13; Christy 2004: 71
Boykinia occidentalis - Mitella ovalis Herbaceous Riparian [Provisional]	Slender boykinia - oval leaved mitrewort	OR1039	G4S3	WC		HR	McCain 2004: 61
Brasenia schreberi western aquatic vegetation	watershield western aquatic vegetation	CEGL005200	G4S3	CR, KM	BC, WA	AB	Titus 1996; McCain and Christy 2005; Kunze 1994; Christy 2004: 72

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Bulboschoenus maritimus</i> (interior alkaline)	Alkali bulrush	CEGL001843	G4S4	BR	CA?, CO, ID, MT, NM, NV, WA	AW	Sawyer et al. 2009; Salas et al. 2010b; Kittel et al. 1999b; Kittel and Lederer 1993; Hansen et al. 1995; Hansen et al. 1991; Griffiths 1902; Crowe et al. 2004; Copeland 1979; Carsey et al. 2003a; Bundy et al. 1996
<i>Calamagrostis canadensis</i>	bluejoint reedgrass western herbaceous vegetation	CEGL001559	G4S4	BM, EC	AB, BC, CA, CO, ID, MT, UT, WA, WY +	WM	Cole 1977b: 100; Padgett et al. 1989: 105; Crowe and Clausnitzer 1997: 38, 188; Kovalchik 1987: 138; Kovalchik 1993: 195; Titus et al. 1998; Crowe et al. 2004: 138; Wells 2006: 146
<i>Calamagrostis nutkaensis</i> - <i>Carex</i> spp. - <i>Juncus</i> spp. Grassland	Pacific reedgrass - sedge - rush	CEGL003378	G2S1	CR	WA?	FM	Christy 2004: 74; Sawyer et al. 2009; Schirokauer et al. 2003
<i>Calamagrostis nutkaensis</i> - <i>Elymus glaucus</i>	Pacific reedgrass - blue wildrye	CEGL001564	G2S1	CR	CA, WA?		Ripley 1983: 114; Crowe et al. 2004
<i>Calamagrostis nutkaensis</i> / <i>Baccharis pilularis</i> grassland	Pacific reedgrass / coyotebrush grassland	CEGL003377	G2S2	CR	CA, WA		Schirokauer et al. 2003; Sawyer et al. 2009
<i>Calliscirpus criniger</i> - <i>Eleocharis quinqueflora</i> Fen [Provisional]	Fringed cottongrass - few-flowered spikerush	OR1040	G2S2	KM	CA	SF	Titus and Christy 2017: 3
<i>Callitriche heterophylla</i>	different-leaved water-starwort aquatic bed	CEGL003301	G4S4	CR, KM, WC, WV	AK?, WA	AB	Titus and Christy 1996a; Christy 2004: 75
<i>Callitriche verna</i> AquaticVegetation [Provisional]	Spring water-starwort	OR1042	G4S4	CR, EC, KM, WV	WA?	AB	Crowe et al. 2004: 69
<i>Callitropsis nootkatensis</i> / <i>Oplopanax horridus</i>	Alaska cedar / devil's club	CEGL000349	G3S2	WC	WA	FW	Dyrness et al. 1974a: 50
<i>Callitropsis nootkatensis</i> / <i>Vaccinium membranaceum</i>	Alaska cedar / thin-leaved blueberry	CEGL000350	G3S2	WC	WA?		Antos and Zobel 1986
<i>Calocedrus decurrens</i> - <i>Pseudotsuga menziesii</i> / <i>Arctostaphylos nevadensis</i> Forest	Incense cedar - Douglas-fir / pinemat manzanita	CEGL000066	G3S3	KM	CA?		Atzet et al. 1996
<i>Caltha leptosepala</i> - <i>Carex obnupta</i> Fen [Provisional]	White marshmarigold - slough sedge	OR1043	G3S1	CR	WA?	FE	Christy 2004: 77
<i>Caltha leptosepala</i> wet meadow	white marsh-marigold	CEGL001954	G4S4	BM, CR, EC, WC	CO, ID, MT, UT, WY	WM	del Moral 1973: 32; Hickman 1976: 150; Hemstrom et al. 1987: 256; Padgett et al. 1989: 100; Murray 2000: 13; Christy 2004: 76; McCain et al. 2014: 70
<i>Camassia cusickii</i> wet meadow	Cusick's camas wet meadow	CEGL003440	G2S1	BM	ID	WM	Moseley 1998; Johnson and Simon 1987; Jankovsky-Jones et al. 2001; Crowe et al. 2004: 185
<i>Camassia quamash</i>	common camas prairie	CEGL003341	G3S3	KM, WV	ID, WA	WP	Titus and Christy 1996b; Christy 2004: 78; Erixson and Cogan 2012c; Copass and Ramm-Granberg 2016b; Christy 2004: 78; Chappell 2006a
<i>Camassia quamash</i> - <i>Triteleia hyacinthina</i> Vernal Pool [Provisional]	Common camas - hyacinth triteleia	OR1044	G1S1	KM	CA?	VP	Borgias 2004: Appendix 3 p 10
<i>Carex amplifolia</i>	bigleaf sedge meadow	CEGL003427	G3S3	BM, CR, EC, WC	ID, WA	WM	Kovalchik 1987: 112; Larkin 1990: 3; Crowe and Clausnitzer 1997: 204; Titus et al. 1998; Murray 2000: 14; Christy 2004: 79; Crowe et al. 2004: 77; Wells 2006: 137
<i>Carex angustata</i> Wet Meadow [Provisional]	Wide-fruited sedge	OR1045	G4S4	BM, EC		WM	Christy 2004: 80; Crowe et al. 2004: 79; Wells 2006: 135
<i>Carex aperta</i> Lowland Wet Meadow	Columbia sedge marsh	CEGL001801	G1S1	WV	ID?, MT, WA	WM	Christy and Putera 1993: 40; Kunze 1994: 44; Christy 2004: 81; Piper and Beattie 1915; Murray 2000; McCain and Christy 2005; Jankovsky-Jones et al. 1999; Hansen et al. 1995; Hansen et al. 1991; Gorman 1926; Boggs et al. 1990; Murray 2000: 14

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Carex aquatilis var. aquatilis	water sedge fen	CEGL001802	G5S4	BM, BR, EC	AB, AZ?, CA, CO, ID, MT, NM, NV, UT, WA, WY	FE	Hall 1973: 6; Volland 1976: 20; Hopkins 1979a: 13; Kauffman 1982: 59; Kauffman et al. 1985: 16; Kovalchik 1987: 104; Johnson and Simon 1987: 225; Padgett et al. 1989: 101; Manning and Padgett 1991: 391; Kovalchik 1993: 168; Crowe and Clausnitzer 1997; Crowe et al. 2004: 81; Wells 2006: 125; Christy 2013: 20
Carex aquatilis var. dives - Comarum palustre fen	Sitka sedge - purple marshlocks	CEGL003433	G2S2	CR	AK?, BC?, WA	FE	Howarth 1995: 9; Christy 2001a: 33; Christy and Brophy 2002; Christy 2004: 84
Carex aquatilis var. dives Fen	Sitka sedge fen	CEGL001826	G4S4	EC, KM, WC	AK, BC, CA?, WA	FE	Campbell 1973: 41; Seyer 1979: 39; Frenkel et al. 1986: 33; Wilson 1986: 19; Hemstrom et al. 1987: 255; Kovalchik 1987: 114; Kunze 1994: 27, 84; Titus 1996; Titus and Christy 1996a; Titus et al. 1998; Murray 2000: 14; Christy 2004: 83; Crowe et al. 2004: 84; Odion et al. 2013: 68; McCain et al. 2014: 74, 79
Carex breweri	Brewer sedge meadow	CEGL001805	G3?S3	EC, WC	CA, WA	WM	Douglas and Bliss 1977: 119; Kovalchik 1987: 126; Titus et al. 1998
Carex buxbaumii fen	Buxbaum's sedge fen	CEGL001806	G3S2	WC	AB?, CO, ID, MT, UT, WY	FE	Tuhy 1981; Titus et al. 1998; Titus and Christy 1996a; Reid et al. 2004; Pierce and Johnson 1986; Pierce 1986; Padgett et al. 1989; Moseley et al. 1994; Moseley et al. 1991; McCain and Christy 2005; Mattson 1984; Hop et al. 2007; Hansen et al. 1988b; Crowe et al. 2004: 89; Cogan et al. 2005; Christy 2004: 85
Carex canescens Fen [Provisional]	Gray sedge	OR1046	G5S2	BM, WC		FE	Crowe et al. 2004: 90
Carex cusickii	Cusick's sedge fen	CEGL000230	G3S2	BM, CR	BC?, CA?, ID, WA	FE	Kovalchik 1993: 164; Crowe and Clausnitzer 1997: 176; Titus et al. 1998; Kunze 1994: 25; Murray 2000: 15; Christy 2004: 86; Crowe et al. 2004: 91
Carex densa - Deschampsia cespitosa Wet Prairie	dense sedge - tufted hairgrass wet prairie	CEGL003455	G2S2	KM, WV	WA	WP	Boss 1983: 98; Titus and Christy 1996b; Titus et al. 1996
Carex densa - Eleocharis palustris Wet Prairie	dense sedge prairie	CEGL003456	G3S2	KM	CA?	WP	Titus and Christy 1996b
Carex echinata Fen [Provisional]	Star sedge	OR1047	G4S2	BM, EC, WC		FE	Crowe et al. 2004: 93; Wells 2006: 149
Carex exsiccata	inflated sedge marsh	CEGL003312	G4S3	CR, KM, WC	BC?, WA	WM	Christy and Cornelius 1980; Henderson and McAllister 1983: 2; Padgett et al. 1989: 102; Kunze 1994: 28; Titus et al. 1996; Christy et al. 1998: 110; Christy 2001a: 34; Christy 2004: 88; Murray 2000: 15; Christy 2004: 88; Odion et al. 2013: 75; McCain et al. 2014: 83
Carex feta Wet Prairie [Provisional]	Green-sheath sedge	OR1048	G3S2	WV	WA	WP	Christy 2004: 89
Carex hoodii	Hood sedge avalanche slope	CEGL001595	G3S3	BM	ID, WA		Cole 1977b: 96; Cole 1982: 17
Carex illota - Eleocharis quinqueflora	small-headed sedge - few-flowered spikerush fen	CEGL001876	G3S3	BM	CO, WY	WM	Titus et al. 1998
Carex interrupta Marsh [Provisional]	Green-fruited sedge	OR1049	G3S2	EC	CA?,	FM	Crowe et al. 2004: 94
Carex kelloggii Wet Meadow [Provisional]	Kellogg's sedge	OR1050	G4S3	BM, EC, WC	ID?, WA?	WM	Murray 2000: 16; Christy 2004: 91; Crowe et al. 2004: 98; Wells 2006: 136; McCain et al. 2014: 87
Carex lasiocarpa	slender sedge fen	CEGL001810	G4S2	BM, BR, WC	AB, AK?, BC, CA?, CO, ID, MT, UT,	FE	Kovalchik 1987: 108; Padgett et al. 1989: 95; Kovalchik 1993: 170; Crowe and Clausnitzer 1997: 200; Kunze 1994: 26; Titus and Christy 1996a; Titus et al. 1998; Christy 2004: 90; Crowe et al. 2004: 96
Carex leporinella Marsh [Provisional]	Sierra hair-sedge	OR1051	G4S4	BM		FM	Crowe et al. 2004: 100; Wells 2006: 136

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Carex limosa</i>	mud sedge	CEGL001811	G2S2	BM, EC, WC	AK?, BC?, CA, CO, ID, MT, NM, UT, WA, WY	FE	Carsey et al. 2003a: 440; Christy 2004: 92; Wells 2006: 135
<i>Carex luzulina</i> Fen [Provisional]	woodrush sedge fen	OR1052	G4S3	BM, EC, WC	ID, WA?	FE	Crowe and Clausnitzer 1997: 172; Titus et al. 1998; Christy 2004: 93; Christy 2004: 93; Crowe et al. 2004: 101; Wells 2006: 142; Odion et al. 2013: 72
<i>Carex lyngbyei</i> - ( <i>Distichlis spicata</i> - <i>Triglochin maritimum</i> )	Lyngby sedge - (saltgrass - arrow grass) salt marsh	CEGL003285	G4S2	CR	AK, BC, WA	SM	Eilers 1976: 27; Frenkel et al. 1978: 98; Taylor and Frenkel 1979: 74; Frenkel and Boss 1988: 39; Taylor 1980: 71; Thomas 1980: 8; Dethier 1990: 34; Viereck et al. 1992: 187
<i>Carex lyngbyei</i> - <i>Potentilla anserina</i> ssp. <i>pacifica</i> Salt Marsh	Lyngby sedge - Pacific silverweed salt marsh	CEGL003289	G4S2	CR	BC, WA	SM	Dethier 1990: 37; Viereck et al. 1992: 186, 187; Shephard 1995: 164; Christy et al. 1998: 120
<i>Carex lyngbyei</i> marsh	Lyngby sedge marsh	CEGL003369	G4S3	CR	AK, BC, WA	FM	Frenkel and Eilers 1976: 52; Frenkel et al. 1978: 103; Taylor and Frenkel 1979: 58; Taylor 1980: 55; Thomas 1980: 10, 55; Dethier 1990: 33, 35; Viereck et al. 1992: 183; Kunze 1994: 54, 96
<i>Carex macrocephala</i>	largehead sedge	CEGL003368	G1G2S1	CR	BC, WA		Christy 2004; Kunze 1984; Copass and Ramm-Granberg 2016a
<i>Carex mendocinensis</i> Fen and Wet Meadow [Provisional]	Mendocino sedge	OR1053	G2S2	KM	CA?	SF, WM	Titus and Christy 2017: 2
<i>Carex microptera</i> wet meadow	small-wing sedge wet meadow	CEGL001792	G4S3	BM, BR, EC, KM, WC	CO, ID, MT, UT, WY	WM	Youngblood et al. 1985b; Youngblood et al. 1985a; Salas et al. 2005; Reid et al. 2004; Padgett et al. 1989; Padgett et al. 1988b; Kittel et al. 1999b; Kittel 1994; Hop et al. 2007; Hansen et al. 1988b; Cogan et al. 2005; Carsey et al. 2003a
<i>Carex nebrascensis</i>	Nebraska sedge meadow	CEGL001813	G4S4	BM, BR, EC	AB, AZ, CA, CO, ID, MT, NM?, NV, UT, WA?, WY +	WM	Hall 1973: 6; Beguin and Major 1975: 353; Christy and Cornelius 1980; Kovalchik 1987: 100; Padgett et al. 1989: 107; Manning and Padgett 1991: 416; Crowe and Clausnitzer 1997: 192; Titus et al. 1998
<i>Carex nigricans</i>	black alpine sedge fen	CEGL001816	G4S4	BM, BR, EC, WC	BC, CA?, ID, MT, WA	FE, WM	Kuramoto and Bliss 1970: 325; Campbell 1973: 20, 22; Cole 1977b: 113; Cole 1982: 20; Kovalchik 1987: 128; Kovalchik 1993: 172; Viereck et al. 1992: 191; Brett et al. 1998: 20; Titus et al. 1998; Christy 2004: 95; Crowe et al. 2004: 106; McCain et al. 2014: 174
<i>Carex nudata</i> Wet Herbaceous Riparian [Provisional]	Torrent sedge	OR1054	G3S3	BM, CP	WA?	HR	Crowe et al. 2004: 108
<i>Carex obnupta</i>	slough sedge marsh	CEGL003313	G4S4	CR, WV	WA	FE, WM	Wiedemann 1966: 131; Taylor and Frenkel 1979: 58; Boss 1983: 45, 98; Ripley 1983: 109; Marshall 1985: 143; Sanville et al. 1986: 127; Kunze 1994: 26, 42, 45, 55, 81; Titus et al. 1996; Christy et al. 1998: 106; Christy 2001a: 34; Christy 2004: 96; Taylor and Frenkel 1979: 60; Taylor 1980: 57; Kunze 1994: 22; Murray 2000: 16; Christy 2004: 96
<i>Carex obnupta</i> - <i>Potentilla anserina</i> ssp. <i>pacifica</i> Brackish Marsh	slough sedge - Pacific silverweed deflation plain	CEGL001820	G4S4	CR	CA?, WA?	SM	Boss 1983: 72; Christy et al. 1998: 108
<i>Carex pachystachya</i> Wet Prairie [Provisional]	Thick-headed sedge	OR1055	G3S2	WV	WA?	WP	Christy 2004: 97

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Carex pellita</i>	woolly sedge fen	CEGL001809	G3S3	BM, BR, EC	BC, CA, CO, ID, MT, NM, NV, UT, WA, WY	FE, WM	Ganskopp 1979: 33; Kovalchik 1987: 98; Evenden 1990: 48; Padgett et al. 1989: 108; Manning and Padgett 1991: 421; Crowe and Clausnitzer 1997: 186; Titus et al. 1998; Crowe et al. 2004: 109; Christy 2013: 24
<i>Carex praeegracilis</i>	clustered field sedge marsh	CEGL002660	G3S2	BM, BR	AZ, CA?, CO, ID, MT, NM, UT, WA, WY	WM	Crowe and Clausnitzer 1997: 199; Titus et al. 1998; Christy 2013: 26
<i>Carex scirpoidea</i> - <i>Micranthes odontoloma</i> Wet Herbaceous Spring [Provisional]	Northern singlespike sedge - stream saxifrage	OR1056	G2S1	BM		SP	Wells 2006: 140
<i>Carex scopulorum</i>	Holm sedge meadow	CEGL001822	G5S4	BM, BR, WC	BC?, CA, CO, ID, MT, NV, UT?, WA, WY?	WM	Campbell 1973: 36; Cole 1977b: 102; Kovalchik 1987: 132; Evenden 1990: 44; Manning and Padgett 1991: 387; Kovalchik 1993: 162; Crowe and Clausnitzer 1997: 170; Titus et al. 1998; Christy 2004: 98; Crowe et al. 2004: 112, 114; Wells 2006: 148; McCain et al. 2014: 223
<i>Carex scopulorum</i> - <i>Eleocharis quinqueflora</i>	Holm sedge - few-flowered spikerush fen	CEGL001837	G3S3	BM, EC, WC	CA, NV	FE, WM	Cole 1977b: 102; Ratliff 1982: 8; Manning and Padgett 1991: 399; Wells 2006: 138; McCain et al. 2014: 228
<i>Carex sheldonii</i> wet meadow	Sheldon sedge	CEGL005210	G3S2	BM, BR, EC	ID	WM	Crowe and Clausnitzer 1997: 201; Moseley 1998: 46; Titus et al. 1998; Crowe et al. 2004: 116; Christy 2013: 29
<i>Carex simulata</i>	short-beaked sedge fen	CEGL001825	G4S4	BM, BR, EC	CA, CO, ID, MT, NM, NV, UT, WA, WY	FE, WM	Christy and Cornelius 1980; Kovalchik 1987: 106; Padgett et al. 1989: 104; Manning and Padgett 1991: 395; Titus and Christy 1996a; Crowe and Clausnitzer 1997: 200; Titus et al. 1998; Christy 2004: 99; Crowe et al. 2004: 117
<i>Carex spectabilis</i> - <i>Polygonum bistortoides</i>	showy sedge - American bistort alpine meadow	CEGL001828	G4S3	WC	BC?, WA		Crawford et al. 2009; Kuramoto and Bliss 1970
<i>Carex spectabilis</i> - <i>Potentilla flabellifolia</i>	showy sedge - high mountain cinquefoil alpine meadow	CEGL001829	G4QS3	WC	WA		Crawford et al. 2009; Hamann 1972
<i>Carex spectabilis</i> meadow	showy sedge meadow	CEGL001827	G5S4	BM, WC	BC?, CA, WA	WM	Douglas 1972; Douglas and Bliss 1977: 129; Cole 1977b: 113; Cole 1982: 20
<i>Carex stipata</i> Wet Meadow [Provisional]	Awl-fruit sedge	OR1058	G3S1	BM, EC	ID?, WA?	WM	Crowe et al. 2004: 119
<i>Carex unilateralis</i> - <i>Hordeum brachyantherum</i>	one-sided sedge - meadow barley prairie	CEGL001830	G2S2	KM, WV	WA?	WM	Moir and Mika 1972: 12
<i>Carex utriculata</i>	beaked sedge marsh	CEGL001562	G5S4	BM, BR, CR, EC, WC	AB, AZ?, CA, CO, ID, MT, NM, NV, UT, WA, WY	WP	Seyer 1979: 35; Kauffman 1982: 59; Kauffman et al. 1985: 16; Frenkel et al. 1986: 33; Halpern 1986: 11; Johnson and Simon 1987: 225; Kovalchik 1987: 118, 118; Viereck et al. 1992: 183; Kunze 1994: 26, 63; Rodwell 1995b: 166; Murray 2000: 16; Christy 2004: 100; Crowe et al. 2004: 120; Wells 2006: 127; McCain et al. 2014: 91
<i>Carex vernacula</i> - <i>Poa fendleriana</i> wet meadow	Native sedge - muttongrass wet meadow	CEGL001869	G2G3S2	BR	NV	FM	Blackburn et al. 1968b
<i>Carex vesicaria</i>	blister sedge	CEGL002661	G4S4	BM, BR, CR, EC	AZ, CA, CO, ID, MT, NV?, WA, WY?	FM	Kovalchik 1987: 116; Crowe and Clausnitzer 1997: 180; Manning and Padgett 1991: 452; Titus et al. 1998; Titus and Christy 1996a; Crowe et al. 2004: 123; Wells 2006: 129

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Ceanothus cuneatus</i> - <i>Cercocarpus betuloides</i> - ( <i>Prunus subcordata</i> ) chaparral [Provisional]	buckbrush - birchleaf mountain mahogany - Klamath plum chaparral	OR0013	G3S3	KM, EC	CA		ORBIC unpubl. data
<i>Ceanothus cuneatus</i> / <i>Achnatherum lemmonii</i>	buckbrush / Lemmon needlegrass	CEGL003158	GNRS2	KM	CA		Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a
<i>Ceanothus integerrimus</i> shrubland	deerbrush shrubland	CEGL003027	G4?SNR	KM	CA		Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Howard 1997c; Gordon and White 1994
<i>Ceanothus thrysiflorus</i> - <i>Baccharis pilularis</i> - <i>Toxicodendron diversilobum</i> chaparral	blueblossom - coyotebrush - Pacific poison oak chaparral	CEGL003198	G4?S2	KM	CA		Schirokauer et al. 2003; Sawyer et al. 2009; Keeler-Wolf 1990a
<i>Ceanothus thrysiflorus</i> - <i>Vaccinium ovatum</i> - <i>Rubus parviflorus</i> shrubland	blueblossom - California huckleberry - thimbleberry shrubland	CEGL003199	G3S2	KM	CA		Schirokauer et al. 2003; Sawyer et al. 2009
<i>Celtis reticulata</i> / <i>Philadelphus lewisii</i>	hackberry / mockorange	CEGL000792	G1S1	BM, CP	ID?, WA	SS	Crowe et al. 2004: 187; Wells 2006: 116, 118
<i>Celtis reticulata</i> / <i>Pseudoroegneria spicata</i>	hackberry / bluebunch wheatgrass	CEGL001085	G2G3S3	BM, CP	CA?, CO, ID, WA		Johnson and Simon 1987: 198
<i>Celtis reticulata</i> / <i>Toxicodendron rydbergii</i> wet scrub	hackberry / western poison-ivy	CEGL003451	G2S2	BM, CP	ID, WA?	SS	Crowe et al. 2004
<i>Ceratophyllum demersum</i>	coon's tail aquatic bed	CEGL004528	G5S5	CR, EC, KM, WV	+	AB	McCain and Christy 2005; Rodwell 1995a; Penfound 1953; Hoagland 2000; Christy 2004: 101; Crowe et al. 2004: 69
<i>Cercocarpus ledifolius</i> / <i>Artemisia arbuscula</i> / <i>Poa secunda</i> - <i>Pseudoroegneria spicata</i>	curlleaf mountain mahogany / low sagebrush / bunchgrass	CEGL001487	G4QS4	BR	CA?		Scheldt 1969
<i>Cercocarpus ledifolius</i> / <i>Artemisia tridentata</i> ssp. <i>vaseyana</i>	curlleaf mountain mahogany / mountain big sagebrush	CEGL001022	G3S2	BM, BR	CA, CO, ID?, NV, UT		Dealy 1975: 74-81; Dealy et al. 1981: 20, 22
<i>Cercocarpus ledifolius</i> / <i>Calamagrostis rubescens</i>	curlleaf mountain mahogany / pinegrass	CEGL000961	G2S1	BM, BR, EC	ID		Dealy 1975:116-122; Dealy et al. 1981: 24
<i>Cercocarpus ledifolius</i> / <i>Festuca idahoensis</i>	curlleaf mountain mahogany / Idaho fescue	CEGL000962	G3S3	BM, BR, EC	ID, MT, NV		Dealy 1971: 60; Dealy 1975: 85; Dealy et al. 1981: 22
<i>Cercocarpus ledifolius</i> / <i>Festuca idahoensis</i> - <i>Pseudoroegneria spicata</i>	curlleaf mountain mahogany / Idaho fescue - bluebunch wheatgrass	CEGL000968	G3G4S2	BM, BR	CA?		Dealy 1971: 55; Dealy 1975: 88; Johnson and Clausnitzer 1992: 133
<i>Cercocarpus ledifolius</i> / <i>Prunus virginiana</i>	curlleaf mountain mahogany / chokecherry	CEGL000966	G4S3	BR	CA?, CO, NV		Lewis 1975a; Coles et al. 2008a
<i>Cercocarpus ledifolius</i> / <i>Pseudoroegneria spicata</i>	curlleaf mountain mahogany / bluebunch wheatgrass	CEGL000967	G4QS3	BM, BR, EC	CA, CO, ID, MT, NV, UT, WY		Hall 1973: 21; Cole 1977b: 91; Dealy et al. 1981: 22; Cole 1982: 17; Johnson and Simon 1987: 192
<i>Cercocarpus ledifolius</i> / <i>Symphoricarpos oreophilus</i>	curlleaf mountain mahogany / mountain snowberry	CEGL000970	G2S2	BM, BR	ID, NV		Dealy 1975: 99-111
<i>Chamaecyparis lawsoniana</i> - <i>Abies concolor</i> - <i>Pseudotsuga menziesii</i> / ( <i>Mahonia nervosa</i> var. <i>nervosa</i> ) / <i>Achlys triphylla</i>	Port Orford cedar - white fir - Douglas-fir / (dwarf Oregongrape) / vanillaleaf	CEGL000041	G2S2	CR, KM	CA		Hawk 1977; Atzet and Wheeler 1984: 67, 72, 137; Atzet et al. 1996; Odion et al. 2013; Jimerson 1994; Hawk 1977
<i>Chamaecyparis lawsoniana</i> - <i>Abies concolor</i> / <i>Quercus sadleriana</i> / <i>Leucothe davisiae</i> * - <i>Rhododendron macrophyllum</i>	Port Orford cedar - white fir / Sadler oak / leucothoe - western rhododendron	CEGL000042	G2S2	CR, KM	CA?		Hawk 1977; Zobel et al. 1985
<i>Chamaecyparis lawsoniana</i> - <i>Picea sitchensis</i> / <i>Vaccinium ovatum</i> - <i>Rhododendron macrophyllum</i>	Port Orford cedar - Sitka spruce / evergreen huckleberry - western rhododendron	CEGL000054	G1S1	CR	CA?		Kagan et al. 1998; Hawk 1977
<i>Chamaecyparis lawsoniana</i> - <i>Pseudotsuga menziesii</i> / ( <i>Rhododendron macrophyllum</i> ) / <i>Xerophyllum tenax</i>	Port Orford cedar - Douglas-fir / (western rhododendron) / beargrass	CEGL000044	G2S2	CR, KM	CA		Hawk 1977

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Chamaecyparis lawsoniana - Pseudotsuga menziesii / Notholithocarpus densiflorus / Gaultheria shallon	Port Orford cedar - Douglas-fir / tanoak / salal	CEGL000043	G2S2	CR, KM	CA		Hawk 1977: 117; Atzet and Wheeler 1984: 138, 166; Atzet et al. 1996: CHLA 14; Jimerson 1994
Chamaecyparis lawsoniana - Tsuga heterophylla / Polystichum munitum	Port Orford cedar - western hemlock / sword fern	CEGL000046	G1S1	CR, KM	CA		Hawk 1977: 101; Atzet et al. 1996
Chamaecyparis lawsoniana - Tsuga heterophylla / Rhododendron macrophyllum - Gaultheria shallon	Port Orford cedar - western hemlock / western rhododendron - salal	CEGL000045	G1S1	CR, KM			Hawk 1977: 107; Atzet et al. 1996
Chamaecyparis lawsoniana / Rhododendron occidentale / Carex ultramafic riparian	Port Orford cedar / western azalea / sedge ultramafic riparian	CEGL000047	G2S2	KM	CA	SF	Hawk 1977: 157; Copeland 1978: 9; Becking et al. 1982: 9; Zobel et al. 1985: 34; Atzet et al. 1996
Chamaecyparis lawsoniana / Rhododendron occidentale forest	Port Orford cedar / western azalea	CEGL003443	G1S1	KM	CA	SF	Atzet and McCrimmon 1990; Sawyer et al. 2009; Jimerson et al. 1995; Jimerson 1994; Hawk 1977
Chamaecyparis lawsoniana / Vaccinium ovatum	Port Orford cedar / evergreen huckleberry dune oldgrowth forest	CEGL000048	G1S1	CR	CA?		Hawk 1977; Christy et al. 1998: 40; Randall 1996
Chrysolepis chrysophylla var. chrysophylla - Arbutus menziesii - Notholithocarpus densiflorus [Provisional]	chinquapin - madrone - tanoak	OR0014	G3S3	KM, EC	CA		Uchtyl 1991b; Sawyer et al. 2009; Sawyer 2006; McDonald et al. 1983; McDonald and Tappeiner 1990; Jimerson et al. 1996; Atzet and Wheeler 1982; Evens et al. 2006
Chrysosplenium glechomifolium Wet Herbaceous Riparian [Provisional]	Western golden carpet	OR1059	G3S3	CR		HR	McCain 2004: 188
Cornus sericea - Salix (hookeriana, sitchensis) shrub swamp	red-osier dogwood - (dune willow, Sitka willow) shrub swamp	CEGL003292	G3S2	CR, WV	BC?, WA	SS	MacKenzie and Moran 2004; Kunze 1994; Frenkel and Eilers 1976; Christy and Putera 1993
Cornus sericea / Lysichiton americanus Shrub Swamp [Provisional]	Creek dogwood / skunk cabbage	OR1060	G3S3	WC	WA?	SS	Murray 2000: 33; Christy 2004: 40
Cornus sericea Pacific shrub swamp	red-osier dogwood Pacific shrub swamp	CEGL005301	G4S3	BM, BR, EC	WA	SS	Rocchio et al. 2012; MacKenzie and Moran 2004; Diaz and Mellen 1996; Crowe et al. 2004; Crowe and Clausnitzer 1997; Crawford 2003; Crowe et al. 2004: 165, 167, 169, 171, 172, 226; Wells 2006: 108
Corydalis aquae-gelidae Wet Herbaceous Riparian [Provisional]	Clackamas corydalis	OR1061	G3S2	WC		HR	McCain 2004: 46
Corydalis scouleri wet meadow	Scouler's Fumewort wet meadow	CEGL001939	G3S3	WC	WA	HR	Henderson and Peter 1982
Crataegus douglasii - Philadelphus lewisii - Physocarpus malvaceus - Acer glabrum - Prunus virginiana Wet Shrubland [Provisional]	Douglas hawthorn - Lewis' mockorange - mallow ninebark - mountain maple - chokecherry	OR1062	G3S2	BM, CP, EC	ID, WA	SS	Crowe et al. 2004: 182
Crataegus douglasii - Rhamnus alnifolia Wet Shrubland [Provisional]	Creek dogwood - alder buckthorn	OR1063	G2S2	CP		SS	Crowe et al. 2004: 177
Crataegus douglasii / Rosa woodsii wet shrubland	black hawthorn / Woods' rose wet shrubland	CEGL001095	G2G2	BM, BR, CP	ID, WA	SS	Kovalchik 1987; Evans 1989a; Crowe et al. 2004: 179; Crawford 2003
Danthonia californica - Festuca idahoensis wet meadow	California oatgrass - Idaho fescue wet meadow	CEGL001607	G1S1	BM	ID	WP	Kagan 1989a; Kagan 1987a; Jankovsky-Jones et al. 2001; Kagan 2010
Danthonia californica valley grassland	California oatgrass valley grassland	CEGL001598	G1S1	WV	CA, WA	WP	Sawyer et al. 2009; Moir and Mika 1972; Kagan and Seyer 1982; Kagan 1980; Johannessen et al. 1971; Grossman et al. 1994; Connelly and Kauffman 1991; Chappell 2006b; Chappell 2006a
Danthonia unispicata - Poa secunda	onespike oatgrass - Sandberg bluegrass wet meadow	CEGL001783	G3S2	BM, EC	WA?, WY		Johnson and Simon 1987: 145; Hall 1973: 8, 47; Ganskopp 1979: 43, 100; Johnson and Simon 1987: 143, 214; Hall 1973; Ganskopp 1979
Darlingtonia californica - Rudbeckia glaucescens Fen	California pitcherplant - California coneflower fen	CEGL003046	G2S2	KM	CA	SF	Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Titus and Christy 2017: 2
Dasiphora fruticosa ssp. floribunda / Deschampsia cespitosa Wet Shrubland	shrubby cinquefoil / tufted hairgrass	CEGL001107	G4S2	BM		SS	Crowe et al. 2004: 229, 271; Wells 2006: 96; Kittel et al. 1999b; Hansen et al. 1995; Crowe and Clausnitzer 1997; Carsey et al. 2003a



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Deschampsia cespitosa - (Carex lyngbyei, Distichlis spicata) Salt marsh	tufted hairgrass - (Lyngbye's sedge, Saltgrass) Salt marsh	CEGL003357	G3G4S3	CR	BC?, WA	SM	Dethier 1990
Deschampsia cespitosa - Argentina egedii	tufted hairgrass - Pacific silverweed high salt marsh	CEGL003383	G3G4S2	CR	BC?, WA	SM	Jefferson 1975: 58, 60; Stout 1976: 37; Frenkel et al. 1978: 89; Taylor and Frenkel 1979: 74; Taylor 1980: 71; Viereck et al. 1992: 166
Deschampsia cespitosa - Artemisia lindleyana wet prairie	tufted hairgrass - Columbia River wormwood marsh	CEGL003425	G1S1	EC, WC	WA	WP	McCain and Christy 2005; Kunze 1994; Glad and Halse 1993; Christy and Putera 1993; Christy 2004: 107
Deschampsia cespitosa - Carex douglasii moist meadow	tufted hairgrass - Douglas' sedge moist meadow	CEGL001602	G2S2	BM	ID?, WA?	WM	Kagan 1987c; Copeland 1979
Deschampsia cespitosa - Carex microptera wet meadow	tufted hairgrass - small-wing sedge wet meadow	CEGL001883	G2G3S2	BM	CO, ID?, WY	WM	Youngblood et al. 1985a; Walford et al. 1997; Salas et al. 2010b; Padgett et al. 1989; Jones and Ogle 2000; Johnson 1961b; Hansen et al. 1995; Girard et al. 1997; Cogan et al. 2005
Deschampsia cespitosa - Carex nebrascensis	tufted hairgrass - Nebraska sedge meadow	CEGL001601	G3?QS3	BM, BR, EC	CO, MT?, NV, UT?, WY	WM	Terwilliger et al. 1979b; Sawyer et al. 2009; Padgett et al. 1989; Manning and Padgett 1995; Kittel et al. 1999b; Hansen et al. 1995; Crowe et al. 2004
Deschampsia cespitosa - Danthonia californica - Rudbeckia glaucescens Wet Prairie [Provisional]	Tufted hairgrass - California oatgrass - California coneflower	OR1065	G2S2	KM	CA?	SF	Titus and Christy 2017: 3
Deschampsia cespitosa - Danthonia californica marsh	tufted hairgrass - California oatgrass marsh	CEGL001604	G2S2	KM, WV	WA	WP	Titus et al. 1996; Savonen 1988; Moir and Mika 1972; McCain and Christy 2005; Lippert and Jameson 1964; Kauffman and Connelly 1989; Kagan 1983; Kagan 1980; Johannessen et al. 1971; Crowe et al. 2004; Connelly and Kauffman 1991; Connelly 1989; Christy 2004: 108
Deschampsia cespitosa - Juncus balticus Brackish Marsh [Provisional]	Tufted hairgrass - Baltic rush	OR1066	G4S2	CR		SM	Taylor 1980: 71
Deschampsia cespitosa - Potentilla anserina ssp. pacifica Salt Marsh	Tufted hairgrass - Pacific silverweed	CEGL003383	G3S2	CR		SM	Boggs 2000; Christy et al. 1998; Dethier 1990; Frenkel et al. 1978; Jefferson 1975; Kagan et al. 2012; Macdonald 1977
Deschampsia cespitosa - Trifolium longipes Wet Meadow [Provisional]	Tufted hairgrass - longstalk clover	OR1067	G4S3	BM, EC, WC	WA?	WM	Christy 2004: 106; Crowe et al. 2004: 144; McCain et al. 2014: 101
Deschampsia cespitosa wet meadow	tufted hairgrass wet meadow	CEGL001599	G4S4	BM, EC	AB, AZ, CA, CO, ID, MT, NM, NV, UT, WA, WY	WM	Hall 1973: 4, 5; Kovalchik 1987: 95; Crowe and Clausnitzer 1997: 190; Titus et al. 1998; Titus and Christy 1996a; Christy 2004: 102; Volland 1976: 21; Hopkins 1979a: 12; Murray 2000: 17; Crowe et al. 2004: 139; McCain et al. 2014: 96, 106
Deschampsia danthonioides - Danthonia unispicata Vernal Pool [Provisional]	Annual hairgrass - onespikes oatgrass	OR1068	G3S2	BM	ID, WA	VP	Johnson and Simon 1987
Deschampsia danthonioides - Lasthenia californica Vernal Pool [Provisional]	Annual hairgrass - slender goldfields	OR1069	G1S1	KM	CA	VP	Titus and Christy 2017: 5; Borgias 2004: Appendix 3 p 10
Deschampsia danthonioides - Plagiobothrys leptocladus Vernal Pool [Provisional]	Annual hairgrass - slender-branched popcorn flower	OR1070	G2S2	CP		VP	Meinke and Magee 1986: 34
Deschampsia danthonioides Vernal Pool [Provisional]	Annual hairgrass	OR1071	G2S2	KM		VP	Titus and Christy 2017: 5; Borgias 2004: Appendix 3 p 10
Distichlis spicata - (Amphiscirpus nevadensis) Alkaline Wet Meadow	alkali saltgrass - (Nevada bulrush) playa	CEGL001773	G4S4	BM, BR	CA?, CO, ID, NV?, WA?	AW	Saul 1974; Salas et al. 2010b; Peterson 2008; Griffiths 1902; Daubenmire 1970; Copeland 1979; Daubenmire 1970: 77
Distichlis spicata - (Salicornia perennis) Salt Marsh	saltgrass - (Virginia glasswort) salt marsh	CEGL003356	G4S2	CR	BC?, WA	SM	Eilers 1984: 8; Dethier 1990: 32; Stout 1976: 35; Frenkel et al. 1978: 82, 89; Frenkel et al. 1981: 200; Frenkel and Boss 1988: 39

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Distichlis spicata - Potentilla anserina ssp. pacifica Salt Marsh [Provisional]	Saltgrass - Pacific silverweed	OR1072	G3S2	CR	WA	SM	Frenkel et al. 1978: 89; Frenkel et al. 1978; Mitchell 1981; Frenkel and Boss 1988; Christy et al. 1998: 124
Distichlis spicata alkaline wet meadow	saltgrass playa (interior alkaline)	CEGL001770	G5S4	BM, BR, CP	AZ, CA, CO, ID, MT, NM, NV, UT, WA, WY +	AW	Poulton 1955; Daubenmire 1970: 45, 50; Saul 1974: 7; Zedler et al. 1999; Zedler et al. 1992; Weaver and Albertson 1956; Von Loh et al. 2002; Vestal 1914; Ungar et al. 1969; Ungar 1970; Ungar 1968; Ungar 1967; Tuhy and Jensen 1982; Thorne 1976; Tendick et al. 2017; Tendick et al. 2012; Stearns-Roger, Inc. 1978; Solomeshch and Barbour 2006; Shupe et al. 1986; Shanks 1977; Schulz and Hall 2011; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Salas et al. 2010b; Rogers 1953; Rodriguez et al. 2017; Ramaley 1942; Ralston 1969; Pickart 2006; Peterson 2008; Osborn 1974; Muldavin et al. 2000a; Klipple and Costello 1960; Kittel et al. 2012a; Kittel et al. 1999b; Kittel et al. 1999a; Kittel et al. 1994; Kittel and Lederer 1993; Keeler-Wolf and Vaghti 2000; Jones and Walford 1995; Johnston 1987; Hyder et al. 1966; Hansen et al. 1995; Hansen et al. 1991; Graham 1937; Evens et al. 2014; Erixson et al. 2011b; Dodd and Coupland 1966; Daubenmire 1970; Daniels 1911; Crouch 1961a; Costello 1944b; Coles et al. 2008a; Cogan and Taylor 2014; Christy 2013; Carsey et al. 2003a; Bunin 1985; Buck-Diaz et al. 2012; Brotherson 1987; Beatley 1976; Baker 1984a; Christy 2013: 31
Downingia yina Vernal Pool [Provisional]	Willamette downingia	OR1073	G2S2	KM	CA?	VP	Titus and Christy 2017: 5; Borgias 2004: Appendix 3 p 10
Dulichium arundinaceum Shore Fen	threeway sedge fen	CEGL001831	G3S3	CR, EC, WC, WV	AK?, BC, CA, ID, MT, WA, WY	FE	Kunze 1994: 28; Titus and Christy 1996a; Christy et al. 1998: 111; Titus et al. 1998; Christy 2001a: 36; Christy 2004: 110; Crowe et al. 2004: 76
Eleocharis acicularis marsh	needle spikerush marsh	CEGL001832	G4S4	EC, WC	CA, CO, ID, NV, WY	FM	Christy and Cornelius 1980; Boss 1983: 147; Titus et al. 1998; Sanville et al. 1986; Salas et al. 2010b; Peterson 2008; Nachlinger 1985; McCain and Christy 2005; Klein et al. 2007; Jankovsky-Jones et al. 1999; Crowe et al. 2004; Cogan et al. 2005; Carsey et al. 2003b; Carsey et al. 2003a; Christy 2004: 111; Crowe et al. 2004: 74
Eleocharis bella Mudflat [Provisional]	Delicate spikerush	OR1074	G3S1	BM		FM	Crowe et al. 2004: 75
Eleocharis obtusa mudflat	Blunt spikerush	CEGL003326	G4S3	CR, WV	WA	FM	Lippert and Jameson 1964: 192; Titus et al. 1996; Christy 2004: 112
Eleocharis palustris	creeping spikerush marsh	CEGL001833	G5S5	ALL	AB, AK?, AZ, BC, CA?, CO, ID, MT, NM, NV?, UT, WA, WY	FM	Padgett 1981: 79; Henderson and McAllister 1983: 2; Boss 1983: 67; Kovalchik 1987: 120; Evenden 1990: 45; Padgett et al. 1989: 94; Manning and Padgett 1991: 384; Kunze 1994: 42, 45, 55; Rodwell 1995b: 203; Crowe and Clausnitzer 1997: 182; Murray 2000: 17; Christy 2004: 113; Crowe et al. 2004: 66; Christy 2013
Eleocharis palustris - Carex unilateralis wet meadow	creeping spikerush - one-sided sedge marsh	CEGL003411	G2S2	WV		WP	Lippert and Jameson 1964: 189
Eleocharis quinqueflora	few-flowered spikerush fen	CEGL001836	G4S2	BM, BR, EC, WC	CA, CO, ID, MT, NV?, UT, WA, WY	FE	Campbell 1973: 36; Cole 1977b: 102; Seyer 1979: 37, 38; Wilson 1986: 19, 20; Kovalchik 1987: 110; Padgett et al. 1989: 104; Manning and Padgett 1991: 399; Kovalchik 1993: 177; Titus 1995b; Crowe and Clausnitzer 1997: 199; Murray 2000: 15, 18; Christy 2004: 114; Crowe et al. 2004: 126; Wells 2006: 131; McCain et al. 2014: 110

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Eleocharis rostellata</i>	beaked spikerush marsh	CEGL003428	G3S3	BR	BC?, CA, CO, ID, MT, NV, WA, WY	AW	Odion et al. 1992; Lesica 1990; Jankovsky-Jones et al. 2001; Hansen et al. 1995; Hansen et al. 1988a; Evens et al. 2014; Carsey et al. 2003a; Christy 2016: 28
<i>Elodea canadensis</i>	Canadian waterweed bed	CEGL003303	G5S5	CR, EC, WC, WV	WA	AB	Kunze 1994: 42, 46, 55; Rodwell 1995b: 76; Titus et al. 1998; Titus and Christy 1996a; Christy 2004: 116; Crowe et al. 2004: 70
<i>Elymus lanceolatus</i> - <i>Hesperostipa comata</i> herbaceous vegetation	downy wheatgrass - needle-and-thread	CEGL001746	G1S1	CP	WA		Mayfield and Kjølmyr 1984; Kagan 1987c; Copeland 1978
<i>Elymus lanceolatus</i> - <i>Lupinus argenteus</i> grassland	thick-spike wheatgrass - silvery lupine grassland	CEGL005595	G4S1	BR, CP	CO, ID, MT, UT, WA		Bell et al. 2009
<i>Empetrum nigrum</i> - <i>Gaultheria shallon</i>	crowberry - salal oceanfront shrubland	CEGL000971	G2S2	CR	CA		Kagan et al. 1998
<i>Equisetum arvense</i>	common horsetail marsh	CEGL003314	G5S5	BM, CR, EC, WC, WV	NM, WA	HR	Crowe and Clausnitzer 1997: 210; Diaz and Mellen 1996: 159; Titus et al. 1998; Titus et al. 1999; Christy 2004: 117; Murray 2000: 18; McCain 2004: 185; Crowe et al. 2004: 159
<i>Equisetum fluviatile</i> marsh	water horsetail marsh	CEGL002746	G4S3	CR, EC, WC	AB, AK, BC, ID, MT, WA	FM	Viereck et al. 1992: 196; Kovalchik 1993: 187; Christy and Putera 1993: 40; Kunze 1994: 56, 80; Rodwell 1995b: 172; Shephard 1995: 191; Titus et al. 1998
<i>Equisetum telmateia</i> Marsh [Provisional]	Giant horsetail	OR1076	G4S3	CR		WM	Murray 2000: 19
<i>Eragrostis hypnoides</i> - <i>Gnaphalium palustre</i>	creeping lovegrass - lowland cudweed mudflat or vernal pool	CEGL003327	G2S1	WV	BC, CA, WA	FM	Titus et al. 1996; Christy 2004: 118; McCain and Christy 2005
<i>Ericameria parryi</i> shrubland	Parry's rabbitbrush shrubland	CEGL003040	G3G4SU	BR	CA, NV?		Sawyer and Keeler-Wolf 1995; Barbour and Major 1988
<i>Eriogonum douglasii</i> / <i>Poa secunda</i>	Douglas buckwheat / Sandberg bluegrass dwarf-shrub scabland	CEGL001785	G3S3	BM, CP	ID, WA		Daubenmire 1970; Johnson and Simon 1987: 148
<i>Eriogonum microthecum</i> - <i>Physaria oregana</i>	buckwheat - Oregon bladderpod scabland	CEGL001737	G2S2	BM	ID, WA		Daubenmire 1970; Johnson and Simon 1987: 205
<i>Eriogonum sphaerocephalum</i> / <i>Poa secunda</i> dwarf-shrub grassland	rock Buckwheat / Sandberg bluegrass dwarf-shrub grassland	CEGL001448	G3S3	BM, BR, CP, EC	ID, WA		Daubenmire and Daubenmire 1968; Daubenmire 1970
<i>Eriogonum strictum</i> / <i>Poa secunda</i>	strict buckwheat / Sandberg bluegrass scabland	CEGL001788	G4S4	BM, CP	CA?, ID		Johnson and Simon 1987: 152
<i>Eryngium petiolatum</i> - <i>Grindelia nana</i>	coyote-thistle - low gumweed vernal pool	CEGL003345	G1S1	KM		VP	Lippert and Jameson 1964: 193
<i>Eryngium petiolatum</i> - <i>Lasthenia glaberrima</i>	coyote-thistle - smooth lasthenia vernal pool	CEGL003458	G1S1	KM, WV		VP	Alverson 1990; : Appendix 3 p 10
<i>Eryngium petiolatum</i> - <i>Navarretia leucocephala</i> ssp. <i>leucocephala</i> Vernal Pool [Provisional]	Coyote-thistle - white flowered navarretia	OR1077	G1S1	KM	CA	VP	Borgias 2004: Appendix 3 p 10
<i>Erythranthe guttata</i> - ( <i>Mimulus</i> spp.) seep or herbaceous riparian	seep monkeyflower - (monkeyflower species) seep	CEGL005305	G3S3	WC	CA, CO, UT	HR	Tendick et al. 2011b; Smith 1998b; Sawyer et al. 2009; Potter 2005; Padgett et al. 1989; Klein et al. 2007; Kittel et al. 2012a; Diaz and Mellen 1996; McCain et al. 2014: 266
<i>Erythranthe guttata</i> Wet Herbaceous Riparian [Provisional]	Yellow monkeyflower	OR1079	G3S2	WC		HR	McCain 2004: 43, 44
<i>Euthamia occidentalis</i>	western goldenrod strand	CEGL003328	G3S3	WV	ID, WA	FM	Christy and Putera 1993: 41; Kunze 1994: 49; Christy 2004: 119
<i>Festuca brachyphylla</i>	sheep fescue subalpine grassland	CEGL001797	G4?S3	BM, BR	CA?, CO, ID, UT, WA		Douglas and Bliss 1977: 128
<i>Festuca brachyphylla</i> - <i>Trisetum spicatum</i> alpine turf	sheep fescue - spike oatgrass alpine turf	CEGL001896	G3?S4	BM	CO, WY		Tweit and Houston 1980; Salas et al. 2010b

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Festuca campestris</i> - ( <i>Festuca idahoensis</i> ) - <i>Achnatherum richardsonii</i> grassland	Rough fescue - (Idaho fescue ) - Richardson's needlegrass grassland	CEGL005869	G2G3SU	BM	ID?, MT, WA?		Willoughby et al. 1998; Reid et al. 2004; Mueggler and Stewart 1980; Lynch 1955; Lesica 2002; Koterba and Habeck 1971; Kartesz 1999; Jaques 1976; Hop et al. 2007; Hitchcock et al. 1977a; Hitchcock et al. 1969; Hitchcock et al. 1961; Hitchcock et al. 1959; Hitchcock et al. 1955; Dorn 1984; Cronquist et al. 1977; Aiken et al. 1996; Aiken and Darbyshire 1990
<i>Festuca campestris</i> - <i>Festuca idahoensis</i> - <i>Geranium viscosissimum</i> grassland	Rough fescue - Idaho fescue - Sticky Purple <i>Geranium</i> grassland	CEGL005870	G3?SU	BM	AB, MT, WA?		Reid et al. 2004; Mueggler and Stewart 1980; Lesica 2002; Kartesz 1999; Hop et al. 2007; Hitchcock et al. 1977a; Dorn 1984; Cronquist et al. 1977; Aiken et al. 1996; Aiken and Darbyshire 1990
<i>Festuca campestris</i> - <i>Festuca idahoensis</i> grassland	rough fescue - Idaho fescue grassland	CEGL005875	G3S3	BM, BR	AB, ID, MT, WA		Hall 1973: 45; Willoughby et al. 1998; Willoughby 1997; Willms et al. 1985; Willms and Fraser 1992; Tisdale and McLean 1957; Tisdale and Bramble-Brodahl 1983; Tisdale 1982; Tisdale 1979; Tisdale 1947; Reid et al. 2004; Mueggler and Stewart 1980; McLean 1970; Lynch 1955; Lesica 2002; Koterba and Habeck 1971; Jaques 1976; Hop et al. 2007; Hodgkinson and Young 1973; Hitchcock et al. 1977a; Dorn 1984; Daubenmire 1970; Cronquist et al. 1977; Cooper 2003; Aiken et al. 1996; Aiken and Darbyshire 1990
<i>Festuca idahoensis</i> - ( <i>Hieraceum cynoglossoides</i> )	Idaho fescue - (houndstongue hawkweed)	CEGL001619	G1G2S2	CP, EC	WA		Daubenmire 1970; Reid et al. 1994
<i>Festuca idahoensis</i> - ( <i>Koeleria macrantha</i> )	Idaho fescue - (prairie junegrass)	CEGL001620	G3Q52	BM, CP	CA?, ID, WA		Poulton 1955: 115; Tisdale 1979: 6; Johnson and Simon 1987: 33, 39, 44, 51
<i>Festuca idahoensis</i> - ( <i>Symphoricarpos albus</i> )	Idaho fescue - (common snowberry)	CEGL001509	G2S2	BM, CP	ID?, WA		Daubenmire 1970; Johnson and Simon 1987: 50, 68
<i>Festuca idahoensis</i> - <i>Carex hoodii</i>	Idaho fescue - Hood sedge	CEGL001609	G3G4S3	BM	NV, UT?		Johnson and Simon 1987: 80
<i>Festuca idahoensis</i> - <i>Eriogonum heracleoides</i>	Idaho fescue - Wyeth buckwheat	CEGL001616	G3S3	BM	WA		Ganskopp 1979; Daubenmire 1970
<i>Festuca idahoensis</i> subalpine grassland	Idaho fescue subalpine grassland	CEGL001897	G4S3	BM, BR	CA?, CO, MT, WA		Hall 1973: 45; Erixson et al. 2011b
<i>Festuca roemerii</i> - <i>Sidalcea virgata</i>	Roemer fescue valley prairie	CEGL001744	G1S1	WV			Magee 1985; Macdonald 1989; Habeck 1962; Habeck 1961; Alverson 1990
<i>Festuca rubra</i> - <i>Armeria maritima</i> coastal headland grassland	red fescue - sea-pink coastal headland grassland	CEGL001567	G2S2	CR	CA, WA		Wiedemann 1966; Wiedemann 1984; Schirokauer et al. 2003; Sawyer and Keeler-Wolf 1995; Rocchio et al. 2012; Alpert 1984
<i>Festuca rubra</i> - <i>Danthonia californica</i>	red fescue - California oatgrass south coast headland or hillslope grassland	CEGL001597	G2S2	CR	CA		Sawyer and Keeler-Wolf 1995; Reid et al. 1994; Holland 1986b; Barbour and Major 1988
<i>Festuca rubra</i> dune grasslands	red fescue stabilized sand dunes	CEGL001774	G1S1	CR	WA		Christy et al. 1998: 94, 98; Pickart 1987; Kunze 1984; Copass and Ramm-Granberg 2016a
<i>Festuca viridula</i> - <i>Carex hoodii</i>	green fescue - Hood sedge	CEGL001596	G3S3	BM	CA?, ID?, WA		Cole 1982: 39; Johnson and Simon 1987: 20
<i>Festuca viridula</i> - <i>Lupinus latifolius</i> meadow	greenleaf fescue - broadleaf lupine meadow	CEGL001635	G4S4	BM, BR, WC	ID?, WA		Reid et al. 1980; Layser 1980; Johnson and Simon 1987; Johnson and Simon 1985; Henderson and Peter 1982; Henderson 1973; Hamann 1972; Hall 1967; Douglas and Bliss 1977; Daubenmire 1981
<i>Festuca viridula</i> - <i>Lupinus laxiflorus</i>	green fescue - spurred lupine	CEGL001634	G3Q53	BM	ID?, WA		Johnson and Simon 1987: 24; Johnson and Swanson 2005
<i>Fontinalis</i> ( <i>antipyretica</i> , <i>neomexicana</i> ) Nonvascular Aquatic Vegetation	Fountain moss	CEGL003304	G5S5	CR, EC, WC, WV	WA	AB	Seyer 1979: 45, 46; Viereck et al. 1992: 209; Christy 2004: 152
<i>Fraxinus latifolia</i> - ( <i>Populus trichocarpa</i> ) / <i>Cornus sericea</i>	Oregon ash - (black cottonwood) / creek dogwood	CEGL003390	G4S4	CR, WV	WA	FW	Smith and Smith 1976: 115, 159, 183; Christy and Putera 1993: 41; Kunze 1994: 52; Titus et al. 1996
<i>Fraxinus latifolia</i> - <i>Populus trichocarpa</i> / <i>Acer circinatum</i>	Oregon ash - black cottonwood / vine maple	CEGL003404	G3S3	WV	WA?	FW	Titus et al. 1996; McCain 2004: 267

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Fraxinus latifolia - Populus trichocarpa / Corylus cornuta - Physocarpus capitatus	Oregon ash - black cottonwood / hazelnut - Pacific ninebark	CEGL003364	G3S3	WV	WA	FW	Titus et al. 1996; McCain 2004: 257
Fraxinus latifolia - Populus trichocarpa / Rubus spectabilis	Oregon ash - black cottonwood / salmonberry	CEGL003405	G2S2	WV	WA?	FW	Titus et al. 1996; McCain 2004: 271
Fraxinus latifolia - Populus trichocarpa / Symphoricarpos albus	Oregon ash - black cottonwood / snowberry	CEGL000641	G3S3	CR, WV	WA	FW	Smith and Smith 1976: 165; Heinitz 1982: 20; Frenkel and Heinitz 1987: 208; Kunze 1994: 33, 53; Titus et al. 1996
Fraxinus latifolia / Carex aquatilis var. aquatilis Riparian Forest [Provisional]	Oregon ash / water sedge	OR1080	G1S1	WV		FW	Christy 2004: 23
Fraxinus latifolia / Carex leptopoda - Urtica dioica	Oregon ash / Dewey sedge - stinging nettle	CEGL003365	G1S1	WV	WA	FW	Christy and Putera 1993: 41; Kunze 1994: 52; Titus et al. 1996; Christy 2004: 24
Fraxinus latifolia / Carex obnupta	Oregon ash / slough sedge	CEGL000640	G4S4	WV	WA	FW	Heinitz 1982: 20; Marshall 1985: 142; Frenkel and Heinitz 1987: 208; Kunze 1994: 33; Titus et al. 1996; Christy 2004: 25; Murray 2000: 44
Fraxinus latifolia / Juncus patens	Oregon ash / spreading rush	CEGL003391	G2S2	KM, WV	WA?	FW	Titus and Christy 1996b
Fraxinus latifolia / Spiraea douglasii	Oregon ash / hardhack	CEGL003392	G3S3	WV	WA	FW	Titus et al. 1996; Christy 2004: 26
Fraxinus latifolia / Symphoricarpos albus	Oregon ash / common snowberry	CEGL003393	G4S4	KM, WV	WA	FW	Heinitz 1982: 20; Frenkel and Heinitz 1987: 208; Kunze 1994: 33; Titus et al. 1996; Christy 2004: 27
Gaultheria shallon - Vaccinium ovatum / Pteridium aquilinum	salal - California huckleberry / western brackenfern shrubland	CEGL000972	G3S3	CR	CA?, WA		Wiedemann 1966; Kumler 1969: 700; Wiedemann 1984
Glossopetalon spinescens var. aridum / Pseudoroegneria spicata	spiny greenbush / bluebunch wheatgrass	CEGL001100	G4S3	BM, BR	ID		Johnson and Simon 1987: 195
Glyceria borealis	northern mannagrass marsh	CEGL001569	G4S4	BM, BR	CO, ID, MT, NM, WA, WY?	FM	Boss 1983: 146; Sanville et al. 1986: 127; Manning and Padgett 1991: 452; Viereck et al. 1992: 182; Kovalchik 1993: 179; Titus et al. 1998; Titus and Christy 1996a; Crowe et al. 2004: 64
Glyceria grandis	American mannagrass marsh	CEGL003429	G2S2	BR	CO, ID, MT, WA	FM	Evenden 1990: 45
Glyceria striata	fowl mannagrass marsh	CEGL000219	G3S3	BM, EC, WC	WA	FM	Kauffman 1982: 59; Kauffman et al. 1985: 16; Manning and Padgett 1991: 452; Crowe and Clausnitzer 1997: 208; Titus and Christy 1996a; Titus et al. 1998; Murray 2000: 19; Christy 2004: 120; Crowe et al. 2004: 147
Gratiola ebracteata Vernal Pool [Provisional]	Bractless hedge-hyssop - bracted popcorn flower	OR1081	G2S2	KM	CA?	VP	Titus and Christy 2017: 6
Grayia spinosa / Achnatherum hymenoides	spiny hopsage / bunchgrass	CEGL001350	G4S3	BR	CA?, CO, NV, WY		Easterly and Salstrom 1997: 28
Grayia spinosa / Achnatherum thurberianum shrubland	spiny hopsage / Thurber's needlegrass shrubland	CEGL002681	G2G3S1	BR	CA?, NV		Roberts 1979; Price and Seibert 1981
Hastingsia bracteosa Fen [Provisional]	Purple-flowered rush-lily	OR1082	G2S2	KM		SF	Titus and Christy 2017: 3
Hesperocyparis macnabiana forest	Macnab's cypress	CEGL003043	G2S1	KM	CA		Vogl et al. 1988; Sawyer and Keeler-Wolf 1995; Keeler-Wolf 1990a; Griffin and Critchfield 1972; Cheatham and Haller 1975
Hesperostipa comata - Poa secunda	needle-and-thread - Sandberg bluegrass	CEGL001704	G1S1	CP	BC?, ID, MT, NV, WA		Poulton 1955; Daubenmire 1970
Hippuris vulgaris	common mares-tail marsh	CEGL003315	G5S3	BM, BR, CR, EC, WV	AK, CO, WA	FM	Viereck et al. 1992: 205; Kunze 1994: 22; Christy and Brophy 2002; Christy 2004: 121

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Hordeum brachyantherum</i> lowland wet meadow	meadow barley lowland wet meadow	CEGL003430	G2S2	ALL	CA, ID, NV, WY	WM	Smith 1998b; Moir and Mika 1972; Manning and Padgett 1995; Kittel et al. 2012a; Jankovsky-Jones et al. 2001; Hansen and Hall 2002; Friesen et al. 2010; Evens and San 2004
<i>Hydrocotyle ranunculoides</i> aquatic bed	floating water-pennywort marsh	OR0015	G5S3	CR	CA?, WA?	FM	McCain and Christy 2005: 301; Christy 2004: 122
<i>Hypericum anagalloides</i> Fen [Provisional]	Bog St. John's wort	OR1084	G5S3	CR, WC		FE	Murray 2000: 20
<i>Isoetes bolanderi</i> Vernal Pool [Provisional]	Bolander's quillwort	OR1085	G1S1	KM		VP	Titus and Christy 2017: 6
<i>Isoetes nuttallii</i> - <i>Plagiobothrys bracteatus</i> Vernal Pool [Provisional]	Nuttall's quillwort - bracted popcorn flower	OR1086	G2S2	KM		VP	Titus and Christy 2017: 6
<i>Isoetes nuttallii</i> wet meadow	Nuttall quillwort bed	CEGL003343	G3S3	WV	BC?, WA?	SM	Titus et al. 1996; Christy 2004: 123
<i>Juncus balticus</i> - <i>Bistorta bistortoides</i> Wet Meadow [Provisional]	Baltic rush - American bistort	OR1087	G4S4	EC, WC		FE, WM	Murray 2000: 21; Christy 2004: 124
<i>Juncus balticus</i> - <i>Carex obnupta</i> Brackish Marsh [Provisional]	Baltic rush - slough sedge	OR1088	G4S4	CR		SM	Taylor 1980: 57; Kunze 1994: 22
<i>Juncus balticus</i> Wet Meadow	Baltic rush marsh	CEGL001838	G5S5	ALL	AB, AZ, BC, CA, CO, ID, MT, NM, NV, UT, WA, WY +	FE, WM	Volland 1976: 20; Taylor and Frenkel 1979: 60; Taylor 1980: 57; Padgett 1981: 73; Henderson and McAllister 1983: 2; Kovalchik 1987: 138; Evenden 1990: 47; Padgett et al. 1989: 111; Manning and Padgett 1991: 436; Kunze 1994: 22; Crowe and Clausnitzer 1997; Taylor and Frenkel 1979: 60; Taylor 1980: 57; Kunze 1994: 22; Christy 2004: 109; Crowe et al. 2004: 129, 145; Wells 2006: 151; Christy 2013: 35
<i>Juncus drummondii</i> - <i>Micranthes tolmiei</i> Alpine Meadow [Provisional]	Drummond's rush - - Tolmie saxifrage	OR1089	G4S3	EC, WC		SD	McCain et al. 2014: 263
<i>Juncus effusus</i> Pacific Coast Marsh	lamp rush Pacific Coast wet meadow	CEGL003317	G5S3	CR, KM, WV	CA, WA	FM	Titus 1996; Schirokauer et al. 2003; Rocchio et al. 2012; Murray 2000; McCain and Christy 2005; Keeler-Wolf and Evens 2006; Kagan et al. 2012; Jankovsky-Jones et al. 1999; Hickman 1993; Christy 2004: 125
<i>Juncus ensifolius</i> Marsh [Provisional]	Dagger-leaf rush	OR1101	G4S4	KM		FM	Titus and Christy 2017: 4
<i>Juncus falcatus</i> - <i>Trifolium wormskjoldii</i> Wet Meadow	Sickle-leaved rush - springbank clover	CEGL001570	G4S3	CR	WA?	SM	Kunze 1994:85; Christy et al. 1998: 102
<i>Juncus nevadensis</i>	Nevada rush marsh	OR0016	G4S4	EC	CA?, NV	FM, WM	Kovalchik 1987: 138; Manning and Padgett 1991: 453; Titus and Christy 1996a; Titus et al. 1998; Christy 2004: 126; Crowe et al. 2004: 131
<i>Juniperus occidentalis</i> / <i>Achnatherum thurberiana</i>	western juniper / Thurber's needlegrass	CEGL002635	G2S2	BM, BR	CA?, NV?		Youtie and Winward 1977
<i>Juniperus occidentalis</i> / <i>Artemisia arbuscula</i> / <i>Danthonia unispicata</i> - <i>Poa secunda</i>	western juniper / low sagebrush / onespikes oatgrass - Sandberg bluegrass	CEGL001715	G3S3	BM, BR, CP	CA?		Johnson and Clausnitzer 1992: 130
<i>Juniperus occidentalis</i> / <i>Artemisia arbuscula</i> / <i>Festuca idahoensis</i>	western juniper / low sagebrush / Idaho fescue	CEGL001716	G3?S3	BM, BR, EC	CA, ID		Eckert 1957: 135; Hall 1973: 18; Hopkins 1979a: 16
<i>Juniperus occidentalis</i> / <i>Artemisia arbuscula</i> / <i>Pseudoroegneria spicata</i>	western juniper / low sagebrush / bluebunch wheatgrass	CEGL001717	G3G4S4	BM, BR, CP	CA?		Eckert 1957: 153; Hall 1973: 18; Johnson and Clausnitzer 1992: 130
<i>Juniperus occidentalis</i> / <i>Artemisia rigida</i> / <i>Poa secunda</i>	western juniper / rigid sagebrush / Sandberg bluegrass	CEGL001718	G2G3S3	BM, BR, CP			Hall 1973: 17; Johnson and Clausnitzer 1992: 130
<i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> - <i>Purshia tridentata</i>	western juniper / big sagebrush - bitterbrush / bunchgrass	CEGL001722	G4QS4	BM, BR, EC	CA?		Driscoll 1964a: 26
<i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> / <i>Carex filifolia</i>	western juniper / big sagebrush / threadleaf sedge	CEGL001719	G1S1	BM			Franklin et al. 1972
<i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> / <i>Festuca idahoensis</i>	western juniper / big sagebrush / Idaho fescue	CEGL001720	G3S3	BM, BR, EC	CA?, WA		Eckert 1957: 109; Driscoll 1964a: 14; Hall 1973: 19; Hopkins 1979a; Dealy et al. 1981: 25

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> / <i>Pseudoroegneria spicata</i>	western juniper / big sagebrush / bluebunch wheatgrass	CEGL001721	G3G4S3	BM, BR, EC	CA?, WA		Eckert 1957: 69; Driscoll 1964a: 20, 22, 30; Hall 1973: 19; Hopkins 1979a; Dealy et al. 1981: 25
<i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> var. <i>vaseyana</i>	western juniper / mountain big sagebrush	CEGL000723	G4S4	BM, EC	CA, ID		Johnson and Clausnitzer 1992: 129
<i>Juniperus occidentalis</i> / <i>Cercocarpus ledifolius</i> - <i>Symphoricarpos oreophilus</i>	western juniper / curlleaf mountain mahogany - mountain snowberry	CEGL000726	G2S2	BR	ID, NV?		Dealy 1975: 91-111; Dealy et al. 1981: 22
<i>Juniperus occidentalis</i> / <i>Cercocarpus ledifolius</i> / <i>Carex geyeri</i>	western juniper / curlleaf mountain mahogany / elk sedge	CEGL000724	G2S2	BM, BR	CA?		Dealy 1975: 91; Johnson and Clausnitzer 1992: 129
<i>Juniperus occidentalis</i> / <i>Cercocarpus ledifolius</i> / <i>Leymus cinereus</i> wooded grassland	western Juniper / curl-leaf Mountain-mahogany / basin wildrye wooded grassland	CEGL001723	G1QS1	BR			Dealy 1975
<i>Juniperus occidentalis</i> / <i>Cercocarpus ledifolius</i> / <i>Pseudoroegneria spicata</i>	western juniper / curlleaf mountain - mahogany rimrock & canyons	CEGL000725	G4S4	BM, BR	CA, NV?		Dealy 1975: 85; Johnson and Clausnitzer 1992: 129
<i>Juniperus occidentalis</i> / <i>Festuca idahoensis</i>	western juniper / Idaho fescue	CEGL001724	G2S2	BM, EC	CA?, ID, WA		Driscoll 1964a: 16, 24, 28; Hall 1973: 16; Johnson and Simon 1987: 183; Johnson and Clausnitzer 1992: 127; Hall 1973: 16; Johnson and Clausnitzer 1992: 127
<i>Juniperus occidentalis</i> / <i>Poa secunda</i> - <i>Achnatherum occidentale</i>	western juniper / Sandberg bluegrass - western needlegrass	CEGL001727	GUS1	BM			Kagan 1988; Copeland 1980b
<i>Juniperus occidentalis</i> / <i>Pseudoroegneria spicata</i>	western juniper / bluebunch wheatgrass	CEGL001728	G3S3	BM, BR, CP, EC	CA?, ID, NV?, WA		Driscoll 1964a: 24; Hall 1973: 16; Johnson and Clausnitzer 1992: 127; Johnson and Simon 1987: 126
<i>Juniperus occidentalis</i> / <i>Purshia tridentata</i> / <i>Festuca idahoensis</i> - <i>Pseudoroegneria spicata</i>	western juniper / bitterbrush / Idaho fescue - bluebunch wheatgrass	CEGL002622	G3S3	BM, EC	CA?		Driscoll 1964a: 18, 26; Segura-Bustamante 1970: 143; Volland 1976: 31; Johnson and Clausnitzer 1992: 125
<i>Kalmia microphylla</i> / <i>Carex aquatilis</i> var. <i>dives</i> Wet Shrubland [Provisional]	Alpine laurel / Sitka sedge	OR1103	G3S2	WC		FE	Christy 2004: 41
<i>Kalmia microphylla</i> / <i>Carex nigricans</i>	bog laurel / black alpine sedge shrub swamp	CEGL001402	G3S2	BM, BR	AB?, BC?, CA, MT, WA	SS	Cole 1977b: 104; Hamann 1972; Kovalchik 1993: 102; Crowe et al. 2004: 264; Wells 2006: 92
<i>Kalmia microphylla</i> / <i>Carex scopulorum</i>	bog laurel / Holm sedge shrub swamp	CEGL001403	G3S3	BM	CA?, ID, MT	SS	Cole 1977b: 104
<i>Krascheninnikovia lanata</i> / <i>Poa secunda</i> - <i>Elymus elymoides</i>	winterfat / Sandberg bluegrass - bottlebrush squirreltail flat	CEGL001326	G3S2	BR	CO, ID, NV, WA, WY		Daubenmire 1970
<i>Larix occidentalis</i> / <i>Clintonia uniflora</i> - <i>Xerophyllum tenax</i> forest	western Larch / bride's bonnet - common beargrass	CEGL005881	GNRS1S2	BM	ID, MT, WA		Williams et al. 1995; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Leavell 2000; Johnson and Simon 1987; Johnson and Clausnitzer 1992; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987
<i>Larix occidentalis</i> / <i>Clintonia uniflora</i> forest	western Larch / bride's bonnet	CEGL005880	GNRS1S2	BM	ID, MT, WA		Williams et al. 1995; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Leavell 2000; Johnson and Simon 1987; Johnson and Clausnitzer 1992; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987
<i>Lemna minor</i>	duckweed bed	CEGL003305	G5S5	ALL	WA	AB	Titus et al. 1996; Rodwell 1995a; Murray 2000: 22; McCain and Christy 2005; Kunze 1994; Kagan et al. 2012; Christy 2004: 127; Buck-Diaz et al. 2012

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Lemna spp. western North American aquatic vegetation	duckweed species western North America aquatic vegetation	CEGL005450	G5S4	All	AZ, CA, CO, ID, MT, NM, NV, UT, WA, WY +	AB	Windell et al. 1986; Sawyer and Keeler-Wolf 1995; Owns et al. 2004; Fuller 1930
Lepidium davisii Playa [Provisional]	Davis pepperweed	OR1104	G3S1	BR		AW	Moseley 1995; Meinke 2014
Leymus cinereus	basin wildrye bottomlands	CEGL001480	G1S1	BM, BR, CP, EC	CA, ID, WA	AW	Daubenmire 1970; Day and Wright 1985: 4; Johnson and Simon 1987: 210; Crowe et al. 2004: 151; Wells 2006: 148
Leymus cinereus - Distichlis spicata	giant wildrye - saltgrass alkali grassland	CEGL001481	G3S3	BR, CP	CA, CO, ID, NV, UT, WA	AW	Poulton 1955: 70; Daubenmire 1970: 50; Crawford 2003; Coles et al. 2008a
Leymus cinereus alkaline wet meadow	basin wildrye alkaline wet meadow	CEGL001479	G3S1	BR, CP	CA, CO, ID, MT, NV, UT, WA, WY	AW	Walker and Brotherson 1982; Vories 1974; Thomas et al. 2009b; Thilenius et al. 1995; Tendick et al. 2010; Stoddart 1941; Schulz and Hall 2011; Peterson 2008; Mueggler and Stewart 1980; Knight et al. 1976; Keammerer 1977; Jones and Ogle 2000; Johnson and Simon 1987; Johnson and Simon 1985; Friesen et al. 2010; Ferchau 1973; Erixson et al. 2011b; Erixson and Cogan 2012a; DiPaolo et al. 2015; DeVelice 1992; Dean 1960; Daubenmire 1988; Daubenmire 1970; Crowe et al. 2004; Coles et al. 2010; Coles et al. 2008a; Cogan et al. 2012; Bell et al. 2009; Baker 1984a; Baker 1982b; Aldous and Shantz 1924
Leymus mollis ssp. mollis - Lathyrus japonicus	unstabilized coastal dune wildrye	CEGL001796	G2S1	CR	BC, CA, WA		Wiedemann 1966; Christy et al. 1998: 92; Stumpf et al. 2017; Sawyer et al. 2009; Rocchio et al. 2012; Pickart and Sawyer 1998; Pickart and Barbour 2007; Kumler 1969; Copass and Ramm-Granberg 2016a
Leymus triticoides - Poa secunda ssp. juncifolia	creeping wildrye - alkali bluegrass playa	CEGL001572	G2S2	BR	CA, NV	AW	Easterday and Mamone 1980: 14; Peterson 2008; Odion et al. 1992; Christy 2013
Leymus triticoides Wet Meadow	Creeping wildrye	CEGL001571	G2S2	BR		AW	Christy 2013: 37; Sawyer et al. 2009; Holstein 2001; Buck-Diaz et al. 2012
Lilaeopsis occidentalis	lilaeopsis marsh	CEGL003329	G3S3	CR, WV	BC?, WA	FM	Christy and Putera 1993: 40; Kunze 1994: 56, 97; Christy 2004: 128
Lomatium martindalei rock garden	Martindale lomatium rock garden	CEGL001972	G2S2	CR	WA?		Kagan et al. 2012; Frenkel and Copeland 1979; Chappell 2006a; Aldrich 1972; Alaback and Frenkel 1978
Lonicera involucrata / Potentilla anserina Brackish Shrub Swamp [Provisional]	Black twinberry / Pacific silverweed	OR1106	G3S2	CR		SM	Brophy 2007
Ludwigia palustris - Persicaria hydropiperoides	water purslane - waterpepper marsh	CEGL003330	G3S3	CR, KM, WV	WA	FM	Christy and Putera 1993: 40; Kunze 1994: 46; Titus et al. 1996; Christy et al. 1998: 131; Christy 2004: 129
Luetkea pectinata - Micranthes tolmiei Alpine Meadow	partridgefoot - Tolmie saxifrage	CEGL001918	G5S4	EC, WC	BC, CA, WA	SD	Douglas 1972: 153; Schreiner 1994; Henderson 1974; Henderson 1973; Douglas 1972; Crawford et al. 2009
Lupinus latifolius ssp. subalpinus - Carex spectabilis alpine meadow	Cascade lupine - showy sedge alpine meadow	CEGL001973	G4S3	BM, EC, WC	BC?, WA	WM	Kovalchik 2001; Douglas and Bliss 1977; Crowe et al. 2004: 119; McCain et al. 2014: 202
Lupinus littoralis dune community	seashore lupine dunes	CEGL001974	G3S3	CR	WA		Wiedemann 1966; Davidson 1967: 46; Christy et al. 1998: 130
Lysichiton americanus - (Athyrum filix-femina) Marsh [Provisional]	Skunk cabbage	OR1107	G4S4	WV		FM	Diaz and Mellen 1996: 167; Murray 2000: 22
Lysichiton americanus marsh	skunk cabbage marsh	CEGL003318	G4S4	EC, WC	WA	FM	Diaz and Mellen 1996: 167; Titus et al. 1998



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Lysimachia maritima</i> - <i>Poa secunda</i> Rich Fen	Sea-milkwort - Sandberg bluegrass	CEGL005661	G3S2	BR		AW	Christy 2016: 32; Carsey et al. 2003a; Cooper 1996
<i>Malus fusca</i> - ( <i>Salix hookeriana</i> ) / <i>Carex obnupta</i> shrub swamp	Oregon Crabapple - (dune willow) / slough sedge shrub swamp	CEGL003294	G3S2	CR	BC, WA	SS	Sanville et al. 1986; Rocchio et al. 2012; Kunze 1994; Kagan et al. 2012; Copass and Ramm-Granberg 2016a; Christy et al. 1998; Christy and Putera 1993; Christy 2004; Christy 2001a; Boss 1983
<i>Malus fusca</i> / <i>Carex obnupta</i>	crabapple / slough sedge shrub swamp	CEGL003385	G3S3	CR, WV	BC?, WA	SS	Kunze 1994: 34; Christy 2004: 49; MacKenzie and Moran 2004
<i>Marsilea oligospora</i> - <i>Eleocharis acicularis</i> Vernal Pool [Provisional]	Pacific watercress - needle spikerush	OR1108	G2S2	EC		VP	Bjork 2002: 26
<i>Menyanthes trifoliata</i>	buckbean marsh	CEGL003410	G5S4	BM, CR, EC, WC, WV	AK, BC, CA, CO, WA, WY	FE	Viereck et al. 1992: 198; Shephard 1995: 197; Crowe and Clausnitzer 1997: 200; Titus et al. 1996; Titus et al. 1998; Christy 2001a: 38; Murray 2000: 23; Christy 2004: 130; Crowe et al. 2004: 61
<i>Mertensia paniculata</i> - <i>Urtica dioica</i> ssp. <i>gracilis</i> Wet Meadow [Provisional]	Bluebell - northwest nettle	OR1109	G4S4	BM		WM	Cole 1982: 17
<i>Micranthes ferruginea</i> - <i>Camassia quamash</i> Wet Outcrop [Provisional]	Rusty saxifrage - Common camas	OR1110	G4S3	CR, WC		WP	Glavich 2016: 44
<i>Micranthes odontoloma</i> Wet Meadow	Brook saxifrage	CEGL001985	G4S3	BM, EC, WC		WM	Crowe et al. 2004: 161; Carsey et al. 2003a; Diaz and Mellen 1996; Komarkova 1976; Kovalchik 2001
<i>Muhlenbergia asperifolia</i> Wet Meadow	Alkali muhly	CEGL001779	G3S2	BR		AW	Christy 2013: 39; Carsey et al. 2003a; Kittel et al. 1999b; Bolen 1964
<i>Myrica gale</i> / <i>Carex</i> ( <i>aquatilis</i> var. <i>dives</i> , <i>utriculata</i> ) fen	sweet gale / sedge fen	CEGL003376	G3S1	CR	AK?, BC, WA?	FE	Viereck et al. 1992; Shephard 1995; McCain and Christy 2005; Kunze 1994; Christy 2001a; Boggs 2000; Murray 2000: 33; Christy 2004: 50
<i>Myriophyllum hippuroides</i>	western water-milfoil bed	CEGL003331	G3S2	WV	BC, WA	AB	Christy and Putera 1993: 39; Kunze 1994: 47, 57
<i>Myriophyllum hippuroides</i> Aquatic Vegetation [Provisional]	Western water-milfoil	OR1111	G3S2	WV		AB, FM	Kunze 1994: 47, 57
<i>Myriophyllum sibiricum</i>	Siberian water-milfoil bed	CEGL002000	G4S3	WC	AB, CO, WY?	AB	Titus et al. 1996; Salas et al. 2010b; Reid et al. 2004; Owns et al. 2004; Johnson and Muller 1993a; Johnson 1941; Johnson 1939; Johnson 1936; Hop et al. 2007; Achuff et al. 2002
<i>Navarretia intertexta</i> - <i>Polygonum polygaloides</i> ssp. <i>kelloggii</i> Vernal Pool [Provisional]	Needle-leaf navarretia - Kellogg knotweed	OR1112	G2S2	BM, KM		VP	Johnson and Simon 1987: 224
<i>Navarretia leucocephala</i> ssp. <i>leucocephala</i> Vernal Pool [Provisional]	White flowered navarretia	OR1113	G2S2	KM		VP	Borgias 2004: Appendix 3 p 10
<i>Navarretia leucocephala</i> ssp. <i>minima</i> - <i>Polygonum polygaloides</i> ssp. <i>confertiflorum</i> [Provisional]	Least navarretia - closeflowered knotweed	OR1114	G2S2	EC		VP	Bjork 2002: 25
<i>Nephrophyllum crista-galli</i> Fen [Provisional]	Deer cabbage	OR1115	G4S1	WC		FE	Murray 2000: 19; Christy 2004: 131
<i>Nuphar lutea</i> ssp. <i>polysepalum</i>	pond-lily bed	CEGL002001	G5S5	BM, BR, CR, EC, WC, WV	BC, CA, CO, ID, MT, WA, WY?	AB	Seyer 1979: 46; Kovalchik 1993: 183; Viereck et al. 1992: 204; Kunze 1994: 23, 80; Rodwell 1995a: 48; Shephard 1995: 187; Christy et al. 1998: 134; Titus and Christy 1996a; Titus et al. 1998; Christy 2004: 132; Crowe et al. 2004: 62; Wells 2006: 156; Odion et al. 2013: 64
<i>Oenanthe sarmentosa</i>	water-parsley marsh	CEGL003319	G4S4	CR, WV	WA	FM	Frenkel et al. 1978: 99; Taylor and Frenkel 1979: 54; Taylor 1980: 51; Mitchell 1981: 114; Boss 1983: 107; Frenkel and Morlan 1990: 47; Titus et al. 1996; Christy 2004: 133; Murray 2000: 23; McCain 2004: 192
<i>Oplopanax horridum</i> - ( <i>Rubus spectabilis</i> , <i>Ribes bracteosum</i> ) Wet Shrubland [Provisional]	Devil's club - (salmonberry, stink currant)	OR1116	G3S3	CR, WC		SS	McCain 2004: 158, 214
<i>Oxalis</i> - <i>Hydrophyllum tenuipes</i> - <i>Tolmiea menziesii</i> Herbaceous Riparian [Provisional]	Oxalis - Pacific waterleaf - piggyback plant	OR1117	G3S3	CR, WC		HR	McCain 2004: 116, 196

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Paspalum distichum</i>	knotgrass marsh	CEGL003320	G3S3	CR, WV	CA?, WA	FM	Christy and Putera 1993: 40; Kunze 1994: 47; Christy et al. 1998: 114; Christy 2004: 134
<i>Persicaria amphibia</i> Marsh [Provisional]	Water smartweed	OR1118	G5S3	BR, WV		FM	Christy 2004: 135
<i>Persicaria lapathifolia</i> Marsh [Provisional]	Curltop ladysthumb	OR1119	G3S2	BR		FM	Christy 2013: 41
<i>Petasites frigidus</i> - <i>Equisetum arvense</i> Wet Herbaceous Riparian [Provisional]	Sweet coltsfoot - common horsetail	OR1120	G4S4	WC		HR	McCain 2004: 53
<i>Petasites frigidus</i> - <i>Stachys cooleyae</i> Wet Herbaceous Riparian [Provisional]	Sweet coltsfoot - great betony	OR1121	G4S4	WC		HR	McCain 2004: 56
<i>Phalaris arundinacea</i> western marsh	reed canarygrass western marsh	CEGL001474	G5S4	BM, BR, CP, CR, EC, KM, WC, WV	AB, CA, CO, ID, MT, NM, UT, WA, WY +	FM	Willoughby et al. 2004; Von Loh et al. 2002; Von Loh 2000; Thompson and Hansen 2002; Tendick et al. 2017; Tendick et al. 2010; Stumpf et al. 2017; Stevens et al. 2015; Salas and Pucherelli 2002a; Reid et al. 2004; Owns et al. 2004; Muldavin et al. 2000a; MacKenzie and Moran 2004; Hop et al. 2007; Hansen et al. 1995; Hall and Hansen 1997; Erixson et al. 2011b; Erixson and Cogan 2012a; Crawford 2003; Crawford 2001; Copass and Ramm-Granberg 2016b; Cooper et al. 1995; Coles et al. 2010; Christy 2013; Carsey et al. 2003a; Buck-Diaz et al. 2012
<i>Philadelphus lewisii</i> / <i>Symphoricarpos albus</i> wet shrubland	Lewis' mock orange / common snowberry wet shrubland	CEGL000875	G2S2	BM, BR, CP	ID?, WA	SS	Crowe et al. 2004; Crawford 2001
<i>Philadelphus lewisii</i> talus	mockorange talus	CEGL001170	G2S2	BM, BR, CP, EC	ID, WA	SS	Moseley 1998: 45; ORBIC unpubl. data; Crowe et al. 2004: 186
<i>Phragmites australis</i>	common reed marsh	CEGL001475	G2S3	BM, BR, CP	AZ, CA, CO, ID, MT, NM, NV, UT, WY +	FM	Myhre and Clements 1972: 4; Rodwell 1995a: 140
<i>Phyllodoce empetriformis</i> - <i>Cassiope mertensiana</i>	red mountain heath - Merten mountain heather	CEGL001398	G5S4	BM, EC, WC	CA, ID, WA		Douglas and Bliss 1977: 126, 127; del Moral 1979; Schreiner 1994; Hamann 1972; Edwards 1980; Crawford et al. 2009
<i>Phyllodoce empetriformis</i> / <i>Vaccinium deliciosum</i> Alpine Dwarf-shrubland	Pink mountain heather / Cascade bilberry	CEGL001407	G4S3	BM, EC, WC		SS	Crowe et al. 2004: 265; Crawford et al. 2009; Douglas 1972; Hamann 1972; Henderson 1974; Henderson and Peter 1982; Kuramoto and Bliss 1970
<i>Phyllodoce empetriformis</i> parkland	red mountain heath parkland	CEGL001404	G5S5	BM, EC, WC	BC?, CA?, WA		Kuramoto and Bliss 1970: 324; Douglas and Bliss 1977: 127; Cole 1977b: 112; Cole 1982: 19; Wells 2006: 94; McCain et al. 2014: 206, 215
<i>Physocarpus malvaceus</i> - <i>Symphoricarpos albus</i>	mallow ninebark - common snowberry	CEGL001171	G3S3	BM, CP	ID, WA		Hall 1973: 23; Ganskopp 1979: 71; Johnson and Simon 1987: 177
<i>Picea (engelmannii x glauca, engelmannii)</i> / <i>Carex disperma</i> Swamp Forest	Engelmann spruce / softleaf sedge	OR1184	G3S2	BM, EC		FW	Crowe et al. 2004: 431; Kovalchik 2001; Crowe and Clausnitzer 1997: 38, 46; Steele et al. 1983
<i>Picea breweriana</i> - <i>Abies concolor</i> / <i>Chimaphila umbellata</i>	Brewer spruce - white fir / prince's-pine	CEGL000050	G2S1	KM	CA		Atzet and Wheeler 1984: 64
<i>Picea breweriana</i> - <i>Abies concolor</i> / <i>Gaultheria ovatifolia</i> - <i>Orthilia secunda</i>	Brewer spruce - white fir / salal / one-sided wintergreen	CEGL000051	G2S1	KM	CA?		Atzet and Wheeler 1984: 63
<i>Picea breweriana</i> - <i>Abies concolor</i> / <i>Vaccinium membranaceum</i> / <i>Goodyera oblongifolia</i>	Brewer spruce - white fir / thin-leaved blueberry / rattlesnake-plantain	CEGL000052	G2S1	KM	CA?		Atzet and Wheeler 1984: 62
<i>Picea breweriana</i> - <i>Chamaecyparis lawsoniana</i> - <i>Abies concolor</i> / <i>Quercus vaccinifolia</i>	Brewer spruce - Port Orford cedar - white fir / shrub oak	CEGL000049	G1S1	KM	CA?		Atzet and Wheeler 1984
<i>Picea engelmannii</i> - ( <i>Abies lasiocarpa</i> ) / <i>Gymnocarpium dryopteris</i>	Engelmann spruce - (subalpine fir) / oak fern	CEGL002611	G2S2	EC	WA		Kovalchik 1993: 54, 68
<i>Picea engelmannii</i> / <i>Bromus vulgaris</i> Riparian Forest [Provisional]	Engelmann spruce / Columbia brome	OR1122	G2S2	BM		FW	Crowe et al. 2004: 436

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Picea engelmannii</i> / <i>Carex angustata</i>	Engelmann spruce / widefruit sedge	CEGL000359	G3S3	EC		FW	Kovalchik 1987: 55; Titus et al. 1998; Crowe et al. 2004: 433, 442
<i>Picea engelmannii</i> / <i>Carex disperma</i>	Engelmann spruce / soft-leaved sedge	CEGL000358	G2S2	BM, EC		FW	Steele et al. 1981: 47; Steele et al. 1983: 38; Crowe and Clausnitzer 1997: 38, 46; Titus et al. 1998
<i>Picea engelmannii</i> / <i>Cinna latifolia</i>	Engelmann spruce / drooping woodreed	OR0017	G3SU	BM	ID?	FW	Crowe and Clausnitzer 1997: 47; Titus et al. 1998
<i>Picea engelmannii</i> / <i>Clintonia uniflora</i>	Engelmann spruce / queencup beadlily	CEGL000360	G3S3	EC	CA?		Volland 1976: 79; Kovalchik 1987: 49; Titus et al. 1998
<i>Picea engelmannii</i> / <i>Cornus sericea</i>	Engelmann spruce / creek dogwood riparian	CEGL002677	G3S3	BM	AB?, CO, ID, MT, UT?, WA, WY	FW	Crowe and Clausnitzer 1997: 46; Kovalchik 1993; Titus et al. 1998; Crowe et al. 2004: 438
<i>Picea engelmannii</i> / <i>Eleocharis quinqueflora</i>	Engelmann spruce / small-flowered spikerush	CEGL000361	G3S3	EC, WC		FE	Kovalchik 1987: 45; Crowe et al. 2004: 444
<i>Picea engelmannii</i> / Equisetum arvense swamp forest	Engelmann spruce / common horsetail swamp	CEGL005927	G4S3	BM, EC	AB, CO, ID, MT, UT, WA, WY	FW	Steele et al. 1981: 49; Steele et al. 1983: 36; Kovalchik 1987: 57; Padgett et al. 1989: 29; Crowe and Clausnitzer 1997: 46; Kovalchik 1993: 52; Titus et al. 1998; Crowe et al. 2004: 428
<i>Picea engelmannii</i> / <i>Senecio triangularis</i>	Engelmann spruce / arrowleaf groundsel swamp	CEGL000376	G3S3	BM, EC		FW	Cole 1977b: 78; Crowe and Clausnitzer 1997: 44; Crowe et al. 2004: 425; Wells 2006: 46
<i>Picea engelmannii</i> / <i>Vaccinium scoparium</i>	Engelmann spruce / grouseberry	CEGL000381	G3G5SU	BM, EC	CO, MT, NM, UT, WY		Steele et al. 1983: 40; Titus et al. 1998
<i>Picea engelmannii</i> / <i>Vaccinium uliginosum</i>	subalpine fir / bog blueberry	CEGL000380	G3SU	BM, EC		FW	Crowe and Clausnitzer 1997: 39; Kovalchik 1987: 51, 53; Titus et al. 1998; Crowe et al. 2004: 410, 440; Wells 2006: 38, 44
<i>Picea sitchensis</i> - ( <i>Alnus rubra</i> ) / <i>Rubus spectabilis</i> / <i>Polystichum munitum</i> forest	Sitka spruce / salmonberry / swordfern	CEGL007297	GNRS3	CR	BC, WA	FW	Henderson 1970: 42; Smith and Smith 1976: 112; Henderson 1979: 200; Hemstrom and Logan 1986: 69; Klinka et al. 1996: 152; McCain and Diaz 2002a
<i>Picea sitchensis</i> - ( <i>Pseudotsuga menziesii</i> ) / <i>Oplopanax horridus</i> Forest	Sitka spruce / devil's club	CEGL005527	G4S3	CR		FW	Meidinger et al. 2005; Hemstrom and Logan 1986
<i>Picea sitchensis</i> - <i>Abies grandis</i> / <i>Gaultheria shallon</i> / <i>Polystichum munitum</i>	Sitka spruce - grand fir / salal - evergreen huckleberry / sword fern	CEGL000053	G1S1	CR			Atzet et al. 1996
<i>Picea sitchensis</i> - <i>Pinus contorta</i> var. <i>contorta</i> / <i>Gaultheria shallon</i> - <i>Vaccinium ovatum</i>	Sitka spruce - shore pine / salal - evergreen huckleberry	CEGL000403	G3S3	CR	CA?, WA		Martin and Frenkel 1978: 18, 48; Christy et al. 1998: 54
<i>Picea sitchensis</i> - <i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> forest	Sitka spruce - Douglas-fir / salal	CEGL005526	G3G4S2	CR	BC, CA?, WA		Quaye 1982; Meidinger et al. 2005; McCain and Diaz 2002a; Lawyer 1979; Kratz 1975; Klinka et al. 1996; Hemstrom and Logan 1986; Crawford et al. 2009; Christy et al. 1998; Bonacker et al. 1979; Bigley and Hull 1995
<i>Picea sitchensis</i> - <i>Pseudotsuga menziesii</i> / <i>Oxalis oregana</i> forest	Sitka spruce - Douglas-fir / redwood sorrel	CEGL005528	G3G4S1	CR	WA		Quaye 1982; Meidinger et al. 2005; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1979; Hemstrom and Logan 1986; Fonda 1974; Crawford et al. 2009; Chappell 1999; Bigley and Hull 1995
<i>Picea sitchensis</i> - <i>Pseudotsuga menziesii</i> / <i>Polystichum munitum</i> forest	Sitka spruce / sword fern	CEGL007308	GNRS3	CR	WA		Martin and Frenkel 1978: 18, 48; Quaye 1982: 61, 64; Hemstrom and Logan 1986: 73; Bigley and Hull 1995: 19; Klinka et al. 1996: 151; Christy et al. 1998: 46; McCain and Diaz 2002a
<i>Picea sitchensis</i> - <i>Pseudotsuga menziesii</i> / <i>Rubus spectabilis</i> forest	Sitka spruce - Douglas-fir / salmonberry	CEGL007309	G4S3	CR			Meidinger et al. 2005

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Picea sitchensis</i> - <i>Tsuga heterophylla</i> - ( <i>Alnus rubra</i> ) / <i>Oplopanax horridus</i> / <i>Polystichum munitum</i> forest	Sitka spruce / devil's club	CEGL005529	GNRS3	CR	AK?, WA	FW	Hemstrom and Logan 1986: 61; Klinka et al. 1996: 152; McCain and Diaz 2002a
<i>Picea sitchensis</i> - <i>Tsuga heterophylla</i> / <i>Polystichum munitum</i> - <i>Oxalis oregana</i> forest	Sitka spruce / wood sorrel	CEGL005530	GNRS2	CR	WA		Quaye 1982: 55; Hemstrom and Logan 1986: 65; Bigley and Hull 1995: 17; McCain and Diaz 2002a
<i>Picea sitchensis</i> - <i>Tsuga heterophylla</i> / <i>Polystichum munitum</i> forest	Sitka spruce - western Hemlock / western swordfern	CEGL003787	G4S3	CR	BC, WA		Quaye 1982; Mycek 1994; Meidinger et al. 2005; McCain and Diaz 2002a; Martin and Frenkel 1978; Lertzman et al. 2002; Kratz 1975; Klinka et al. 1996; Kagan et al. 2012; Juday 1976; Henderson et al. 1989; Hemstrom and Logan 1986; Green and Klinka 1994; Dorner and Wong 2003; Crawford et al. 2009; Christy et al. 1998; Cadrin and Wolowicz 2005; Bigley and Hull 1995; Banner et al. 2005; Banner et al. 1993
<i>Picea sitchensis</i> - <i>Tsuga heterophylla</i> / <i>Rhododendron macrophyllum</i> - <i>Vaccinium ovatum</i>	Sitka spruce - western hemlock / western rhododendron - evergreen huckleberry	CEGL002603	G1S1	CR	CA		Wiedemann 1984; Hemstrom and Logan 1986: 87; Christy et al. 1998: 52
<i>Picea sitchensis</i> / <i>Calamagrostis nutkaensis</i> forest	Sitka spruce / Pacific reedgrass	CEGL005523	G3S2	CR	AK, BC, WA		Pawuk and Kissinger 1989; Meidinger et al. 2005; Martin et al. 1995; Kratz 1975; Kagan et al. 2012; Green and Klinka 1994; DeVelice et al. 1999; DeMeo et al. 1992; Crawford et al. 2009; Boggs 1996
<i>Picea sitchensis</i> / <i>Carex obnupta</i> - <i>Lysichiton americanus</i>	Sitka spruce / slough sedge - skunk cabbage swamp	CEGL000400	G2S1	CR	CA, WA	FW	Smith and Smith 1976: 112, 129; Frenkel et al. 1978: 59; Boss 1983: 83; Kunze 1994: 91, 98; Bigley and Hull 1995: 20; Klinka et al. 1996: 153; Christy et al. 1998: 62; Christy 2001a: 10; Christy 2004: 28
<i>Picea sitchensis</i> / <i>Cornus sericea</i> / <i>Lysichiton americanus</i>	Sitka spruce / red-osier dogwood / skunk cabbage swamp	CEGL000055	G2S1	CR	WA	FW	Eilers 1975a: 261; Hirschberger 1978: 5; Frenkel et al. 1978: 99; Thomas 1980: 8; Christy 2004: 29
<i>Picea sitchensis</i> / <i>Gaultheria shallon</i> forest	Sitka spruce / salal	CEGL005524	GNRS3	CR	BC, CA?, WA		Quaye 1982: 66; Hemstrom and Logan 1986: 67; Bigley and Hull 1995: 22; Klinka et al. 1996: 151; Christy et al. 1998: 42; McCain and Diaz 2002a; Atzet et al. 1996; Christy et al. 1998: 48
<i>Picea sitchensis</i> / <i>Lonicera involucrata</i> - <i>Malus fusca</i> Brackish Swamp Forest [Provisional]	Sitka spruce / black twinberry - western crabapple	OR1123	G3S2	CR		SM	Brophy et al. 2011
<i>Picea sitchensis</i> / <i>Menziesia ferruginea</i> - <i>Vaccinium parvifolium</i>	Sitka spruce / fool's huckleberry - red huckleberry	CEGL000056	G3S3	CR	CA?, WA?		Quaye 1982: 61; Hemstrom and Logan 1986: 63; McCain and Diaz 2002a
<i>Picea sitchensis</i> / <i>Vaccinium ovatum</i>	Sitka spruce / evergreen huckleberry	CEGL007306	GNRS3	CR	WA		Atzet et al. 1996; Christy et al. 1998: 48
<i>Picrothamnus desertorum</i> shrubland	bud sagebrush shrubland	CEGL001452	G3G4S2	BR	MT, NV		Schulz and Hall 2011; Peterson 2008
<i>Pinus albicaulis</i> - ( <i>Abies lasiocarpa</i> ) / <i>Carex geyeri</i> woodland	whitebark pine - (subalpine fir) / Geyer's sedge woodland	CEGL000754	G2G3S2	BM	ID, MT, WY		Steele et al. 1983; Steele et al. 1981; Schmidt and McDonald 1990; Schlatterer 1972; Rust 1998; Reid et al. 2004; Nesser et al. 1997; Murray 1996; Jones and Ogle 2000; Johnston 1987; Hop et al. 2007; Hall 1973; Eyre 1980; Cooper 1975; Cogan et al. 2005; Burns and Honkala 1990a; Bowerman et al. 1997; Arno and Weaver 1990
<i>Pinus albicaulis</i> - ( <i>Tsuga mertensiana</i> ) / <i>Luzula glabrata</i> var. <i>hitchcockii</i> woodland	whitebark pine - (mountain hemlock) / Hitchcock's smooth woodrush woodland	CEGL007352	G4S3	EC, WC	WA		Diaz et al. 1997: 67; Meidinger et al. 2005; McCain and Diaz 2002a; Crawford et al. 2009
<i>Pinus albicaulis</i> - <i>Abies lasiocarpa</i> / <i>Vaccinium scoparium</i>	whitebark pine - subalpine fir / grouseberry	CEGL000752	G4S4	BM	AB?, ID, MT, WA?, WY		Head 1959: 36; Cole 1977b: 88; Cole 1982: 14; Steele et al. 1983: 66; Johnson and Clausnitzer 1992: 42, 43
<i>Pinus albicaulis</i> - <i>Pinus contorta</i> var. <i>latifolia</i> / <i>Penstemon laetus</i>	whitebark pine - lodgepole pine / gay penstemon	CEGL000130	G3S3	EC	CA?		Hopkins 1979a: 19
<i>Pinus albicaulis</i> / <i>Festuca viridula</i> herbaceous vegetation with sparse Trees	whitebark pine / greenleaf fescue herbaceous vegetation with sparse Trees	CEGL007314	G2S1	BM, EC, WC	WA		Meidinger et al. 2005
<i>Pinus albicaulis</i> / <i>Juniperus communis</i> woodland	whitebark pine / mountain juniper	CEGL000756	G4S3	EC, WC	ID, MT, WA, WY		Diaz et al. 1997: 47

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pinus albicaulis</i> / <i>Luzula glabrata</i> var. <i>hitchcockii</i> woodland	whitebark pine / Hitchcock's smooth woodrush woodland	CEGL000758	G3S1	BM, EC, WC	CA, ID, WA		Williams and Smith 1990; Lillybridge et al. 1995
<i>Pinus albicaulis</i> / <i>Vaccinium scoparium</i>	whitebark pine / grouseberry	CEGL000131	G4S2	BM, WC	AB?, ID, MT, WY		Terwilliger et al. 1979a; Steele et al. 1983; Reed 1976; Reed 1969; Jones and Ogle 2000; Jones 1999; Johnston 1987; Cooper 1975; Cogan et al. 2005
<i>Pinus attenuata</i> / <i>Arctostaphylos nevadensis</i>	knobcone pine / pinemat manzanita	CEGL000763	G2S2	KM	CA		Sawyer and Keeler-Wolf 1995; Kagan and Borgais 1994; Hopkins 1979a
<i>Pinus attenuata</i> / <i>Arctostaphylos viscida</i>	knobcone pine / sticky whiteleaf manzanita	CEGL008623	G3S2	KM	CA		Sawyer et al. 2009; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002
<i>Pinus contorta</i> - ( <i>Populus tremuloides</i> ) / <i>Vaccinium uliginosum</i> forest	lodgepole pine - (aspen) / bog blueberry	CEGL000158	G3QS2	EC, WC		FW	Kovalchik 1987; Crowe et al. 2004
<i>Pinus contorta</i> / <i>Calamagrostis rubescens</i> forest	lodgepole pine / pinegrass	CEGL000139	G5S5	BM, EC, WC	ID, MT, WA, WY		Tisdale and McLean 1957; Steele et al. 1983; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Oswald 1966; Mauk and Henderson 1984; Johnson and Clausnitzer 1992; Horton 1971; Hop et al. 2007; Erixson and Cogan 2012b; Cooper et al. 1987; Cooper 1975; Cogan et al. 2005
<i>Pinus contorta</i> / <i>Carex (aquatilis, angustata)</i> swamp woodland	lodgepole pine / water or widefruit sedge swamp woodland	CEGL000140	G4S4	BM, EC		FW	Kovalchik 1987: 41; Titus et al. 1998; Volland 1976: 32; Crowe et al. 2004; Crowe and Clausnitzer 1997
<i>Pinus contorta</i> / <i>Carex geyeri</i> forest	lodgepole pine / Geyer's sedge	CEGL000141	G4S4	BM, EC	CO, ID, MT, NM, WY		Wasser and Hess 1982; Steen and Dix 1974; Steele et al. 1983; Steele et al. 1981; Salas et al. 2005; Moir 1969a; Komarkova et al. 1988b; Jones and Ogle 2000; Johnston 1987; Johnson and Clausnitzer 1992; Hess and Wasser 1982; Hess and Alexander 1986; Hess 1981; Cooper 1975; Cogan et al. 2005; Alexander 1986; Alexander 1981
<i>Pinus contorta</i> / <i>Clintonia uniflora</i> - <i>Xerophyllum tenax</i> woodland	lodgepole pine / bride's bonnet - common beargrass woodland	CEGL005921	G4G5SU	BM, EC	AB, ID, MT, WA?		Williams et al. 1995; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Pinus contorta</i> / <i>Clintonia uniflora</i> forest	lodgepole pine / bride's bonnet	CEGL005916	G5S4	BM, EC	AB, ID, MT, WA		Williams et al. 1995; Williams and Lillybridge 1983; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Lotan and Perry 1983; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Grossman et al. 1998; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Pinus contorta</i> / <i>Menziesia ferruginea</i> / <i>Clintonia uniflora</i> forest	lodgepole pine / rusty menziesia / bride's bonnet	CEGL005922	G4G5SU	BM, EC	AB, ID, MT, WA?		Williams et al. 1995; Reid et al. 2004; Pfister et al. 1977; Ogilvie 1962; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Grossman et al. 1998; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Pinus contorta</i> / <i>Vaccinium cespitosum</i> forest	lodgepole pine / dwarf Bilberry	CEGL000168	G5S3	BM, EC	AB, CO, ID, MT, UT, WY	FW	Williams et al. 1990b; Steele et al. 1983; Steele et al. 1981; Salas et al. 2005; Roberts 1980; Reid et al. 2004; Pfister et al. 1977; Mauk and Henderson 1984; Johnston 1987; Hop et al. 2007; Cooper et al. 1987; Cooper 1975
<i>Pinus contorta</i> / <i>Vaccinium membranaceum</i> / <i>Xerophyllum tenax</i> forest	lodgepole pine / thinleaf huckleberry / common beargrass	CEGL005913	G4G5S4	BM, EC, WC	AB, ID, MT, WA		Williams et al. 1995; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Pinus contorta</i> / <i>Vaccinium membranaceum</i> Rocky Mountain forest	lodgepole pine / thinleaf huckleberry	CEGL000169	G3G4S4	BM, EC, WC	ID, MT, WA, WY		Steele et al. 1983; Pfister et al. 1977; Johnson and Clausnitzer 1992; Hall 1973; Crawford et al. 2009; Cogan et al. 2005

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pinus contorta</i> / <i>Vaccinium scoparium</i> forest	lodgepole pine / grouse whortleberry	CEGL000172	G5S4	BM, EC, KM, WC	CA?, CO, ID, MT, UT, WA, WY		Wasser and Hess 1982; Volland 1976; Ueckert 1968; Terwilliger et al. 1979a; Steen and Dix 1974; Steele et al. 1983; Steele et al. 1981; Salas et al. 2005; Rolston 1961; Reid et al. 2004; Pfister et al. 1977; Oswald 1966; Mauk and Henderson 1984; Marr et al. 1973b; Komarkova et al. 1988b; Jones and Ogle 2000; Jones and Fertig 1999d; Jones 1999; Johnston 1987; Johnson 1981a; Horton 1971; Hop et al. 2007; Hoffman and Alexander 1987; Hoffman and Alexander 1980; Hoffman and Alexander 1976; Hess and Alexander 1986; Hess 1981; Harrington 1978; Hall 1973; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Cooper 1975; Cogan et al. 2005; Baker 1984a; Alexander et al. 1986
<i>Pinus contorta</i> var. <i>contorta</i> - ( <i>Thuja plicata</i> ) / <i>Ledum glandulosum</i>	shorepine - (western redcedar) / Labrador tea	OR0018	G2S2	CR	CA?, WA?	FW	Cordes 1972: 300; Kunze 1994: 76, 78; Hebda and Biggs 1981: 8; Wiedemann 1984: 56; Howarth 1995: 2, 11; Klinka et al. 1996: 153
<i>Pinus contorta</i> var. <i>contorta</i> - <i>Pseudotsuga menziesii</i> / <i>Morella californica</i> - <i>Vaccinium ovatum</i>	shorepine - Douglas-fir / waxmyrtle - evergreen huckleberry	CEGL000151	G3S3	CR	CA?		Christy et al. 1998: 56; Wiedemann 1993; Wiedemann 1990; Wiedemann 1984; Sawyer and Keeler-Wolf 1995; Meidinger et al. 2005; Martin and Frenkel 1978; Kumler 1969; Kagan et al. 2012
<i>Pinus contorta</i> var. <i>contorta</i> / <i>Arctostaphylos columbiana</i> woodland	shorepine / hairy manzanita	CEGL002682	G1S1	CR	CA?		Wiedemann 1993; Wiedemann 1984; Kumler 1969; Egler 1934; Duebendorfer 1992; Christy et al. 1998
<i>Pinus contorta</i> var. <i>contorta</i> / <i>Arctostaphylos uva-ursi</i>	shorepine / kinnikinnick	CEGL002605	G1S1	CR	CA, WA		Wiedemann 1993; Wiedemann 1990; Wiedemann 1984; Kumler 1969; Kagan et al. 2012; Egler 1934; Duebendorfer 1992; Christy et al. 1998; Alpert 1984
<i>Pinus contorta</i> var. <i>contorta</i> / <i>Carex obnupta</i>	shorepine / slough sedge	CEGL000142	G2S2	CR	CA?, WA	FW	Wiedemann 1993; Wiedemann 1984; Wiedemann 1966; Sawyer and Keeler-Wolf 1995; Meidinger et al. 2005; McCain and Christy 2005; Egler 1934; Christy et al. 1998; Christy 2004: 31; Christy 2001a; Christy 1979
<i>Pinus contorta</i> var. <i>contorta</i> / <i>Gaultheria shallon</i> - <i>Vaccinium ovatum</i>	pygmy shore pine on Blacklock soils	CEGL000152	G1S1	CR	CA?		Jenny et al. 1969: 63; Martin and Frenkel 1978: 18, 48
<i>Pinus contorta</i> var. <i>contorta</i> / <i>Rhododendron macrophyllum</i> - <i>Vaccinium ovatum</i>	shore pine / western rhododendron - evergreen huckleberry	CEGL000151	G3S2	CR	CA?		Wiedemann 1993; Wiedemann 1990; Wiedemann 1984; Sawyer and Keeler-Wolf 1995; Meidinger et al. 2005; Martin and Frenkel 1978; Kumler 1969; Kagan et al. 2012; Christy et al. 1998
<i>Pinus contorta</i> var. <i>latifolia</i> - <i>Populus tremuloides</i> / <i>Spiraea douglasii</i>	lodgepole pine - quaking aspen / Douglas spiraea	CEGL000157	G3S3	EC	CA?	FW	Kovalchik 1987: 35, 63; Titus et al. 1998; Crowe et al. 2004: 390, 392, 454
<i>Pinus contorta</i> var. <i>latifolia</i> / ( <i>Arctostaphylos nevadensis</i> ) / <i>Xerophyllum tenax</i>	lodgepole pine / (pinemat manzanita) / beargrass	CEGL000175	G5S4	EC	ID, MT, WY?		Volland 1976: 52; Cooper et al. 1987; Arno et al. 1985; Volland 1985; Volland 1976
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Achnatherum occidentale</i> ssp. <i>occidentale</i>	lodgepole pine / western needlegrass	CEGL000165	G4QS3	EC			Volland 1976: 42, 43, 48, 49; Johnson and Clausnitzer 1992: 43
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Arctostaphylos nevadensis</i>	lodgepole pine / pinemat manzanita	CEGL000133	G3S3	EC, WC	CA?		Volland 1976: 50; Atzet and McCrimmon 1990: 62; Meidinger et al. 2005; Marsh et al. 1987
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Arctostaphylos uva-ursi</i>	lodgepole pine / kinnikinnick	CEGL000134	G5S4	EC	CO, MT, UT, WA, WY		Youngberg and Dahms 1970; Volland and Dell 1981; Volland 1976; Titus et al. 1998; Terwilliger et al. 1979a; Stephens 1966; Steen and Dix 1974; Shepherd 1975; Salas et al. 2005; Pfister 1972; Peet 1981; Peet 1980; Meidinger et al. 2005; Mauk and Henderson 1984; Kovalchik 1987; Jones and Ogle 2000; Johnston 1987; Hoffman and Alexander 1976; Franklin 1966; Driscoll et al. 1984; Douglas 1971; Despain 1973b; Crowe et al. 2004; Crawford et al. 2009; Bigley and Hull 1992; Baker 1984a
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Artemisia tridentata</i> / <i>Elymus elymoides</i>	lodgepole pine / big sagebrush / bottlebrush squirreltail	CEGL000137	G3S3	EC			Volland 1976: 36

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Artemisia tridentata</i> / <i>Festuca idahoensis</i>	lodgepole pine / big sagebrush / Idaho fescue	CEGL000136	G3S3	EC			Volland 1976: 37
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Calamagrostis canadensis</i>	lodgepole pine / bluejoint reedgrass	CEGL000138	G5S3	BM, EC	CA?, ID, MT, UT, WY	FW	Tuhy and Jensen 1982; Tuhy 1981; Titus et al. 1998; Steele et al. 1983; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Padgett et al. 1989; Mutz and Queiroz 1983; Mauk and Henderson 1984; Jones and Ogle 2000; Hop et al. 2007; Henderson et al. 1977; Girard et al. 1997; Crowe et al. 2004: 462; Crowe and Clausnitzer 1997; Cooper et al. 1987; Cooper 1975; Cogan et al. 2005
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Carex (aquatilis</i> var. <i>aquatilis, angustata)</i> Swamp Woodland	Lodgepole pine / aquatic sedge, widefruit sedge	CEGL000140	G4S3	BM, EC		FW	Crowe et al. 2004: 457, 459; Kovalchik 1987: 41; Titus and Christy 1999
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Carex inops</i> ssp. <i>inops</i>	lodgepole pine / long-stolon sedge	CEGL000143	G3G4S4	BM, EC, WC	CA?		Volland 1976: 46, 47; Hopkins 1979a: 22; Atzet and McCrimmon 1990: 59
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Ceanothus velutinus</i>	lodgepole pine / snowbrush	CEGL000145	G4S4	EC	MT, WY		Volland 1976: 45
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Danthonia californica</i>	lodgepole pine / California oatgrass	CEGL000146	G3QS3	EC			Dealy 1971: 45
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Deschampsia cespitosa</i>	lodgepole pine / tufted hairgrass	CEGL000147	G3S3	BM, EC	CA?	FW	Kovalchik 1987: 136; Crowe and Clausnitzer 1997: 50; Titus et al. 1998; Crowe et al. 2004: 463
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Festuca idahoensis</i>	lodgepole pine / Idaho fescue	CEGL000149	G3S2	EC	ID, WY		Dealy 1971: 40; Hopkins 1979a: 21; Steele et al. 1981: 85
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Linnaea borealis</i>	lodgepole pine / twinflower	CEGL000153	G5S4	BM	AB, MT,		Steele et al. 1983: 72; Johnson and Simon 1987: 305
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Purshia tridentata</i> - <i>Ribes cereum</i>	lodgepole pine / bitterbrush - wax currant	CEGL000161	G4S4	EC			Volland 1976: 35, 38, 41
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Purshia tridentata</i> / <i>Achnatherum occidentale</i> ssp. <i>occidentale</i>	lodgepole pine / bitterbrush / western needlegrass	CEGL000162	G3S3	EC			Volland 1976: 35, 38, 40, 42
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Purshia tridentata</i> / <i>Carex inops</i> ssp. <i>inops</i>	lodgepole pine / bitterbrush / long-stolon sedge	CEGL000159	G4S4	EC			Volland 1976: 44,45
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Purshia tridentata</i> / <i>Festuca idahoensis</i>	lodgepole pine / bitterbrush / Idaho fescue	CEGL000160	G3S3	EC			Volland 1976: 39
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Spiraea douglasii</i>	lodgepole pine / Douglas spiraea	CEGL002604	G3S3	EC	CA?	FW	Kovalchik 1987: 33, 35, 136; Titus et al. 1998; Crowe et al. 2004: 451
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Vaccinium membranaceum</i>	lodgepole pine / thin-leaved blueberry	CEGL000170	G4S4	BM	WA		Hall 1973: 35; Cole 1977b: 67; Cole 1982: 15; Johnson and Simon 1987: 259; Johnson and Clausnitzer 1992: 42, 76
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Vaccinium scoparium</i>	lodgepole pine / grouseberry	CEGL000174	G3S3	BM, EC	BC, ID, MT, WA, WY		Hall 1973: 36; Volland 1976: 51; Steele et al. 1981: 85; Steele et al. 1983: 72; Johnson and Simon 1987: 250; Cooper et al. 1991: 79; Johnson and Clausnitzer 1992: 41, 77, 79
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Vaccinium scoparium</i> / <i>Carex inops</i> ssp. <i>inops</i>	lodgepole pine / grouseberry / long-stolon sedge	CEGL000173	G3S3	BM, EC			Hopkins 1979b: 13; Volland 1976
<i>Pinus contorta</i> var. <i>latifolia</i> / <i>Vaccinium uliginosum</i>	lodgepole pine / western bog blueberry	CEGL000171	G3S3	EC, WC	CA, ID	FW	Volland 1976; Tuhy and Jensen 1982; Titus et al. 1998; Titus and Christy 1996a; Seyer 1979; Sawyer et al. 2009; Moseley et al. 1994; Kovalchik 1987; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Crowe et al. 2004: 447, 449
<i>Pinus contorta</i> var. <i>murrayana</i> / sparse understory forest	Sierra lodgepole pine / sparse understory forest	CEGL003069	G4S4	EC, KM	CA, NV +		Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pinus flexilis</i> / <i>Juniperus communis</i> subalpine parkland	limber pine / mountain juniper	CEGL000807	G5S1	BM	AB, CA?, CO, ID, MT, NV, UT, WY		Cole 1977b: 62; Steele et al. 1981: 22; Cole 1982: 8; Wasser and Hess 1982; Steele et al. 1983; Steele et al. 1981; Schulz and Hall 2011; Salas et al. 2010b; Salas et al. 2005; Reid et al. 2004; Pfister et al. 1977; Jones and Ogle 2000; Jones 1992b; Johnston et al. 2001; Johnston and Hendzel 1985; Johnston 1987; Hop et al. 2007; Hoffman and Alexander 1980; Hess and Alexander 1986; Hess 1981; Coles et al. 2008a; Cole 1982; Cogan et al. 2012; Burns and Honkala 1990a; Baker 1984a; Alexander 1986; Achuff et al. 2002; Achuff et al. 1997
<i>Pinus flexilis</i> / <i>Juniperus scopulorum</i> woodland	limber pine / Rocky Mountain Juniper woodland	CEGL000809	G3S1	BM	MT, WY		Stevens et al. 2015; Lesica and DeVelice 1992; DeVelice and Lesica 1993
<i>Pinus jeffreyi</i> - <i>Calocedrus decurrens</i> / <i>Quercus vaccinifolia</i>	Jeffrey pine - incense cedar / huckleberry oak	CEGL000820	G4S4	KM	CA		Atzet and Wheeler 1984: 268; Sawyer et al. 2009; Potter 1994; Jimerson et al. 1995; Atzet et al. 1996
<i>Pinus jeffreyi</i> - <i>Pinus monticola</i> / <i>Arctostaphylos nevadensis</i>	Jeffrey pine - western white pine / pinemat manzanita	CEGL000818	G3S3	KM	CA?		Atzet and Wheeler 1984: 267
<i>Pinus jeffreyi</i> / <i>Ceanothus pumilus</i>	low elevation Jeffrey pine serpentine savanna	CEGL000816	G4S3	KM	CA?		Atzet and Wheeler 1984: 269, 270; Atzet et al. 1996; Jimerson et al. 1995
<i>Pinus jeffreyi</i> / <i>Festuca roemeri</i> woodland and savanna	high elevation Jeffrey pine / serpentine bunchgrass savanna	CEGL000817	G4S4	KM	CA		Atzet and Wheeler 1984: 271; Atzet et al. 1996
<i>Pinus jeffreyi</i> / <i>Quercus vacciniifolia</i> - <i>Arctostaphylos nevadensis</i> woodland	Jeffrey pine / huckleberry oak - pinemat manzanita woodland	CEGL003448	G2S2	KM	CA?		Sawyer et al. 2009; Jimerson et al. 1995; Atzet et al. 1996
<i>Pinus jeffreyi</i> / <i>Quercus vacciniifolia</i> - <i>Garrya buxifolia</i> woodland	Jeffrey pine / huckleberry oak - dwarf silktassel woodland	CEGL003447	G2G3S1	KM	CA?		Jimerson et al. 1995; Atzet et al. 1996
<i>Pinus jeffreyi</i> / <i>Ceanothus pumilus</i> - <i>Arctostaphylos viscida</i>	low elevation, mixed conifer serpentine woodland	CEGL000819	G3S3	KM	CA?		Atzet and Wheeler 1984: 228
<i>Pinus lambertiana</i> - <i>Pinus ponderosa</i> - <i>Pseudotsuga menziesii</i> / <i>Festuca californica</i>	sugar pine - ponderosa pine - Douglas-fir / California fescue	CEGL000065	G1S1	KM	CA?		Atzet et al. 1996; Atzet and Wheeler 1984
<i>Pinus monticola</i> - <i>Pseudotsuga menziesii</i> / <i>Quercus vaccinifolia</i> - <i>Notholithocarpus densiflorus</i> ssp. <i>echinoides</i>	western white pine - Douglas-fir / huckleberry oak - tan oak	CEGL003449	G2S2	KM	CA		Atzet et al. 1996; Jimerson et al. 1995: F-10; Stumpf et al. 2017; Sawyer et al. 2009
<i>Pinus monticola</i> / <i>Clintonia uniflora</i> forest	western white pine / bride's bonnet	CEGL000176	G1S1	BM	ID?, MT, WA		Johnson 1981a; Dyrness et al. 1975
<i>Pinus monticola</i> / <i>Deschampsia cespitosa</i> riparian forest	western white pine / tufted hairgrass riparian forest	CEGL003441	G1S1	BM		FW	Titus et al. 1996; Crowe et al. 2004: 372; Crowe and Clausnitzer 1997
<i>Pinus monticola</i> / <i>Xerophyllum tenax</i>	western white pine / beargrass	CEGL000177	G2S2	KM	CA		Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Jimerson et al. 1995; Atzet et al. 1996; Atzet and Wheeler 1984
<i>Pinus ponderosa</i> - <i>Abies concolor</i> / <i>Carex inops</i>	ponderosa pine - white fir / long-stolon sedge	CEGL000257	G3S3	EC	CA?		Hopkins 1979a; Baker 1980b
<i>Pinus ponderosa</i> - <i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> - <i>Purshia tridentata</i> woodland	ponderosa pine - western juniper / big sagebrush - bitterbrush	CEGL002688	G4S4	BM, EC	CA		Hopkins 1979a; Baker 1980b
<i>Pinus ponderosa</i> - <i>Juniperus occidentalis</i> / <i>Artemisia tridentata</i> - <i>Purshia tridentata</i> woodland	Ponderosa pine - western Juniper / big sagebrush - antelope bitterbrush woodland	CEGL002688	G4S4	KM, EC, BM	CA		Hopkins 1979a; Baker 1980b
<i>Pinus ponderosa</i> - <i>Populus tremuloides</i> / <i>Carex</i> - ( <i>Poa</i> )	ponderosa pine - quaking aspen / sedge - (bluegrass)	CEGL000191	G2G3S2	BM, EC		FW	Hopkins 1979a: 28, 36
<i>Pinus ponderosa</i> - <i>Pseudotsuga menziesii</i> / <i>Arctostaphylos nevadensis</i>	ponderosa pine - Douglas-fir / pinemat manzanita	CEGL000208	G2S2	KM, EC	CA?		Mitchell and Moir 1976: 50; Atzet and Wheeler 1984: 258



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pinus ponderosa</i> - <i>Pseudotsuga menziesii</i> / <i>Arctostaphylos patula</i>	ponderosa pine - Douglas-fir / greenleaf manzanita	CEGL000209	G3S3	KM, EC	CA?		Atzet and Wheeler 1984: 258
<i>Pinus ponderosa</i> - <i>Pseudotsuga menziesii</i> / <i>Carex geyeri</i>	ponderosa pine - Douglas-fir / elk sedge	CEGL000211	GNRQS3	BM			Hall 1973: 29; Cole 1977b: 56
<i>Pinus ponderosa</i> - <i>Pseudotsuga menziesii</i> / <i>Physocarpus malvaceus</i>	ponderosa pine - Douglas-fir / ninebark	CEGL000213	GNRQS3	BM	WA		Hall 1973: 31
<i>Pinus ponderosa</i> - <i>Pseudotsuga menziesii</i> / <i>Purshia tridentata</i>	ponderosa pine - Douglas-fir / bitterbrush	CEGL000214	G3S3	EC	BC?, CA?, UT, WA		Sawyer et al. 2009; Romme et al. 1993; Marsh et al. 1987; Crawford et al. 2009; Clark et al. 2009; Williams and Smith 1990; Williams and Lillybridge 1983
<i>Pinus ponderosa</i> - <i>Quercus garryana</i> / <i>Arctostaphylos viscida</i> / <i>Festuca californica</i>	ponderosa pine - white oak / bunchgrass savanna	CEGL000880	G1S1	KM	CA?		Kagan 2010
<i>Pinus ponderosa</i> - <i>Quercus garryana</i> / <i>Balsamorhiza sagittata</i>	ponderosa pine - Oregon white oak / arrowleaf balsamroot	CEGL000881	G2S2	EC			Topik et al. 1988: 43
<i>Pinus ponderosa</i> - <i>Quercus garryana</i> / <i>Purshia tridentata</i>	ponderosa pine - Oregon white oak / bitterbrush	CEGL000883	G3S3	EC	WA		Topik et al. 1988: 47
<i>Pinus ponderosa</i> - <i>Quercus garryana</i> / <i>Symphoricarpos albus</i>	ponderosa pine - white oak / snowberry	CEGL000884	G2G3S3	EC, KM, WC, WV	CA?, WA		Atzet and McCrimmon 1990: 324; John and Tart 1986
<i>Pinus ponderosa</i> - <i>Quercus kelloggii</i> / <i>Arctostaphylos viscida</i> woodland	ponderosa pine - black oak / woodland and savanna	CEGL008694	G4?S1	KM	CA		Sawyer et al. 2009; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002
<i>Pinus ponderosa</i> / <i>Arctostaphylos patula</i> - <i>Arctostaphylos viscida</i> manzanita	ponderosa pine / greenleaf manzanita - sticky manzanita	CEGL000061	G2QS3	EC	CA?		Atzet and Wheeler 1984: 258; Waring 1969; Franklin et al. 1972
<i>Pinus ponderosa</i> / <i>Arctostaphylos patula</i> - <i>Ceanothus velutinus</i>	ponderosa pine / greenleaf manzanita - snowbrush	CEGL000062	G3S3	EC	CA?		Dyrness 1960: 103; Dyrness and Youngberg 1966: 126; Dealy 1971: 23
<i>Pinus ponderosa</i> / <i>Arctostaphylos patula</i> - <i>Purshia tridentata</i>	ponderosa pine / greenleaf manzanita - bitterbrush	CEGL000063	G3S3	EC	CA		Dyrness 1960: 92; Dyrness and Youngberg 1966: 126; Dealy 1971: 23; Volland 1976: 58, 61, 64; Marsh et al. 1987: 34
<i>Pinus ponderosa</i> / <i>Artemisia arbuscula</i>	ponderosa pine / low sagebrush	CEGL000845	G2G3S2	BM	CO?, ID?, NM		Johnson and Clausnitzer 1992: 123
<i>Pinus ponderosa</i> / <i>Artemisia tridentata</i> var. <i>vaseyana</i>	ponderosa pine / mountain big sagebrush	CEGL000180	G2G3S2	BM, EC			Dealy 1971: 30; Hopkins 1979a: 29; Johnson and Clausnitzer 1992: 117, 123
<i>Pinus ponderosa</i> / <i>Artemisia tridentata</i> var. <i>vaseyana</i> - <i>Purshia tridentata</i>	ponderosa pine / mountain big sagebrush - bitterbrush	CEGL000178	G3S3	EC	CA?		Volland 1976: 55, 56.; Hopkins 1979b: 9
<i>Pinus ponderosa</i> / <i>Artemisia tridentata</i> var. <i>wyomingensis</i> / <i>Achnatherum occidentale</i>	ponderosa pine / Wyoming big sagebrush / western needlegrass	CEGL000179	G1S1	BR	CA		Berry 1963
<i>Pinus ponderosa</i> / <i>Calamagrostis rubescens</i>	ponderosa pine / pinegrass	CEGL000181	G2QS1	BM	ID, WA		Johnson and Clausnitzer 1992: 109
<i>Pinus ponderosa</i> / <i>Carex geyeri</i>	ponderosa pine / elk sedge	CEGL000182	G3G4S2	BM	CO, MT, UT, WY		Cole 1977b; Johnson and Clausnitzer 1992: 107
<i>Pinus ponderosa</i> / <i>Ceanothus velutinus</i> - <i>Purshia tridentata</i>	ponderosa pine / snowbrush - bitterbrush	CEGL000064	G4S4	EC	CA		Dyrness 1960: 96; Dyrness and Youngberg 1966: 126; Volland 1976: 59, 62, 65, 70
<i>Pinus ponderosa</i> / <i>Cercocarpus ledifolius</i> Central Rocky Mountain woodland	ponderosa pine / mountain mahogany	CEGL005646	G4S2	BM	CA?		Dealy 1971: 28; Dealy 1975: 94; Johnson and Clausnitzer 1992: 97, 99, 101
<i>Pinus ponderosa</i> / <i>Crataegus douglasii</i>	ponderosa pine / black hawthorn	CEGL000855	G1S1	BM	ID, MT, WA, WY	FW	Kauffman et al. 1985: 17; Crowe and Clausnitzer 1997: 72; Kauffman et al. 1985; Daubenmire and Daubenmire 1968; Daubenmire 1968a; Crowe et al. 2004: 324; Crawford 2001; Wells 2006: 60
<i>Pinus ponderosa</i> / <i>Elymus glaucus</i>	ponderosa pine / blue wildrye	CEGL000184	G2S2	BM			Hall 1973: 28; Head 1959;

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pinus ponderosa</i> / <i>Festuca idahoensis</i>	ponderosa pine / Idaho fescue	CEGL000857	G4S2	BM, EC	CA?, CO, ID, MT, UT, WA, WY		Hall 1973: 26; Ganskopp 1979: 64, 96; Steele et al. 1981: 25; Johnson and Simon 1987: 378; Cooper et al. 1991: 82; Johnson and Clausnitzer 1992: 119; Marsh et al. 1987: 28; Dealy 1971: 36
<i>Pinus ponderosa</i> / <i>Pseudoroegneria spicata</i> ssp. <i>spicata</i>	ponderosa pine / bluebunch wheatgrass	CEGL000865	G4S2	BM	BC, ID, MT, WA, WY +		Head 1959: 22; Hall 1973: 25; Ganskopp 1979: 63, 97; Steele et al. 1981: 24; Johnson and Simon 1987: 383; Cooper et al. 1991: 83; Johnson and Clausnitzer 1992: 121
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Achnatherum occidentale</i> s	ponderosa pine / bitterbrush / western needlegrass	CEGL000198	G2S2	EC	CA		Dyrness 1960: 72; Dyrness and Youngberg 1966: 126; Volland 1976: 54, 60; Hopkins 1979b: 15
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Carex geyeri</i>	ponderosa pine / bitterbrush / elk sedge	CEGL002606	G3S3	BM	CA, WA?		Johnson and Clausnitzer 1992: 113; John et al. 1988; Hall 1973; Cole 1977b
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Carex inops</i> ssp. <i>inops</i>	ponderosa pine / bitterbrush / long-stolon sedge	CEGL000193	G3S3	EC	CA?		Volland 1976: 63; Volland 1985
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Carex rossii</i>	ponderosa pine / bitterbrush / Ross sedge	CEGL000194	G2G3S3	BM			Dealy 1971: 19; Hall 1973: 27; Johnson and Clausnitzer 1992: 111
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Festuca idahoensis</i>	ponderosa pine / bitterbrush / Idaho fescue	CEGL000195	G3S3	BM, EC	CA, ID?, MT, WA		Dyrness 1960: 86; Dyrness and Youngberg 1966: 126; Dealy 1971: 10, 15; Volland 1976: 57; Williams 1978: 39, 43, 46; Hopkins 1979a: 25, 26; Hopkins 1979b: 14; Steele et al. 1981: 26; Smith 1994b: 36, 48
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Oryzopsis hymenoides</i>	ponderosa pine / bitterbrush / indian ricegrass	CEGL000196	G1S1	BR	CA		Moir et al. 1973b; Moir et al. 1973a; Clausnitzer and Zamora 1987; Berry 1963
<i>Pinus ponderosa</i> / <i>Purshia tridentata</i> / <i>Pseudoroegneria spicata</i>	ponderosa pine / bitterbrush / bluebunch wheatgrass	CEGL000197	G3S3	BM, EC	CA?, ID, MT?, WA		Volland 1976: 53; Williams 1978: 36; Steele et al. 1981: 26; Johnson and Simon 1987: 388; Johnson and Clausnitzer 1992: 115
<i>Pinus ponderosa</i> / <i>Ribes montigenum</i> woodland	Ponderosa pine / gooseberry currant woodland	CEGL000200	G2Q52	BM			Hopkins 1979a
<i>Pinus ponderosa</i> / <i>Symphoricarpos albus</i>	ponderosa pine / common snowberry riparian	CEGL000203	G4?S1	BM, EC	CA, ID, MT, WA, WY +	FW	Hall 1973: 30; Ganskopp 1979: 67, 95; Steele et al. 1981: 28; Kovalchik 1987: 27; Johnson and Simon 1987: 372, 377; Cooper et al. 1991: 81; Johnson and Clausnitzer 1992: 103; Crowe and Clausnitzer 1997: 72; Titus et al. 1998
<i>Pinus ponderosa</i> / <i>Symphoricarpos albus</i> riparian woodland	Ponderosa pine / common snowberry riparian woodland	CEGL000866	G2S2	BM, EC	ID, WA	FW	Mack 1988; Evans 1989a; Crowe and Clausnitzer 1997; Crawford 2003; Crowe et al. 2004: 321, 373
<i>Pinus ponderosa</i> / <i>Symphoricarpos oreophilus</i>	ponderosa pine / mountain snowberry	CEGL000205	G3S2	BM	ID, UT		Steele et al. 1981: 27; Johnson and Clausnitzer 1992: 105
<i>Pinus ponderosa</i> / <i>Wyethia mollis</i>	ponderosa pine / woolly wyethia	CEGL000206	G2Q52	EC	CA?		Hopkins 1979a: 27
<i>Plagiobothrys figuratus</i> vernal pool	fragrant Popcorn-flower vernal pool	CEGL003346	G1S1	KM, WV		VP	ORBIC unpubl. data
<i>Plagiobothrys leptocladus</i> - <i>Veronica peregrina</i> Vernal Pool [Provisional]	Slender-branched popcorn flower - purslane speedwell	OR1124	G2S2	CP		VP	Meinke and Magee 1986: 34
<i>Poa cusickii</i>	Cusick bluegrass meadow	CEGL001655	G2S2	BM, BR, EC	CA?, NV, WA?	WM	Volland 1976: 23; Kovalchik 1987: 90; Manning and Padgett 1991: 453; Titus et al. 1998; Crowe et al. 2004: 149
<i>Poa secunda</i> - ( <i>Balsamorhiza serrata</i> )	Sandberg bluegrass - serrate balsamroot scabland	CEGL001782	G3S3	CP	WA, WY		Poulton 1955; Cogan et al. 2005
<i>Poa secunda</i> - <i>Aristida purpurea</i> var. <i>longiseta</i>	Sandberg bluegrass - red threeawn	CEGL001781	G3S3	BM	ID, WA		Daubenmire 1970; Tisdale 1986
<i>Poa secunda</i> - <i>Eriogonum compositum</i>	Sandberg bluegrass - northern buckwheat scabland	CEGL001784	G3S3	BM, CP	ID?, WA		Daubenmire 1970; Erixson et al. 2011b
<i>Poa secunda</i> - <i>Eriogonum sphaerocephalum</i>	Sandberg bluegrass - rock buckwheat scabland	CEGL001787	G3G4S3	CP	BC?, WA		Daubenmire 1970; MacKenzie and Moran 2004; Kunze 1994; Crawford et al. 2009

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Poa secunda</i> - <i>Lomatium cous</i>	Sandberg bluegrass-cous biscuitroot scabland	CEGL001790	G4S4	BM, CP	CA, WA		Copeland 1980b: 59; Winward and Youtie 1976
<i>Poa secunda</i> - <i>Muhlenbergia richardsonis</i> moist meadow	sandberg bluegrass - mat muhly	CEGL002755	GNRS2	BR	NV	WM	Weixelman et al. 1996
<i>Poa secunda</i> montane meadow	Sandberg bluegrass montane meadow	CEGL001657	G4S4	BR, EC	CA?, CO, ID, MT, NV, UT	WM	Christy and Cornelius 1980; Boss 1983: 173; Manning and Padgett 1991: 379, 445; Tendick et al. 2011b; Tendick et al. 2011a; Tendick et al. 2010; Peterson 2008; Manning and Padgett 1995; Manning 1988; Coles et al. 2011; Coles et al. 2010; Blackburn et al. 1969a; Bell et al. 2009
<i>Polygonum amphibium</i>	water smartweed marsh	CEGL002002	G5S3	WV	BC, CA?, CO, ID, MT, UT, WA +	SD	Christy and Putera 1993; Kunze 1994: 47; Rodwell 1995b: 56; Christy et al. 1998: 133; Christy 2004: 135; Von Loh et al. 2002; Von Loh 2000; Salas et al. 2010b; Rodwell 1995a; Ramaley 1942; Ramaley 1930; McCain and Christy 2005; Hansen et al. 1995; Hansen et al. 1991; Cooper and Severn 1992; Chappell et al. 1997; Butler et al. 2002
<i>Polytrichum commune</i> Nonvascular Seasonal Pond [Provisional]	Haircap moss	OR1125	G5S4	EC, WC		SD	Christy 2004: 152
<i>Populus tremuloides</i> / <i>Alnus incana</i> - <i>Betula nana</i> - <i>Ribes</i> spp. Riparian Forest	quaking aspen / mountain alder - bog birch - currant	CEGL001149	G1S1	BM	ID?, WA?	FW	Crowe et al. 2004: 395
<i>Populus tremuloides</i> / <i>Alnus incana</i> - <i>Salix</i> spp.	quaking aspen / mountain alder - willow spp.	CEGL001082	G4S3	BM	NV	WM	Smith 1994b; Manning and Padgett 1995; Manning and Padgett 1991; Evans 1989a
<i>Populus tremuloides</i> / <i>Alnus incana</i> Riparian Forest	Quaking aspen / mountain alder	CEGL001150	G3S2	BM, BR, CP, EC		FW	Crowe et al. 2004: 395; Salas et al. 2005; Kittel et al. 1999b; Crowe and Clausnitzer 1997; Carsey et al. 2003a
<i>Populus tremuloides</i> / <i>Amelanchier alnifolia</i>	quaking aspen / serviceberry avalanche chute or snowbank shrubland	CEGL005886	G3?S2	BM, BR	AB, MT, WY		Reid et al. 2004; Hop et al. 2007; Cogan et al. 2005; Allen 2013
<i>Populus tremuloides</i> / <i>Artemisia tridentata</i> var. <i>vaseyana</i>	quaking aspen / mountain big sagebrush	CEGL000572	G3G4SU	BM, BR, EC	CA, ID, NV, UT, WY		Youngblood and Mueggler 1981; Schulz and Hall 2011; Sawyer et al. 2009; Mueggler 1988; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Jones and Ogle 2000; Johnston 1987; Dealy et al. 1981; Dealy 1971; Cogan et al. 2012; Blackburn et al. 1969d; Bell et al. 2009
<i>Populus tremuloides</i> / <i>Betula occidentalis</i> Riparian Forest	Quaking aspen / water birch	CEGL002650	G3S2	BM, BR, CP		FW	Crowe et al. 2004: 398; Carsey et al. 2003a; Cogan et al. 2012; Kittel et al. 1999b; Hansen et al. 1995
<i>Populus tremuloides</i> / <i>Calamagrostis canadensis</i>	quaking aspen / bluejoint reedgrass	CEGL000574	G3S3	BM, EC	AB, CO, ID, MT, WA, WY?	FW	Crowe and Clausnitzer 1997: 84; Titus et al. 1998; Salas et al. 2010b; Salas et al. 2005; Reid et al. 2004; Powell 1988a; Mutel 1973; Jones and Ogle 2000; Huckaby and Moir 1998; Hop et al. 2007; Hess and Alexander 1986; Hansen et al. 1995; Hansen et al. 1991; Crowe et al. 2004: 388; Boggs et al. 1990; Baker 1984a
<i>Populus tremuloides</i> / <i>Calamagrostis rubescens</i> forest	Quaking Aspen / pinegrass	CEGL000575	G5?SU	BM, BR, EC	AB?, ID, MT, NV?, UT, WA, WY		Youngblood and Mueggler 1981; Williams and Lillybridge 1983; Reid et al. 2004; Mueggler and Campbell 1986; Mueggler and Campbell 1982; Mueggler 1988; Jones and Ogle 2000; Hop et al. 2007; Cooper and Pfister 1981; Cogan et al. 2005; Bell et al. 2009; Bader 1932; Alexander 1986
<i>Populus tremuloides</i> / <i>Carex aquatilis</i> var. <i>aquatilis</i>	quaking aspen / aquatic sedge	CEGL003442	G1S1	BM, CP	WA?	FW	Crowe and Clausnitzer 1997: 84; Titus et al. 1998; Crowe et al. 2004: 384; Hall 1973
<i>Populus tremuloides</i> / <i>Carex obnupta</i>	quaking aspen / slough sedge	CEGL003371	G2S1	WV	BC, WA	FW	Christy 2001a: 14; Christy 2004: 33; Rocchio et al. 2012; McCain and Christy 2005
<i>Populus tremuloides</i> / <i>Carex pellita</i>	quaking aspen / woolly sedge	CEGL000577	G2S2	BM, BR, EC	CA?, NV?, WA	FW	Kovalchik 1993: 80; Crowe and Clausnitzer 1997: 78; Titus et al. 1998; Crowe et al. 2004: 385; Padgett 1982

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Populus tremuloides</i> / <i>Cornus sericea</i>	quaking aspen / creek dogwood	CEGL000582	G4S3	BM, BR, CP, EC	AB, CA?, CO, ID, MT, UT, WA, WY	FW	Kovalchik 1993: 80, 88; Crowe and Clausnitzer 1997: 84; Titus et al. 1998; Salas et al. 2010b; Richard et al. 1996; Reid et al. 2004; Padgett et al. 1989; Manning and Padgett 1995; Kovalchik 2001; Kovalchik 1993; Kittel et al. 1999b; Kittel et al. 1999a; Kittel et al. 1994; Jankovsky-Jones et al. 2001; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991; Hansen et al. 1990; Friesen et al. 2010; Evans 1989a; Crowe et al. 2004: 396; Crawford 2003; Crawford 2001; Carsey et al. 2003a
<i>Populus tremuloides</i> / <i>Crataegus douglasii</i> / <i>Heracleum maximum</i> wet shrubland	(Quaking aspen) / hawthorn / cow parsnip	CEGL001094	G1S1	CP	ID, WA	FW	Daubenmire 1970; Crawford 2003
<i>Populus tremuloides</i> / <i>Crataegus douglasii</i> / <i>Symphoricarpos albus</i> wet shrubland	(Quaking aspen) / hawthorn / snowberry	CEGL001096	G3S2	BM, CP	CA?, ID, WA	FW	Daubenmire 1970; Crowe and Clausnitzer 1997; Crawford 2003; Crowe et al. 2004: 180; Wells 2006: 110, 112
<i>Populus tremuloides</i> / <i>Elymus glaucus</i>	quaking aspen / blue wildrye	CEGL000846	G5S3	BM, EC	AZ, UT	FW	Kovalchik 1987: 61; Titus et al. 1998; Youngblood and Mauk 1985; Wright et al. 1979; West and Hassan 1985; Thomas et al. 2010; Tendick et al. 2011b; Stuever and Hayden 1997a; Romme et al. 1993; Roberts et al. 1992; McMurray 1986a; Larson and Moir 1987; Johnston 1987; DeVelice et al. 1986; Cogan et al. 2004; Clark et al. 2009
<i>Populus tremuloides</i> / <i>Prunus virginiana</i>	quaking aspen / chokecherry	CEGL000596	G3G4S3	EC	CO, ID, MT, UT, WY +	FW	Youngblood and Mueggler 1981; Von Loh et al. 2007; Titus et al. 1998; Tendick et al. 2010; Severson and Thilenius 1976; Salas et al. 2005; Salas and Pucherelli 1998b; Mueggler and Campbell 1986; Mueggler 1988; Marriott et al. 1999; Marriott and Faber-Langendoen 2000; Komarkova et al. 1988b; Johnston 1987; Hoffman and Alexander 1987; Hansen et al. 1995; Girard et al. 1997; Girard 1991; Crowe et al. 2004: 399; Coles et al. 2010; Coles et al. 2008a; Cogan et al. 1999; Coenenberg and Deput 1979; Caicco et al. 1995; Bell et al. 2009
<i>Populus tremuloides</i> / <i>Salix scouleriana</i>	quaking aspen / Scouler willow	CEGL000604	G4S2	BR	CO, ID, NV, UT, WY	FW	Evenden 1990: 18; Manning and Padgett 1991: 112 - 118; Titus et al. 1998; Salas et al. 2010b; Mueggler 1988; Cogan et al. 2005
<i>Populus tremuloides</i> / <i>Symphoricarpos albus</i>	quaking aspen / common snowberry	CEGL000609	G3S2	BM, BR, EC	MT, WA, WY	FW	Weixelman et al. 1996; Titus et al. 1998; Sawyer et al. 2009; Reid et al. 2004; Kovalchik 2001; Kovalchik 1987; Hop et al. 2007; Erixson et al. 2011b; Crowe et al. 2004; Crowe and Clausnitzer 1997; Crawford 2003; Crawford 2001; Cooper and Pfister 1981; Cogan et al. 2005; Crowe et al. 2004: 401
<i>Populus tremuloides</i> / <i>Symphoricarpos albus</i> / <i>Elymus glaucus</i> Woodland	Quaking aspen / common snowberry / blue wildrye	CEGL000946	G3S2	BM, BR, EC		FW	Crowe et al. 2004: 404; Manning and Padgett 1995; Weixelman et al. 1999
<i>Populus tremuloides</i> / <i>Symphoricarpos oreophilus</i>	quaking aspen / mountain snowberry	CEGL000610	G5S2	BR, EC	AZ?, CO, ID, MT, NM, NV, UT, WA, WY +		Youngblood and Mueggler 1981; Titus et al. 1998; Tendick et al. 2011b; Tendick et al. 2010; Schulz and Hall 2011; Salas et al. 2010b; Romme et al. 1993; Reed 1971; Mueggler 1988; Lewis 1975a; Kovalchik 1987; Komarkova et al. 1988a; Keammerer and Stoecker 1980; Keammerer and Stoecker 1975; Keammerer and Peterson 1981; Jones and Ogle 2000; Johnston and Hendzel 1985; Johnston 1987; Hoffman and Alexander 1983; Hoffman and Alexander 1980; Hess and Wasser 1982; Ferchau 1973; Dorn 1969; Day and Wright 1985; Coles et al. 2010; Coles et al. 2008a; Cogan et al. 2012; Clark et al. 2009; Boyce 1977; Bell et al. 2009; Baker 1982b

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Populus tremuloides</i> / tall forbs Forest	Quaking aspen / tall forbs	CEGL000618	G5S3	BM, BR, CP, EC		FW	Crowe et al. 2004: 406; Youngblood and Mueggler 1981; Mueggler and Campbell 1986; Mueggler 1988; Kittel et al. 1999b; Carsey et al. 2003a; Bell et al. 2009
<i>Populus tremuloides</i> / <i>Veratrum californicum</i>	quaking aspen / California hellebore	CEGL000621	G3?S2	BR, EC	CA, CO, ID, NV, UT	FW	Sawyer et al. 2009; Potter 1998; Padgett et al. 1989; Padgett et al. 1988b; Mueggler and Campbell 1986; Mueggler 1988; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002; Johnston and Hendzel 1985; Hoffman and Alexander 1980
<i>Populus trichocarpa</i> - <i>Acer macrophyllum</i> / <i>Equisetum hyemale</i>	black cottonwood - bigleaf maple / Dutch rush	CEGL003406	G3S3	WV	WA	FW	Titus et al. 1996; McCain 2004: 256
<i>Populus trichocarpa</i> - <i>Acer macrophyllum</i> / <i>Symphoricarpos albus</i>	black cottonwood - bigleaf maple / common snowberry	CEGL003363	G3S3	WV	BC?, WA	FW	Titus et al. 1996
<i>Populus trichocarpa</i> - <i>Alnus rhombifolia</i>	black cottonwood - white alder	CEGL000668	G1S1	BM, BR, CP, WV	WA	FW	Daubenmire 1970: 60; Titus et al. 1998; Holmstead 2001; Evans 1989a; Crowe et al. 2004: 331; Crowe and Clausnitzer 1997
<i>Populus trichocarpa</i> - <i>Alnus rubra</i> / <i>Rubus spectabilis</i>	black cottonwood - red alder / salmonberry	CEGL003407	G2G3S2	WV	BC?, WA	FW	McCain 2004: 269; McCain and Christy 2005: 174
<i>Populus trichocarpa</i> - <i>Alnus rubra</i> / <i>Symphoricarpos albus</i>	black cottonwood - red alder / common snowberry	CEGL003362	G3S3	WV	BC?, WA	FW	Titus et al. 1996
<i>Populus trichocarpa</i> - <i>Picea sitchensis</i> - ( <i>Acer macrophyllum</i> ) / <i>Oxalis oregana</i> riparian forest	Black Cottonwood - Sitka spruce - (bigleaf maple) / redwood sorrel riparian forest	CEGL003418	G2G3S2	CR	WA	FW	Fonda 1974; Crawford et al. 2009; Chappell 1999
<i>Populus trichocarpa</i> / <i>Acer glabrum</i> Riparian Forest [Provisional]	Black cottonwood / mountain maple	OR1126	G2S2	BR		FW	Crowe and Clausnitzer 1997: 92; Kovalchik 1993: 80; Titus et al. 1998; Jankovsky-Jones et al. 2001; Crowe et al. 2004: 345
<i>Populus trichocarpa</i> / <i>Alnus incana</i>	black cottonwood / mountain alder	CEGL000667	G3S2	BM, BR, EC	ID, WA	FW	Kauffman 1982: 60, 61; Kauffman et al. 1985: 17; Kovalchik 1987: 136; Kovalchik 1993: 84, 86; McNeil 1975: 85; Ferro et al. 1976: 13; Crowe and Clausnitzer 1997: 90; Titus et al. 1998; Crowe et al. 2004: 339, 349, 350; Wells 2006:64
<i>Populus trichocarpa</i> / <i>Betula occidentalis</i> - <i>Salix</i> spp	black cottonwood / western birch - willow	CEGL003282	G3S2	BM, BR, CP	AK	FW	Manning and Padgett 1991: 86, 90, 137; Crowe et al. 2004: 335
<i>Populus trichocarpa</i> / <i>Cicuta douglasii</i> riparian forest	Black Cottonwood / western water-hemlock riparian forest	CEGL000671	G1S1	CR, WC, WV	ID, WA	FW	Evans 1989a; Daubenmire 1970;
<i>Populus trichocarpa</i> / <i>Cornus sericea</i>	black cottonwood / creek dogwood	CEGL000672	G3S3	BM, BR, CP, EC	AB, CA, ID, MT, WA, WY	FW	Walford et al. 2001; Titus et al. 1998; Reid et al. 2004; Manning and Padgett 1991; Kovalchik 1993; Kovalchik 1987; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991; Hall and Hansen 1997; Evans 1989a; Crowe et al. 2004; Crawford et al. 2009; Crawford 2003; Cogan et al. 2005; Caicco 1988
<i>Populus trichocarpa</i> / <i>Cornus sericea</i> / <i>Carex deweyana</i> ssp. <i>leptopoda</i>	black cottonwood / creek dogwood / Dewey sedge	CEGL003408	G1S1	CR, WV	WA	FW	Christy and Putera 1993: 41; Kunze 1994: 60; Christy 2004: 32
<i>Populus trichocarpa</i> / <i>Cornus sericea</i> / <i>Carex obnupta</i> riparian forest	Black Cottonwood / red-osier dogwood / slough sedge riparian forest	CEGL002844	GNRS2?	CR, WV	BC, WA	FW	Rocchio et al. 2012; Meidinger et al. 2005; Green and Klinka 1994; Brown and Hebda 1999
<i>Populus trichocarpa</i> / <i>Cornus sericea</i> / <i>Impatiens capensis</i> Riparian Forest	Black cottonwood / creek dogwood / skunk cabbage - orange jewelweed	CEGL003408	G1S1	CR, WV	WA	FW	Christy 2004: 32; Kunze 1994; Christy and Putera 1993
<i>Populus trichocarpa</i> / <i>Crataegus douglasii</i>	black cottonwood / black hawthorn	CEGL000673	G1S1	BM, CP, EC	ID, WA?	FW	Kauffman 1982; Kauffman et al. 1985: 17; Titus et al. 1998; Crowe et al. 2004: 337
<i>Populus trichocarpa</i> / <i>Philadelphus lewisii</i> Riparian Forest [Provisional]	black cottonwood / mockorange	OR0019	G3S3	BM, BR, CP, EC	ID, WA?	FW	Titus et al. 1998; Crowe et al. 2004: 333
<i>Populus trichocarpa</i> / <i>Salix exigua</i>	black cottonwood / coyote willow	CEGL000676	G1S1	BM, BR, CP	CA?, ID?, NV?, WA	FW	Manning and Padgett 1991: 141; Titus et al. 1998; Sawyer and Keeler-Wolf 1995; Poulton 1955; Peterson 2008; Manning and Padgett 1995; Manning and Padgett 1992; Erixson et al. 2011b; Erixson et al. 2011a; Crawford 2003

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Populus trichocarpa</i> / <i>Salix lasiandra</i> var. <i>caudata</i> Riparian Woodland	Black cottonwood / greenleaf willow	CEGL003431	G2S2	BM		FW	Crowe et al. 2004: 325, 328; Crawford 2001; Crowe and Clausnitzer 1997; Hansen et al. 1995; Jankovsky-Jones et al. 2001; Kovalchik 2001; Manning and Padgett 1995; Moseley 1998
<i>Populus trichocarpa</i> / <i>Salix lasiolepis</i> Riparian forest [Provisional]	Black cottonwood / arroyo willow	OR1129	G3S1	BR		FW	Crowe et al. 2004: 327
<i>Populus trichocarpa</i> / <i>Salix lucida</i> ssp. <i>caudata</i>	black cottonwood / Pacific willow riparian	CEGL003431	G2S2	BM	BC?, ID, WA	FW	Crowe and Clausnitzer 1997: 88; Moseley 1998: 16; Titus et al. 1998; Moseley 1998; Manning and Padgett 1995; Kovalchik 2001; Jankovsky-Jones et al. 2001; Hansen et al. 1995; Crowe et al. 2004; Crowe et al. 2002; Crawford 2001
<i>Populus trichocarpa</i> / <i>Symphoricarpos albus</i>	black cottonwood / snowberry	CEGL000677	G2S2	BM, CP, EC, WC	BC?, ID, MT, WA, WY	FW	Poulton 1955: 87; Kauffman 1982: 61; Kauffman et al. 1985: 17; Kovalchik 1987: 136; Crowe and Clausnitzer 1997: 94; Moseley 1998: 17; Titus et al. 1998; Murray 2000: 44; Crowe et al. 2004: 346; Wells 2006: 66
<i>Populus trichocarpa</i> alluvial bar	black cottonwood alluvial bar	OR0020	G4S4	BM, BR, CP, EC	CA, ID, WA	FW	Crowe et al. 2004: 325; Manning and Padgett 1995; Hansen et al. 1995; Thompson and Hansen 2002; Jankovsky-Jones et al. 2001; Holmstead 2001; Kovalchik 2001
<i>Potamogeton diversifolius</i>	diverse-leaved pondweed bed	CEGL002007	G4S3	EC	CO	AB	Kovalchik 2001; Jankovsky-Jones et al. 2001; Galatowitsch and Bourgeron 1985; Crowe et al. 2004: 72; Boggs 2000; Titus et al. 1998
<i>Potamogeton gramineus</i> Aquatic Vegetation [Provisional]	Variable pondweed	OR1130	G5S5	ALL		AB	Crowe et al. 2004: 72
<i>Potamogeton natans</i>	floating-leaved pondweed bed	CEGL002925	G5S5	CR, EC, KM, WC, WV	BC, CA?, CO, ID, WA	AB	Kunze 1994: 23; Rodwell 1995b: 53; Titus and Christy 1996a; Titus and Christy 1996b; Christy et al. 1998: 136; Titus et al. 1998; Murray 2000: 24; Christy 2004: 136; Crowe et al. 2004: 73
<i>Potentilla anserina</i> ssp. <i>pacifica</i> - <i>Juncus balticus</i> Salt Marsh	Pacific silverweed - Baltic rush high salt marsh	CEGL003382	G3S2	CR	BC?, WA	SM	Frenkel et al. 1978: 57, 75, 82, 99; Frenkel et al. 1981: 200; Mitchell 1981: 112, 113; Frenkel and Boss 1988: 39; Dethier 1990: 37; Viereck et al. 1992: 194; Christy et al. 1998: 126
<i>Potentilla anserina</i> ssp. <i>pacifica</i> - <i>Symphotrichum subspicatum</i> Brackish Marsh	Pacific silverweed - Douglas aster high salt marsh	CEGL003288	G3S2	CR	BC?, WA	SM	Eilers 1975a: 256, 258; Eilers 1976: 27; Taylor and Frenkel 1979: 78; Taylor 1980: 75; Mitchell 1981: 112, 113; Frenkel and Boss 1988: 39; Dethier 1990: 38
<i>Potentilla rivalis</i> Marsh [Provisional]	Brook cinquefoil	OR1131	G3S2	BR		FM	Christy 2013: 45
<i>Prunus emarginata</i> montane chaparral shrubland	bitter cherry chaparral shrubland	CEGL005822	G3?S1	BR	CA		Keeler-Wolf et al. 2012
<i>Prunus virginiana</i> - ( <i>Prunus americana</i> )	chokecherry- (American plum) wet shrubland	CEGL001108	G4QS2	BM, CP	CO, ID, MT, NM, NV, UT, WA, WY +	SS	Von Loh et al. 1999; Thomas et al. 2009b; Tendick et al. 2011b; Tendick et al. 2010; Stevens et al. 2015; Schulz and Hall 2011; Salas et al. 2010b; Rice et al. 2012b; Owns et al. 2004; Osborn et al. 1998; Muldavin et al. 2012a; Manning and Padgett 1995; Kudray et al. 2004; Kovalchik 1987; Kittel et al. 1999b; Kittel et al. 1996; Jones and Walford 1995; Jones 1992b; Johnston 1987; Hansen et al. 1995; Hansen et al. 1991; Hansen et al. 1988b; Hall and Hansen 1997; Friesen et al. 2010; Evans 1989b; Evans 1989a; Erixson and Cogan 2012c; Copeland 1980a; Cooper et al. 2001; Coles et al. 2010; Coles et al. 2008a; Cogan et al. 2005; Cogan et al. 1999; Carsey et al. 2003a; Caicco and Wellner 1983n; Caicco and Wellner 1983a
<i>Prunus virginiana</i> - Mixed shrub Talus shrubland	chokecherry - mixed shrub talus shrubland	CEGL005444	GNR53	BM, BR, CP, EC	NV		Schulz and Hall 2011; DiPaolo et al. 2015; Cogan et al. 2012
<i>Prunus virginiana</i> / <i>Leymus cinereus</i> shrubland	Chokecherry / basin wildrye shrubland	CEGL005606	GNR51	BR	CA, CO, ID, MT, WA, WY		Bell et al. 2009

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Pseudoroegneria spicata - Balsamorhiza sagittata - Poa secunda	bluebunch wheatgrass - arrowleaf balsamroot - Sandberg bluegrass canyon	CEGL001662	G3S3	BM, CP, EC	ID, WA, WY		Poulton 1955; Daubenmire 1970; Ganskopp 1979; Johnson and Simon 1987: 69; Tisdale 1986; Stevens et al. 2015; Rust 1997a; Johnson and Simon 1985; Johnson and Clausnitzer 1992; Ganskopp 1979; Erixson et al. 2011b; Cogan et al. 2005; Bell et al. 2009
Pseudoroegneria spicata - Eriogonum heracleoides	bluebunch wheatgrass - Wyeth buckwheat	CEGL001668	G2QSU	BM, CP, EC	ID, WA		Johnson and Simon 1987: 87; Mueggler and Harris 1969; Johnson and Simon 1987; Johnson and Simon 1985; Ganskopp 1979; Erixson et al. 2011b
Pseudoroegneria spicata - Festuca idahoensis canyon	bluebunch wheatgrass - Idaho fescue canyon	CEGL001669	G3S2	BM, CP, EC	ID, WA		Poulton 1955; Hall 1973: 9-12, 47; Ganskopp 1979; Tisdale 1979: 6; Copeland 1980a: 56; Johnson and Simon 1987: 59-68, 74-78
Pseudoroegneria spicata - Festuca idahoensis palouse	bluebunch wheatgrass - Idaho fescue palouse	CEGL001670	G1S1	CP	ID, WA		Poulton 1955; Tisdale 1986; Johnson and Simon 1987; Johnson and Clausnitzer 1992; Hall 1973; Daubenmire 1970; Anderson 1956
Pseudoroegneria spicata - Hesperostipa comata	bluebunch wheatgrass - needle-and-thread	CEGL001679	G4S1	CP	MT, NV, UT, WY		Poulton 1955; Williams 1961; Tweit and Houston 1980; Stevens et al. 2015; Schulz and Hall 2011; Poulton 1955; Mueggler and Stewart 1980; Jones and Ogle 2000; Johnston 1987; Hyde 1964; Daubenmire 1970; Coles et al. 2011; Cogan et al. 2012; Anderson 1956
Pseudoroegneria spicata - Opuntia polycantha - (Poa secunda)	bluebunch wheatgrass - plains pricklypear - Sandberg bluegrass	CEGL001673	G3S3	BM, CP	ID, WA		Tisdale 1979: 7; Johnson and Simon 1987: 121
Pseudoroegneria spicata - Poa secunda lithosol	bluebunch wheatgrass - Sandberg bluegrass lithosol	CEGL001678	G3S3	BM, CP	ID, WA		Poulton 1955; Daubenmire 1970; Hall 1973: 9-12, 47; Ganskopp 1979: 49, 51, 98; Tisdale 1979: 7; Copeland 1980a: 53; Day and Wright 1985: 4; Johnson and Simon 1987: 92-120, 134
Pseudoroegneria spicata - Poa secunda Palouse	bluebunch wheatgrass - Sandberg bluegrass Palouse	CEGL001677	G4?S1	CP	BC?, CO, ID, MT, NV, UT, WA, WY		Poulton 1955; Daubenmire 1970
Pseudoroegneria spicata - Sporobolus cryptandrus - Aristida purpurea	bluebunch wheatgrass - sand dropseed - red threeawn	CEGL001589	G2S2	BM	WA		Johnson and Simon 1987: 126
Pseudotsuga menziesii - (Alnus rubra, Tsuga heterophylla) / Rubus spectabilis	Douglas-fir (red alder, western hemlock) / salmonberry	CEGL005534	GNR54	CR	WA		Hemstrom and Logan 1986: 97, 99; McCain and Diaz 2002a
Pseudotsuga menziesii - (Tsuga heterophylla) / Acer circinatum - Corylus cornuta / Polystichum munitum forest	Douglas-fir - western hemlock / vine maple - hazel / swordfern	CEGL007351	GNR53	CR, WV, WC	WA		Meidinger et al. 2005
Pseudotsuga menziesii - Abies grandis / Acer circinatum / Polystichum munitum	Douglas-fir - grand fir / vine maple / sword fern	CEGL005631	GNR53	CR, WC, WV	WA		McCain and Diaz 2002a; McCain and Diaz 2002b
Pseudotsuga menziesii - Abies grandis / Corylus cornuta / Polystichum munitum forest	Douglas-fir - grand Fir / Beaked Hazelnut / western swordfern	CEGL005632	GNR52	CR, EC, WC, WV	WA		Meidinger et al. 2005; Chappell 2006b; Chappell 2001; Chappell 1997; McCain and Diaz 2002b
Pseudotsuga menziesii - Abies grandis / Mahonia nervosa - Anemone deltoidea forest	Douglas-fir - grand fir / dwarf Oregongrape / three-leaved anemone	CEGL005633	GNR53	WC			McCain and Diaz 2002b
Pseudotsuga menziesii - Abies grandis / Mahonia nervosa - Gaultheria shallon	Douglas-fir - grand fir / dwarf Oregongrape - salal	CEGL005634	GNR53	CR, WC, WV	WA		McCain and Diaz 2002a; McCain and Diaz 2002b; Crawford et al. 2009
Pseudotsuga menziesii - Abies grandis / Toxicodendron diversilobum - Polystichum munitum forest	Douglas-fir - grand Fir / Pacific poison-oak - western swordfern	CEGL005640	G3G4S3	EC, KM, WC			Meidinger et al. 2005
Pseudotsuga menziesii - Abies lowiana - Calocedrus decurrens forest	Douglas-fir - white Fir - Incense-cedar	CEGL005813	G3?S3	KM	CA		Odion et al. 2013; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Fites 1993
Pseudotsuga menziesii - Abies lowiana - Umbellularia californica / Polystichum munitum forest	Douglas-fir - white Fir - California Laurel / western swordfern	CEGL005630	GNR53	KM			Meidinger et al. 2005

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Pseudotsuga menziesii - Abies lowiana / Holodiscus discolor / Polystichum munitum forest	Douglas-fir - white Fir / Oceanspray / western swordfern	CEGL007396	G3G4S3	EC, KM, WC			Meidinger et al. 2005
Pseudotsuga menziesii - Abies lowiana / Polystichum munitum forest	Douglas-fir - white Fir / western swordfern	CEGL005629	G4S3	KM			Meidinger et al. 2005
Pseudotsuga menziesii - Arbutus menziesii - Quercus / Toxicodendron diversilobum	Douglas-fir - Pacific madrone - oak / poison oak	CEGL000927	G3G4S3	CR, EC, KM, WC, WV	CA?		Klinka et al. 1996: 151; McCain and Diaz 2002a
Pseudotsuga menziesii - Chrysolepis chrysophylla var. chrysophylla / Rhododendron macrophyllum	Douglas-fir / western rhododendron	CEGL000071	G4S3	KM, WC	CA?		Atzet and Wheeler 1984: 215; Jimerson et al. 1995: C-107,111,115,119,123,127,131
Pseudotsuga menziesii - Notholithocarpus densiflorus - (Chamaecyparis lawsoniana) / (Vaccinium ovatum) - Rhododendron occidentale	Douglas-fir - tan oak - (Port Orford cedar) / (evergreen huckleberry) - western azalea	CEGL000077	G3S3	KM	CA		Atzet and Wheeler 1984; Sawyer et al. 2009
Pseudotsuga menziesii - Pinus lambertiana - Abies concolor / Arctostaphylos nevadensis	Douglas-fir - sugar pine - white fir / pinemat manzanita	OR0021	G2?S2	KM	CA?		Atzet et al. 1996
Pseudotsuga menziesii - Pinus ponderosa - Calocedrus decurrens forest	Douglas-fir - Ponderosa pine - incense cedar	CEGL008684	G3S3	EC	CA		Titus et al. 1998
Pseudotsuga menziesii - Quercus chrysolepis forest	Douglas-fir - canyon live oak	CEGL005814	G3G4S2	KM	CA		Taylor and Teare 1979a; Sawyer et al. 2009; Odion et al. 2013; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a
Pseudotsuga menziesii - Quercus garryana / Symphoricarpos albus	Douglas-fir - Oregon white oak / common snowberry	CEGL000929	G3S3	CR, WV, EC, KM, WC	CA, WA		Thilenius 1968: 1128; Jimerson et al. 1996: C-48
Pseudotsuga menziesii - Quercus garryana / Toxicodendron diversilobum	Douglas-fir - Oregon white oak / poison oak	CEGL000928	G3SU	KM, WC	CA, WA		Atzet and McCrimmon 1990: 318; Riegel et al. 1992: 70
Pseudotsuga menziesii - Tsuga heterophylla / (Acer circinatum) / Polystichum munitum	Douglas-fir - western hemlock / vine maple / sword fern	CEGL005542	G4S3	CR, WC	BC, CA?, WA		Hawk 1973: 42; Dyrness et al. 1974a: 33; Hemstrom and Logan 1986: 105; Atzet and McCrimmon 1990: 187; McCain and Diaz 2002a; McCain and Diaz 2002b
Pseudotsuga menziesii - Tsuga heterophylla / Achlys triphylla forest	Douglas-fir - western hemlock / vanilla leaf	CEGL005535	G4S3	CR, WC	WA		Halverson et al. 1986: 56, 58; Topik et al. 1986: 90; Hemstrom et al. 1987: 242; McCain and Diaz 2002a; Hemstrom et al. 1987: 198; Atzet and McCrimmon 1990: 159
Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon - Mahonia nervosa forest	Douglas-fir - western hemlock / salal - dwarf Oregon grape	CEGL005538	G4S4	KM, WC	BC, WA		Hemstrom et al. 1987: 86; Atzet and McCrimmon 1990: 130, 138; Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1992; Henderson et al. 1989; Hemstrom and Logan 1986; Hawk 1973; Halverson et al. 1986; Green and Klinka 1994; Crawford et al. 2009; Chappell 2006b
Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon - Vaccinium parvifolium forest	Douglas-fir - western hemlock / salal - red huckleberry	CEGL005539	GNRS4	KM, WC	BC, CA, WA		Hemstrom et al. 1987: 86; Atzet and McCrimmon 1990: 130, 138; Topik et al. 1986; Meidinger et al. 2005; Kagan et al. 2012; Henderson et al. 1989; Henderson et al. 1986; Fonda and Bernardi 1976; del Moral and Long 1977; Crawford et al. 2009; Agee and Wasem 1987
Pseudotsuga menziesii - Tsuga heterophylla / Gaultheria shallon / Polystichum munitum forest	Douglas-fir - western hemlock / salal / sword fern	CEGL005536	G4G5S4	KM, WC	BC, WA		Hemstrom et al. 1987: 86, 234; Atzet and McCrimmon 1990: 130, 138; Topik et al. 1986; Meidinger et al. 2005; Kojima and Krajina 1975; Kagan et al. 2012; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom and Logan 1986; Crawford et al. 2009; Copass and Ramm-Granberg 2016a; Chappell 2006b; Chappell 2001; Chappell 1997
Pseudotsuga menziesii - Tsuga heterophylla / Holodiscus discolor	Douglas-fir - western hemlock / oceanspray	CEGL000067	G3S3	KM, WC			Halverson et al. 1986: 66; Dyrness et al. 1974a: 13; Hemstrom et al. 1987: 62, 66; Topik et al. 1988: 59; McCain and Diaz 2002a; McCain and Diaz 2002b



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Holodiscus discolor</i> / <i>Polystichum munitum</i> forest	Douglas-fir - western Hemlock / Oceanspray / western swordfern	CEGL005540	G3S3	EC, WC	BC, WA		Hemstrom et al. 1987: 234; Topik et al. 1986; Meidinger et al. 2005; Kojima and Krajina 1975; Henderson et al. 1986; Hemstrom et al. 1987; Green and Klinka 1994; Chappell 2006b
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Mahonia nervosa</i> - <i>Polystichum munitum</i> forest	Douglas-fir - western hemlock / vine maple - dwarf Oregongrape / sword fern - oxalis	CEGL005543	G4S3	CR, WC	BC, CA?, WA		Halverson et al. 1986: 64; Topik et al. 1986: 84; Henderson et al. 1992: 34; Hemstrom et al. 1987: 234
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Mahonia nervosa</i> / <i>Tiarella trifoliata</i> forest	Douglas-fir - western Hemlock / Cascade barberry / threelobed foamflower	CEGL007288	G3S3	CR, WC	WA		Meidinger et al. 2005
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i>	Douglas-fir - western hemlock / dwarf Oregongrape	CEGL005541	G4S3	CR, KM, WC	BC?, WA		Hemstrom et al. 1987: 78; Williams and Smith 1990; Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Klinka et al. 1996; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson and Peter 1984; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Henderson 1981; Hemstrom and Logan 1986; Halverson et al. 1986; Crawford et al. 2009; Chappell 2006b; Chappell 1997
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Polystichum munitum</i> - <i>Oxalis oregana</i> forest	Douglas-fir - western hemlock / sword fern	CEGL005568	G3G4S3	CR, WC	CA, WA		Dyrness et al. 1974a: 36; Halverson et al. 1986: 75; Topik et al. 1986: 76
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Rhododendron macrophyllum</i>	Douglas-fir - western hemlock / western rhododendron	CEGL000086	G3S3	KM, WC			Atzet and Wheeler 1984: 118; Hemstrom et al. 1987: 82; McCain and Diaz 2002b; Atzet and McCrimmon 1990: 196
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Rhododendron macrophyllum</i> - <i>Corylus cornuta</i> / <i>Polystichum munitum</i> forest	Douglas-fir - western Hemlock / Pacific rhododendron - Beaked Hazelnut / western swordfern	CEGL007289	G4S4	CR, WC			Moir et al. 1973b: 9; Dyrness et al. 1974a: 22, 24; Halverson et al. 1986: 77-83; Hemstrom et al. 1982: 49; Hemstrom and Logan 1986: 85, 89, 91; Hemstrom et al. 1987: 206-226; Atzet and McCrimmon 1990: 117, 122, 126; McCain and Diaz 2002a
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Rhododendron macrophyllum</i> / <i>Polystichum munitum</i> forest	Douglas-fir - western Hemlock / Pacific rhododendron / western swordfern	CEGL005545	G3G4QS3	CR, WC	WA		Moir et al. 1973b: 9; Dyrness et al. 1974a: 22, 24; Halverson et al. 1986: 77-83; Hemstrom et al. 1982: 49; Hemstrom and Logan 1986: 85, 89, 91; Hemstrom et al. 1987: 206-226; Atzet and McCrimmon 1990: 117, 122, 126; McCain and Diaz 2002a
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Rhododendron macrophyllum</i> forest	Douglas-fir - western Hemlock / Pacific rhododendron	CEGL005544	G4S3	CR, WC	WA		Moir et al. 1973b: 9; Dyrness et al. 1974a: 22, 24; Halverson et al. 1986: 77-83; Hemstrom et al. 1982: 49; Hemstrom and Logan 1986: 85, 89, 91; Hemstrom et al. 1987: 206-226; Atzet and McCrimmon 1990: 117, 122, 126; McCain and Diaz 2002a
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Umbellularia californica</i>	Douglas-fir - western hemlock / California laurel	CEGL000087	G3S3	KM	CA?		Atzet and Wheeler 1984: 119
<i>Pseudotsuga menziesii</i> - <i>Tsuga heterophylla</i> / <i>Vaccinium alaskaense</i> / <i>Xerophyllum tenax</i> forest	Douglas-fir - western Hemlock / Alaska blueberry / common beargrass	CEGL005547	G3S3	EC, WC	AK, WA		Topik et al. 1986; Shephard 1995; Pawuk and Kissinger 1989; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Martin et al. 1995; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Hemstrom et al. 1987; Halverson et al. 1986; Franklin et al. 1979; Fox 1983; DeVelice et al. 1994; DeMeo et al. 1992
<i>Pseudotsuga menziesii</i> - <i>Tsuga mertensiana</i> / <i>Acer circinatum</i> lava flow	Douglas-fir - mountain hemlock / vine maple lava flow woodland	CEGL000912	G4QS4	EC, WC			Roach 1952; Atzet and Wheeler 1984
<i>Pseudotsuga menziesii</i> - <i>Umbellularia californica</i> / <i>Toxicodendron diversilobum</i> forest	Douglas-fir - California laurel / Pacific poison-oak	CEGL000073	G4S3	KM	CA		Sawyer et al. 2009
<i>Pseudotsuga menziesii</i> / <i>Acer circinatum</i>	Douglas-fir / vine maple	CEGL000417	G5?SU	CP, EC	WA		Titus et al. 1998
<i>Pseudotsuga menziesii</i> / <i>Acer circinatum</i> - <i>Holodiscus discolor</i>	Douglas-fir / vine maple - oceanspray	CEGL005533	G3S3	EC, WC	WA		Topik et al. 1986: ; Halverson et al. 1986

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pseudotsuga menziesii</i> / <i>Acer glabrum</i> Riparian Forest	Douglas-fir / Rocky Mountain maple	CEGL000418	G4S3	BM, EC	AB, CO, ID, MT?, UT, WY	FW	Steele et al. 1981: 43; Steele et al. 1983: 23; Johnson and Simon 1987: 339; Titus et al. 1998; Crowe et al. 2004: 309; Wells 2006: 56
<i>Pseudotsuga menziesii</i> / <i>Betula occidentalis</i> riparian woodland	Douglas-fir / water birch riparian woodland	CEGL002639	G3S1	BM, CP, EC	CO, NV?, UT	FW	Romme et al. 1993; Manning and Padgett 1995; Kittel et al. 1999b; Kittel et al. 1999a; Kittel et al. 1997a; Kittel et al. 1996; Crowe et al. 2004: 313; Clark et al. 2009; Carsey et al. 2003a
<i>Pseudotsuga menziesii</i> / <i>Calamagrostis rubescens</i>	Douglas-fir / pinegrass	CEGL000429	G5S3	BM	BC, ID, MT, UT, WA, WY		Cole 1977b: 64; Steele et al. 1981: 38; Cole 1982: 6; Steele et al. 1983: 28; Johnson and Simon 1987: 332; Cooper et al. 1991: 76; Johnson and Clausnitzer 1992: 91
<i>Pseudotsuga menziesii</i> / <i>Carex geyeri</i>	Douglas-fir / elk sedge	CEGL000430	G4?S3	BM, EC	CO, ID, MT, WA, WY		Steele et al. 1981: 35; Topik et al. 1988: 51; Cooper et al. 1991: 76; Johnson and Clausnitzer 1992: 93, 95
<i>Pseudotsuga menziesii</i> / <i>Cercocarpus ledifolius</i>	Douglas-fir / mountain mahogany	CEGL000897	G3G4S2	BM	CO, ID, MT, UT, WY		Steele et al. 1981: 38; Steele et al. 1983: 28; Johnson and Clausnitzer 1992: 95
<i>Pseudotsuga menziesii</i> / <i>Clintonia uniflora</i> - <i>Xerophyllum tenax</i> forest	Douglas-fir / bride's bonnet - common beargrass	CEGL005854	G4G5S3	BM	AB?, ID, MT, WA		Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Pseudotsuga menziesii</i> / <i>Clintonia uniflora</i> forest	Douglas-fir / bride's bonnet	CEGL005850	G4G5S3	BM	AB, ID, MT, WA		Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002
<i>Pseudotsuga menziesii</i> / <i>Cornus nuttallii</i> / <i>Achlys triphylla</i> forest	Douglas-fir / Pacific dogwood / sweet after death	CEGL007355	GNRS1	WC	WA		Meidinger et al. 2005
<i>Pseudotsuga menziesii</i> / <i>Corylus cornuta</i> / <i>Symphoricarpos hesperius</i> - <i>Polystichum munitum</i>	Douglas-fir / beaked hazelnut / trailing snowberry - swordfern	CEGL007358	GNRS2	EC, KM, WC, WV	WA		Hemstrom et al. 1987: 74; Henderson et al. 1986; Meidinger et al. 2005; Chappell 2006b
<i>Pseudotsuga menziesii</i> / <i>Festuca occidentalis</i>	Douglas-fir / western fescue	CEGL000434	G2S2	EC	WA		Topik et al. 1988: 55; Topik 1989
<i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> - <i>Holodiscus discolor</i>	Douglas-fir / salal - oceanspray	CEGL005537	G2S2	WC	WA		Topik et al. 1986; Meidinger et al. 2005; Krajina 1969; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Dyrness et al. 1975; Crawford et al. 2009; Copass and Ramm-Granberg 2016a; Chappell 2006b; Atzet and McCrimmon 1990; Agee 1987
<i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> - <i>Holodiscus discolor</i> forest	Douglas-fir / salal - Oceanspray	CEGL005531	GNRS3	CR, WC, WV	BC, CA, WA		Topik et al. 1986; Rocchio et al. 2012; Meidinger et al. 2005; Henderson et al. 1989; Henderson et al. 1986; Fonda and Bernardi 1976; del Moral and Long 1977; Crawford et al. 2009; Copass and Ramm-Granberg 2016a; Chappell 2006b; Chappell 2001; Chappell 1997; Agee and Wasem 1987
<i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> - <i>Mahonia nervosa</i> / <i>Polystichum munitum</i> forest	western Hemlock - (Douglas-fir) / Alaska blueberry - Cascade barberry - (salal)	CEGL007365	GNRS2	CR, WC	WA		Halverson et al. 1986: 88; Topik et al. 1986: 88; McCain and Diaz 2002b; Meidinger et al. 2005; Crawford et al. 2009; Chappell 2006b
<i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> - <i>Vaccinium parvifolium</i> forest	Douglas-fir / salal - red huckleberry	CEGL005532	G3G4S3	CR, WC	BC, CA, WA		Topik et al. 1986; Meidinger et al. 2005; Henderson et al. 1989; Henderson et al. 1986; Fonda and Bernardi 1976; del Moral and Long 1977; Crawford et al. 2009; Agee and Wasem 1987
<i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> / <i>Polystichum munitum</i>	Douglas-fir / salal / swordfern	CEGL000070	G4S3	WC			Klinka et al. 1996: 151; Atzet and McCrimmon 1990; Odion et al. 2013
<i>Pseudotsuga menziesii</i> / <i>Holodiscus discolor</i> - <i>Whipplea modesta</i>	Douglas-fir / oceanspray - whipplevine	OR0022	G3S3	KM, WC, WV	CA, WA		Hemstrom et al. 1987: 70; Atzet et al. 1996; McCain and Diaz 2002b

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pseudotsuga menziesii</i> / <i>Holodiscus discolor</i> / <i>Carex geyeri</i>	Douglas-fir / oceanspray / elk sedge	CEGL000437	G3S3	BM, EC	WA		Johnson and Clausnitzer 1992: 85; Titus et al. 1998; Topik et al. 1988; John and Tart 1986; Hemstrom et al. 1987; Dyrness et al. 1974a; Douglas 1971; Crowe et al. 2004; Agee and Kertis 1987
<i>Pseudotsuga menziesii</i> / <i>Mahonia aquifolium</i>	Douglas-fir / Pipers Oregongrape	CEGL000069	G3S3	KM	CA?		Atzet and Wheeler 1984: 224
<i>Pseudotsuga menziesii</i> / <i>Mahonia nervosa</i>	Douglas-fir / dwarf Oregongrape	CEGL000068	G3S3	CR, KM, WC, WV	CA?		Atzet and Wheeler 1984: 223; Atzet et al. 1996; Klinka et al. 1996: 151; McCain and Diaz 2002a; McCain and Diaz 2002b
<i>Pseudotsuga menziesii</i> / <i>Mahonia repens</i>	Douglas-fir / creeping Oregongrape	CEGL000442	G5S2	BM, KM	AZ, CO, ID, MT, NM, UT, WY		Cole 1977b: 59; Steele et al. 1981: 36; Cole 1982: 8; Steele et al. 1983: 30; Atzet and Wheeler 1984: 222
<i>Pseudotsuga menziesii</i> / <i>Menziesia ferruginea</i> / <i>Clintonia uniflora</i> forest	Douglas-fir / rusty menziesia / bride's bonnet	CEGL005851	G3?SU	BM	AB?, ID, MT, WA?		Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Achuff et al. 2002; Youngblood and Mauk 1985; Walkup 1991b; Tendick et al. 2010; Stuever and Hayden 1997a; Stevens et al. 2015; Steele et al. 1983; Steele et al. 1981; Roberts et al. 1992; Roberts 1980; Pfister et al. 1977; Muldavin et al. 2011b; Muldavin et al. 1996; Mauk and Henderson 1984; Larson and Moir 1987; Jones and Ogle 2000; Johnston 1987; Johnston 1984; Hoffman and Alexander 1976; Coles et al. 2010; Coles et al. 2008a; Cole 1982; Cole 1977b; Atzet and Wheeler 1984; Alexander et al. 1984b
<i>Pseudotsuga menziesii</i> / <i>Notholithocarpus densiflorus</i> - <i>Chrysolepis chrysophylla</i> var. <i>chrysophylla</i>	Douglas-fir / tan oak - golden chinquapin	CEGL000074	G3S2	KM	CA		Atzet and Wheeler 1984: 217
<i>Pseudotsuga menziesii</i> / <i>Notholithocarpus densiflorus</i> - <i>Quercus chrysolepis</i>	Douglas-fir / tan oak - canyon live oak	CEGL000076	G3G4S3	KM	CA		Atzet and Wheeler 1984: 175, 176, 220
<i>Pseudotsuga menziesii</i> / <i>Notholithocarpus densiflorus</i> / <i>Gaultheria shallon</i>	Douglas-fir / tan oak / salal	CEGL000075	G4S3	KM	CA		Atzet and Wheeler 1984: 165, 168, 169, 216; Atzet et al. 1996
<i>Pseudotsuga menziesii</i> / <i>Notholithocarpus densiflorus</i> / <i>Gaultheria shallon</i> - <i>Mahonia nervosa</i> var. <i>nervosa</i>	Douglas-fir / tan oak / dwarf Oregongrape	OR0023	G3G4S3	KM	CA		Atzet and Wheeler 1984: 173, 174, 219; Atzet et al. 1996
<i>Pseudotsuga menziesii</i> / <i>Notholithocarpus densiflorus</i> / <i>Toxicodendron diversilobum</i>	Douglas-fir / tan oak / poison oak	CEGL000078	G4S4	KM	CA		Atzet and Wheeler 1984: 177, 218
<i>Pseudotsuga menziesii</i> / <i>Notholithocarpus densiflorus</i> / <i>Vaccinium uliginosum</i>	Douglas-fir / tan oak / bog blueberry	CEGL000079	G4SU	KM	CA		Atzet and Wheeler 1984
<i>Pseudotsuga menziesii</i> / <i>Physocarpus malvaceus</i>	Douglas-fir / mallow ninebark	CEGL000447	G5S3	BM	BC?, ID, MT, UT, WA, WY		Hall 1973: 31; Steele et al. 1981: 44; Cole 1982: 57; Cole 1982: 6; Steele et al. 1983: 22; Johnson and Simon 1987: 345; Cooper et al. 1991: 73; Johnson and Clausnitzer 1992: 83; Zamora 1983; Youngblood and Mauk 1985; Williams et al. 1990b; Williams and Lillybridge 1985; Williams and Lillybridge 1983; Steele et al. 1983; Steele et al. 1981; Pfister et al. 1977; Mauk and Henderson 1984; Jones and Ogle 2000; Johnston 1987; Daubenmire and Daubenmire 1968; Daubenmire 1952; Cooper et al. 1987; Cooper 1975; Cole 1982; Clausnitzer and Zamora 1987
<i>Pseudotsuga menziesii</i> / <i>Pseudoroegneria spicata</i>	Douglas-fir / bluebunch wheatgrass	CEGL000908	G4S2	BM	BC, CO, ID, MT, UT?, WA		Cole 1977b: 54; Steele et al. 1981: 30; Cole 1982: 5; Cooper et al. 1991: 77; Pfister et al. 1977; Pfister 1977
<i>Pseudotsuga menziesii</i> / <i>Quercus chrysolepis</i>	Douglas-fir / canyon live oak	CEGL000926	G4S2	KM	CA		Atzet and Wheeler 1984

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Pseudotsuga menziesii</i> / <i>Rhododendron macrophyllum</i> - <i>Vaccinium ovatum</i>	Douglas-fir / western rhododendron - evergreen huckleberry	CEGL005546	GNRS3	CR	WA		Moir et al. 1973b; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom et al. 1982; Hemstrom and Logan 1986; Halverson et al. 1986; Dyrness et al. 1974a; Christy et al. 1998; Atzet and McCrimmon 1990
<i>Pseudotsuga menziesii</i> / <i>Spiraea betulifolia</i>	Douglas-fir / birchleaf spiraea	CEGL000457	G5S4	BM	AB, ID, MT, WY		Head 1959: 27; Steele et al. 1981: 40; Steele et al. 1983: 26; Johnson and Simon 1987: 352; Cooper et al. 1991: 76
<i>Pseudotsuga menziesii</i> / <i>Symphoricarpos albus</i>	Douglas-fir / common snowberry	CEGL000459	G5S3	BM, CP, EC, WC	AB, BC?, ID, MT, WA, WY	FW	Steele et al. 1983: 25; Johnson and Simon 1987: 358; Cooper et al. 1991: 75; Johnson and Clausnitzer 1992: 87; Wooten and Morrison 1995: 77; Crowe and Clausnitzer 1997: 64, 66; Titus et al. 1998; Crowe et al. 2004: 315, 317; Wells 2006: 58
<i>Pseudotsuga menziesii</i> / <i>Symphoricarpos albus</i> / <i>Hieracium albertinum</i>	Douglas-fir / common snowberry / hawkweed	CEGL000458	G2S2	EC	CA?, WA		Topik et al. 1988: 67; Titus et al. 1998; Topik et al. 1988; Titus et al. 1998; Kovalchik 2001; Hemstrom et al. 1987; Ganskopp 1979; Crowe et al. 2004; Crowe and Clausnitzer 1997
<i>Pseudotsuga menziesii</i> / <i>Symphoricarpos oreophilus</i>	Douglas-fir / mountain snowberry	CEGL000462	G5S3	BM	AZ, CO, ID, MT, NM, UT, WA, WY +		Steele et al. 1981: 32; Steele et al. 1983: 34; Day and Wright 1985: 5; Johnson and Simon 1987: 365; Johnson and Clausnitzer 1992:89; Williams et al. 1990b; Williams and Lillybridge 1985; Williams and Lillybridge 1983; Tendick et al. 2011b; Tendick et al. 2010; Salas et al. 2010b; Romme et al. 1993; Reid and Hall 2010; Reed 1976; Pfister et al. 1977; Muldavin et al. 1996; Mauk and Henderson 1984; Lillybridge et al. 1995; Komarkova et al. 1988b; Kittel et al. 1999b; Kittel et al. 1994; Kearsley et al. 2015; Jones and Ogle 2000; Johnston 1987; Hess and Wasser 1982; Friesen et al. 2010; Fischer and Bradley 1987; Diamond 1993; Day and Wright 1985; Coles et al. 2010; Coles et al. 2008c; Coles et al. 2008a; Cogan et al. 2005; Cogan et al. 2004; Clark et al. 2009; Bell et al. 2009; Arno 1980
<i>Pseudotsuga menziesii</i> / <i>Toxicodendron diversilobum</i>	Douglas-fir / poison oak	CEGL000072	G4S4	CR, KM, WC, WV	CA?		McCain and Diaz 2002a; Atzet and Wheeler 1984: 224, 225; Atzet and McCrimmon 1990: 311, 315; McCain and Diaz 2002a; McCain and Diaz 2002b
<i>Pseudotsuga menziesii</i> / <i>Umbellularia californica</i> / <i>Polystichum munitum</i> forest	Douglas-fir / California Laurel / western swordfern	CEGL003168	G4S3	KM	CA		Schirokauer et al. 2003; Sawyer et al. 2009
<i>Pseudotsuga menziesii</i> / <i>Vaccinium cespitosum</i> forest	Douglas-fir / dwarf Bilberry	CEGL000465	G5S3	BM	AB?, ID, MT, WA		Williams et al. 1995; Williams et al. 1990b; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Ogilvie 1962; Hop et al. 2007; Crawford et al. 2009; Cooper et al. 1987
<i>Pseudotsuga menziesii</i> / <i>Vaccinium membranaceum</i>	Douglas-fir / thin-leaved blueberry	CEGL000464	G4QS2	BM	WA		Johnson and Simon 1987: 364; Johnson and Clausnitzer 1992: 81; Pfister et al. 1977; Daubenmire and Daubenmire 1968; Cooper et al. 1987
<i>Pseudotsuga menziesii</i> / <i>Vaccinium membranaceum</i> / <i>Xerophyllum tenax</i> forest	Douglas-fir / thinline huckleberry / common beargrass	CEGL005852	G4G5S2	BM	AB, ID, MT, WA		Schirokauer et al. 2003; Sawyer et al. 2009; Steele et al. 1981; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Johnson and Simon 1987; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Arno and Peterson 1983; Achuff et al. 2002
<i>Psilocarphus brevissimus</i> Vernal Pool [Provisional]	Dwarf wooly-heads	OR1132	G2S2	KM	CA?	VP	Titus and Christy 2017: 5
<i>Puccinellia lemmonii</i> - <i>Poa secunda</i>	Lemmon alkaligrass - alkali bluegrass	CEGL001658	G1S1	BM, BR, EC		AW	Kagan 1986
<i>Purshia tridentata</i> - <i>Artemisia tridentata</i> - <i>Tetradymia canescens</i> shrubland	antelope bitterbrush - big sagebrush - spineless horsebrush shrubland	CEGL003481	GNRSU	BR, EC	CA		Sawyer et al. 2009; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a
<i>Purshia tridentata</i> / <i>Carex inops</i> ssp. <i>inops</i> - <i>Achnatherum occidentale</i>	bitterbrush / long-stolon sedge - western needlegrass	CEGL001492	G2S1	EC			Volland 1976: 29

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Purshia tridentata / Festuca idahoensis shrub grassland	bitterbrush / Idaho fescue	CEGL002674	G3G5S1	BM, EC	CA?, ID, MT, NV, WA, WY		Dealy 1971: 64; Johnson and Simon 1987: 167; Johnson and Clausnitzer 1992: 135; Tweit and Houston 1980; Mueggler and Stewart 1980; Lewis 1975a; Johnson and Simon 1987; Hall 1973; Erixson et al. 2011b; Daubenmire 1970
Purshia tridentata / Hesperostipa comata	bitterbrush / needle-and-thread	CEGL001498	G2S1	BR, CP	ID, MT, NV, UT, WA		Poulton 1955; Daubenmire 1970; Easterly and Salstrom 1997: 26; Hironaka et al. 1983; Erixson et al. 2011b; Daubenmire 1970; Cooper 2003; Tendick et al. 2011b; Schulz and Hall 2011; Poulton 1955
Purshia tridentata / Oryzopsis hymenoides	bitterbrush / indian ricegrass dune community	CEGL001058	G1S1	BM, CP	ID, WA, WY?		Daubenmire 1970; Easterly and Salstrom 1997: 29; Poulton 1955; Erixson et al. 2011b; Daubenmire 1975; Crawford 1986; Copeland 1978; Chadwick and Dalke 1965
Purshia tridentata / Poa secunda	bitterbrush / Sandberg bluegrass	CEGL001059	G1?QS1	CP	ID		Reid et al. 1994; Moseley 1987c
Purshia tridentata / Pseudoroegneria spicata	bitterbrush / bluebunch wheatgrass	CEGL001495	G3S1	BM, EC	BC, CA?, ID, MT, WA		Hall 1973: 20; Johnson and Simon 1987: 172; Easterly and Salstrom 1997: 25; Mueggler and Stewart 1980; Hironaka et al. 1983; Erixson et al. 2011b; Daubenmire 1970; Crawford et al. 2009; Cooper 2003; Bell et al. 2009
Quercus garryana - Acer macrophyllum - Pseudotsuga menziesii / Acer circinatum - Corylus cornuta	white oak - bigleaf maple - Douglas-fir / vine maple - hazel	OR0024	G3S3	WV	WA?		Buechling et al. 2008
Quercus garryana - Fraxinus latifolia / Symphoricarpos albus	white oak - Oregon ash / common snowberry	CEGL003299	G2S2	KM, WC, WV	WA	FW	Smith 1985: 529; Titus et al. 1996; Copass and Ramm-Granberg 2016b; Chappell and Crawford 1997; Chappell 2006b; Buechling et al. 2008: 9; McCain 2004: 274, 283
Quercus garryana - Juniperus occidentalis / Ceanothus cuneatus / Festuca idahoensis	white oak - western juniper savanna	OR0025	G1S1	KM	CA		ORBIC unpubl. data
Quercus garryana - Quercus kelloggii / Toxicodendron diversilobum	white oak - black oak / poison oak	CEGL000931	G2S2	KM, WV	CA		Smith 1985: 528; Jimerson 1993; Sawyer et al. 2009; Riegel et al. 1992; Buechling et al. 2008
Quercus garryana / Ceanothus cuneatus / Festuca idahoensis	white oak / buckbrush / Idaho fescue	CEGL000930	G2S2	KM	CA		Riegel et al. 1992: 70; Detling 1961; Barbour and Major 1988
Quercus garryana / Elymus glaucus	white oak / blue wildrye	CEGL000550	G1G2S1	CP, EC	CA, WA		John and Tart 1986
Quercus garryana / Festuca (idahoensis ssp. roemerii, rubra) wooded grassland	white oak / Roemer fescue savanna	CEGL001714	G1S1	CR, KM, WV	CA, WA		Buechling et al. 2008; Thilenius 1968; Sawyer and Keeler-Wolf 1995; Reid et al. 1994; John and Tart 1986; Chappell et al. 1997; Chappell 2006b
Quercus garryana / Festuca idahoensis woodland	Oregon white oak / Idaho fescue woodland	CEGL000551	G1?S1	KM, WV	WA		Thilenius 1968; ORBIC unpubl. data
Quercus garryana / Pseudoregnaria spicata	white oak / bluebunch wheatgrass	CEGL000552	G1G2S1	CP, EC	WA		Buechling et al. 2008; Lillybridge et al. 1995; John and Tart 1986; Williams and Smith 1990
Quercus garryana / Symphoricarpos albus / Polystichum munitum	white oak / snowberry / sword fern	CEGL003353	G2S1	WV			Thilenius 1968: 1128
Quercus garryana / Toxicodendron diversilobum / Elymus glaucus	white oak / poison oak / blue wildrye	CEGL000932	G2S1	CR, EC, WC, WV	CA, WA		Thilenius 1968: 1128; Riegel et al. 1992: 70; Stumpf et al. 2017; Buechling et al. 2008
Quercus garryana / Viburnum ellipticum - Toxicodendron diversilobum woodland	Oregon white oak / western Blackhaw - Pacific poison-oak woodland	CEGL003354	G1S1	EC, WV	WA		Buechling et al. 2008; Chappell 2006b
Quercus vaccinifolia - Arctostaphylos patula shrubland	huckleberry oak - greenleaf manzanita chaparral	CEGL008697	GNRS3	KM	CA		Sawyer et al. 2009; Sawyer and Thornburgh 1977; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a
Ranunculus aquatilis - Callitriche palustris vegetation	water crowfoot - vernal water starwort	CEGL001984	G5S5	BM		AB	Crowe et al. 2004; Jankovsky-Jones et al. 2001; Salas et al. 2010b
Ranunculus aquatilis - Callitriche verna aquatic vegetation	whitewater Crowfoot - Vernal water-starwort aquatic vegetation	CEGL003307	G5S5	ALL	CO	AB	Salas et al. 2010b; Robbins 1918; Jankovsky-Jones et al. 2001; Fuller 1930; Crowe et al. 2004: 60; Christy 2004: 137

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Ranunculus flammula Aquatic Vegetation [Provisional]	Creeping buttercup	OR1133	G5S3	CR, WC		AB, FM	Christy 2004: 138
Ranunculus lobbii aquatic vegetation	Lobb's buttercup aquatic vegetation	CEGL003308	G3S2	KM, WV		AB	Titus and Christy 1996b; Titus and Christy 2017: 4
Rhamnus alnifolia riparian wet shrubland	alderleaf buckthorn riparian wet shrubland	CEGL001132	G3S2	BM	AB, ID, MT, WA, WY	SS	Youngblood et al. 1985a; Reid et al. 2004; Hop et al. 2007; Hansen et al. 1988b; Hansen and Hall 2002; Elzinga and Rosentreter 2000; Crowe et al. 2004: 225; Crowe et al. 2002; Crowe and Clausnitzer 1997; Cogan et al. 2005; Bursik and Moseley 1995; Allen 2013
Rhododendron (columbianum, groenlandicum) - Myrica gale / Sphagnum spp. Fen	Western Labrador-tea - sweet gale / sphagnum	CEGL003335	G2S1	CR	BC, WA	FE	Christy 2001a: 25; Christy 2004: 47
Rhododendron columbianum - Gaultheria shallon / Carex obnupta Fen	Western Labrador tea - salal / slough sedge	CEGL003437	G2S2	CR	CA?	FE	Christy 2001a: 23; Christy and Brophy 2002; Christy 2004: 42; McCain and Christy 2005; Kunze 1994
Rhododendron columbianum / Carex obnupta / Sphagnum spp. Fen	Western Labrador-tea / slough sedge / sphagnum	CEGL003434	G2S2	CR	CA?	FE	Christy 2001a: 16, 17; Christy 2004: 43
Rhododendron columbianum / Carex scopulorum Fen [Provisional]	Western Labrador-tea / mountain sedge	OR1135	G4S2	BM		FE	Crowe et al. 2004: 267; Wells 2006: 96
Rhododendron columbianum / Darlingonia californica / Sphagnum spp. Fen	Western Labrador-tea / darlingtonia / sphagnum	CEGL003435	G2S2	CR		FE	Christy 2001a: 19, 21; Christy 2004: 45
Rhododendron columbianum / Sanguisorba officinalis / Sphagnum spp. Fen	Western Labrador tea / great burnet / sphagnum	CEGL003436	G1S1	CR		FE	Christy 2001a: 22; Christy 2004: 48
Rhododendron occidentale Shrub Swamp [Provisional]	Western azalea	OR1136	G2S2	KM	CA	SF	Titus and Christy 2017: 2
Rhus glabra / Aristida purpurea var. longiseta shrub grassland	smooth sumac / red three-awn shrub grassland	CEGL001507	G1S1	BM	ID?, WA		Tisdale 1986; Franklin and Dyrness 1973; Daubenmire 1970
Rhus glabra / Pseudoroegneria spicata	smooth sumac / bluebunch wheatgrass	CEGL001122	G2S2	BM	ID, WA		Daubenmire 1970; Crawford 2003; Johnson and Simon 1987: 201
Ribes bracteosum - Rubus spectabilis / Chrysosplenium glechomifolium Wet Shrubland [Provisional]	Stink currant - salmonberry / western golden carpet	OR1137	G4S3	CR		SS	McCain 2004: 200
Ribes bracteosum - Rubus spectabilis / mesic forbs Wet Shrubland [Provisional]	Stink currant - salmonberry / mesic forbs	OR1138	G4S3	CR, WC		SS	Murray 2000: 34; McCain 2004: 68, 94, 102, 207, 211
Ribes lacustre - Ribes hudsonianum / Cinna latifolia	prickly currant - northern black currant / drooping woodreed	CEGL003445	G2S2	BM	WA?	SS	Crowe and Clausnitzer 1997: 150, 164; Crowe et al. 2004: 189
Ribes lacustre - Ribes hudsonianum / Glyceria striata	prickly currant - northern black currant / fowl mannagrass	CEGL003446	G2S2	BM		SS	Crowe et al. 2004: 191; Crowe and Clausnitzer 1997
Rosa nutkana - Festuca idahoensis grassland	Nootka rose - Idaho fescue grassland	CEGL001626	G1G2S1	BR	ID, WA		Reid et al. 1994; Johnson and Simon 1987; Johnson and Simon 1985; Daubenmire 1970
Rosa nutkana / Deschampsia cespitosa	Nootka rose / tufted hairgrass brush prairie	CEGL003344	G2S2	WV		WP	Boss 1983: 98; Kauffman and Connelly 1989: 2, 3; Connelly 1989: 21, 22; Connelly
Rosa nutkana / Oenanthe sarmentosa	Nootka rose / water parsley shrub swamp	CEGL003457	G2S2	WV		WP	Marshall 1985: 142
Rosa woodsii	Wood's rose	CEGL001126	G5SU	BM, BR, CP, EC	CA, ID, MT, NV, WA +	SS	Titus et al. 1998; Schulz and Hall 2011; Sawyer et al. 2009; Reid et al. 2004; Peterson 2008; Nachlinger and Reese 1996; Manning and Padgett 1995; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991; Hansen et al. 1990; Evens et al. 2014; Erixson et al. 2011b; Crawford 2003; Cogan et al. 2012; Cogan and Taylor 2014;
Rubus parviflorus / Achlys triphylla Riparian Shrubland [Provisional]	Thimbleberry / vanillaleaf	OR1140	G3S3	WC		SS	McCain 2004: 76
Rubus spectabilis - Vaccinium ovalifolium / Lysichiton americanus Wet Shrubland [Provisional]	Salmonberry - early blueberry / skunk cabbage	OR1141	G3S3	WC		SS	McCain 2004: 170

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Rubus spectabilis - Vaccinium ovalifolium / Polystichum munitum Wet Shrubland [Provisional]	Salmonberry - early blueberry / sword fern	OR1142	G3S3	CR		SS	McCain 2004: 239
Rubus spectabilis / mesic forbs Wet Shrubland [Provisional]	Stink currant - salmonberry / mesic forbs	OR1143	G4S3	CR, WC		SS	McCain 2004: 221, 225, 234, 244
Rubus spectabilis / Tolmiea menziesii Wet Shrubland [Provisional]	Salmonberry / piggyback plant	OR1144	G3S3	CR, WC		SS	McCain 2004: 86
Ruppia (cirrhosa,maritima)	spiral ditch-grass, widgeongrass alkaline bed	CEGL003119	G3S2	CR, BM, BR	CA, NV?	SM	Thorne 1982; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Odion et al. 1992
Sagittaria latifolia	wapato marsh	CEGL003321	G3S2	WV	BC?, CA?, WA	FM	Christy and Putera 1993: 40; Kunze 1994: 48, 57; Titus et al. 1996; Christy 2004: 139
Salicornia (bigelovii, depressa)	(dwarf saltwort, Virginia glasswort) salt marsh	CEGL003123	GNRQS2	CR	CA?, WA?	SM	Eilers 1984: 12; Dethier 1990: 32, 33
Salicornia depressa - Distichlis spicata - Triglochin maritima - (Jaumea carnososa)	Virginia glasswort - saltgrass - arrow grass - (jaumea) salt marsh	CEGL003366	G3S2	CR	BC?, WA	SM	Eilers 1984: 12; Dethier 1990: 34; Rocchio et al. 2012; MacKenzie and Moran 2004; Kunze 1984; Eilers 1984; Dethier 1990; Ball 2003a
Salix (boothii, geyeriana) / Carex aquatilis wet shrubland	Booth willow - Geyer willow / water sedge	CEGL001176	G3S3	BM, EC	CA?, CO?, ID, UT, WA	SS	Kovalchik 1987: 80; Padgett et al. 1989: 56, 65; Manning and Padgett 1991: 265; Titus and Christy 1996a; Crowe and Clausnitzer 1997: 108; Walford et al. 2001; Tuhy 1981; Padgett et al. 1988b; Norton et al. 1981; Mutz and Queiroz 1983; Kovalchik 2001; Kovalchik 1987; Hansen et al. 1995; Hansen et al. 1988b; Hansen and Hall 2002; Crowe et al. 2004: 279
Salix (hookeriana, sitchensis) - Spiraea douglasii	willow (Hooker willow, Sitka willow) - Douglas spiraea shrub swamp	CEGL003386	G3G4S3	CR, WV	BC?, WA	SS	Christy and Putera 1993: 40; Kunze 1994: 89, 90; Christy 2004: 53
Salix (melanopsis, sitchensis) Cobble Bar wet shrubland	dusky willow	CEGL002705	G3S3	BM, BR	ID, MT?, WA	SS	Titus et al. 1998; Tuhy and Jensen 1982; Rust et al. 2003; Murray 2000; Kovalchik 2001; Kerr 2000; Diaz and Mellen 1996; Crowe et al. 2004: 247; Crowe and Clausnitzer 1997; Brunsfeld and Johnson 1985
Salix amygdaloides - Salix exigua	peachleaf willow - coyote willow	CEGL000948	G2S1	BM, CP	ID?, NM, UT, WA	SS	Von Loh et al. 2002; Von Loh 2000; Muldavin et al. 2011b; Hirschberger 1978; Hibner 2009; Hansen et al. 1995; Evans 1989a
Salix boothii - Salix eastwoodiae / Carex nigricans	Booth willow - mountain willow riparian / black alpine sedge	CEGL002607	G3S2	BM, EC	NV?	SS	Kovalchik 1987: 137; Crowe et al. 2004: 258
Salix boothii - Salix geyeriana / Carex angustata wet shrubland	Booth willow - Geyer willow / widefruit sedge	CEGL001185	G2S2	EC	WA?	SS	Kovalchik 1987: 78; Crowe et al. 2004: 282
Salix boothii - Salix geyeriana / Carex utriculata	Booth willow - Geyer willow / beaked sedge	CEGL001178	G4S3	BM, EC	CA?, CO, ID, MT, UT, WY	SS	Kovalchik 1987: 84; Crowe and Clausnitzer 1997: 106; Crowe et al. 2004: 273; Walford et al. 2001; Tuhy and Jensen 1982; Reid et al. 2004; Padgett et al. 1989; Padgett et al. 1988b; Norton et al. 1981; Mutz and Queiroz 1983; Mutz and Graham 1982; Kittel et al. 1999b; Kittel et al. 1999a; Kittel et al. 1994; Kittel and Lederer 1993; Kettler and McMullen 1996; Jones and Ogle 2000; Hop et al. 2007; Hansen et al. 1995; Cogan et al. 2005
Salix boothii - Salix lemmonii / Aconitum columbianum	Booth willow - Lemmon willow / Columbia monkshood	CEGL001186	G3S2	BM, EC	CA?, NV?	SS	Manning and Padgett 1991; Kovalchik 1987; Crowe et al. 2004: 289; Crowe and Clausnitzer 1997
Salix boothii / Calamagrostis canadensis	Booth willow / bluejoint reedgrass	CEGL001175	G5S3	BM	CO, ID, MT?, NV, UT, WA?, WY	SS	Padgett et al. 1989: 59; Titus et al. 1998; Tuhy and Jensen 1982; Reid et al. 2004; Peterson 2008; Padgett et al. 1988b; Norton et al. 1981; Mutz and Queiroz 1983; Mutz and Graham 1982; Kovalchik 2001; Hop et al. 2007; Hansen et al. 1995; Crowe et al. 2004: 256; Carsey et al. 2003a; Wells 2006: 84

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Salix boothii / Carex scopulorum Wet Shrubland [Provisional]	Booth willow / mountain sedge	OR1145	G3S2	BM		SS	Crowe et al. 2004: 253; Wells 2006: 78
Salix boothii / Deschampsia cespitosa Wet Shrubland [Provisional]	Booth willow / tufted hairgrass	OR1146	G2S2	BM, EC		SS	Crowe et al. 2004: 257
Salix boothii / mesic graminoids Wet Shrubland	Booth willow / mesic graminoids	CEGL001181	G3S2	BM, BR, EC		SS	Crowe et al. 2004: 284, 288; Schulz and Hall 2011; Reid 1990; Padgett et al. 1989; Padgett et al. 1988b; Jones and Ogle 2000; Hansen et al. 1995; Cogan et al. 2012; Cogan et al. 2005; Carsey et al. 2003a
Salix boothii mesic forbs	Booth willow mesic forbs shrubland	CEGL001180	G3S3	BM, EC	CA, CO, ID, MT, NV, UT, WY	SS	Youngblood et al. 1985b; Youngblood et al. 1985a; Weixelman et al. 1996; Schulz and Hall 2011; Sawyer and Keeler-Wolf 1995; Reid et al. 2004; Peterson 2008; Padgett et al. 1989; Padgett et al. 1988b; Norton et al. 1981; Kittel et al. 1999b; Kittel et al. 1997b; Kittel et al. 1995; Kittel et al. 1994; Kittel and Lederer 1993; Kettler and McMullen 1996; Jones and Ogle 2000; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1988b; Cogan et al. 2012; Cogan et al. 2005; Carsey et al. 2003a; Wells 2006: 82
Salix commutata / Carex aquatilis var. dives Wet Shrubland [Provisional]	Undergreen willow / Sitka sedge	OR1147	G3S2	WC		SS	Murray 2000: 35
Salix commutata / Carex scopulorum	undergreen willow / Holm sedge	CEGL001189	G3S3	BM, EC	CA, ID, NM, WA	SS	Kovalchik 1987: 137; Crowe and Clausnitzer 1997: 104; Titus et al. 1998; Tuhy and Jensen 1982; Seyer 1983; Seyer 1981; Mutz and Queiroz 1983; McCain and Christy 2005; Kovalchik 2001; Jankovsky-Jones 1999; Crowe et al. 2004: 251; Christy 2004: 51; Brunsfeld and Johnson 1985; Wells 2006: 80
Salix drummondiana	Drummond willow	CEGL001190	G3QS1	BM, BR	CO?, ID?, MT	SS	Manning and Padgett 1991: 321; Phillips 1977; Kittel and Lederer 1993; Hansen et al. 1995; Hansen et al. 1991; Hansen et al. 1989; Boggs et al. 1990; Baker 1989b
Salix drummondiana / Carex scopulorum Wet Shrubland	Drummond's willow / fire-thread sedge	CEGL001584	G2S2	BM	ID, WA	SS	Kovalchik 1993: 94; Bailey et al. 1994; Wells 2006: 90
Salix drummondiana / mesic forbs Wet Shrubland	Drummond willow / mesic forbs	CEGL001192	G4S1	BM, BR	AB, CO, MT, WY	SS	Carsey et al. 2003b; Kittel et al. 1999b; Manning and Padgett 1995; Padgett et al. 1989; Youngblood et al. 1985a
Salix eastwoodiae - Salix boothii / Carex aquatilis [Provisional]	Sierra willow - Booth willow / water sedge	OR1148	G2S2	BM, EC		SS	Crowe et al. 2004: 254
Salix eastwoodiae - Salix commutata / Carex utriculata Wet Shrubland [Provisional]	Sierra willow - undergreen willow / southern beaked sedge	OR1149	G3S2	BM, EC		SS	Crowe et al. 2004: 255
Salix eastwoodiae / Deschampsia cespitosa wet shrubland	Mountain willow / tufted hairgrass wet shrubland	CEGL003128	G3S1	BM	CA	SS	Taylor 1984; Sawyer et al. 2009; Potter 2000; Odion et al. 2013; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Keeler-Wolf 2002; Odion et al. 2013: 100
Salix exigua - Salix lasiandra var. caudata Wet Shrubland	coyote willow - Pacific willow	CEGL001204	G2S2	BM, BR, CP, EC	CA?, CO	SS	Myhre and Clements 1972: 5; Padgett et al. 1989: 73; Titus et al. 1998
Salix exigua - Salix lasiandra var. lasiandra - Cornus sericea Riparian Shrubland [Provisional]	Coyote willow - Pacific willow - red-osier dogwood	OR1150	G3S3	BM, BR, CP, EC		SS	Crowe et al. 2004: 294
Salix exigua / Equisetum arvense	coyote willow / common horsetail	CEGL001201	G3S2	BM, BR, CP, EC	ID, NM, WA, WY	SS	Huschle 1975: 232, 233; Padgett et al. 1989: 75; Crowe and Clausnitzer 1997: 114; Moseley 1998: 24; Titus et al. 1998; Crowe et al. 2004: 293



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Salix exigua</i> / mesic forbs wet shrubland	Narrowleaf willow / mesic forbs wet shrubland	CEGL001202	G2S2	BM, BR, CP, EC	CO, ID, NV, UT, WY	SS	Thomas et al. 2009b; Tendick et al. 2010; Peterson 2008; Padgett et al. 1989; Padgett et al. 1988b; Manning and Padgett 1995; Jones 1992b; Jankovsky-Jones et al. 2001; Holmstead 2001; Hansen and Hall 2002; Crowe et al. 2002; Crowe and Clausnitzer 1997; Coles et al. 2010; Coles et al. 2008a; Cole 1996; Cole 1995; Cogan and Taylor 2014
<i>Salix exigua</i> / mesic gramenoid	coyote willow / common spikerush - smallfruit bulrush	CEGL001203	G5S3	BM, BR, CP	CA, CO, ID, MT, NM, NV, UT, WY	SS	Titus et al. 1998; Walford et al. 2001; Von Loh et al. 2007; Tendick et al. 2017; Tendick et al. 2012; Tendick et al. 2010; Stevens et al. 2007; Steinauer and Rolfmeier 1997; Schulz and Hall 2011; Sawyer et al. 2009; Romme et al. 1993; Peterson 2008; Padgett et al. 1989; Padgett et al. 1988b; Muldavin et al. 2000a; Kittel et al. 1999a; Kittel et al. 1996; Kittel and Lederer 1993; Kittel 1994; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Jones and Walford 1995; Jones 1992b; Hansen et al. 1995; Faber-Langendoen 2001; Evens et al. 2014; Crowe et al. 2004; Cooper and Cottrell 1990; Coles et al. 2010; Coles et al. 2008c; Coles et al. 2008a; Cogan et al. 2012; Cogan et al. 2004; Clark et al. 2009; Carsey et al. 2003a
<i>Salix exigua</i> gravel bar	coyote willow gravel bar	CEGL005656	G5S4	BM, BR, CP, EC	AZ?, CO, ID, MT, NM?, NV, UT, WA, WY	SS	Myhre and Clements 1972: 6; Miller 1976: 130; Padgett 1981: 61; Kovalchik 1987: 137; Evenden 1990: 41; Titus et al. 1998; Crowe et al. 2004: 291; Wells 2006: 86
<i>Salix exigua</i> riparian wet shrubland	Narrowleaf willow riparian wet shrubland	CEGL001197	G5S5	BM, BR, CP, EC	AB, CA, CO, ID, NM, UT, WA, WY	SS	Thompson and Hansen 2002; Tendick et al. 2011b; Tendick et al. 2011a; Sawyer et al. 2009; Salas et al. 2011; Salas et al. 2010b; Phillips 1977; Padgett et al. 1989; Owns et al. 2004; Muldavin et al. 2000a; Kovalchik 1987; Klein et al. 2007; Kittel et al. 2012a; Kittel et al. 1996; Kittel et al. 1995; Kittel and Lederer 1993; Kittel 1993; Hansen et al. 1995; Hansen et al. 1991; Hansen et al. 1989; Evenden 1990; Erixson and Cogan 2012c; Donnelly et al. 2006; Crawford 2003; Caicco et al. 1995; Borchert et al. 2004
<i>Salix farriar</i> / <i>Allium validum</i> - <i>Carex scopulorum</i> Wet Shrubland [Provisional]	Farr's willow / Pacific swamp onion - mountain sedge	OR1151	G2S1	BM		SS	Crowe et al. 2004: 271; Wells 2006: 89
<i>Salix farriar</i> / <i>Carex aquatilis</i> Wet Shrubland [Provisional]	Farr's willow / water sedge	OR1152	G2S1	BM		SS	Crowe et al. 2004: 270; Wells 2006: 88
<i>Salix geyeriana</i> - <i>Salix hookeriana</i> wet shrubland	Geyer willow - Piper willow	CEGL003295	G1S1	CR, WV	WA?	SS	Christy unpubl. data 1990
<i>Salix geyeriana</i> - <i>Salix lemmonii</i> / <i>Carex aquatilis</i> var. <i>dives</i>	Geyer willow - Lemmon willow / Sitka sedge	CEGL001212	G3S2	EC	CA?, ID?, NV?	SS	Peterson 2008; Kovalchik 1987; Crowe et al. 2004: 276; Crowe et al. 2002; Murray 2000
<i>Salix geyeriana</i> - <i>Salix prolixa</i> Shrubland	Geyer willow - rigid willow	CEGL001213	G3S1	BR, CP		SS	ORBIC unpubl. data
<i>Salix geyeriana</i> / <i>Calamagrostis canadensis</i>	Geyer willow / bluejoint wet shrubland	CEGL001205	G5S3	BM, EC	CO, ID, MT, UT, WY	SS	Youngblood et al. 1985a; Walford et al. 2001; Tuhy and Jensen 1982; Salas et al. 2005; Padgett et al. 1989; Mutz and Queiroz 1983; Manning and Padgett 1995; Kittel et al. 1999b; Kittel et al. 1999a; Kittel et al. 1994; Kettler and McMullen 1996; Jones and Ogle 2000; Johnston 1987; Hansen et al. 1995; Hansen et al. 1991; Hall and Hansen 1997; Girard et al. 1997; Crowe et al. 2004: 272; Crowe and Clausnitzer 1997; Cooper and Cottrell 1990; Cogan et al. 2005; Carsey et al. 2003b; Carsey et al. 2003a

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Salix geyeriana</i> / <i>Carex utriculata</i>	Geyer willow / northweset territory sedge wet shrubland	CEGL001207	G5SU	BM, EC	CO, ID, MT, NV, UT, WY	SS	Kovalchik 1987: 82; Padgett et al. 1989: 65; Titus et al. 1998; Youngblood et al. 1985a; Walford et al. 2001; Tuhy and Jensen 1982; Salas et al. 2005; Rice et al. 2012c; Reznicek 1987; Phillips 1977; Peterson 2008; Mutz and Queiroz 1983; Manning and Padgett 1995; Kittel et al. 1999a; Kittel and Lederer 1993; Kettler and McMullen 1996; Jones and Ogle 2000; Jones 1992c; Johnston 1987; Hansen et al. 1995; Hansen et al. 1991; Hall and Hansen 1997; Girard et al. 1997; Cogan et al. 2005; Carsey et al. 2003a; Crowe et al. 2004: 273
<i>Salix geyeriana</i> / <i>Deschampsia cespitosa</i> - <i>Carex nebrascensis</i> Wet Shrubland [Provisional]	Geyer willow / tufted hairgrass - Nebraska sedge	OR1153	G3S2	BM, EC		SS	Crowe et al. 2004: 287
<i>Salix geyeriana</i> / mesic forbs	Geyer willow / mesic forbs wet shrubland	CEGL002666	G3S3	BM, BR, EC	CO, ID, MT, UT, WY	SS	Youngblood et al. 1985b; Youngblood et al. 1985a; Weixelman et al. 1996; Walford et al. 2001; Tuhy 1981; Tendick et al. 2010; Richard et al. 1996; Reid et al. 2004; Phillips 1977; Padgett et al. 1989; Padgett et al. 1988b; Mattson 1984; Kittel et al. 1999b; Kittel et al. 1999a; Kettler and McMullen 1996; Jones and Ogle 2000; Johnston 1987; Jensen and Tuhy 1981; Jankovsky-Jones et al. 2001; Hop et al. 2007; Hansen and Hall 2002; Crowe and Clausnitzer 1997; Coles et al. 2010; Carsey et al. 2003b; Carsey et al. 2003a
<i>Salix geyeriana</i> / mesic graminoides	Geyer willow / Baltic rush	CEGL001210	G3?S3	EC	CO, ID, NV, UT, WY	SS	Kovalchik 1987: 74, 82; Titus et al. 1998; Weixelman et al. 1996; Walford et al. 2001; Tendick et al. 2010; Sawyer et al. 2009; Salas et al. 2005; Peterson 2008; Padgett et al. 1989; Padgett et al. 1988b; Norton et al. 1981; Mutz and Queiroz 1983; Manning and Padgett 1995; Kovalchik 2001; Hansen et al. 1995; Hansen and Hall 2002; Evenden 1990; Crowe et al. 2002; Coles et al. 2010; Cogan et al. 2005
<i>Salix hookeriana</i> - ( <i>Malus fusca</i> ) / <i>Carex obnupta</i> - <i>Lysichiton americanus</i>	coast willow - (crabapple) / slough sedge - skunk cabbage shrub swamp	CEGL003432	G3S3	CR	BC?, WA	SS	Boss 1983: 51; Sanville et al. 1986: 127; Christy and Putera 1993: 40; Kunze 1994: 90, 93; Christy et al. 1998: 80; Christy 2001a: 31; Christy 2004: 54
<i>Salix hookeriana</i> - ( <i>Salix sitchensis</i> ) wet shrubland	coast willow wet shrubland	CEGL003387	G3S3	CR	WA		Christy et al. 1998: 76; Shephard 1995; Rocchio et al. 2012; McCain and Christy 2005; Kunze 1994; Copass and Ramm-Granberg 2016a; Christy 2004; Boggs 2000
<i>Salix hookeriana</i> - <i>Myrica californica</i> Wet Shrubland	coast willow deflation plain wetland	CEGL001138	G4S4	CR	CA?, WA	SS	Wiedemann 1966; Wiedemann 1984
<i>Salix hookeriana</i> / <i>Potentilla anserina</i> ssp. <i>pacifica</i> - <i>Carex obnupta</i> Wet Shrubland [Provisional]	Hooker willow / Pacific silverweed - slough sedge	OR1154	G4S4	CR		SM	Christy et al. 1998: 76
<i>Salix lasiandra</i> var. <i>lasiandra</i> - <i>Salix exigua</i> var. <i>columbiana</i> Swamp Woodland	Pacific willow - Columbia River willow	CEGL000949	G3S2	WV		SS	Marshall 1985: 143; Christy and Putera 1993: 40; Kunze 1994: 43, 50; Kunze 1994; Hirschberger 1978; Copass and Ramm-Granberg 2016b; Christy 1993
<i>Salix lasiandra</i> var. <i>lasiandra</i> - <i>Salix sitchensis</i> / <i>Lysichiton americanus</i> Swamp Woodland [Provisional]	Pacific willow - Sitka willow / skunk cabbage	OR1155	G2S2	CR, WV	WA	SS	Christy and Putera 1993: 41; Kunze 1994: 51,97; Titus et al. 1996; Christy 2004: 56
<i>Salix lasiandra</i> var. <i>lasiandra</i> / <i>Urtica dioica</i> ssp. <i>gracilis</i> Swamp Woodland	Pacific willow / northwest nettle	CEGL003409	G2S2	WV		SS	Christy 2004: 55; Kunze 1994: 43, 50; Christy 2004: 55; McCain and Christy 2005: 239; Copass and Ramm-Granberg 2016a; Christy and Putera 1993
<i>Salix lasiandra</i> var. <i>lasiandra</i> / wet graminoids Wet shrubland [Provisional]	Pacific willow / wet graminoids	OR1156	G3S2	BM, BR, EC		SS	Crowe et al. 2004: 299
<i>Salix lasiandra</i> var. <i>lasiandra</i> Riparian Shrubland [Provisional]	Pacific willow	OR1157	G3S3	BM, BR, EC		SS	Crowe et al. 2004: 297

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Salix lasiolepis</i> - <i>Cornus sericea</i> / <i>Rosa woodsii</i> wet shrubland	arroyo willow - creek dogwood	CEGL003453	G2G3SU	BM, BR, CP, EC	ID?	SS	Titus et al. 1998; Manning and Padgett 1995; Jankovsky-Jones et al. 2001; Crowe et al. 2002
<i>Salix lasiolepis</i> - <i>Rosa woodsii</i>	arroyo willow - Wood's rose	CEGL001217	G3S2	BM, BR, CP, EC	CA, NV	SS	Titus et al. 1998; Peterson 2008; Evens et al. 2014; Crowe et al. 2004: 301; Blackburn et al. 1968a
<i>Salix lemmonii</i> / <i>Rosa woodsii</i> wet shrubland	Lemmon willow / Wood's rose	CEGL002772	G3S2	BM, BR, CP, EC	CA, ID, NV	SS	Peterson 2008; Manning and Padgett 1995; Jankovsky-Jones et al. 2001; Crowe et al. 2004; Crowe et al. 2002; Crowe et al. 2004: 302
<i>Salix lemmonii</i> mesic graminoides wet shrubland	Lemmon willow / mesic graminoides	CEGL002069	GNRSU	BM, BR	ID, NV, WY	SS	Titus et al. 1998; Sawyer et al. 2009; Peterson 2008; Manning and Padgett 1995; Cogan et al. 2005
<i>Salix lemmonii</i> mesic-tall forbs wet shrubland	Lemmon willow / mesic tall forbs	CEGL002771	G3?SU	BM, BR	NV, WY	SS	Titus et al. 1998; Sawyer et al. 2009; Peterson 2008; Manning and Padgett 1995; Cogan et al. 2005
<i>Salix lucida</i> ssp. <i>caudata</i> / <i>Rosa woodsii</i> wet shrubland	Pacific willow / Wood's rose	CEGL002621	G3S2	BM, BR, CP, EC	CA?, CO?, ID, MT, NV, WY	SS	Evenden 1990: 37, 38, 39; Manning and Padgett 1991: 300; Titus et al. 1998; Evans 1989b: 22; Jankovsky-Jones et al. 1999: 32
<i>Salix lucida</i> ssp. <i>caudata</i> wet shrubland	Pacific willow / small-fruited bulrush	CEGL001215	G3QS2	BM, BR, CP, EC	CA?, CO, MT, WA	SS	Titus et al. 1998; Platts et al. 1987; Kittel et al. 1999a; Kittel et al. 1996; Kittel and Lederer 1993; Jankovsky-Jones 1994; Hansen et al. 1995; Hansen et al. 1991; Carsey et al. 2003a
<i>Salix lutea</i> / <i>Carex utriculata</i>	rigid willow / beaked sedge	CEGL001220	G4S2	BM	CA, ID, MT, NV	SS	Manning and Padgett 1995; Hansen et al. 1995; Hansen et al. 1991; Evenden 1990
<i>Salix lutea</i> / <i>Rosa woodsii</i>	rigid willow / golden currant - Wood's rose	CEGL002624	G3S2	BM	CA?, ID, MT, NV	SS	Sawyer et al. 2009; Peterson 2008; Padgett 1982; Manning and Padgett 1995; Manning and Padgett 1992; Jankovsky-Jones et al. 2001; Holmstead 2001; Evenden 1990; Dean 1960
<i>Salix melanopsis</i> wet shrubland	dusky willow wet shrubland	CEGL008699	GNRSU	BR, EC	CA	SS	Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a
<i>Salix pedicellaris</i> / ( <i>Carex aquatilis</i> var. <i>dives</i> ) Wet Shrubland [Provisional]	Bog willow / Sitka sedge	OR1158	G2S2	WC		SS	Murray 2000: 35
<i>Salix petrophila</i> - <i>Salix boothii</i> / <i>Eleocharis quinqueflora</i> Wet Dwarf-shrubland [Provisional]	Rock loving willow - Booth's willow / few-flowered spikerush	OR1159	G3S1	BM		SS	Crowe et al. 2004: 269; Wells 2006: 76
<i>Salix petrophila</i> / <i>Carex subnigricans</i> Wet Dwarf-shrubland [Provisional]	Rock loving willow / nearlyblack sedge	OR1160	G3S1	BM		SS	Crowe et al. 2004: 268
<i>Salix planifolia</i> var. <i>planifolia</i> / ( <i>Carex aquatilis</i> var. <i>dives</i> ) Wet Shrubland [Provisional]	Tea leaf willow/ Sitka sedge	OR1161	G2S2	WC		SS	Murray 2000: 36
<i>Salix prolixa</i> / <i>Rosa woodsii</i> wet shrubland	rigid willow - Wood's rose / stinging nettle	CEGL003452	G3S3	BM, BR, CP		SS	Manning and Padgett 1995; Crowe et al. 2004; Crowe et al. 2002; Crowe et al. 2004: 296
<i>Salix prolixa</i> / <i>Ribes aureum</i> - <i>Rosa woodsii</i>	rigid willow - golden currant riparian	CEGL001233	G3S2	BM, BR	NV	SS	Padgett 1981: 62; Evenden 1990: 40, 41; Manning and Padgett 1991: 122, 276, 333; Titus et al. 1998
<i>Salix scouleriana</i> Riparian Shrubland [Provisional]	Scouler's willow	OR1162	G3S3	BM, BR, EC		SS	Crowe et al. 2004: 300
<i>Salix sitchensis</i> / <i>Equisetum arvense</i> - <i>Petasites frigidus</i>	Sitka willow / field horsetail - Arctic sweet-colt's-foot	CEGL003296	G4S4	CR, WC	WA	SS	Diaz and Mellen 1996: 135, 139, 179; Titus et al. 1999; Titus et al. 1998; Murray 2000: 36, 37; Christy 2004: 57; McCain 2004: 50
<i>Salix sitchensis</i> wet shrubland	Sitka willow	CEGL002896	G4S4	KM, WV	WA	SS	Titus and Christy 1996a; Christy 2004: 57; McCain and Christy 2005; Diaz and Mellen 1996
<i>Salvia dorrii</i> / <i>Pseudoroegneria spicata</i>	desert sage / bluebunch wheatgrass	CEGL001453	G4S4	BM, BR, EC	CA?, WA?		ORBIC unpubl. data
<i>Sanguisorba officinalis</i> - <i>Carex aquatilis</i> var. <i>dives</i> [Provisional]	Burnet - Sitka sedge fen	OR0027	G2S2	CR, WC	WA?	FE	Christy 2004: 140; Murray 2000
<i>Sarcobatus vermiculatus</i> / <i>Achnatherum hymenoides</i>	black greasewood / indian ricegrass playa	CEGL001373	G4S3	BR	CA?, ID?, NV +		Blackburn et al. 1969d; ORBIC unpubl. data

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Sarcobatus vermiculatus</i> / <i>Atriplex confertifolia</i> - ( <i>Picrothamnus desertorum</i> , <i>Suaeda moquinii</i> ) wet shrubland	black greasewood / shadscale saltbush wet shrubland	CEGL001371	G5S3	BR	NV, UT	AW	Blackburn et al. 1969a; Schulz and Hall 2011; Romme et al. 1993; Peterson 2008; Clark et al. 2009; Bundy et al. 1996
<i>Sarcobatus vermiculatus</i> / <i>Distichlis spicata</i>	black greasewood / alkali saltgrass playa	CEGL001363	G4S4	BR	CO, ID, MT, NM, NV, UT, WA, WY	AW	Daubenmire 1970: 50, 51; Dealy et al. 1981:49; Moseley 1998: 33
<i>Sarcobatus vermiculatus</i> / <i>Elymus elymoides</i>	black greasewood /squirreltail wet shrubland	CEGL001372	G4S4	BR	NV	AW	Peterson 2008; Blackburn et al. 1969b
<i>Sarcobatus vermiculatus</i> / <i>Leymus cinereus</i>	black greasewood / basin wildrye playa	CEGL001366	G3S2	BR	CA, ID, MT, NV, WA	AW	Tweit and Houston 1980; Sawyer and Keeler-Wolf 1995; Peterson 2008; Mueggler and Stewart 1980; Evens et al. 2014
<i>Sarcobatus vermiculatus</i> / <i>Nitrophila occidentalis</i> - <i>Suaeda nigra</i> Wet Shrubland	black greasewood / borax weed - bushy seablite playa	CEGL001369	G5S5	BR	CA?, NV?	AW	Copeland and Greene 1982; Copeland 1979
<i>Sarcobatus vermiculatus</i> / <i>Sporobolus airoides</i>	black greasewood / alkali sacaton	CEGL001368	G3?S4	BR	CO, NM, UT, WY	AW	Terwilliger et al. 1979b; Terwilliger et al. 1979a; Tendick et al. 2017; Tendick et al. 2012; Shaw et al. 1989; Salas et al. 2010b; Romme et al. 1993; Muldavin et al. 2013c; Jones 1992b; Coles et al. 2009a; Coles et al. 2008a; Clark et al. 2009
<i>Sarcobatus vermiculatus</i> / <i>Suaeda nigra</i> Wet Shrubland	black greasewood / bushy seablite playa	CEGL001370	G4S4	BR	AZ, CO, NM, NV, UT	AW	Thomas et al. 2009a; Tendick et al. 2017; Shiflet 1994; Peterson 2008; Küchler 1964; Donnelly et al. 2006; Branson and Owen 1970
<i>Sarcocornia perennis</i> - <i>Distichlis spicata</i> - <i>Triglochin maritima</i> ( <i>Jaumea carnosa</i> ) Salt Marsh	Pickleweed - saltgrass - arrow grass - (fleshy jaumea)	CEGL003366	G3S2	CR	BC?, WA	SM	Dethier 1990; Eilers 1984; Kunze 1984; Kagan et al. 2012; Rocchio et al. 2012
<i>Saussurea americana</i> - <i>Heracleum maximum</i> Wet Meadow	American sawwort - cow parsnip	CEGL001945	G4S1	KM	WA	WM	Murray 2000: 7; Kuramoto and Bliss 1970
<i>Saxifraga odontoloma</i> - <i>Senecio triangularis</i>	brook saxifrage - arrowleaf groundsel riparian	CEGL001985	G3S3	BM, EC, WC	CO	WM	Diaz and Mellen 1996: 183; Crowe and Clausnitzer 1997: 213; Titus et al. 1998; Kovalchik 2001; Komarkova 1976; Crowe et al. 2004; Carsey et al. 2003a
<i>Schoenoplectus</i> ( <i>americanus</i> , <i>pungens</i> )	(Chairmaker's bulrush, common threesquare) tidal marsh	CEGL003367	G3S2	CR	BC, WA	TM	Frenkel et al. 1978: 57, 89, 103; Eilers 1984: 4, 8; Dethier 1990: 33; Christy and Putera 1993: 39; Kunze 1994: 58; Christy et al. 1998: 128
<i>Schoenoplectus acutus</i>	hardstem bulrush marsh	CEGL001840	G5S5	ALL	CA, CO, ID, MT, NV, UT, WA	AW, FM, SM	Christy and Cornelius 1980; Dethier 1990: 36; Kunze 1994: 24, 58, 81; Christy et al. 1998: 116; Moseley 1998: 36; Youngblood et al. 1985a; Von Loh et al. 2002; Thomas 1980; Sproul et al. 2011; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Salas et al. 2010b; Peterson 2008; Padgett et al. 1989; McCain and Christy 2005; Macdonald 1977; Kierstead and Pogson 1976; Kagan et al. 2012; Jefferson 1975; Jankovsky-Jones et al. 1999; Hansen et al. 1995; Hansen et al. 1991; Griffiths 1902; Evans 1989b; Evans 1989a; Erixson et al. 2011b; Dethier 1990; Crawford 2003; Copass and Ramm-Granberg 2016a; Coles et al. 2008a; Christy and Cornelius 1980; Bundy et al. 1996; Buck-Diaz et al. 2012; Christy 2004: 141; Crowe et al. 2004: 70
<i>Schoenoplectus americanus</i> Western Marsh (interior alkaline)	chairmaker's bulrush playa	CEGL001841	G3S3	BM, BR, CP, EC	AZ, CA, CO, ID, MT?, WA	AW	Kierstead and Pogson 1976: 1-12; Titus et al. 1998; Tuhy 1981; Sproul et al. 2011; Sawyer et al. 2009; Salas et al. 2010b; Reid and Hall 2010; Keeler-Wolf and Vaghti 2000; Keeler-Wolf 2007; Kearsley et al. 2015; Hansen et al. 1995; Evens et al. 2014; Evans 1989a; Crowe et al. 2004: 133; Christy et al. 1998; Buck-Diaz et al. 2012; Bradley 1970

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Schoenoplectus pungens</i> (estuarine) Salt Marsh [Provisional]	Common three-square (freshwater tidal)	OR1164	G3S2	CR, WV	WA	SM	Christy et al. 1998: 128, as <i>S. americanus</i>
<i>Schoenoplectus pungens</i> Marsh (interior alkaline)	Common three-square (interior alkaline)	CEGL001587	G3S3	BR	AB, AZ, BC, CO, ID, MT, NM, NV, UT, WY +	AW	Brotherson et al. 1984; Bundy et al. 1996; Butler et al. 2002; Carsey et al. 2003a; Clark et al. 2009; Coles et al. 2009a; Coles et al. 2008a; Hansen et al. 1995; Hansen et al. 1991; Jones and Walford 1995; Kittel et al. 1999b; Lauver et al. 1999; MacKenzie and Moran 2004; Muldavin et al. 2000a; Thompson and Hansen 2002; Walford 1996
<i>Schoenoplectus subterminalis</i>	Swaying bulrush	CEGL003309	G4S3	CR	WA	AB	Kunze 1994: 24; Stumpf et al. 2017; Osvald 1933
<i>Schoenoplectus tabernaemontani</i>	softstem bulrush marsh	CEGL002623	G5S5	All	AB, BC, CA, CO, ID, MT, WA, WY	FM	Smith and Smith 1976: 132; Boss 1983: 126, 146; Sanville et al. 1986: 127; Thomas 1980: 6; Viereck et al. 1992: 181; Kovalchik 1993: 181; Kunze 1994: 49; Rodwell 1995b: 206; Titus et al. 1998; Crowe et al. 2004: 70
<i>Scirpus microcarpus</i>	small-fruited bulrush marsh	CEGL003322	G4S4	All	CA, ID, WA	FM	Frenkel et al. 1978: 82; Ganskopp 1979: 39; Boss 1983: 113; Kovalchik 1987: 112; Evenden 1990: 44; Kovalchik 1993: 179; Diaz and Mellen 1996: 187; Titus 1996; Crowe and Clausnitzer 1997: 206; Titus et al. 1998; Christy 2001a: 37; Crowe et al. 2004: 134; Murray 2000: 25; Christy 2004: 142; Crowe et al. 2004: 134; Wells 2006: 133
<i>Senecio triangularis</i>	arrowleaf groundsel riparian	CEGL001987	G5S4	BM, BR, CR, EC, WC	AB, AK?, CA?, ID, MT, WA, WY	FM, WM	Hemstrom et al. 1987: 251; Kovalchik 1987: 124; Manning and Padgett 1991: 95, 365, 373; Diaz and Mellen 1996: 191; Crowe and Clausnitzer 1997: 212; Titus et al. 1998; Murray 2000: 26; Christy 2004: 143; Crowe et al. 2004: 160, 162; McCain 2004: 72, 154; Wells 2006: 154; McCain et al. 2014: 116, 219
<i>Senecio triangularis</i> - <i>Mimulus guttatus</i> wet meadow	Arrowleaf ragwort - seep monkeyflower wet meadow	CEGL001988	G4S4	BM, BR, EC, WC	WY	WM	Norton et al. 1981; Mattson 1984; Crowe et al. 2004; Cogan et al. 2005
<i>Senecio triangularis</i> - <i>Veratrum californicum</i> wet meadow	Arrowleaf ragwort - California false hellebore wet meadow	CEGL001989	G4S4	BR, EC, KM, WC	CA	WM	Sawyer et al. 2009; Manning and Padgett 1991; Kovalchik 1987; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Hemstrom et al. 1987
<i>Sequoia sempervirens</i> / <i>Polystichum munitum</i>	coast redwood / sword fern	CEGL000081	G2S1	CR	CA		Mahony and Stuart 2000: 57; Stumpf et al. 2017; Frenkel 1976
<i>Sequoia sempervirens</i> / <i>Vaccinium ovatum</i>	coast redwood / evergreen huckleberry	CEGL000082	G2S1	CR	CA		Atzet and Wheeler 1984: 158; Stumpf et al. 2017
<i>Sparganium angustifolium</i>	narrowleaf bur-reed marsh	CEGL001990	G4S3	CR, WV	CA, CO, ID, WA	FM	Kovalchik 1993: 185; Kunze 1994: 50, 59; Christy and Putera 1993: 40; Titus et al. 1996; Titus et al. 1998; Christy et al. 1998: 138; Christy 2004: 144; Titus and Christy 1996a; Stumpf et al. 2017; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Salas et al. 2005; Robbins 1918; Ramaley and Robbins 1909; Ramaley 1919a; Murray 2000; McCain and Christy 2005; Kovalchik 1993; Komarkova 1986; Keeler-Wolf et al. 2012; Keeler-Wolf et al. 2003a; Kagan et al. 2012; Hall and Hansen 1997; Fuller 1930; Crowe et al. 2004; Cooper 1986a; Clements 1904; Boggs 2000
<i>Sparganium eurycarpum</i>	broadfruited bur-reed marsh	CEGL003323	G4S3	BR, CP, CR, WV	CA?, CO, ID, WA	FM	Kunze 1994: 81; Christy and Brophy 2002; Christy 2004: 145; Salas et al. 2010b; McCain and Christy 2005; Kunze 1994; Evans 1989b; Christy 2013: 47
<i>Spartina gracilis</i>	alkali cordgrass playa	CEGL001588	G3S2	BM, BR	CA, CO, ID, MT, NV, UT, WA, WY	AW	Ungar 1974c; Ungar 1972; Sawyer et al. 2009; Sawyer and Keeler-Wolf 1995; Salas et al. 2010b; Jones 1992b; Hanson 1929; Crawford 2003; Coles et al. 2008a; Carsey et al. 2003a; Baker 1984b

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Spartina pectinata</i>	prairie cordgrass marsh	CEGL001476	G3S2	BM, CP	CO, UT, WA	AW	Weaver 1965; Kittel et al. 1999b; Kittel et al. 1997a; Kittel et al. 1996; Keim 1932; Jones and Walford 1995; Jones 1992b; Johnston 1987; Hansen et al. 1995; Hansen et al. 1991; Hansen et al. 1989; Hansen and Hoffman 1988; Evans 1989a; Cooper et al. 2001; Coles et al. 2008a; Carsey et al. 2003a
<i>Sphagnum</i> ( <i>angustifolium</i> , <i>capillifolium</i> , <i>fuscum</i> , <i>mendocinum</i> , <i>miyabeanum</i> , <i>pacificum</i> , <i>palustre</i> ) Fen [Provisional]	Sphagnum	OR1166	G3S2	CR, WV, WC		FE	Murray 2000: 11, 12
<i>Spiraea douglasii</i>	Douglas spiraea shrub swamp	CEGL001129	G5S4	CR, EC, KM, WC, WV	AK?, BC, ID, MT, WA	SS	Thomas 1980; Streatfield and Frenkel 1997; Seyer 1983; McCain and Christy 2005; Kunze 1994; Kovalchik 1993; Kovalchik 1987; Kagan et al. 2012; Jankovsky-Jones et al. 1999; Hemstrom et al. 1987; Hansen et al. 1995; Hansen et al. 1991; Glad et al. 1987; Crowe et al. 2004; Christy et al. 1998; Christy 2004: 58; Boggs et al. 1990
<i>Spiraea douglasii</i> - <i>Rosa woodsii</i> / <i>Scirpus microcarpus</i> [Provisional]	Douglas spiraea - pearhip rose / small-fruited bulrush	OR1167	G3S3	EC		SS	Crowe et al. 2004: 228
<i>Spiraea douglasii</i> - <i>Vaccinium uliginosum</i> / <i>Carex</i> ( <i>aquatilis</i> var. <i>dives</i> , <i>exsiccata</i> ) Fen or Wet Shrubland [Provisional]	Douglas spiraea - bog bilberry / sedge (Sitka sedge, western inflated sedge )	OR1168	G3S2	WC		FE, SS	Murray 2000: 37, 38; McCain et al. 2014: 120
<i>Spiraea douglasii</i> - <i>Vaccinium uliginosum</i> / <i>Carex obnupta</i> - <i>Deschampsia cespitosa</i>	Douglas spiraea - bog blueberry / slough sedge / sphagnum	OR0028	G2S2	CR		FE	Christy 2001a: 29; Christy 2004: 59
<i>Spiraea douglasii</i> - <i>Viburnum edule</i> / <i>Viola palustris</i> Wet Shrubland [Provisional]	Douglas spiraea - highbush cranberry / marsh violet	OR1170	G2S2	WV		SS	Murray 2000: 38
<i>Spiraea douglasii</i> / Sphagnum	Douglas spiraea / sphagnum fen	CEGL003416	G3S1	WV	BC, WA	FE	Kunze 1994: 18; Titus et al. 1996; Christy 2001a: 28; Christy 2004: 60; McCain and Christy 2005
<i>Sporobolus airoides</i> - <i>Distichlis spicata</i>	alkali saltgrass - alkali sacaton	CEGL001687	G4S3	BR	CA?, CO, NM, UT +	AW	Young et al. 1986; Stevens et al. 2007; Salas et al. 2010b; Neid et al. 2007; Muldavin et al. 2000b; Muldavin et al. 2000a; Muldavin and Mehlhop 1992
<i>Sporobolus cryptandrus</i> - <i>Poa secunda</i> grassland	sand dropseed - Sandberg bluegrass	CEGL001516	G2S1	BM, BR	ID, WA		Johnson and Simon 1987: 216; Easterly and Salstrom 1997: 31; Tisdale 1986; Johnson and Simon 1985; Daubenmire 1970
<i>Symphoricarpos albus</i> - <i>Rosa woodsii</i>	common snowberry - Wood's rose	CEGL001130	G3S3	BM, CP	ID, WA		Daubenmire 1970; Tisdale 1979: 7; Hall 1973; Tisdale 1986; Tisdale 1979; Reid et al. 2004; Johnson and Simon 1987; Daubenmire 1970
<i>Symphoricarpos oreophilus</i> shrubland	mountain snowberry shrubland	CEGL002951	G4S2	BR	CO, NV, UT, WY		Tendick et al. 2011b; Tendick et al. 2011a; Schulz and Hall 2011; Salas et al. 2010b; Romme et al. 1993; Komarkova 1986; Johnston 1987; Johnson and Clausnitzer 1992; Friesen et al. 2010; Cogan et al. 2012; Cogan et al. 2005; Cogan et al. 2004; Clark et al. 2009
<i>Thuja plicata</i> - ( <i>Abies grandis</i> ) / <i>Achlys triphylla</i>	western red cedar (grand fir) / vanillaleaf	CEGL002669	G2S2	EC	WA		Topik et al. 1988: 115; Topik 1989
<i>Thuja plicata</i> - <i>Acer macrophyllum</i> - <i>Abies grandis</i> / ( <i>Oemleria cerasiformis</i> ) / <i>Polystichum munitum</i>	bigleaf maple - western red cedar / Indian plum	CEGL002846	G1S1	WV	BC, WA		Hawk 1973: 50; Ward et al. 1998; Meidinger et al. 2005; Green and Klinka 1994; Cadrin and Wolowicz 2005; Brown and Hebda 1999; McCain 2004: 285
<i>Thuja plicata</i> - <i>Pseudotsuga menziesii</i> - <i>Abies grandis</i> / <i>Mahonia nervosa</i> / <i>Polystichum munitum</i> forest	western red cedar - western hemlock / dwarf Oregongrape	CEGL002848	G1S1	KM, WC	BC, WA		Atzet and Wheeler 1984: 114; Ward et al. 1998; Meidinger et al. 2005; Green and Klinka 1994; Chappell 2006b; Chappell 1997; Cadrin and Wolowicz 2005; Brown and Hebda 1999
<i>Thuja plicata</i> - <i>Tsuga heterophylla</i> / <i>Lysichiton americanus</i> Swamp Forest	western red cedar - western hemlock / skunk cabbage	CEGL001787	G3S1	CR, WC, WV	BC?, WA	FW	Franklin 1966: 87; Henderson 1970: 42; Henderson 1979: 200; Topik et al. 1986: 70; Henderson et al. 1989: 378; Henderson et al. 1992: 48; Kunze 1994: 34, 94; Crawford et al. 2009; Murray 2000: 45; McCain 2004: 173; Christy 2004: 34

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Thuja plicata - Tsuga heterophylla / Oplopanax horridus Rocky Mountain Swamp Forest	western red cedar - western hemlock / devils club	CEGL000479	G3S1	BM, WC	BC?, ID, MT, WA	FW	Williams et al. 1995; Williams et al. 1990b; Williams and Lillybridge 1985; Utzig et al. 1986; Reid et al. 2004; Pfister et al. 1977; Parker 1986a; Kovalchik 2001; Kovalchik 1993; Hop et al. 2007; Hansen et al. 1995; Franklin 1966; Douglas 1971; Daubenmire and Daubenmire 1968; Daubenmire 1952; Cooper et al. 1987; Braumandl and Curran 1992
Thuja plicata - Tsuga heterophylla / Oxalis oregana	western red cedar - western hemlock / Oregon oxalis	CEGL000483	G2S2	CR, WC			Atzet and McCrimmon 1990: 171
Thuja plicata - Tsuga heterophylla / Polystichum munitum	western red cedar - western hemlock / swordfern	CEGL000468	G1S1	WC, WV	BC, WA		Rocchio et al. 2012; Reid et al. 1994; Meidinger et al. 2005; Green and Klinka 1994; Fonda and Bernardi 1976; Chappell 2006b; Chappell 1997; Chappell 1994; Agee 1987
Thuja plicata - Tsuga heterophylla / Whipplea modesta	western red cedar - western hemlock / whipplevine	CEGL000486	G2G3S3	WC	CA?		Atzet and McCrimmon 1990: 199
Thuja plicata / Athyrium filix-femina	western red cedar / ladyfern	CEGL000473	G3S1	WC	ID, MT, WA	FW	Kovalchik 1987: 28; Cooper et al. 1991: 28; Diaz and Mellen 1996: 35; Hop et al. 2007; Hansen et al. 1995; Hansen et al. 1991; Diaz and Mellen 1996; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Reid et al. 2004; Lillybridge et al. 1995
Thuja plicata / Athyrium filix-femina - Stachys chamissonis var. cooleyae forest	western red-cedar / common ladyfern - Cooley's hedge-nettle	CEGL007290	GNRS2	CR, WC	WA		Meidinger et al. 2005
Thuja plicata / Linnaea borealis	western red cedar / twinflower	CEGL000089	G2S1	EC	WA		Williams 1978: 66; Williams and Winward 1976; Atzet and McCrimmon 1990
Thuja plicata / Rubus spectabilis / Oxalis oregana	western red cedar / salmonberry / Oregon oxalis	CEGL007292	GNRS2	WC	WA	FW	Diaz and Mellen 1996: 39; Meidinger et al. 2005
Torreyochloa pallida var. pauciflora [Provisional]	weak alkaligrass meadow	OR0029	G2S2	BM, CR, EC, WV	ID?, WA?	FM	Crowe and Clausnitzer 1997: 212; Titus et al. 1998; Christy 2004: 146; Crowe et al. 2004: 65; Murray 2000: 27
Trichophorum cespitosum Pacific fen	tufted bulrush Pacific fen	CEGL002679	G5S1	WC	AK?, BC?, WA? +	FE	Viereck et al. 1992; Shephard 1995; McCain and Christy 2005; Murray 2000: 28; Christy 2004: 147
Triglochin maritima - (Salicornia depressa)	Seaside Arrow-grass - (Virginia glasswort) salt marsh	CEGL003381	G4S2	CR	BC?, WA	SM	Eilers 1975a: 229; Eilers 1976: 27; Dethier 1990: 34, 35; Viereck et al. 1992: 199
Triteleia hyacinthina Wet Outcrop [Provisional]	Hyacinth brodiaea	OR1172	G2S2	KM, WV	CA?	WP	Titus and Christy 1996b; Christy 2004: 148
Tsuga heterophylla - (Pseudotsuga menziesii) / Oplopanax horridus / Polystichum munitum forest	western Hemlock - (Douglas-fir) / devil's-club / western swordfern	CEGL000497	G4S3	CR, WC	BC, WA	FW	Franklin 1966; Franklin 1988: 54; Hemstrom and Logan 1986: 75; Halverson et al. 1986: 71; Topik et al. 1986: 74; Henderson et al. 1989: 314; Henderson et al. 1992: 50; McCain and Diaz 2002a; McCain and Diaz 2002b; Halverson et al. 1986: 90
Tsuga heterophylla - (Pseudotsuga menziesii) / Vaccinium alaskaense - Mahonia nervosa - (Gaultheria shallon) forest	western Hemlock - (Douglas-fir) / Alaska blueberry - Cascade barberry - (salal)	CEGL005574	G3G4S3	WC	AK, WA		Worley 1977; Topik et al. 1986; Shephard 1995; Pawuk and Kissinger 1989; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Martin et al. 1995; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Hemstrom et al. 1987; Halverson et al. 1986; Franklin et al. 1979; Fox 1983; DeVelice et al. 1994; DeMeo et al. 1992; del Moral and Long 1977; Crawford et al. 2009; Borchers et al. 1989; Boggs 2000
Tsuga heterophylla - (Pseudotsuga menziesii) / Vaccinium alaskaense / Cornus unalaschkensis forest	western Hemlock - (Douglas-fir) / Alaska blueberry / bunchberry	CEGL005572	G4S3	WC	AK, WA		Halverson et al. 1986: 86; Topik et al. 1986: 86; Hemstrom et al. 1987: 178; McCain and Diaz 2002b; Halverson et al. 1986: 91; Topik et al. 1986: 78; Henderson et al. 1989: 290; Henderson et al. 1992: 60;

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Tsuga heterophylla</i> - ( <i>Pseudotsuga menziesii</i> ) / <i>Vaccinium alaskaense</i> / <i>Polystichum munitum</i> forest	western Hemlock - (Douglas-fir) / Alaska blueberry / western swordfern	CEGL005573	G3S3	WC	AK, WA		Worley 1977; Topik et al. 1986; Shephard 1995; Pawuk and Kissinger 1989; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Martin et al. 1995; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Hemstrom et al. 1987; Halverson et al. 1986; Franklin et al. 1979; Fox 1983; DeVelice et al. 1994; DeMeo et al. 1992; del Moral and Long 1977; Crawford et al. 2009; Borchers et al. 1989; Boggs 2000
<i>Tsuga heterophylla</i> - ( <i>Pseudotsuga menziesii</i> , <i>Thuja plicata</i> ) / <i>Polystichum munitum</i> - <i>Athyrium filix-femina</i> forest	western hemlock - (Douglas-fir, western red cedar) / swordfern - ladyfern	CEGL005576	G4S4	WC	BC, CA?, WA	FW	Hemstrom and Logan 1986: 234; Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1984; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Hemstrom et al. 1987; Hemstrom and Logan 1986; Halverson et al. 1986; Green and Klinka 1994; Franklin et al. 1988; Franklin et al. 1979; Dyrness et al. 1974a; Crawford et al. 2009; Copass and Ramm-Granberg 2016a; Chappell 2006b; Chappell 2006a; Chappell 2001; Chappell 1997; Bigley and Hull 1995; Atzet and McCrimmon 1990
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> - ( <i>Pseudotsuga menziesii</i> ) / <i>Hylocomium splendens</i> forest	western Hemlock - Pacific silver fir - (Douglas-fir) / splendid feathermoss	CEGL002833	G2G3S2	WC	BC, WA		Meidinger et al. 2005; Green and Klinka 1994; Eng 2005
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> - ( <i>Pseudotsuga menziesii</i> ) / <i>Vaccinium alaskaense</i> forest	western Hemlock - Pacific silver fir - (Douglas-fir) / Alaska blueberry	CEGL005518	G4S3	WC	BC, WA		Murray 2000; Meidinger et al. 2005; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson and Peter 1984; Henderson and Peter 1982; Henderson and Peter 1981; Henderson 1981; Green and Klinka 1994; Franklin 1966; Crawford et al. 2009; Brockway et al. 1983; Brockway and Topik 1984; Bigley and Hull 1992
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> - <i>Pseudotsuga menziesii</i> / <i>Gaultheria shallon</i> forest	western Hemlock - Pacific silver fir - Douglas-fir / salal	CEGL005567	GNRS4	WC	BC, WA		Meidinger et al. 2005; McCain and Diaz 2002b; Henderson et al. 1992; Henderson et al. 1989; Hemstrom et al. 1987; Hemstrom et al. 1982; Franklin et al. 1988; Crawford et al. 2009; Brockway et al. 1983; Brockway and Topik 1984; Bigley and Hull 1992
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> - <i>Pseudotsuga menziesii</i> / <i>Oxalis oregana</i>	western hemlock - Pacific silver fir - Douglas-fir / wood sorrel	CEGL005569	GNRS4	WC	WA		Hemstrom et al. 1982: 33; Hemstrom et al. 1987: 138; Bigley and Hull 1995: 25; McCain and Diaz 2002a; Meidinger et al. 2005; Henderson et al. 1989; Henderson et al. 1986; Fonda and Bliss 1969; Bigley and Hull 1995
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> - <i>Pseudotsuga menziesii</i> / <i>Oxalis oregana</i> forest	western Hemlock - Pacific silver fir - Douglas-fir / redwood sorrel	CEGL005569	G4S4	WC	WA		Meidinger et al. 2005; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom et al. 1982; Fonda and Bliss 1969; Bigley and Hull 1995
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> / <i>Oxalis oregana</i> - <i>Blechnum spicant</i> forest	western Hemlock - Pacific silver fir / redwood sorrel - Deer Fern	CEGL005564	G3S2S3	WC	WA		Meidinger et al. 2005; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom et al. 1982; Fonda and Bliss 1969; Crawford et al. 2009; Bigley and Hull 1995
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> / <i>Vaccinium alaskaense</i>	western hemlock - Pacific silver fir / Alaska blueberry	CEGL005518	G4S3	WC	BC, WA		Brockway et al. 1983: 60; Hemstrom et al. 1982: 51; Hemstrom et al. 1987: 105; Henderson et al. 1992: 104
<i>Tsuga heterophylla</i> - <i>Abies amabilis</i> / <i>Vaccinium alaskaense</i> / <i>Rubus pedatus</i> forest	western Hemlock - Pacific silver fir / Alaska blueberry / strawberry-leaf raspberry	CEGL005565	G4G5S4	KM	BC, WA		Meidinger et al. 2005; Henderson et al. 1992; Henderson et al. 1989; Hemstrom et al. 1987; Hemstrom et al. 1982; Green and Klinka 1994; Franklin et al. 1988; Dyrness et al. 1974a; Crawford et al. 2009; Brockway et al. 1983; Bigley and Hull 1995; Banner et al. 1993



Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Tsuga heterophylla</i> - <i>Notholithocarpus densiflorus</i> / <i>Vaccinium ovatum</i> - <i>Rhododendron macrophyllum</i>	western hemlock / tan oak / evergreen huckleberry - western rhododendron	CEGL000080	G4S3	CR, KM	CA		Atzet and Wheeler 1984: 159, 160, 163; Atzet et al. 1996; Stumpf et al. 2017
<i>Tsuga heterophylla</i> - <i>Pseudotsuga menziesii</i> - <i>Abies amabilis</i> / <i>Vaccinium parvifolium</i> / <i>Achlys triphylla</i> forest	western Hemlock - Douglas-fir - Pacific silver fir / red huckleberry / sweet after death	CEGL005575	G4S3	WC	BC, CA?, WA		Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1984; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Hemstrom et al. 1987; Hemstrom and Logan 1986; Halverson et al. 1986; Green and Klinka 1994; Franklin et al. 1988; Franklin et al. 1979; Franklin and Dyrness 1973; Dyrness et al. 1974a; Chappell 2006b; Bigley and Hull 1995; Atzet and McCrimmon 1990
<i>Tsuga heterophylla</i> - <i>Pseudotsuga menziesii</i> / <i>Mahonia nervosa</i> - <i>Chimaphila menziesii</i> forest	western Hemlock - Douglas-fir / Cascade barberry - Little Prince's-pine	CEGL005570	G3S3	KM, WC	WA		Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Klinka et al. 1996; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson and Peter 1984; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Henderson 1981; Hemstrom et al. 1987; Hemstrom and Logan 1986
<i>Tsuga heterophylla</i> - <i>Pseudotsuga menziesii</i> / <i>Rhododendron macrophyllum</i> - <i>Vaccinium alaskaense</i> / <i>Cornus unalaschensis</i> forest	western Hemlock - Douglas-fir / Pacific rhododendron - Alaska blueberry / bunchberry	CEGL005571	G4S4	WC	WA		Moir et al. 1973b; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom et al. 1982; Hemstrom and Logan 1986; Halverson et al. 1986; Dyrness et al. 1974a; Atzet and McCrimmon 1990
<i>Tsuga heterophylla</i> - <i>Pseudotsuga menziesii</i> / <i>Vaccinium alaskaense</i> / <i>Oxalis oregana</i> forest	western Hemlock - Douglas-fir / Alaska blueberry / redwood sorrel	CEGL005588	G4S3	WC	CA, WA		Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom and Logan 1986; Fonda 1974; Diaz and Mellen 1996; Crawford et al. 2009; Chappell 2006b; Chappell 2001; Chappell 1997; Atzet and McCrimmon 1990
<i>Tsuga heterophylla</i> / <i>Acer circinatum</i> / <i>Lysichiton americanus</i>	western hemlock / vine maple / skunk cabbage	CEGL000093	G4S4	CR, EC, WC	WA?	FW	Halverson et al. 1986: 68; Topik et al. 1986: 70; McCain and Diaz 2002b
<i>Tsuga heterophylla</i> / <i>Acer glabrum</i> / <i>Linnaea borealis</i>	western hemlock / Douglas maple / twinflower	CEGL002608	G3S3	WC			Atzet and McCrimmon 1990: 150
<i>Tsuga heterophylla</i> / <i>Chrysolepis chrysophylla</i> var. <i>chrysophylla</i>	western hemlock / golden chinquapin	CEGL000099	G3S3	CR, KM, WC			Dyrness et al. 1974a: 19
<i>Tsuga heterophylla</i> / <i>Clintonia uniflora</i>	western hemlock / queencup beadlily	CEGL000493	G4S4	WC	ID, MT, WA		Atzet and McCrimmon 1990: 80; Marsh et al. 1987: 64; Reid et al. 2004; Pfister et al. 1977; Lillybridge et al. 1995; Hop et al. 2007; Daubenmire and Daubenmire 1968; Cooper et al. 1987
<i>Tsuga heterophylla</i> / <i>Hydrophyllum tenuipes</i> swamp forest	western Hemlock / Pacific waterleaf swamp forest	CEGL000103	G4S4	WC		FW	Campbell and Franklin 1979
<i>Tsuga heterophylla</i> / <i>Ledum glandulosum</i> / <i>Carex obnupta</i> - <i>Lysichiton americanus</i>	western hemlock / western Labrador tea / slough sedge - skunk cabbage swamp	CEGL000477	G1S1	CR		FW	Howarth 1995: 10; Christy 2001a: 19; Christy 2004: 35; McCain and Christy 2005; Glad et al. 1987; Franklin 1966
<i>Tsuga heterophylla</i> / <i>Linnaea borealis</i>	western hemlock / twinflower	CEGL000104	G3S3	WC	WA		Moir et al. 1973b: 9; Williams 1978: 69; Hemstrom et al. 1987: 238; McCain and Diaz 2002b
<i>Tsuga heterophylla</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i> / <i>Linnaea borealis</i>	western hemlock / dwarf Oregonrape / twinflower	CEGL000097	G3S3	WC	CA?		Dyrness et al. 1974a: 31; Atzet and McCrimmon 1990: 154
<i>Tsuga heterophylla</i> / <i>Mahonia nervosa</i> var. <i>nervosa</i> / <i>Oxalis oregana</i>	western hemlock / dwarf Oregonrape / Oregon oxalis	CEGL000098	G3S3	CR, WC	WA		Hemstrom et al. 1987: 190; Atzet and McCrimmon 1990: 183; McCain and Diaz 2002a; McCain and Diaz 2002b

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
Tsuga heterophylla / Polystichum munitum - Blechnum spicant forest	western Hemlock / western swordfern - Deer Fern	CEGL005559	G3S2	CR, WC	CA?, WA		Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1984; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Hemstrom et al. 1987; Hemstrom and Logan 1986; Halverson et al. 1986; Franklin et al. 1988; Franklin et al. 1979; Franklin and Dyrness 1973; Dyrness et al. 1974a; Crawford et al. 2009; Chappell 2006b; Chappell 2001; Chappell 1997; Bigley and Hull 1995; Atzet and McCrimmon 1990
Tsuga heterophylla / Polystichum munitum - Oxalis oregana forest	western Hemlock / western swordfern - redwood sorrel	CEGL005586	G3S3	CR, KM, WC	CA, WA		Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom and Logan 1986; Fonda 1974; Diaz and Mellen 1996; Crawford et al. 2009; Chappell 2006b; Chappell 2001; Chappell 1997; Atzet and McCrimmon 1990
Tsuga heterophylla / Quercus sadleriana	western hemlock / Sadler oak	CEGL000110	G2S2	KM	CA?		Atzet and Wheeler 1984: 115
Tsuga heterophylla / Rhododendron columbianum / Carex obnupta - Lysichiton americanus Treed Bog	Western hemlock / western Labrador tea / slough sedge - skunk cabbage	CEGL000477	G1S1	CR		FE	Christy 2004: 35; McCain and Christy 2005; Christy 2001a
Tsuga heterophylla / Vaccinium alaskaense / Oxalis oregana forest	western Hemlock / Alaska blueberry / redwood sorrel	CEGL005587	G4S3	WC	CA, WA		Topik et al. 1986; Meidinger et al. 2005; McCain and Diaz 2002b; McCain and Diaz 2002a; Henderson et al. 1989; Henderson et al. 1986; Hemstrom et al. 1987; Hemstrom and Logan 1986; Fonda 1974; Diaz and Mellen 1996; Crawford et al. 2009; Chappell 2006b; Chappell 2001; Chappell 1997; Atzet and McCrimmon 1990
Tsuga heterophylla / Vaccinium membranaceum / Linnaea borealis	western hemlock / thin-leaved huckleberry / twinflower	CEGL000119	G4S3	WC			Atzet and McCrimmon 1990: 113
Tsuga heterophylla / Vaccinium membranaceum / Xerophyllum tenax	western hemlock / thin-leaved huckleberry / beargrass	CEGL000120	G4S4	WC	WA?		Halverson et al. 1986: 93; Marsh et al. 1987: 56
Tsuga heterophylla / Vaccinium ovatum	western hemlock / evergreen huckleberry	CEGL000121	G3S3	CR	WA		Hemstrom and Logan 1986: 81; McCain and Diaz 2002a
Tsuga mertensiana - (Abies amabilis) / Vaccinium scoparium woodland	mountain hemlock - (Pacific silver fir) / grouse whortleberry woodland	CEGL005582	G4G5S4	EC, WC	CA?, WA		Volland 1985; Volland 1976; Schuller 1978; Meidinger et al. 2005; Lillybridge et al. 1995; Johnson and Simon 1987; Johnson and Clausnitzer 1992; Hopkins 1979b; Hemstrom et al. 1987; Hemstrom et al. 1982; Franklin 1966; Diaz et al. 1997; Crawford et al. 2009; Atzet and McCrimmon 1990
Tsuga mertensiana - (Abies amabilis, Abies lasiocarpa) / Luzula glabrata var. hitchcockii woodland	mountain hemlock (Pacific silver fir, subalpine fir) / smooth woodrush	CEGL007381	G5S4	EC, WC	CA?, WA		Schuller 1978: 46; Hemstrom et al. 1987: 170; Cooper et al. 1991: 44; Diaz et al. 1997: 55; McCain and Diaz 2002b: 314
Tsuga mertensiana - Abies amabilis / Rhododendron albiflorum forest	mountain hemlock - Pacific silver fir / Cascade azalea	CEGL002632	G4G5S4	EC, WC	BC, WA		Brockway et al. 1983: 70; Henderson et al. 1992: 158, 160; Diaz et al. 1997: 71
Tsuga mertensiana - Abies amabilis / Vaccinium alaskaense / Rubus pedatus forest	mountain hemlock - Pacific silver fir / Alaska blueberry / strawberry-leaf raspberry	CEGL005580	G4G5S4	EC, WC	BC, WA		Meidinger et al. 2005; Henderson et al. 1992; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1984; Henderson and Peter 1983; Henderson and Peter 1982; Henderson and Peter 1981; Henderson 1981; Green and Klinka 1994; Franklin et al. 1988; del Moral et al. 1976; Crawford et al. 2009; Banner et al. 1993
Tsuga mertensiana - Abies amabilis / Vaccinium membranaceum / Xerophyllum tenax	mountain hemlock - Pacific silver fir / thin-leaved blueberry / beargrass	CEGL000515	G5S4	WC	WA		Brockway et al. 1983: 68; Hemstrom et al. 1982: 63; Brockway et al. 1983; Hemstrom et al. 1987: 162; Henderson et al. 1992: 182; Diaz et al. 1997: 81

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Tsuga mertensiana</i> - <i>Abies lasiocarpa</i> / <i>Eucephalus ledophyllus</i> - <i>Lupinus arcticus</i> ssp. <i>subalpinus</i> woodland	mountain hemlock - subalpine fir / Cascades aster	CEGL007372	G4S2	EC, WC	WA		Diaz et al. 1997: 39; Meidinger et al. 2005; McCain and Diaz 2002b; Crawford et al. 2009
<i>Tsuga mertensiana</i> / <i>Calamagrostis rubescens</i>	mountain hemlock / pinegrass	CEGL000122	G3S3	BM	WA		Kovalchik 2001
<i>Tsuga mertensiana</i> / <i>Chimaphila umbellata</i>	mountain hemlock / prince's-pine	CEGL000502	G4S4	EC, KM, WC	CA?		Atzet and McCrimmon 1990: 43
<i>Tsuga mertensiana</i> / <i>Menziesii ferruginea</i>	mountain hemlock / fool's huckleberry	CEGL000506	G4S3	EC, WC	ID, MT, WA		Brockway et al. 1983: 69; Franklin et al. 1979; Hemstrom et al. 1982; Brockway et al. 1983; Cooper et al. 1991: 40; Diaz et al. 1997: 59; Pfister et al. 1977; Daubenmire and Daubenmire 1968; Cooper et al. 1987; Brockway and Topik 1984
<i>Tsuga mertensiana</i> / <i>Phyllodoce empetriformis</i> - <i>Vaccinium deliciosum</i> woodland	mountain hemlock / red heather - delicious huckleberry	CEGL005579	G4S3	EC, WC	BC, WA		Henderson et al. 1992: 156; Diaz et al. 1997: 63; Titus et al. 1998; Sawyer et al. 2009; Meidinger et al. 2005; Lillybridge et al. 1995; Kovalchik 2001; Henderson et al. 1989; Henderson et al. 1986; Henderson et al. 1985; Henderson and Peter 1983; Green and Klinka 1994; Douglas 1971; del Moral et al. 1976; Crawford et al. 2009; Chappell 2006a; Banner et al. 1993
<i>Tsuga mertensiana</i> / <i>Polygonum davisiae</i> woodland	mountain hemlock / Davis' Knotweed woodland	CEGL007294	G4S3	EC, WC	WA		Diaz et al. 1997: 51; Meidinger et al. 2005
<i>Tsuga mertensiana</i> / <i>Quercus sadleriana</i> / <i>Orthilia secunda</i>	mountain hemlock / Sadler oak / wintergreen	CEGL000123	G3G4S4	KM	CA?		Atzet and Wheeler 1984; Sawyer et al. 2009
<i>Tsuga mertensiana</i> / <i>Rhododendron macrophyllum</i>	mountain hemlock / western rhododendron	CEGL000124	G4S4	WC			Hemstrom et al. 1987: 174; Atzet and McCrimmon 1990: 51; Diaz et al. 1997: 77
<i>Tsuga mertensiana</i> / sparse understory forest	mountain hemlock / sparse understory forest	CEGL008685	G3G4S3	EC, WC	CA		Potter 1998; Keeler-Wolf et al. 2012; Keeler-Wolf 2002; Sawyer et al. 2009; Atzet et al. 1996
<i>Typha</i> ( <i>latifolia</i> , <i>angustifolia</i> )	western cattail marsh	CEGL002010	G5S5	ALL	AB, AZ, BC, CA, CO, ID, MT, NM, NV, UT, WA, WY +	FM	Kunze 1994: 59, 97; Rodwell 1995b: 185; Youngblood et al. 1985a; Von Loh et al. 2002; Von Loh 2000; Tolstead 1942; Titus et al. 1999; Titus et al. 1998; Titus et al. 1996; Stumpf et al. 2017; Stevens et al. 2015; Stevens et al. 2007; Sproul et al. 2011; Sawyer et al. 2009; Sanville et al. 1986; Salas et al. 2010b; Salas et al. 2009; Romme et al. 1993; Rolfsmeier and Steinauer 2010; Rice et al. 2012c; Reid et al. 2004; Ramaley 1939b; Ramaley 1939a; Padgett et al. 1989; Murray 2000; Muldavin et al. 2012b; Muldavin et al. 2000a; Muldavin et al. 1993b; McEachern 1979; McCain and Christy 2005; Masek 1979; Marriott and Faber-Langendoen 2000; Lindauer and Christy 1972; Lindauer 1978; Kovalchik 2001; Kovalchik 1993; Kittel et al. 1999b; Kittel et al. 1999a; Kittel et al. 1996; Kagan et al. 2012; Jones and Walford 1995; Jones 1992b; Johnston 1987; Jankovsky-Jones et al. 2001; Hop et al. 2007; Holland 1986b; Hansen et al. 1995; Hansen et al. 1991; Evens et al. 2014; Erixson and Cogan 2012c; Dorn 1992; Dethier 1990; Crowe et al. 2004; Crowe and Clausnitzer 1997; Crawford 2003; Copass and Ramm-Granberg 2016a; Clark et al. 2009; Christy 2004; Christy 1973; Carsey et al. 2003a; Bunin 1985; Bundy et al. 1996; Buck-Diaz et al. 2012; Boss 1983; Baker 1984a
<i>Utricularia macrorhiza</i> aquatic vegetation	common bladderwort bed	CEGL003310	G5S3	CR, WC, WV	AK?, BC?, CA?, CO, WA	AB	Titus and Christy 1996a; Christy 2001a: 38; Christy 2004: 150
<i>Utricularia macrorhiza</i> Aquatic Vegetation [Provisional]	Common bladderwort	OR1173	G5S3	CR, WC, WV		AB	Christy 2004: 150

Scientific Name	Common Name	ELCODE	G/S Rank	Ecoregions	W S & P	Wetland Type	References
<i>Vaccinium caespitosum</i> / <i>Sanguisorba officinalis</i> fen	dwarf bilberry / (beargrass) - great burnet fen	CEGL003438	G1S1	CR	WA	FE	Christy 2004: 61, 62; McCain and Christy 2005
<i>Vaccinium deliciosum</i> parkland	delicious blueberry parkland	CEGL001427	G4G5S2	WC	WA		Wooten and Morrison 1995; Schreiner 1994; Henderson 1974; Henderson 1973; Hamann 1972; Douglas 1972; Crawford et al. 2009
<i>Vaccinium ovalifolium</i> Riparian Shrubland [Provisional]	Early blueberry	OR1174	G4S3	WC		SS	Murray 2000: 39; McCain 2004: 110
<i>Vaccinium uliginosum</i> / <i>Deschampsia cespitosa</i>	bog blueberry / tufted hairgrass shrub swamp	CEGL001250	G2S2	EC, WC	CA?, WA	SS	Hemstrom et al. 1987: 247; Titus and Christy 1996a; Martin and Frenkel 1978: 18, 48; Christy et al. 1998: 86; Christy 2001a: 31; Christy 2004: 64
<i>Vaccinium uliginosum</i> / <i>Carex aquatilis</i> var. <i>dives</i>	bog blueberry / Sitka sedge shrub swamp	CEGL001249	G4S4	CR	CA?	SS	Roach 1952: 184; Seyer 1979: 41, 42; Frenkel et al. 1986: 33; Wilson 1986: 21; Kovalchik 1987: 86, 88; Christy 2004: 65; Murray 2000: 39; Crowe et al. 2004: 262; McCain et al. 2014: 125
<i>Vaccinium uliginosum</i> / <i>Carex obnupta</i> Wet Shrubland [Provisional]	Bog bilberry / slough sedge	OR1175	G3S3	CR		FE	Christy 2004: 63
<i>Vaccinium uliginosum</i> / <i>Eleocharis quinqueflora</i> Wet Shrubland [Provisional]	bog blueberry / few-flowered spikerush shrub swamp	OR0031	G4S2	EC, WC	WA?	FE	Seyer 1979: 42; Kovalchik 1987: 88; Crowe et al. 2004: 259
<i>Valeriana sitchensis</i> - <i>Veratrum viride</i> meadow	Sitka valerian - green false hellebore meadow	CEGL001998	G4S4	BM	AB, BC, MT, WA	WM	Reid et al. 2004; Hop et al. 2007; Hamann 1972; Franklin and Dyrness 1973; Douglas and Bliss 1977; Damm 2001; Crawford et al. 2009
<i>Veratrum californicum</i>	mesic herb rich montane meadow	CEGL001946	G3S3	BR, EC, BM	CA, NV, UT	WM	Ganskopp 1979: 37; Padgett et al. 1989: 114; Titus et al. 1998; Murray 2000: 39; Crowe et al. 2004: 164; Wells 2006: 158; McCain et al. 2014: 57
<i>Veronica americana</i> [Provisional]	American speedwell marsh	OR1012	G3S3	BM, EC, WV	ID?, WA	AB	Crowe and Clausnitzer 1997: 213; Titus et al. 1998; Crowe et al. 2004: 63
<i>Wolffia</i> ( <i>borealis</i> , <i>columbiana</i> )	(northern watermeal, Columbian watermeal) aquatic bed	CEGL003311	G4S3	KM, WV	WA	AB	Titus et al. 1996
<i>Xerophyllum tenax</i> - <i>Sanguisorba officinalis</i> meadow	common beargrass - great burnet meadow	CEGL003439	G1S1	CR, KM		FE	Christy 2001b; Christy 2004: 62
<i>Xerophyllum tenax</i> / <i>Sphagnum</i> spp. Meadow	Bear-grass / sphagnum	OR1011	G3S2	CR, WC	WA?	FE	Murray 2000: 29
<i>Zostera marina</i>	eelgrass bed	CEGL005626	G5S3	CR	CA, WA	SM	Eilers 1975a: 220; Thomas 1980: 2; Dethier 1990; Viereck et al. 1992: 211

## Oregon Plant Community References

- Achuff, P. L., R. L. McNeil, and M. L. Coleman. 1997. Chapter III-Vegetation. Pages 28-93 in: P. L. Achuff, R. L. McNeil, and M. L. Coleman. Ecological land classification of Waterton Lakes National Park, Alberta. Parks Canada, Waterton Lakes National Park. 250 pp. plus maps.
- Achuff, P. L., R. L. McNeil, M. L. Coleman, C. Wallis and C. Wershler. 2002. Ecological land classification of Waterton Lakes National Park, Alberta. Volume I: Integrated resource description. Parks Canada, Waterton Lakes National Park, Alberta. 226 pp.
- Achuff, P. L., W. D. Holland, G. M. Coen, and K. Van Tighem. 1984a. Ecological land classification of Kootenay National Park, British Columbia. Alberta Institute of Pedology Publication No. M-84-10. 373 pp. plus plates and maps.
- Achuff, P. L., W. D. Holland, G. M. Coen, and K. Van Tighem. 1984b. Ecological land classification of Mount Revelstoke and Glacier national parks, British Columbia. Alberta Institute of Pedology Publication No. M-84-11. 261 pp. plus plates and maps.
- Agee, J. K. 1987. The forest of San Juan Island National Historic Park. Unpublished report prepared by the University of Washington for the USDA National Park Service. Report CPSU/UW 88-1. 83 pp.
- Agee, J. K., and J. Kertis. 1987. Forest types of the north Cascades National Park Service complex. *Canadian Journal of Botany* 65:1520-1530.
- Agee, J. K., and R. Wasem. 1987. Stetattle Creek Research Natural Area. Federal Research Natural Areas in Oregon and Washington. Supplement No. 25. 25 pp.
- Aiken, S. G., and S. J. Darbyshire. 1990. Fescue grasses of Canada. Agriculture Canada Publication 1844/E.
- Aiken, S. G., M. J. Dallwitz, C. L. McJannet, and L. L. Consaul. 1996 et seq. Festuca of North America: Descriptions, illustrations, identification, and information retrieval. Version: 2 April 1998. [<http://biodiversity.uno.edu/delta/>]
- Alaback, P. A., and R. E. Frenkel. 1978. Preserve analysis: Saddle Mountain. Oregon Natural Area Preserves Advisory Committee. Division of State Lands, Salem.
- Aldous, A. E., and H. L. Shantz. 1924. Types of vegetation in the semiarid portion of the United States and their economic significance. *Journal of Agricultural Research* 28(2):99-128.
- Aldrich, F. T. 1972. A chorological analysis of the grass balds in the Oregon Coast Range. Ph.D. dissertation, Oregon State University, Corvallis.
- Alexander, B. G., Jr. 1981. A preliminary forest habitat classification for the Lincoln National Forest, New Mexico. Unpublished thesis, Northern Arizona University, Flagstaff. 94 pp.
- Alexander, B. G., Jr., F. Ronco, Jr., A. S. White, and J. A. Ludwig. 1984b. Douglas-fir habitat types of northern Arizona. General Technical Report RM-108. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 13 pp.
- Alexander, R. M. 1986. Classification of the forest vegetation of Wyoming. Research Note RM-466. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 10 pp.
- Alexander, R. R., G. R. Hoffman, and J. M. Wirsing. 1986. Forest vegetation of the Medicine Bow National Forest in southeastern Wyoming: A habitat type classification. Research Paper No. RM-271. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.
- Allen, L. 2012-2013. Alberta Conservation Information Management System Ecological Community Tracking List. Alberta Tourism, Parks and Recreation, Edmonton, AB. [<http://tpr.alberta.ca/parks/heritageinfocentre/default.aspx>]
- Alpert, P. 1984. Inventory and analysis of Oregon coastal dunes. Unpublished manuscript prepared for the Oregon Natural Heritage Program, Portland, OR.
- Alverson, E. R. 1990. A survey for native grassland remnants in the mid-Willamette Valley, Oregon. A report on research conducted with a grant from the Mazamas Research Assistance Program. Department of Botany and Plant Pathology, Oregon State University. 35 pp. plus appendices.
- Anderson, W. E. 1956. Some soil-plant relationships in eastern Oregon. *Journal of Range Management* 9:171-175.

- Annable, C. R., and P. M. Peterson. 1988. Vascular plants of the Kettle Range, Ferry County, Washington. In: *Plant Life of Washington State: Big Beaver Valley and the Kettle Range*. Douglasia Occasional Papers, Volume 3, Part II. Washington Native Plant Society, University of Washington, Seattle.
- Antos, J. A., and D. B. Zobel. 1986. Habitat relationships of *Chamaecyparis nootkatensis* in southern Washington, Oregon, and California. *Canadian Journal of Botany* 64:1898-1909.
- Arno, S. F. 1980. Forest fire history in the northern Rockies. *Journal of Forestry* 78(8):460-465.
- Arno, S. F., and T. D. Peterson. 1983. Variation in estimates of fire intervals: A closer look at fire history on the Bitterroot National Forest. Research Paper INT-301. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT.
- Arno, S. F., and T. Weaver. 1990. Whitebark pine community types and their patterns on the landscape. Pages 97-105 in: W. C. Schmidt and K. J. McDonald, compilers. *Proceedings-Symposium on Whitebark Pine Ecosystems: Ecology and Management of a High-Mountain Resource*. March 29-31 1989, Bozeman, MT. General Technical Report INT-270. USDA Forest Service, Intermountain Research Station, Ogden, UT. 386 pp.
- Arno, S. F., D. G. Simmerman, and R. E. Keane. 1985. Forest succession on four habitat types in western Montana. General Technical Report INT-177. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 74 pp.
- Atzet, T. A., D. E. White, L. A. McCrimmon, P. A. Martinez, P. R. Fong, and V. D. Randall. 1996. Field guide to the forested plant associations of southwestern Oregon. Technical Paper R6-NR-ECOL-TP-17-96. USDA Forest Service, Pacific Northwest Region, Portland, OR.
- Atzet, T., and D. L. Wheeler. 1982. Historical and ecological perspectives on fire activity in the Klamath Geological Province of the Rogue River and Siskiyou national forests. R6-Range-102-1982. USDA Forest Service, Pacific Northwest Region, Portland, OR.
- Atzet, T., and D. L. Wheeler. 1984. Preliminary plant associations of the Siskiyou Mountains Province, Siskiyou National Forest. USDA Forest Service, Pacific Northwest Region, Portland, OR.
- Atzet, T., and L. A. McCrimmon. 1990. Preliminary plant associations of the southern Oregon Cascade Mountain Province. USDA Forest Service, Pacific Northwest Region, Siskiyou National Forest, Grants Pass, OR. 330 pp.
- Bader, E. H. 1932. The vegetation of the Mesa Verde National Park, Colorado. Unpublished thesis, University of Colorado, Boulder. 64 pp.
- Bailey, R. G., P. E. Avers, T. King, and W. H. McNab, editors. 1994. *Ecoregions and subregions of the United States (map)*. U.S. Geological Survey, Washington, DC. Scale 1:7,500,000 colored. Accompanied by a supplementary table of map unit descriptions compiled and edited by W. H. McNab and R. G. Bailey. Prepared for the USDA Forest Service.
- Baker, W. 1980b. Inventory of Wildhaven Preserve and vicinity, and an analysis of habitats. Unpublished report prepared for The Nature Conservancy, Portland, OR.
- Baker, W. L. 1982b. Natural vegetation of the Piceance Basin, Colorado. Appendix D, pages 1-113 in: J. S. Peterson and W. L. Baker, editors. *Inventory of the Piceance Basin, Colorado*. Unpublished report for the Bureau Land Management, Craig, CO.
- Baker, W. L. 1983b. Some aspects of the presettlement vegetation of the Piceance Basin, Colorado. *Great Basin Naturalist* 43(4):687-699.
- Baker, W. L. 1983c. Natural vegetation of part of northwestern Moffat County, Colorado. Unpublished report prepared for the State of Colorado Natural Areas Program, Department of Natural Resources, Denver by Colorado Natural Heritage Inventory, Denver.
- Baker, W. L. 1984a. A preliminary classification of the natural vegetation of Colorado. *Great Basin Naturalist* 44(4):647-676.
- Baker, W. L. 1984b. Additions to a bibliography of Colorado vegetation description. *Great Basin Naturalist* 44(4):677-680.
- Baker, W. L. 1989b. Classification of the riparian vegetation of the montane and subalpine zones in western Colorado. *Great Basin Naturalist* 49(2):214-228.
- Baker, W. L., and S. C. Kennedy. 1985. Presettlement vegetation of part of northwestern Moffat County, Colorado, described from remnants. *Great Basin Naturalist* 45(4):747-777.
- Ball, P. W. 2003a. *Salicornia*. Pages 382-384 in: *Flora of North America* Editorial Committee, editors. *Flora of North America North of Mexico*. Volume 4. Oxford University Press, New York.

- Banner, A., P. LePage, J. Moran, and A. deGroot, editors. 2005. The HyP3 Project: Pattern, process, and productivity in hypermaritime forests of coastal British Columbia - A synthesis of 7-year results. Special Report 10. British Columbia Ministry of Forests, Research Branch, Victoria, BC. [<http://www.for.gov.bc.ca/hfd/pubs/Docs/Srs/Srs10.htm>]
- Banner, A., W. MacKenzie, S. Haeussler, S. Thomson, J. Pojar, and R. Trowbridge. 1993. A field guide to site identification and interpretation for the Prince Rupert Forest Region. Ministry of Forests Research Program. Victoria, BC. Parts 1 and 2. Land Management Handbook Number 26.
- Barbour, M. G., and J. Major, editors. 1988. Terrestrial vegetation of California: New expanded edition. California Native Plant Society, Special Publication 9, Sacramento. 1030 pp.
- Beatley, J. C. 1976. Vascular plants of the Nevada Test Site and central-southern Nevada: Ecological and geographic distributions. Technical Information Center, Energy Research and Development Administration. TID-26881. Prepared for Division of Biomedical and Environmental Research. 297 pp.
- Becking, R. W., J. A. Lenihan, and E. Muldavin. 1982. *Schoenolirion bracteosum*, ecological investigations. Final report. Oregon Natural Heritage Program, Portland. 17 pp.
- Beetle, A. A. 1961. Range survey in Teton County, Wyoming, Part I. Ecology of range resources. University of Wyoming Agricultural Experiment Station Bulletin 376, Laramie. 40 pp.
- Beguín, C., and J. Major. 1975. Contribution a l'etude phytosociologique et ecologique des marais de la Sierra Nevada (Californie). *Phytocoenologia* 2:349-367.
- Bell, J., D. Cogan, J. Erixson, and J. Von Loh. 2009. Vegetation inventory project report, Craters of the Moon National Monument and Preserve. Natural Resource Technical Report NPS/UCBN/NRTR-2009/277. National Park Service, Fort Collins, CO. 358 pp.
- Berry, D. W. 1963. An ecological study of a disjunct Ponderosa pine forest in the northern Great Basin in Oregon. Ph.D. dissertation, Oregon State University, Corvallis. 291 pp.
- Bigley, R., and S. Hull. 1992. Siouxi guide to site interpretation and forest management Washington Department. Natural Resources Division of Forest Land Management, Olympia, WA. 216 pp.
- Bigley, R., and S. Hull. 1995. Draft guide to plant associations on the Olympic Experimental Forest. Washington Department of Natural Resources, Olympia, WA. 50 pp.
- Bjork, C. R. 2002. A new subspecies of *Navarretia leucocephala* (Polemoniaceae) from vernal pools in eastern Washington. *Madroño* 49:165-168.
- Blackburn, W. H. 1967. Plant succession on selected habitat types in Nevada. Unpublished thesis, University of Nevada, Reno. 162 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1968a. Vegetation and soils of the Mill Creek watershed. Nevada Agricultural Experiment Station Bulletin R-43. University of Nevada, Reno. 69 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1968b. Vegetation and soils of the Crowley Creek watershed. Nevada Agricultural Experiment Station Bulletin R-42. Reno. 60 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1968c. Vegetation and soils of the Duckwater watershed. Nevada Agricultural Experiment Station Bulletin R-40. University of Nevada, Reno. 76 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1969a. Vegetation and soils of the Cow Creek watershed. Vegetation and soils of the Mill Creek watershed. In cooperation with USDI Bureau of Land Management. University of Nevada, College of Agriculture, Reno. 71 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1969b. Vegetation and soils of the Coils Creek watershed. Nevada Agricultural Experiment Station Bulletin R-48. Reno. 81 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1969c. Vegetation and soils of the Churchill Canyon watershed. Nevada Agricultural Experiment Station Bulletin R-45. Reno. 157 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1969d. Vegetation and soils of the Pine and Mathews Canyon watersheds. Nevada Agricultural Experiment Station Bulletin R-46. Reno. 111 pp.
- Blackburn, W. H., P. T. Tueller, and R. E. Eckert, Jr. 1971. Vegetation and soils of the Rock Springs watershed. Nevada Agricultural Experiment Station Bulletin R-83. Reno. 116 pp.
- Boggs, K. 1996. Forested plant communities of maritime southcentral and southeast Alaska. Unpublished report of the Alaska Natural Heritage Program, University of Alaska, Anchorage.
- Boggs, K. 2000. Classification of community types, successional sequences and landscapes of the Copper River Delta, Alaska. General Technical Report PNW-GTR-469. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. March 2000. 244 pp.

- Boggs, K., P. Hansen, R. Pfister, and J. Joy. 1990. Classification and management of riparian and wetland sites in northwestern Montana. Draft version I. Report prepared for the Montana Riparian Association and Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana, Missoula. 216 pp.
- Bolen, E. G. 1964. Plant ecology of spring-fed salt marshes in western Utah. *Ecological Monographs* 34(2):143-166.
- Bonacker, G. L., R. C. Martin, and R. E. Frenkel. 1979. Preserve analysis: Netarts Sand Spit. Oregon Natural Area Preserves Advisory Committee to the State Land Board. Salem, OR. 55 pp.
- Borchers, S. L., J. Wattenbarger, and R. Ament. 1989. Forest plant associations of Montague Island, Chugach National Forest. Unpublished report. USDA Forest Service, Alaska Region, Chugach National Forest, Anchorage, AK. 5 pp.
- Borchert, M., A. Lopez, C. Bauer, and T. Knowd. 2004. Field guide to coastal sage scrub and chaparral series of Los Padres National Forest. Report R5-TP-019. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- Borgias, D. 2004. Effects of livestock grazing and the development of grazing best management practices for the vernal pool - mounded prairies of the Agate Desert, Jackson County, Oregon. The Nature Conservancy, Medford, OR. <https://www.fws.gov/oregonfwo/FieldOffices/Roseburg/VernalPools/Documents/GrazingReportForVernalPoolOfAgateDesert2004.pdf>
- Borgias, D.B. 1993. Fire effects on the Rogue Valley mounded prairie on the Agate Desert, Jackson County, Oregon. Report for Katherine Ordway Stewardship Endowment research grant K89WR01. The Nature Conservancy, Oregon Field Office, Portland. 29 pp.
- Boss, T. R. 1983. Vegetation ecology and net primary productivity of selected freshwater wetlands in Oregon. Ph.D. dissertation, Oregon State University, Corvallis. 236 pp.
- Bowerman, T. S., J. Dorr, S. Leahy, K. Varga, and J. Warrick. 1997. Targhee National Forest ecological unit inventory. USDA Forest Service, Targhee National Forest, St. Anthony, ID. 789 pp.
- Boyce, D. A. 1977. Vegetation of the South Fork of the White River Valley, Colorado. Unpublished dissertation, University of Colorado, Boulder. 312 pp.
- Bradley, W. G. 1970. The vegetation of Saratoga Springs, Death Valley National Monument. *Southwest Naturalist* 15:111-129.
- Branson, F. A., and J. B. Owen. 1970. Plant cover, runoff, and sediment yield relationships on Mancos shale in western Colorado. *Water Resources Research* 6:783-790.
- Braumandl, T. F., and M. P. Curran. 1992. A field guide for site identification and interpretation for the Nelson Forest Region. British Columbia Ministry of Forestry, Victoria, BC. Land Management Handbook No. 20.
- Brett, R. B., K. Klinka, and H. Qian. 1998. Classification of high-elevation, non-forested plant communities in coastal British Columbia. Forest Science Department, University of British Columbia, Vancouver. *Scientia Silvana*. 58 pp.
- Brockway, D. G., and C. Topik. 1984. Ecological classification and management characteristics of montane forest land in southwestern Washington. In: J. G. Bockheim, editor. *Forest land classification: Experiences, problems, perspectives*. Proceedings of a symposium held at the University of Wisconsin at Madison on March 18-20, 1984.
- Brockway, D. G., C. Topik, M. A. Hemstrom, and W. H. Emmingham. 1983. Plant association and management guide for the Pacific silver fir zone, Gifford Pinchot National Forest. Technical Report R6-Ecol-130a-1983. USDA Forest Service, Pacific Northwest Region, Portland, OR. 122 pp.
- Brophy, L.S. 2007. Vegetation monitoring and mapping at tidal wetland restoration and reference sites: Siletz Bay National Wildlife Refuge and Yaquina River Estuary. Prepared for Confederated Tribes of Siletz Indians, Siletz, OR. Green Point Consulting, Corvallis, OR. 47pp.
- Brophy, L.S., C.E. Cornu, P.R. Adamus, J.A. Christy, A. Gray, L. Huang, M.A. MacClellan, J.A. Doumbia, and R.L. Tully. 2011. New Tools for Tidal Wetland Restoration: Development of a Reference Conditions Database and a Temperature Sensor Method for Detecting Tidal Inundation in Least-disturbed Tidal Wetlands of Oregon, USA. Prepared for the Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET).199pp.
- Brotherson, J. D. 1987. Plant community zonation in response to soil gradients in a saline meadow near Utah Lake, Utah County, Utah. *Great Basin Naturalist* 47(2):322-333.
- Brotherson, J. D., D. L. Anderson, and L. A. Szyska. 1984. Habitat relations of *Cercocarpus montanus* (true mountain mahogany) in central Utah. *Journal of Range Management* 37:321-324.



- Brown, K. J., and R. J. Hebda. 1999. Long-term fire incidence in coastal forests of British Columbia. *Northwest Science* 73:41-43.
- Brown, R. W. 1971. Distribution of plant communities in southeastern Montana badlands. *The American Midland Naturalist* 85(2):458-477.
- Brunsfeld, S. J., and F. D. Johnson. 1985. Field guide to the willows of east-central Idaho. Bulletin No. 39. Forest, Wildlife & Range Experimental Station, University of Idaho, Moscow. 95 pp.
- Buck-Diaz, J., S. Batiuk, and J. M. Evens. 2012. Vegetation alliances and associations of the Great Valley ecoregion, California. California Native Society, Sacramento, CA. [[http://cnps.org/cnps/vegetation/pdf/great\\_valley\\_eco-vegclass2012.pdf](http://cnps.org/cnps/vegetation/pdf/great_valley_eco-vegclass2012.pdf)]
- Buechling, A., E. Alverson, J. Kertis, and G. Fitzpatrick. 2008. Classification of oak vegetation in the Willamette Valley. Oregon Natural Heritage Information Center, Oregon State University, Corvallis. 71 pp.
- Bundy, R. M., J. V. Baumgartner, M. S. Reid, P. S. Bourgeron, H. C. Humphries, and B. L. Donohue. 1996. Ecological classification of wetland plant associations in the Lahontan Valley, Nevada. Prepared for Stillwater National Wildlife Refuge and USDI Fish & Wildlife Service. 53 pp. not including inventories, tables and graphs.
- Bunin, J. E. 1985. Vegetation of the City of Boulder, Colorado open space lands. Report prepared for the City of Boulder, Real Estate/Open Space, Boulder, CO. 114 pp.
- Burns, R. M., and B. H. Honkala, technical coordinators. 1990a. *Silvics of North America: Volume 1. Conifers*. Agriculture Handbook 654. USDA Forest Service, Washington, DC. 675 pp.
- Bursik, R. J., and R. K. Moseley. 1995. Ecosystem conservation strategy for Idaho Panhandle peatlands. Cooperative project between Idaho Panhandle National Forests and Idaho Department of Fish and Game, Conservation Data Center, Boise. 28 pp. plus appendix.
- Butler, J., D. Crawford, S. Menard, and T. Meyer. 2002. Lacreek National Wildlife Refuge, South Dakota. USGS-USFWS Vegetation Mapping Program. Final report. Technical Memorandum 8260-02-02, Remote Sensing and GIS Group, Technical Service Center, Bureau of Reclamation, Denver, CO.
- Cadrin, C. M., and M. Wolowicz. 2005. Application of terrestrial ecosystem mapping on coastal British Columbia to conservation status assessments of ecological communities. British Columbia Conservation Data Centre, Ministry of Sustainable Resource Management, Victoria, BC.
- Caicco, S. 1988. Idaho Natural Heritage Program plant association classification. Idaho Natural Heritage Program, Boise, ID. Mimeograph copy.
- Caicco, S. L., and C. A. Wellner. 1983a. Research Natural Area recommendation for City of Rocks. Unpublished report prepared for USDI Bureau of Land Management, Burley District, Idaho by Idaho Natural Areas Coordinating Committee. On file at Idaho Conservation Data Center, Boise, ID. 12 pp.
- Caicco, S. L., and C. A. Wellner. 1983f. Research Natural Area recommendation for Menan Buttes. Unpublished report prepared for USDI Bureau of Land Management, Idaho Falls District, Idaho by Idaho Natural Areas Coordinating Committee. 10 pp.
- Caicco, S. L., and C. A. Wellner. 1983g. Research Natural Area recommendation for Middle Canyon Alluvial Fan. Unpublished report prepared for USDI Bureau of Land Management, Idaho Falls District, Idaho by Idaho Natural Areas Coordinating Committee.
- Caicco, S. L., and C. A. Wellner. 1983h. Research Natural Area recommendation for Brass Cap Kipuka. Unpublished report prepared for USDI Bureau of Land Management, Shoshone District, Idaho by Idaho Natural Areas Coordinating Committee. 15 pp.
- Caicco, S. L., and C. A. Wellner. 1983i. Research Natural Area recommendation for Substation Tract. Unpublished report prepared for USDI Bureau of Land Management, Shoshone District, Idaho by Idaho Natural Areas Coordinating Committee. 11 pp.
- Caicco, S. L., and C. A. Wellner. 1983j. Research Natural Area recommendation for Big Juniper Kipuka. Unpublished report prepared for USDI Bureau of Land Management, Shoshone District, Idaho by Idaho Natural Areas Coordinating Committee.
- Caicco, S. L., and C. A. Wellner. 1983k. Research Natural Area recommendation for East Fork Salmon River Bench. Unpublished report prepared for USDI Bureau of Land Management, Salmon District, Idaho by Idaho Natural Areas Coordinating Committee. 14 pp.

- Caicco, S. L., and C. A. Wellner. 1983l. Research Natural Area recommendation for Antelope Flat. Unpublished report prepared for USDI, Bureau of Land Management, Salmon District, Idaho by Idaho Natural Areas Coordinating Committee. 12 pp.
- Caicco, S. L., and C. A. Wellner. 1983n. Research Natural Area recommendation for Little Jacks Creek. Unpublished report prepared for USDI Bureau of Land Management, Boise District, Idaho by Idaho Natural Areas Coordinating Committee. 14 pp.
- Caicco, S. L., J. M. Scott, B. Butterfield, and B. Csuti. 1995. A gap analysis of the management status of the vegetation of Idaho (U.S.A.). *Conservation Biology* 9(3):498-511.
- Campbell, A. G. 1973. Vegetative ecology of Hunts Cove, Mt. Jefferson, OR. M.S. thesis, Oregon State University, Corvallis. 89 pp.
- Campbell, A. G., and J. F. Franklin. 1979. Riparian vegetation in Oregon's western Cascade Mountains: Composition, biomass, and autumn phenology. *Coniferous Forest Biome, Ecosystem Analysis Studies, Bulletin No. 14.*
- Carsey, K., D. Cooper, K. Decker, D. Culver, and G. Kittel. 2003b. Statewide wetlands classification and characterization: Wetland plant associations of Colorado. Prepared for Colorado Department of Natural Resources, Denver, by Colorado Natural Heritage Program, College of Natural Resources, Colorado State University, Fort Collins. 79 pp. [[http://www.cnhp.colostate.edu/documents/2003/wetland\\_classification\\_final\\_report\\_2003.pdf](http://www.cnhp.colostate.edu/documents/2003/wetland_classification_final_report_2003.pdf)]
- Carsey, K., G. Kittel, K. Decker, D. J. Cooper, and D. Culver. 2003a. Field guide to the wetland and riparian plant associations of Colorado. Colorado Natural Heritage Program, Fort Collins, CO.
- Chadde, S., P. Hansen, and R. Pfister. 1988. Wetland plant communities of the northern range, Yellowstone National Park. Final contract report June 10, 1988 (revised September 9, 1988). School of Forestry, University of Montana, Missoula. 81 pp.
- Chadwick, H. W., and P. D. Dalke. 1965. Plant succession on dune sands in Fremont County, Idaho. *Ecology* 46:765-780.
- Chappell, C. 1994. Natural forests of the Puget Lowland, Washington. Northwest Science Abstract.
- Chappell, C. B. 1997. Terrestrial forested plant associations of the Puget Lowland. Draft report. Washington Natural Heritage Program, Washington Department of Natural Resources, Olympia. 36 pp.
- Chappell, C. B. 1999. Ecological classification of low-elevation riparian vegetation on the Olympic Experimental State Forest: A first approximation. Unpublished progress report. Washing Natural Heritage Program, Washington Department of Natural Resources, Olympia. 43 pp.
- Chappell, C. B. 2001. Draft upland forest vegetation classification for Fort Lewis Military Reservation, Washington. Unpublished report, Washington Natural Heritage Program, Washington Department of Natural Resources, Olympia, WA. . 41 pp.
- Chappell, C. B. 2006a. Plant associations of balds and bluffs of western Washington. Natural Heritage Report 2006-02. Washington Natural Heritage Program, Washington Department of Natural Resources, Olympia. [[http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/balds\\_veg.pdf](http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/balds_veg.pdf)]
- Chappell, C. B. 2006b. Upland plant associations of the Puget Trough ecoregion, Washington. Natural Heritage Report 2006-01. Washington Department of Natural Resources, Natural Heritage Program, Olympia, WA. [<http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf>]
- Chappell, C. B., and R. C. Crawford. 1997. Native vegetation of the South Puget Sound prairie landscape. Pages 107-122 in: P. Dunn and K. Ewing, editors. *Ecology and conservation of the South Puget Sound prairie landscape.* The Nature Conservancy of Washington, Seattle. 289 pp.
- Chappell, C., R. Crawford, J. Kagan, and P. J. Doran. 1997. A vegetation, land use, and habitat classification system for the terrestrial and aquatic ecosystems of Oregon and Washington. Unpublished report prepared for Wildlife habitat and species associations within Oregon and Washington landscapes: Building a common understanding for management. Prepared by Washington and Oregon Natural Heritage Programs, Olympia, WA, and Portland, OR. 177 pp.
- Cheatham, N. H., and J. R. Haller. 1975. An annotated list of California habitat types. Unpublished report. University of California, Natural Land and Water Reserves System.
- Christy, J. 1991. Unpublished data from Banks swamp. Data on file at Oregon Natural Heritage Program, Portland, OR.

- Christy, J. A. 1979. Report on a preliminary survey of Sphagnum-containing wetlands on the Oregon Coast. Oregon Natural Area Preserves Advisory Committee. Oregon State Land Board, Salem. 92 pp.
- Christy, J. A. 1993. Classification and catalog of native wetland plant communities in Oregon. Oregon Natural Heritage Program, Portland. 63 pp.
- Christy, J. A. 2001a. Low-elevation Sphagnum wetlands in western Oregon. Report to Environmental Protection Agency, Region 10. Oregon Natural Heritage Program, Portland. 90 pp.
- Christy, J. A. 2001b. Wetland vegetation of Fanno Meadows Preserve, Polk County, Oregon. Report to The Nature Conservancy of Oregon, Portland. Oregon Natural Heritage Program. 17 pp.
- Christy, J. A. 2004. Native freshwater wetland plant associations of northwestern Oregon. Oregon Natural Heritage Information Center, Oregon State University, Portland, OR.
- Christy, J. A. 2013. Wet meadow plant associations, Malheur National Wildlife Refuge, Harney County, Oregon. Oregon Biodiversity Information Center, Institute for Natural Resources, Portland State University, Portland.
- Christy, J. A., and J. A. Putera. 1993. Lower Columbia River Natural Area Inventory, 1992. Oregon Natural Heritage Program, Portland. 75 pp.
- Christy, J. A., and L. Brophy. 2002. Vegetation of Neskowin Marsh Unit, Nestucca Bay National Wildlife Refuge, Tillamook County, Oregon. Report to U.S. Fish and Wildlife Service. Oregon Natural Heritage Information Center and Green Point Consulting. 26 pp.
- Christy, J. A., and L. C. Cornelius. 1980. Katherine Ordway Sycan Marsh Preserve: Preliminary classification of plant communities. The Nature Conservancy, Oregon Field Office, Portland.
- Christy, J. A., J. S. Kagan, and A. M. Wiedemann. 1998. Plant associations of the Oregon Dunes National Recreation Area - Siuslaw National Forest, Oregon. Technical Paper R6-NR-ECOL-TP-09-98. USDA Forest Service, Pacific Northwest Region, Portland, OR. 196 pp.
- Christy, J.A. 2016. Wet meadow plant associations, Double O Unit, Malheur National Wildlife Refuge, Harney County, Oregon. Oregon Biodiversity Information Center, Institute for Natural Resources, Portland State University, Portland.
- Christy, S. 1973. An analysis of the woody vegetation on the South Platte River flood plain in northeastern Colorado. Unpublished thesis, University of Northern Colorado, Greeley. 82 pp.
- Clagg, H. B. 1975. Fire ecology in high-elevation forests in Colorado. Unpublished M.S. thesis, Colorado State University, Fort Collins. 137 pp.
- Clark, D., M. Dela Cruz, T. Clark, J. Coles, S. Topp, A. Evenden, A. Wight, G. Wakefield, and J. Von Loh. 2009. Vegetation classification and mapping project report, Capitol Reef National Park. Natural Resource Report NPS/NCPN/NRTR--2009/187. National Park Service, Fort Collins, CO. 882 pp.
- Clausnitzer, R. R. 1993. The grand fir series of northeastern Oregon and southeastern Washington: Successional stages and management guide. Technical Report R6-ECO-TP-050-93. USDA Forest Service, Pacific Northwest Region. 193 pp. plus appendices.
- Clausnitzer, R. R., and B. A. Zamora. 1987. Forest habitat types of the Colville Indian Reservation. Unpublished report prepared for the Department of Forest and Range Management, Washington State University, Pullman. 110 pp.
- Clements, F. E. 1904. Formation and succession herbaria. University of Nebraska, University Studies IV(4):329-355.
- Coenenberg, J. G., and E. J. Deputit. 1979. Baseline wildlife studies, Crow Coal Lease, southeastern Montana, 1975-1978. Montana Agricultural Experiment Station, Reclamation Research Unit, Bozeman, MT. 133 pp.
- Cogan, D., and J. E. Taylor. 2014. Manzanar National Historic Site: Vegetation classification and mapping project report. Natural Resource Technical Report NPS/MANZ/NRTR--2014/868. National Park Service, Fort Collins, CO. 170 pp.
- Cogan, D., H. Marriott, J. Von Loh, and M. J. Pucherelli. 1999. USGS-NPS Vegetation Mapping Program, Wind Cave National Park, South Dakota. Technical Memorandum No. 8260-98-08. USDI Bureau of Reclamation Technical Services Center, Denver, CO. 225 pp.
- Cogan, D., J. E. Taylor, and K. Schulz. 2012. Vegetation inventory project: Great Basin National Park. Natural Resource Report NPS/MOJN/NRR--2012/568. National Park Service, Fort Collins, CO. 373 pp.

- Cogan, D., K. Varga, and G. Kittel. 2005. USGS-NPS Vegetation Mapping Program: Grand Teton National Park and John D. Rockefeller, Jr. Memorial Parkway. Final Project Report 2002-2005 Vegetation Mapping Project. Technical Memorandum 8260-06-02. USDI Bureau of Reclamation, Denver, CO. 87 pp. plus Appendixes A-F.
- Cogan, D., M. Reid, K. Schulz, and M. Pucherelli. 2004. Zion National Park, Utah 1999-2003. Vegetation Mapping Project. Technical Memorandum 8260-03-01. Remote Sensing and GIS Group Technical Service Center, Bureau of Reclamation, Denver, CO. Appendix F: Vegetation Association Descriptions for Zion.
- Cole, D. N. 1977b. Man's impact on wilderness: An example from Eagle Cap Wilderness, northeastern Oregon. Ph.D. dissertation, Oregon State University, Corvallis. 307 pp.
- Cole, D. N. 1982. Vegetation of two drainages in Eagle Cap Wilderness, Wallowa Mountains, Oregon. Research Paper INT-288. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 26 pp.
- Cole, N. K. 1995. Cover type map and vegetation classification of the Hagerman study area, southwestern Idaho. Technical appendix E.3.3-A for new license application: Upper Salmon Falls (FERC No. 2777), Lower Salmon Falls (FERC No. 2061), Bliss (FERC No. 1975). Volume 4. Idaho Power Company, Boise ID. 61 pp. plus appendices.
- Cole, N. K. 1996. Cover type map and vegetation classification of the Shoshone Falls study area, southwestern Idaho. Technical appendix E.3.3-A for new license application: Shoshone Falls (FERC No. 2778), Volume 2. Idaho Power Company, Boise ID. 38 pp. plus appendices.
- Coles, J., A. Tendick, G. Manis, A. Wight, G. Wakefield, J. Von Loh, and A. Evenden. 2009a. Vegetation classification and mapping project report, Arches National Park. Natural Resource Technical Report NPS/NCPN/NRTR--2009/253. National Park Service, Fort Collins, CO. 544 pp.
- Coles, J., A. Tendick, J. Von Loh, G. Bradshaw, G. Manis, A. Wight, G. Wakefield, and A. Evenden. 2010. Vegetation classification and mapping project report, Black Canyon of the Gunnison National Park. Natural Resource Technical Report NPS/NCPN/NRTR--2010/361. National Park Service, Fort Collins, CO.
- Coles, J., A. Wight, J. Von Loh, K. Schulz, and A. Evenden. 2011. Vegetation classification and mapping project report, Golden Spike National Historic Site. Natural Resource Technical Report NPS/NCPN/NRTR---2011/508. National Park Service, Fort Collins, CO. 252 pp. [<http://www.nature.nps.gov/im/units/NCPN>]
- Coles, J., D. Cogan, D. Salas, A. Wight, G. Wakefield, J. Von Loh, and A. Evenden. 2008a. Vegetation classification and mapping project report, Dinosaur National Monument. Natural Resource Technical Report NPS/NCPN/NRTR-2008/112. National Park Service, Fort Collins, CO. 814 pp.
- Coles, J., J. Von Loh, A. Evenden, G. Manis, G. Wakefield. and A. Wight. 2008c. Vegetation classification and mapping project report, Natural Bridges National Monument. Natural Resource Technical Report NPS/NCPN/NRTR--2008/077. National Park Service, Fort Collins, CO. 390 pp.
- Connelly, K. P. 1989. Ecological effects of fire in bottomland Willamette Valley prairies, with special emphasis on *Lomatium bradshawii* and *Erigeron decumbens*, two rare endemic plants. Study plan and progress report. The Nature Conservancy, Oregon Field Office, Portland. 35 pp.
- Connelly, K. P., and J. B. Kauffman. 1991. Ecological effects of fire in Willamette Valley wetland prairies with special emphasis on *Lomatium bradshawii* and *Erigeron decumbens*, two rare endemic plants. Unpublished report, on file at the Oregon Natural Heritage Program, Portland, OR. 45 pp.
- Cooper, D. J. 1986a. Ecological studies of wetland vegetation, Cross Creek Valley, Holy Cross Wilderness Area, Sawatch Range, Colorado. Holy Cross Wilderness Defense Fund, Technical Report No. 2. 24 pp.
- Cooper, D. J. 1996. Soil and water chemistry, floristics and phytosociology of the extreme rich High Creek fen in South Park, Colorado. Canadian Journal of Botany 74:1801-1811.
- Cooper, D. J., and C. Severn. 1992. Wetlands of the San Luis Valley, Colorado: An ecological study and analysis of the hydrologic regime, soil chemistry, vegetation and the potential effects of a water table drawdown. Report submitted to the State of Colorado Division of Wildlife, the USDI Fish & Wildlife Service and the Rio Grande Water Conservation District.
- Cooper, D. J., and T. R. Cottrell. 1990. Classification of riparian vegetation in the northern Colorado Front Range. Unpublished report prepared for The Nature Conservancy, Colorado Field Office, Boulder. 115 pp.
- Cooper, S. V. 1975. Forest habitat types of northwestern Wyoming and contiguous portion of Montana and Idaho. Unpublished dissertation, Washington State University, Pullman. 190 pp.
- Cooper, S. V. 2003. Assessment of Kootenai National Forest vegetation types with potential for *Silene spaldingii* in the Tobacco Plains, Rexford Bench and Salish Range foothills. Unpublished report to Kootenai National Forest, Supervisor's Office. Montana Natural Heritage Program, Helena, MT. 33 pp. plus appendices.

- Cooper, S. V., C. Jean, and B. L. Heidel. 1999. Plant associations and related botanical inventory of the Beaverhead Mountains Section, Montana. Unpublished report to the Bureau of Land Management. Montana Natural Heritage Program, Helena. 235 pp.
- Cooper, S. V., C. Jean, and P. Hendricks. 2001. Biological survey of a prairie landscape in Montana's glaciated plains. Report to State Office, Bureau of Land Management. Montana Natural Heritage Program, Helena. 24 pp. plus appendices.
- Cooper, S. V., K. E. Neiman, R. Steele, and D. W. Roberts. 1987. Forest habitat types of northern Idaho: A second approximation. General Technical Report INT-236. USDA Forest Service, Intermountain Research Station, Ogden, UT. 135 pp. [reprinted in 1991]
- Cooper, S. V., P. Lesica, R. L. DeVelice, and T. McGarvey. 1995. Classification of southwestern Montana plant communities with emphasis on those of Dillon Resource Area, Bureau of Land Management. Montana Natural Heritage Program, Helena, MT. 154 pp.
- Cooper, S., and R. Pfister. 1981. Forest habitat types of the Blackfeet Indian Reservation. Review Draft, 5/21/81, for Bureau of Indian Affairs, Wind River Agency, Fort Washakie, WY.
- Cooper, S.V., K.E. Neiman, and D.W. Roberts. 1991. Forest Habitat Types of Northern Idaho: A Second Approximation. General Technical Report INR-236, Intermountain Research Station.
- Copass, C., and T. Ramm-Granberg. 2016a. Ebey's Landing National Historical Reserve vegetation inventory and mapping project. Natural Resource Report NPS/NCCN/NRR--2016/1127. National Park Service, Fort Collins, CO. 194 pp.
- Copass, C., and T. Ramm-Granberg. 2016b. Vancouver National Historic Reserve vegetation inventory and mapping project. Natural Resource Report NPS/NCCN/NRR--2016/1128. National Park Service, Fort Collins, CO. 90 pp.
- Copeland, W. N. 1978. Botanical survey of Eight Dollar Mountain, May 6-9, 1978. Oregon Natural Heritage Data Base, Portland, OR.
- Copeland, W. N. 1979. Harney Lake RNA Guidebook, Supplement #9. USDA Forest Service Experiment Station, Portland, OR.
- Copeland, W. N. 1980a. The Lawrence Memorial Grassland Preserve, a biophysical inventory with management recommendations. June 1980. Unpublished report prepared by The Nature Conservancy Field Office, Portland, Oregon. 161 pp.
- Copeland, W. N. 1980b. National Natural Landmark evaluation, Lawrence Memorial Grassland Preserve. The Heritage Conservation and Recreation Service Report, USDI National Park Service.
- Copeland, W. N., and S. E. Greene. 1982. Stinking Lake Research Natural Area. Supplement #12 to Franklin, J. F., F. C. Hall, C. T. Dyrness and C. Maser. 1972. Federal research natural areas in Oregon and Washington: A guidebook for scientists and educators. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- Cordes, L. D. 1972. An ecological study of the Sitka spruce forest on the west coast of Vancouver Island. Unpublished dissertation, University of British Columbia, Vancouver. 452 pp.
- Costello, D. F. 1944b. Important species of the major forage types in Colorado and Wyoming. Ecological Monographs 14:107-134.
- Crawford, R. C. 1986. Classification of antelope bitterbrush shrub steppe. Pages 37-48 in: National Natural Landmark Theme Phase I of Columbia Plateau Natural Region. Report to U.S. National Park Service.
- Crawford, R. C. 2001. Initial riparian and wetland classification and characterization of the Columbia Basin in Washington. Prepared for Environmental Protection Agency and Bureau of Land Management, Spokane District. Washington Natural Heritage Program, Washington Department of Natural Resources, Olympia. 83 pp.
- Crawford, R. C. 2003. Riparian vegetation classification of the Columbia Basin, Washington. Natural Heritage Report 2003-03. Washington Natural Heritage Program, Washington Department of Natural Resources, Olympia. 98 pp. plus appendices.
- Crawford, R. C., and F. D. Johnson. 1985. Pacific yew dominance in tall forests, a classification dilemma. Canadian Journal of Botany 63:592-602.
- Crawford, R. C., C. B. Chappell, C. C. Thompson, and F. J. Rocchio. 2009. Vegetation classification of Mount Rainier, North Cascades, and Olympic national parks. Plant association descriptions and identification keys: Appendices A-G. Natural Resource Technical Report NPS/NCCN/NRTR--2009/D-586. National Park Service, Fort Collins, CO. 586 pp.

- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren. 1977. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Volume 6: The Monocotyledons. Columbia University Press, New York. 584 pp.
- Crouch, G. L. 1961a. Wildlife populations and habitat conditions on grazed and ungrazed bottomlands in Logan County, Colorado. Unpublished thesis, Colorado State University, Fort Collins.
- Crowe, E. A., and R. R. Clausnitzer. 1997. Mid-montane wetland plant associations of the Malheur, Umatilla, and Wallowa-Whitman national forests. Technical Paper R6-NR-ECOL-TP-22-97. USDA Forest Service, Pacific Northwest Region, Portland, OR.
- Crowe, E. A., B. L. Kovalchik, and M. J. Kerr. 2004. Riparian and wetland vegetation of central and eastern Oregon. Oregon Natural Heritage Information Center, Institute for Natural Resources, Oregon State University, Portland. 473 pp. [<http://oregonstate.edu/ornhic/publications.html>]
- Crowe, E., B. Kovalchik, M. J. Kerr, J. Titus, and J. S. Kagan. 2002. Riparian and wetland plant communities of eastern Oregon. Draft report. Oregon Natural Heritage Information Center, Portland, OR.
- Damm, C. 2001. A phytosociological study of Glacier National Park, Montana, U. S. A., with notes on the syntaxonomy of alpine vegetation in western North America. Dissertation from Georg - August University, Germany. 297 pp. plus appendices.
- Daniels, F. P. 1911. The flora of Boulder, Colorado and vicinity. University of Missouri Studies, Science Series II(2):8-48.
- Daubenmire, R. 1952. Forest vegetation of northern Idaho and adjacent Washington, and its bearing on concepts of vegetation classification. *Ecological Monographs* 22(4):301-330.
- Daubenmire, R. 1968a. Analysis and description of plant communities. Pages 62-70 in: *Plant communities: A text book of plant synecology*. Harper & Row, New York.
- Daubenmire, R. 1975. Floristic plant geography of eastern Washington and northern Idaho. *Journal of Biogeography* 2:1-18.
- Daubenmire, R. 1981. Subalpine parks associated with snow transfer in the mountains of northern Idaho and eastern Washington. *Northwest Science* 55:124-135.
- Daubenmire, R. 1988. Steppe vegetation of Washington. Washington State University Cooperative Extension Service Publication EB1446. (Revised from and replaces Washington Agricultural Experiment Station Publication XT0062.) 131 pp.
- Daubenmire, R. F. 1970. Steppe vegetation of Washington. Washington State University Agricultural Experiment Station Technical Bulletin No. 62. 131 pp.
- Daubenmire, R. F., and J. B. Daubenmire. 1968. Forest vegetation of eastern Washington and northern Idaho. Washington State University Agricultural Experiment Station Technical Bulletin No. 60. 104 pp.
- Davidson, E.D. 1967. Synecological features of a natural headland prairie on the Oregon Coast. MS Thesis, Oregon State University, Corvallis, OR. 78:pp.
- Day, T. A., and R. G. Wright. 1985. The vegetation types of Craters of the Moon National Monument. *Forestry, Wildlife, and Range Experiment Station Bulletin* No. 38. University of Idaho, Moscow. 6 pp.
- Dealy, J. E. 1971. Habitat characteristics of the Silver Lake mule deer range. Research Paper PNW-125. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR. 99 pp.
- Dealy, J. E. 1975. Ecology of curl-leaf mahogany (*Cercocarpus ledifolius* Nutt.) in Oregon and adjacent areas. Unpublished dissertation, Oregon State University, Corvallis. 168 pp.
- Dealy, J. E., D. A. Leckenby, and D. M. Concannon. 1981. Wildlife habitats in managed rangelands--the Great Basin of southeastern Oregon. Plant communities and their importance to wildlife. General Technical Report PNW-120. USDA Forest Service, Pacific Northwest Region, Portland, OR. 66 pp.
- Dean, M. L. 1960. A taxonomic and ecologic study of the vascular plants of a section of the Owyhee River Canyon in Oregon. M.S. thesis, Oregon State University, Corvallis.
- del Moral, R. 1973. The vegetation of Findley Lake Basin. *The American Midland Naturalist* 89(10):26-40.
- del Moral, R. 1979. High elevation vegetation of the Enchantment Lakes Basin, Washington. *Canadian Journal of Botany* 57(10):1111-1130.
- del Moral, R., A. F. Watson, and R. S. Fleming. 1976. Vegetation structure in the Alpine Lakes region of Washington State: Classification of vegetation on granitic rocks. *Syesis* 9:291-316.
- del Moral, R., and J. N. Long. 1977. Classification of montane forest community types in the Cedar River drainage of western Washington, U.S.A. *Canadian Journal of Forest Research* 7(2):217-225.

- DeMeo, T., J. Martin, and R. A. West. 1992. Forest plant association management guide, Ketchikan Area, Tongass National Forest. R10-MB-210. USDA Forest Service, Alaska Region. 405 pp.
- Despain, D. G. 1973b. Major vegetation zones of Yellowstone National Park. USDI National Park Service, Yellowstone National Park. Information Paper No. 19.
- Dethier, M. N. 1990. A marine and estuarine habitat classification system for Washington State. Washington Natural Heritage Program, Department of Natural Resources, Olympia, WA. 56 pp.
- Detling, L. E. 1961. The chaparral formation of southwestern Oregon, with considerations of its postglacial history. *Ecology* 42:348-357.
- DeVelice, R. L. 1992. Classification of the plant communities of Beaverhead, Silver Bow, and Madison counties, Montana. Volume I (text). Prepared for the Montana Natural Heritage Program, Helena, MT. 35 pp.
- DeVelice, R. L., and P. Lesica. 1993. Plant community classification for vegetation on BLM lands, Pryor Mountains, Carbon County, Montana. Unpublished report by Montana Natural Heritage Program, Helena, MT. 78 pp.
- DeVelice, R. L., C. J. Hubbard, K. Boggs, S. Boudreau, M. Potkin, T. Boucher, and C. Wertheim. 1999. Plant community types of the Chugach National Forest: South-central Alaska. Technical Publication R10-TP-76. USDA Forest Service, Chugach National Forest, Alaska Region. 375 pp.
- DeVelice, R. L., J. A. Ludwig, W. H. Moir, and F. Ronco, Jr. 1986. A classification of forest habitat types of northern New Mexico and southern Colorado. General Technical Report RM-131. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 59 pp.
- DeVelice, R., C. Hubbard, M. Potkin, and T. Boucher. 1994. Preliminary classification of vegetation types of Prince William Sound. Unpublished report on file USDA Forest Service, Alaska Region. Chugach National Forest, Anchorage. 40 pp.
- Diamond, D. D. 1993. Classification of the plant communities of Texas (series level). Unpublished document. Texas Natural Heritage Program, Austin. 25 pp.
- Diaz, N. M., and T. K. Mellen. 1996. Riparian ecological types, Gifford Pinchot and Mt. Hood national forests, and Columbia River Gorge National Scenic Area. Technical Report R6-NR-TP-10-96. USDA Forest Service, Pacific Northwest Region, Portland, OR. 203 pp. plus appendices.
- Diaz, N. M., C. T. High, T. K. Mellen, D. E. Smith, and C. Topik. 1997. Plant association and management guide for the mountain hemlock zone. Gifford Pinchot and Mt. Hood National Forests. Technical Report R6-MTH-GP-TP-08-95. USDA Forest Service, Pacific Northwest Region, Portland, OR. 111 pp.
- DiPaolo, D. A., S. B. Smith, D. C. Odion, J. H. Ives, and D. A. Sarr. 2015. Vegetation classification and mapping: Lava Beds National Monument. Natural Resource Report NPS/LABE/NRR--2015/1098. National Park Service, Fort Collins, CO. 262 pp.
- Dodd, J. D., and R. T. Coupland. 1966. Vegetation of saline areas in Saskatchewan. *Ecology* 47(6):958-968.
- Doescher, P. S., R. F. Miller, S. R. Swanson, and A. H. Winward. 1986. Identification of the *Artemisia tridentata* ssp. *wyomingensis*/*Festuca idahoensis* habitat type in eastern Oregon. *Northwest Science* 60(1):55-60.
- Donnelly, P., D. Lindsey, E. Muldavin, Y. Chauvin, and A. Browder. 2006. Vegetation communities of Bosque del Apache National Wildlife Refuge. Prepared by U.S. Fish and Wildlife Service, National Wildlife Refuge Remote Sensing Lab, Albuquerque, NM, and Natural Heritage New Mexico, University of New Mexico, Albuquerque. Final report submitted to U.S. Fish and Wildlife Service, Southwest Region (R2), National Wildlife Refuge System (NWR), NWR Remote Sensing Lab, Division of Planning. 27 pp.  
[<http://www.fws.gov/data/documents/BDA%20NVCS%20Veg%20Community%20Report%20Example.pdf>]
- Dorn, R. D. 1969. Relations of moose, cattle and willows in southwestern Montana. Unpublished thesis, Montana State University, Bozeman. 79 pp.
- Dorn, R. D. 1984. Vascular plants of Montana. Mountain West Publishing, Cheyenne, WY. 276 pp.
- Dorn, R. D. 1992. Vascular plants of Wyoming. Second edition. Mountain West Publishing, Cheyenne, WY. 340 pp.
- Dorner, B., and C. Wong. 2003. Natural disturbance dynamics on the North Coast. Background report for North Coast LRMP, British Columbia. 51 pp.

- Douglas, G. W. 1971. An ecological survey of potential natural areas in the North Cascades National Park complex. Unpublished report prepared for Intercampus Education and Science Preserves Commission, State of Washington. 137 pp.
- Douglas, G. W. 1972. Subalpine plant communities of the western North Cascades, Washington. *Arctic and Alpine Research* 4:147-166.
- Douglas, G. W., and L. C. Bliss. 1977. Alpine and high subalpine plant communities of the North Cascades Range, Washington and British Columbia. *Ecological Monographs* 47:113-150.
- Driscoll, R. S. 1964a. Vegetation-soil units in the central Oregon juniper zone. Research Paper PNW-19. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR. 60 pp.
- Driscoll, R. S., D. L. Merkel, D. L. Radloff, D. E. Snyder, and J. S. Hagihara. 1984. An ecological land classification framework for the United States. Miscellaneous Publication No. 1439. USDA Forest Service, Washington, DC. 56 pp.
- Duebendorfer, T. 1992. Vegetation classification, rare plant analysis, impacts, restoration, and habitat management strategies for the Humboldt County Beach and Dunes Management Plan. Report to Humboldt County Planning and Building Department, Eureka, CA. 105 pp.
- Dyrness, C. T. 1960. Soil-vegetation relationships within the ponderosa pine type in the central Oregon pumice region. Unpublished dissertation. Oregon State College, Corvallis.
- Dyrness, C. T., and C. T. Youngberg. 1966. Soil-vegetation relationships within the ponderosa pine type in the central Oregon pumice region. *Ecology* 47:122-138.
- Dyrness, C. T., J. F. Franklin, and C. Maser. 1974b. Wheeler Creek Research Natural Area. Supplement #1 to "Federal Research Natural Areas in Oregon and Washington. A guidebook for scientists and educators" by Franklin, J. F., F. C. Hall, C. T. Dyrness, and C. Maser. USDA Forest Service.
- Dyrness, C. T., J. F. Franklin, and W. H. Moir. 1974a. A preliminary classification of forest communities in the central portion of the western Cascades of Oregon. *Coniferous Forest Biome Bulletin* 4:1-123.
- Dyrness, C. T., J. F. Franklin, C. Maser, S. A. Cook, J. D. Hall, and G. Faxon. 1975. Research natural area needs in the Pacific Northwest. General Technical Report PNW-38. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR. 231 pp.
- Easterday, J. C., and M. S. Mamone. 1980. Vegetation of Warner Valley. Pages 3-66 in: C. Gilman, project director. Analysis of the aquatic habitats of Warner Valley with relation to land use patterns. Final report. National Science Foundation Grant SPI-78-03490. Department of Fisheries and Wildlife, Oregon State University, Corvallis. 175 pp.
- Easterly, R., and D. Salstrom. 1997. Central Hanford 1997 Plant Community Inventory. The Nature Conservancy, Seattle, WA.
- Eckert, R. E. 1957. Vegetation soil relationships in some Artemisia types in northern Harney and Lake counties, Oregon. Unpublished dissertation, Oregon State University, Corvallis, OR. 208 pp.
- Edwards, O. M. 1980. The alpine vegetation of Mount Rainier National Park: Structure, constraints, and development. Dissertation, University of Washington, Seattle, WA.
- Egler, F. E. 1934. Communities and successional trends in the vegetation of the Coos Bay sand dunes, Oregon. M.S. thesis, University of Minnesota, St. Paul. 39 pp.
- Eilers, H. P. 1975a. Plants, plant communities, net production and tide levels: The ecological biogeography of the Nehalem salt marshes, Tillamook County, Oregon. Ph.D. dissertation, Oregon State University, Corvallis. 352 pp.
- Eilers, H. P. 1976. The ecological biogeography of an Oregon coastal salt marsh. *Yearbook Association of Pacific Coast Geographers* 38:19-32.
- Eilers, P. 1984. Low elevation/high salinity intertidal marshes on sandy substrate estuarine aquatic ecosystem Cell #24. Unpublished document located at Oregon Natural Heritage Program, Portland, OR.
- Elliott, H. W., and J. D. Wehausen. 1974. Vegetation succession on coastal rangeland of Point Reyes Peninsula. *Madrono* 22:231-238.
- Elzinga, C., and R. Rosentreter. 2000. Riparian and wetland plants of the Intermountain West. Unpublished draft distributed for review by Alderspring Consulting, Tendoy, ID.
- Eng, M. 2005. Analysis of biogeoclimatic units by forest cover and forest age class. Unpublished data. British Columbia Ministry of Forests Research Branch, Victoria, BC.



- Erixson, J. A., and D. Cogan. 2009. Vegetation classification and mapping: Hagerman Fossil Beds National Monument. Natural Resource Technical Report NPS/UCBN/NRTR--2009/212. National Park Service, Fort Collins, CO. 206 pp.
- Erixson, J. A., D. Cogan, and J. Von Loh. 2011a. Vegetation inventory project: John Day Fossil Beds National Monument. Natural Resource Technical Report NPS/UCBN/NRTR--2011/419. National Park Service, Fort Collins, CO. 184 pp. [[http://www.usgs.gov/core\\_science\\_systems/csas/vip/parks/joda.html](http://www.usgs.gov/core_science_systems/csas/vip/parks/joda.html)]
- Erixson, J., and D. Cogan. 2012a. Vegetation inventory project: Whitman Mission National Historic Site. Natural Resource Report NPS/UCBN/NRR--2012/520. National Park Service, Fort Collins, CO. 176 pp.
- Erixson, J., and D. Cogan. 2012b. Vegetation inventory project report: Big Hole National Battlefield. Natural Resource Report NPS/UCBN/NRR--2012/519. National Park Service, Fort Collins, CO. 178 pp.
- Erixson, J., and D. Cogan. 2012c. Vegetation inventory project report: Nez Perce National Historical Park. Natural Resource Report NPS/UCBN/NRR--2012/531. National Park Service, Fort Collins, CO. 380 pp.
- Erixson, J., D. Cogan, and J. Von Loh. 2011b. Vegetation inventory project report: Lake Roosevelt National Recreation Area. Natural Resource Report NPS/UCBN/NRR--2011/434 National Park Service, Fort Collins, CO.
- Evans, S. 1989a. Riparian survey of Washington's Columbia Basin. Unpublished report prepared for The Nature Conservancy Washington Natural Heritage Program, Olympia, Washington.
- Evans, S. 1989b. Provisional riparian and aquatic wetland plant communities on the Columbia Plateau. Unpublished report prepared under Contract No. C0089098, with Washington State Department of Ecology. 52 pp.
- Evenden, A. G. 1990. Ecology and distribution of riparian vegetation in the Trout Creek Mountains of southeastern Oregon. Ph.D. dissertation, Oregon State University, Corvallis. 156 pp.
- Evens, J. M., K. Sikes, D. Hastings, and J. Ratchford. 2014. Vegetation alliance descriptions for Lake Mead National Recreation Area, Death Valley National Park and Mojave National Preserve. Unpublished report submitted to USDI National Park Service, Mojave Desert Network Inventory and Monitoring Program. California Native Plant Society, Sacramento, CA.
- Evens, J., A. Klein, J. Taylor, T. Keeler-Wolf, and D. Hickson, principal investigators. 2006. Vegetation classification, descriptions, and mapping of the Clear Creek Management Area, Joaquin Ridge, Monocline Ridge, and Environs in San Benito and western Fresno counties, California. Final report prepared by California Native Plant Society and California Department of Fish and Game, Sacramento, CA. 273 pp.
- Evens, J., and S. San. 2004. Vegetation associations of a serpentine area: Coyote Ridge, Santa Clara County, California. Unpublished report. California Native Plant Society, Sacramento, CA.
- Eyre, F. H., editor. 1980. Forest cover types of the United States and Canada. Society of American Foresters, Washington, DC. 148 pp.
- Faber-Langendoen, D., editor. 2001. Plant communities of the Midwest: Classification in an ecological context. Association for Biodiversity Information, Arlington, VA. 61 pp. plus appendix (705 pp.).
- Fenemore, R. M., Jr. 1970. Plant succession in a receding lake bed in the western Great Basin. Unpublished thesis, University of Nevada, Reno.
- Ferchau, H. A. 1973. Vegetation inventory analysis & impact study of the Parachute Creek area, Garfield County, Colorado. Part II, Volume 1, Chapter VI:1-77 in: Unpublished Colony Environmental Report for Colony Develop. Operation, Denver, prepared by Thorne Ecological Institute, Boulder.
- Ferro, M., K. Hulbert, J. Merrill, J. Merzenich, J. Reed, K. Roberts, and A. Taylor. 1976. Preliminary survey of plants and vertebrates of the Wenaha Drainage. NSF Student-originated study, Eastern Oregon State College. 37 pp. plus bibliography and appendices.
- Fischer, W. C., and A. F. Bradley. 1987. Fire ecology of western Montana forest habitat types. General Technical Report INT-223. USDA Forest Service, Intermountain Research Station, Ogden, UT. 95 pp.
- Fisser, H. G. 1962. An ecological study of the *Artemisia tripartita* subsp. *rupicola* and related shrub communities in Wyoming. Unpublished dissertation, University of Wyoming, Laramie.
- Fisser, H. G. 1964. Range survey in Wyoming's Big Horn Basin of Wyoming. Wyoming Agricultural Experiment Station Bulletin 424.
- Fisser, H. G. 1970. Exclosure studies with transects of permanent plots, 1969 results. University of Wyoming Cooperative Research Report to the USDI Bureau of Land Management, sections I-IV. Wyoming Agricultural Experiment Station. Science Report 240. Laramie, WY. 128 pp.

- Fites, J. 1993. Ecological guide to mixed conifer plant associations of the northern Sierra Nevada and southern Cascades. Publication R5-ECOL-TP-001. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- Fonda, R. W. 1974. Forest succession in relation to river terrace development in Olympic National Park, Washington. *Ecology* 55:927-942.
- Fonda, R. W., and J. A. Bernardi. 1976. Vegetation of Sucia Island in Puget Sound, Washington. *Bulletin of the Torrey Botanical Club* 103(3):99-109.
- Fonda, R. W., and L. C. Bliss. 1969. Forest vegetation of the mountain and subalpine zones, Olympic Mountains, Washington. *Ecological Monographs* 39(3):271-301.
- Fox, J. L. 1983. Constraints on winter habitat selection by the mountain goat (*Oreamnos americanus*) in Alaska. Ph.D. thesis, University of Washington, Seattle. 147 pp.
- Francis, R. E. 1983. Sagebrush-steppe habitat types in northern Colorado: A first approximation. Pages 67-71 in: *Proceedings of the Workshop on Southwestern habitat types*. USDA Forest Service, Southwestern Region, Albuquerque, NM.
- Franklin, J. F. 1966. Vegetation and soils in the subalpine forests of the southern Washington Cascade Range. Ph.D. dissertation, Washington State University, Pullman. 132 pp.
- Franklin, J. F. 1988. Pacific Northwest forests. Pages 104-130 in: M. G. Barbour and W. D. Billings, editors. *North American terrestrial vegetation*. Cambridge University Press, New York.
- Franklin, J. F., and C. T. Dyrness. 1973. Natural vegetation of Oregon and Washington. General Technical Report PNW-8. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR. 417 pp.
- Franklin, J. F., F. C. Hall, C. T. Dyrness, and C. Maser. 1972. *Federal Research Natural Areas in Oregon and Washington: A guidebook for scientists and educators*. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- Franklin, J. F., W. H. Moir, M. A. Hemstrom, and S. Greene. 1979. Forest ecosystems of Mount Rainier National Park. Unpublished report prepared for the USDI National Park Service.
- Franklin, J. F., W. H. Moir, M. A. Hemstrom, S. E. Greene, and B. G. Smith. 1988. The forest communities of Mount Rainier National Park. USDI National Park Service. *Scientific Monograph Series* 19. Washington, DC. 194 pp.
- Frenkel, R. E. 1976. Preserve analysis: Winchuck Slope. State Land Board and NAPAC, Salem.
- Frenkel, R. E., and E. F. Heinitz. 1987. Composition and structure of Oregon ash (*Fraxinus latifolia*) forest in William L. Finley National Wildlife Refuge, Oregon. *Northwest Science* 61:203-212.
- Frenkel, R. E., and H. P. Eilers. 1976. Tidal datums and characteristics of coastal marshes in selected Oregon estuaries. Final report on a pilot study conducted for E.P.A. Department of Geography, Oregon State University, Corvallis. 93 pp.
- Frenkel, R. E., and J. C. Morlan. 1990. Restoration of the Salmon River salt marshes: Retrospect and prospect. Oregon State University. Report to U.S. Environmental Protection Agency, Corvallis, Oregon. 142 pp.
- Frenkel, R. E., and T. R. Boss. 1988. Introduction, establishment and spread of *Spartina patens* on Cox Island, Siuslaw Estuary, Oregon. *Wetlands* 8:33-49.
- Frenkel, R. E., and W. N. Copeland. 1979. Preserve analysis: Onion Peak. Oregon Natural Area Preserves Advisory Committee to the State Land Board, Salem, OR. 53 pp.
- Frenkel, R. E., T. R. Boss, and S. R. Schuller. 1978. Transition zone vegetation between intertidal marsh and upland in Oregon and Washington. Grant R804963-01. U.S. Environmental Protection Agency, Corvallis, OR. 320 pp.
- Frenkel, R. E., W. H. Moir, and J. A. Christy. 1986. Vegetation of Torrey Lake Mire, central Cascade Range, Oregon. *Madrono* 33:24-39.
- Frenkel, R.E., H.P. Eilers & C.A. Jefferson. 1981. Oregon coastal salt marsh upper limits and tidal datums. *Estuaries* 4: 198-205.
- Friesen, B. A., S. Blauer, K. Landgraf, J. Von Loh, J. Coles, K. Schulz, A. Tendick, A. Wight, G. Wakefield, and A. Evenden. 2010. Vegetation classification and mapping project report, Fossil Butte National Monument. Natural Resource Technical Report NPS/NCPN/NRTR--2010/319. National Park Service, Fort Collins, CO. 552 pp. [<http://biology.usgs.gov/npsveg/fobu/foburpt.pdf>]

- Fuller, G. D. 1930. A comparison of certain Rocky Mountain grasslands with the prairie of Illinois. *Transactions of the Illinois Academy of Science* 8:121-130.
- Galatowitsch, S., and P. S. Bourgeron. 1985. Colorado plant association classification draft. Unpublished report prepared for The Nature Conservancy, Rocky Mountain Heritage Task Force, Lakewood, CO. 49 pp.
- Ganskopp, D. C. 1979. Plant communities and habitat types of the Meadow Creek Experimental Watershed. Unpublished thesis, Oregon State University, Corvallis. 162 pp.
- Girard, M. [1991]. ECODATA survey of riparian communities of Black Hills National Forest, 1986-1990. Unpublished files, field forms, notes, data analyses and type descriptions. Supervisor's Office, Black Hills National Forest, Custer, SD.
- Girard, M., D. L. Wheeler, and S. B. Mills. 1997. Classification of riparian communities on the Bighorn National Forest. R2-RR-97-02. USDA Forest Service, Rocky Mountain Region, Sheridan, WY. 308 pp.
- Glad, J. B., and R. R. Halse. 1993. Invasion of *Amorpha fruticosa* L. (Leguminosae) along the Columbia and Snake rivers in Oregon and Washington. *Madrono* 40:62-63.
- Glad, J. B., R. Mishaga, and R. R. Halse. 1987. Habitat characteristics of *Sidalcea nelsoniana* Piper (Malvaceae) at Walker Flat, Yamhill County, Oregon. *Northwest Science* 61:257-263.
- Glavich, D. 2016. Non-forest Plant Communities of the Northern Oregon Coast Range and Vicinity, Draft Report. USFS Northwest Ecology Group. 51 pp.
- Gordon, H. J., and T. C. White. 1994. Ecological guide to the southern California chaparral plant series. Technical Report R5-ECOL-TP-005. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- Gorman, M. W. 1926. List of plants in the vicinity of Portland, Ore. Undated manuscript [Gorman died before its completion]. Special Collections, University of Oregon Library, Eugene. 160 pp.
- Graham, E. H. 1937. Botanical studies in the Uinta Basin of Utah and Colorado. *Annals of the Carnegie Museum* 26:28-432.
- Green, R. N., and K. Klinka. 1994. A field guide to site interpretation for the Vancouver Forest Region. British Columbia Ministry of Forests. ISSN 0229-1622 Land Management Handbook 28. 285 pp.
- Griffin, J. R., and W. B. Critchfield. 1972. The distribution of forest trees in California. Research Paper PSW-82/1972. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, CA. 114 pp.
- Griffiths, D. 1902. Forage conditions in the northern border of the Great Basin. *USDA Bureau of Plant Industry Bulletin* 15.
- Grossman, D. H., D. Faber-Langendoen, A. S. Weakley, M. Anderson, P. Bourgeron, R. Crawford, K. Goodin, S. Landaal, K. Metzler, K. D. Patterson, M. Pyne, M. Reid, and L. Sneddon. 1998. International classification of ecological communities: Terrestrial vegetation of the United States. Volume I. The national vegetation classification system: Development, status, and applications. The Nature Conservancy, Arlington, VA.
- Grossman, D. H., K. Lemon Goodin, and C. L. Reuss, editors. 1994. Rare plant communities of the conterminous United States: An initial survey. The Nature Conservancy. Arlington, VA. 620 pp.
- Habeck, J. R. 1961. The original vegetation of the mid-Willamette Valley, Oregon. *Northwest Science* 35:65-77.
- Habeck, J. R. 1962. Forest succession in Monmouth Township, Polk County, Oregon, since 1850. *Proceedings of the Montana Academy of Science* 21:7-17.
- Hall, F. C. 1967. Vegetation-soil relations as a basis for resource management on the Ochoco National Forest of central Oregon. Unpublished dissertation, Oregon State University, Corvallis. 207 pp.
- Hall, F. C. 1973. Plant communities of the Blue Mountains in eastern Oregon and southeastern Washington. R6 Area Guide 3-1. USDA Forest Service, Pacific Northwest Region, Portland, OR. 62 pp.
- Hall, J. B., and P. L. Hansen. 1997. A preliminary riparian habitat type classification system for the Bureau of Land Management districts in southern and eastern Idaho. Riparian and Wetland Research Program, School of Forestry, University of Montana. Idaho Bureau of Land Management, Technical Bulletin No. 97-11. 381 pp.
- Halpern, C. B. 1986. Montane meadow plant associations of Sequoia National Park, CA. *Madrono* 33:1-23.
- Halverson, N. M., C. Topik, and R. van Vickle. 1986. Plant association and management guide for the western hemlock zone Mt. Hood National Forest. R6-ECOL-232A-1986. USDA Forest Service, Pacific Northwest Region, Portland, OR. 111 pp.
- Hamann, M. J. 1972. Vegetation of alpine and subalpine meadows of Mount Rainier National Park, Washington. Unpublished thesis, Washington State University, Pullman. 120 pp.

- Hansen, P. L., and G. R. Hoffman. 1988. The vegetation of the Grand River/Cedar River, Sioux, and Ashland districts of the Custer National Forest: A habitat type classification. General Technical Report RM-157. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 68 pp.
- Hansen, P. L., and J. B. Hall. 2002. Classification and management of the USDI Bureau of Land Management's riparian and wetland sites in eastern and southern Idaho. Unpublished draft prepared for the Upper Snake River District, Bureau of Land Management, by Bitterroot Restoration, Inc., Corvallis, MT.
- Hansen, P. L., G. R. Hoffman, and A. J. Bjugstad. 1984. The vegetation of Theodore Roosevelt National Park, North Dakota: A habitat type classification. General Technical Report RM-113. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 35 pp.
- Hansen, P. L., K. Bogs, R. Pfister, and J. Joy. 1990. Classification and management of riparian and wetland sites in central and eastern Montana. Draft version 2. Montana Riparian Association, Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana, Missoula, MT. 279 pp.
- Hansen, P. L., R. D. Pfister, K. Boggs, B. J. Cook, J. Joy, and D. K. Hinckley. 1995. Classification and management of Montana's riparian and wetland sites. Miscellaneous Publication No. 54. Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana. 646 pp. plus posters.
- Hansen, P. L., S. W. Chadde, and R. D. Pfister. 1988b. Riparian dominance types of Montana. University of Montana Miscellaneous Publication 49. Montana Forest and Conservation Experiment Station, Missoula. 411 pp.
- Hansen, P., K. Boggs, and R. Pfister. 1991. Classification and management of riparian and wetland sites in Montana. Unpublished draft version prepared for Montana Riparian Association, Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana, Missoula. 478 pp.
- Hansen, P., R. Pfister, J. Joy, D. Svoboda, K. Boggs, L. Myers, S. Chadde, and J. Pierce. 1989. Classification and management of riparian sites in southwestern Montana. Unpublished draft prepared for the Montana Riparian Association, School of Forestry, University of Montana, Missoula. 292 pp.
- Hansen, P., S. Chadde, R. Pfister, J. Joy, D. Svoboda, J. Pierce, and L. Myers. 1988a. Riparian site types, habitat types, and community types of southwestern Montana. Draft Version 1. University of Montana, Montana Riparian Association, School of Forestry, Missoula. 140 pp.
- Hanson, H. C. 1929. Range resources of the San Luis Valley. Pages 5-61 in: Range resources of the San Luis Valley. Bulletin 335. Colorado Experiment Station, Fort Collins, CO.
- Harrington, F. A., Jr. 1978. Ecological segregation of ungulates in alpine and subalpine communities. Unpublished dissertation, Colorado State University, Fort Collins. 142 pp.
- Hawk, G. M. 1973. Forest vegetation and soils of terraces and floodplains along the Mckenzie River, Oregon. M.S. thesis, Oregon State University, Corvallis. 188 pp.
- Hawk, G. M. 1977. A comparative study of temperate Chamaecyparis forests. Unpublished dissertation, Oregon State University, Corvallis. 194 pp.
- Head, S. C. 1959. Plant taxonomy and ecology of the East Eagle Creek Drainage of the Wallowa Mountains, Northeast Oregon. Unpublished dissertation, Oregon State University, Corvallis. 249 pp.
- Hebda, R. J., and W. G. Biggs. 1981. The vegetation of Burns Bog, Fraser Delta, southwestern British Columbia. *Syesis* 14:1-20.
- Heinitz, E. F. 1982. Vegetation ecology of *Fraxinus latifolia* communities in William L. Finley National Wildlife Refuge, Oregon. M.S. thesis, Oregon State University, Corvallis. 40 pp.
- Heinze, D. H., R. E. Eckert, and P. T. Tueller. 1962. The vegetation and soils of the Steptoe Watershed. Unpublished report prepared for the USDI Bureau of Land Management. 40 pp.
- Hemstrom, M. A., and S. E. Logan. 1986. Plant association and management guide Siuslaw National Forest. Report R6-Ecol 220-1986a. USDA Forest Service, Pacific Northwest Region, Portland, OR. 121 pp.
- Hemstrom, M. A., S. E. Logan, and W. Pavlat. 1987. Plant association and management guide, Willamette National Forest. Report R6-Ecol 257-B-86. USDA Forest Service, Pacific Northwest Region, Portland, OR. 312 pp.
- Hemstrom, M. A., W. H. Emmingham, N. M. Halverson, S. E. Logan, and C. Topik. 1982. Plant association and management guide for the pacific silver fir zone, Mt. Hood and Willamette national forests. R6-Ecol 100-1982a. USDA Forest Service, Pacific Northwest Region, Portland, OR. 104 pp.
- Henderson, J. A. 1970. Biomass and composition of the understory vegetation in some *Alnus rubra* stands in western Oregon. Unpublished thesis, Oregon State University, Corvallis, OR. 64 pp.

- Henderson, J. A. 1973. Composition, distribution and succession of subalpine meadows in Mount Rainier National Park, Washington. Unpublished dissertation, Oregon State University, Corvallis. 150 pp.
- Henderson, J. A. 1974. Composition, distribution, and succession of subalpine meadows in Mount Rainier National Park, Washington. Dissertation, Oregon State University, Corvallis, OR.
- Henderson, J. A. 1979. Plant succession on the *Alnus rubra* / *Rubus spectabilis* habitat type in western Oregon. *Northwest Science* 53:200-211.
- Henderson, J. A. 1981. Preliminary plant associations and habitat types of the White River District, Mt. Baker-Snoqualmie National Forest. Unpublished report prepared for USDA Forest Service, Pacific Northwest Region. 40 pp.
- Henderson, J. A., and D. Peter. 1981. Preliminary plant associations and habitat types of the Green and Cedar River drainages. North Bend District, Mt. Baker-Snoqualmie National Forest. Unpublished report prepared for USDA Forest Service. 48 pp.
- Henderson, J. A., and D. Peter. 1982. Preliminary plant associations and habitat types of the Snoqualmie and adjacent Skykomish River drainages, Mt. Baker-Snoqualmie National Forest. Unpublished report prepared for USDA Forest Service, Pacific Northwest Region. 87 pp.
- Henderson, J. A., and D. Peter. 1983. Preliminary plant associations and habitat types of the Skykomish Ranger District, Mt. Baker-Snoqualmie National Forest. Unpublished report prepared for USDA Forest Service, Pacific Northwest Region. 67 pp.
- Henderson, J. A., and D. Peter. 1984. Preliminary plant associations and habitat types of the Darrington Ranger District, Mt. Baker-Snoqualmie National Forest. USDA Forest Service, Pacific Northwest Region. 69 pp.
- Henderson, J. A., B. G. Smith, and R. L. Mauk. 1979. Plant communities of the Hoh and Dosewallips drainages, Olympic National Park, Washington. Unpublished progress report. Department of Forestry and Outdoor Recreation, Utah State University, Logan.
- Henderson, J. A., D. A. Peter, and R. Leshner. 1985. Preliminary plant associations and habitat types of the Mt. Baker Ranger District, Mt. Baker-Snoqualmie National Forest. Unpublished report for USDA Forest Service, Pacific Northwest Region. 74 pp.
- Henderson, J. A., D. A. Peter, and R. Leshner. 1986. Preliminary plant associations of the Olympic National Forest. USDA Forest Service, Pacific Northwest Region. 136 pp.
- Henderson, J. A., D. A. Peter, R. Leshner, and D. C. Shaw. 1989. Forested plant associations of the Olympic National Forest. R6-ECOL-TP-001-88. USDA Forest Service, Pacific Northwest Region, Portland, OR. 502 pp.
- Henderson, J. A., D. A. Peter, R. Leshner, and D. C. Shaw. 1992. Field guide to forested plant associations of the Mt. Baker-Snoqualmie National Forest. Technical Paper R6-ECOL-TP-028-91. USDA Forest Service, Pacific Northwest Region, Portland, OR. 196 pp.
- Henderson, J. A., S. A. Simon, and S. B. Hartvigsen. 1977. Plant community types and habitat types of the Price District Manti-La Sal National Forest. Unpublished report prepared for Utah State University, Department of Forestry and Outdoor Recreation, Logan.
- Henderson, J. S., and M. L. McAllister. 1983. Downey Lake, an inventory of vegetation and wildlife. The Nature Conservancy, Portland, OR.
- Hess, K. 1981. Phyto-edaphic study of habitat types of the Arapaho-Roosevelt National Forest, Colorado. Unpublished dissertation, Colorado State University, Fort Collins. 558 pp.
- Hess, K., and C. H. Wasser. 1982. Grassland, shrubland, and forest habitat types of the White River-Arapaho National Forest. Unpublished final report 53-82 FT-1-19. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 335 pp.
- Hess, K., and R. R. Alexander. 1986. Forest vegetation of the Arapaho and Roosevelt national forests in northcentral Colorado: A habitat type classification. Research Paper RM-266. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 48 pp.
- Hibner, C. D. 2009. Special project soil survey of Bandelier National Monument. Natural Resources Conservation Science. In cooperation with the USDI National Park Service and the New Mexico Agricultural Experiment Station. [in review]

- Hickman, J. C. 1993. The Jepson manual: Higher plants of California. University of California Press, Ltd., Berkeley, CA. 1400 pp.
- Hickman, J.C. 1976. Non-forest vegetation of the central western Cascade Mountains of Oregon. Northwest Science 50:145-155.
- Hinschberger, M. S. 1978. Occurrence and relative abundance of small mammals associated with riparian and upland habitats along the Columbia River. Unpublished thesis, Oregon State University, Corvallis. 78 pp.
- Hironaka, M., M. A. Fosberg, and A. H. Winward. 1983. Sagebrush-grass habitat types of southern Idaho. Forestry, Wildlife, and Range Experiment Station Bulletin No. 15, University of Idaho, Moscow. 44 pp.
- Hirsch, L. and J. Riefler. 1981. A floristic study of eight vernal pools at Lower Table Rock, Oregon. Unpublished Report to The Nature Conservancy, Portland, OR.
- Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1955. Vascular plants of the Pacific Northwest. Part 5: Compositae. University of Washington Press, Seattle, WA. 343 pp.
- Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1959. Vascular plants of the Pacific Northwest Part 4: Ericaceae through Campanulaceae. University of Washington Press, Seattle, WA. 510 pp.
- Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1961. Vascular plants of the Pacific Northwest. Part 3: Saxifragaceae to Ericaceae. University of Washington Press, Seattle, WA. 614 pp.
- Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1969. Vascular plants of the Pacific Northwest. Part 1: Vascular cryptogams, gymnosperms, and monocotyledons. University of Washington Press, Seattle, WA. 914 pp.
- Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1977a. Vascular plants of the Pacific Northwest. Part 1: Vascular Cryptogams, Gymnosperms, and Monocotyledons. University of Washington Press, Seattle. 914 pp.
- Hoagland, B. 2000. The vegetation of Oklahoma: A classification for landscape mapping and conservation planning. The Southwestern Naturalist 45(4):385-420.
- Hodgkinson, H. S., and A. E. Young. 1973. Rough fescue (*Festuca scabrella* Torr.) in Washington. Journal of Range Management 26:25-26.
- Hoffman, G. R., and R. R. Alexander. 1976. Forest vegetation of the Bighorn Mountains, Wyoming: A habitat type classification. Research Paper RM-170. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 38 pp.
- Hoffman, G. R., and R. R. Alexander. 1980. Forest vegetation of the Routt National Forest in northwestern Colorado: A habitat type classification. General Technical Report RM-221. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 41 pp.
- Hoffman, G. R., and R. R. Alexander. 1983. Forest vegetation of the White River National Forest in western Colorado: A habitat type classification. Research Paper RM-249. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 36 pp.
- Hoffman, G. R., and R. R. Alexander. 1987. Forest vegetation of the Black Hills National Forest of South Dakota and Wyoming: A habitat type classification. Research Paper RM-276. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 48 pp.
- Holland, R. F. 1986b. Preliminary descriptions of the terrestrial natural communities of California. Unpublished report prepared for the California Department of Fish and Game, Nongame-Heritage Program and Natural Diversity Database, Sacramento. 156 pp.
- Holland, W. D., and G. M. Coen, editors. 1982. Ecological (biophysical) land classification of Banff and Jasper national parks: Volume II, soil and vegetation resources. Publication No. SS-82-44. Alberta Institute of Pedology, Edmonton, AB. 540 pp.
- Holmstead, G. 2001. Vegetation of the Snake River corridor in Hells Canyon-Weiser, Idaho to the Salmon River. Technical Report Appendix E.3.3-1 prepared for FERC License No. 1971, Hells Canyon Complex by Idaho Power Company, Boise, ID. 49 pp. plus appendices.
- Holstein, G. 2001. Pre-agricultural grassland in central California. Madroño 48(4):253-264.
- Hop, K., M. Reid, J. Dieck, S. Lubinski, and S. Cooper. 2007. U.S. Geological Survey-National Park Service Vegetation Mapping Program: Waterton-Glacier International Peace Park. U.S. Geological Survey, Upper Midwest Environmental Sciences Center, La Crosse, WI. 131 pp. plus Appendices A-L.

- Hopkins, W. E. 1979a. Plant associations of the Fremont National Forest. Technical Report R6-ECOL-79-004. USDA Forest Service, Pacific Northwest Region, Portland.
- Hopkins, W. E. 1979b. Plant associations of South Chiloquin and Klamath Ranger Districts - Winema National Forest. Publication R6-ECOL-79-005. USDA Forest Service, Pacific Northwest Region, Portland, OR. 96 pp.
- Horton, L. E. 1971. Vegetation and ecological relationships, west slope of the Teton study area, Targhee National Forest. USDA Forest Service, Intermountain Region. Unpublished mimeographed report. 50 pp. plus appendices.
- Howard, J. L. 1997c. *Ceanothus integerrimus*. In: Fire Effects Information System [Online]. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). [<http://www.fs.fed.us/database/feis/>]
- Howarth, J. 1995. Gearhart Bog Preserve: Plant community mapping and background information. The Nature Conservancy, Oregon Field Office, Portland. 36 pp. plus appendices.
- Huckaby, L. S., and W. H. Moir 1998. Forest communities at Fraser Experimental Forest. *Southwestern Naturalist* 43(2):204-218.
- Hughes, H. G. 1977. Factors influencing vegetative and reproductive phenology of black sagebrush (*Artemisia nova* Nels.). Unpublished thesis, University of Wyoming, Laramie.
- Huschle, G. 1975. Analysis of the vegetation along the middle and lower Snake River. MS Thesis, University of Idaho. Moscow, ID. 271 pp.
- Hyde, R. M. 1964. Vegetation in Sunlight Basin, Park County, Wyoming. Unpublished dissertation, University of Wyoming, Laramie.
- Hyder, D. N., R. E. Bement, E. E. Remmenga, and C. Terwilliger, Jr. 1966. Vegetation-soils and vegetation-grazing relations from frequency data. *Journal of Range Management* 19:11-17.
- Jankovsky-Jones, M. 1994. Environmental factors affecting the distribution of riparian plant associations in the Roaring Fork River Basin, Colorado. M.S. thesis. University of Wyoming, Laramie.
- Jankovsky-Jones, M. 1999. Conservation strategy for wetlands in east-central Idaho. Idaho Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. 26 pp. plus appendices.
- Jankovsky-Jones, M., C. J. Murphy, and C. L. Coulter. 2001. Riparian and wetland plant associations of southwestern Idaho in the Lower Snake River District, Bureau of Land Management. Idaho Conservation Data Center, Idaho Department of Fish and Game, Boise.
- Jankovsky-Jones, M., S. K. Rust, and R. K. Moseley. 1999. Riparian reference areas in Idaho: A catalog of plant associations and conservation sites. General Technical Report RMRS-GTR-20. USDA Forest Service, Rocky Mountain Research Station, Ogden, UT. 141 pp.
- Jaques, D. R. 1976. Winter alpine-subalpine wildlife habitat in the southern Rocky Mountains of Alberta. Kananaskis Center for Environmental Research, University of Calgary, Calgary, Alberta. 113 pp.
- Jefferson, C. A. 1975. Plant communities and succession in Oregon coastal salt marshes. Ph.D. dissertation, Oregon State University, Corvallis. 192 pp.
- Jenny, H., R. J. Arkley, and A. M. Schultz. 1969. The pygmy forest-podsol ecosystem and its dune associates of the Mendocino coast. *Madrono* 20:60-74.
- Jensen, M. E., L. S. Peck, and M. V. Wilson. 1988a. A sagebrush community type classification for mountainous northeastern Nevada rangelands. *Great Basin Naturalist* 48(4):422-433.
- Jensen, M. E., L. S. Peck, and M. V. Wilson. 1988b. Vegetation characteristics of mountainous northeastern Nevada sagebrush community types. *The Great Basin Naturalist* 48(4):403-421.
- Jensen, S. E., and J. S. Tuhy. 1981. Soils investigation of riparian communities of East Smiths Fork and Henrys Fork drainages, North Slope Uinta Mountains, Utah. Unpublished report presented to USDA Forest Service, Ogden, UT. 35 pp.
- Jimerson, T. J. 1994. A field guide to the Port Orford cedar plant associations in northwestern California. Pacific Southwest Research Station PSW-R5-ECOL-TP-OO2. Six Rivers National Forest, Eureka, CA. 109 pp.
- Jimerson, T. J., L. D. Hoover, E. A. McGee, G. DeNitto, and R. M. Creasy. 1995. A field guide to serpentine plant associations and sensitive plants in northwestern California. Technical Publication R5-ECOL-TP-006. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.

- Jimerson, T. M. 1993. Preliminary plant associations of the Klamath province, Six Rivers and Klamath national forests. Unpublished report. USDA Forest Service, Eureka, CA.
- Jimerson, T. M., E. A. McGee, D. W. Jones, R. J. Svilich, E. Hotalen, G. DeNitto, T. Laurent, J. D. Tenpas, M. E. Smith, K. Hefner-McClelland, and J. Mattison. 1996. A field guide to the tanoak and Douglas-fir plant associations in northwestern California. Technical Paper R5-ECOL-TP-009. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- Johannessen, C. L., W. A. Davenport, A. Millet, and S. McWilliams. 1971. The vegetation of the Willamette Valley. *Annals of the Association of American Geographers* 61:286-302.
- John, T., and D. Tart. 1986. Forested plant associations of the Yakima Drainage within the Yakama Indian Reservation. Review copy prepared for the Yakama Indian Nation - BIA-SCS.
- John, T., D. Tart, and R. Clausnitzer. 1988. Forest associations of the Yakama Indian Reservation. Draft. Yakama Indian Nation. Toppenish, WA. 133 pp.
- Johnson, A. F., and J. W. Muller. 1993a. An assessment of Florida's remaining coastal upland natural communities: Final summary report. The Nature Conservancy, Florida Natural Areas Inventory, Tallahassee. 37 pp.
- Johnson, C. G., and R. R. Clausnitzer. 1992. Plant associations of the Blue and Ochoco mountains. R6-ERW-TP-036-92. USDA Forest Service, Pacific Northwest Region, Wallowa-Whitman National Forest. 163 pp. plus appendices.
- Johnson, C. G., and S. A. Simon. 1985. Plant associations of the Wallowa Valley Ranger District, Part II: Steppe. USDA Forest Service, Pacific Northwest Region, Wallowa-Whitman National Forest. 258 pp.
- Johnson, C. G., Jr. 1981a. Final report - Research Natural Area program - inventory phase area 3. 83 pp.
- Johnson, C. G., Jr., and D. K. Swanson. 2005. Bunchgrass plant communities of the Blue and Ochoco Mountains: A guide for managers. General Technical Report PNW-GTR-641. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. 119 pp.
- Johnson, C. G., Jr., and S. A. Simon. 1987. Plant associations of the Wallowa-Snake Province Wallowa-Whitman National Forest. Technical Paper R6-ECOL-TP-255A-86. USDA Forest Service, Pacific Northwest Region, Wallowa-Whitman National Forest. 399 pp. plus appendices.
- Johnson, K. R. 1936. Ecology of a glacial lake in central Colorado. *University of Colorado Studies* 23(3):235-243.
- Johnson, K. R. 1939. Plant ecology of northwestern Colorado lakes and surrounding areas. Unpublished dissertation, University of Colorado, Boulder. 138 pp.
- Johnson, K. R. 1941. Vegetation of some mountain lakes and shores in northwestern Colorado. *Ecology* 22:306-316.
- Johnson, W. C., T. L. Sharik, R. A. Mayes, and E. P. Smith. 1987. Nature and cause of zonation discreteness around glacial prairie marshes. *Canadian Journal of Botany* 65:1622-1632.
- Johnson, W. M. 1961b. The ecology of alpine and subalpine ranges in Wyoming as related to use by big game and domestic sheep. Unpublished dissertation, University of Wyoming, Laramie.
- Johnston, B. C. 1984. Plant associations of Region Two. Edition 3.5. USDA Forest Service, Rocky Mountain Region. Lakewood, CO.
- Johnston, B. C. 1987. Plant associations of Region Two: Potential plant communities of Wyoming, South Dakota, Nebraska, Colorado, and Kansas. R2-ECOL-87-2. USDA Forest Service, Rocky Mountain Region. Lakewood, CO. 429 pp.
- Johnston, B. C. 2001. Ecological types of the Upper Gunnison Basin. Technical Report R2-RR-2001-01. USDA Forest Service, Rocky Mountain Region. Denver, CO.
- Johnston, B. C., and L. Hendzel. 1985. Examples of aspen treatment, succession and management in western Colorado. USDA Forest Service, Range Wildlife Fisheries and Ecology. Denver, CO. 164 pp.
- Johnston, B. C., L. Huckaby, T. J. Hughes, and J. Pecor. 2001. Ecological types of the Upper Gunnison Basin: Vegetation-soil-landform-geology-climate-water land classes for natural resource management. Technical Report R2-RR-2001-01. USDA Forest Service, Rocky Mountain Region, Lakewood, CO. 858 pp.
- Jones, G. 1992b. Wyoming plant community classification (Draft). Wyoming Natural Diversity Database, Laramie, WY. 183 pp.



- Jones, G. 1992c. A preliminary classification of riparian vegetation types of the Medicine Bow Range and the Sierra Madre. Report submitted to the Medicine Bow National Forest. Wyoming Natural Diversity Database (The Nature Conservancy), Laramie, WY.
- Jones, G. P. 1999. Ecological evaluation of the potential Roaring Fork Mountain Research Natural Area within the Shoshone National Forest, Fremont County, Wyoming. Prepared for the Shoshone National Forest, USDA Forest Service by the Wyoming Natural Diversity Database. 47 pp.
- Jones, G. P., and G. M. Walford. 1995. Major riparian vegetation types of eastern Wyoming. Submitted to Wyoming Department of Environmental Quality, Water Quality Division. Wyoming Natural Diversity Database, Laramie, WY. 245 pp.
- Jones, G. P., and W. Fertig. 1996. Plant associations and plant species of special concern in the Jack Morrow Hills ecosystem. Unpublished report prepared for the Bureau of Land Management, Rock Springs District by the Wyoming Natural Diversity Database. 2 volumes.
- Jones, G. P., and W. Fertig. 1999d. Ecological evaluation of the potential Lake Creek Research Natural Area within the Shoshone National Forest, Park County, Wyoming. Prepared for the Shoshone National Forest, USDA Forest Service by the Wyoming Natural Diversity Database. 46 pp.
- Jones, G., and S. Ogle. 2000. Characterization abstracts for vegetation types on the Bighorn, Medicine Bow, and Shoshone national forests. Prepared for USDA Forest Service, Region 2 by the Wyoming Natural Diversity Database, University of Wyoming.
- Juday, G. P. 1976. The location, composition and structure of old-growth forests of the Oregon Coast Range. Ph.D. dissertation, Oregon State University, Corvallis. 190 pp.
- Kagan, J. 1983. Willamette Valley wetlands and wet prairies. Bulletin of the Native Plant Society of Oregon 16:12.
- Kagan, J. 1987a. National Natural Landmark Evaluation, Finley Buttes Grassland (Oregon), Columbia Plateau Natural Region, Lowland and Valley Grassland Theme, Lowland Grasslands Subtheme. Unpublished report prepared for USDI National Park Service. Oregon Natural Heritage Database, Portland.
- Kagan, J. S. 1980. The biology of *Lomatium bradshawii* (Apiaceae), a rare plant of Oregon. Unpublished thesis, University of Oregon, Eugene.
- Kagan, J. S. 1986. Status report for *Thelypodium howellii* subsp. *spectabilis*. Oregon Natural Heritage Data Base, The Nature Conservancy, Portland.
- Kagan, J. S. 1987c. Draft species management guide for *Astragalus robbinsii* var. *alpiniformis*. Challenge grant funding with USDA Forest Service. Oregon Natural Heritage Data Base, The Nature Conservancy, Portland.
- Kagan, J. S. 1988. Status report for *Eriogonum scopulorum*. Oregon Natural Heritage Data Base, The Nature Conservancy, Portland.
- Kagan, J. S. 1989a. Draft species management for *Clintonia andrewsiana*. Challenge Cost/Share for USDA Forest Service. Unpublished document on file at Oregon Natural Heritage Data Base, Portland, OR.
- Kagan, J. S., and D. Borgais. 1994. Personal inventory of *Pinus attenuata* stands in the Illinois Valley, Oregon.
- Kagan, J. S., and S. C. Seyer. 1982. Native grassland search in Willamette Valley, Oregon. Unpublished report to The Nature Conservancy, Portland, OR.
- Kagan, J. S., E. M. Nielsen, M. D. Noone, J. C. van Warmerdam, L. K. Wise, G. Kittel, and C. Copass. 2012. Lewis and Clark National Historic Park vegetation classification and mapping project report. Natural Resource Report NPS/NCCN/NRR--2012/597. National Park Service, Fort Collins, CO.
- Kagan, J. S., J. A. Christy, D. Vandershaaf, and J. H. Titus. 1998. Inventory of the vegetation, rare species and habitats of Curry County Parks. Unpublished report to Oregon Department of Parks and Recreation, Salem, by Oregon Natural Heritage Program, Portland.
- Kagan, J.S. 2010. Evaluation of Round Top Butte, Jackson County, Oregon for its merit for its merit in meeting national significance criteria as a National Natural Landmark to represent upland valley grasslands and savanna in the North Pacific Border Biophysiological Province. Oregon Biodiversity Information Center, Portland, OR 97207
- Kartesz, J. T. 1999. A synonymized checklist and atlas with biological attributes for the vascular flora of the United States, Canada, and Greenland. First edition. In: J. T. Kartesz and C. A. Meacham. Synthesis of the North American Flora, Version 1.0. North Carolina Botanical Garden, Chapel Hill, NC.

- Kauffman, J. B. 1982. Synecological effects of cattle grazing riparian ecosystems. Unpublished thesis, Oregon State University, Corvallis. 283 pp.
- Kauffman, J. B., and K. P. Connelly. 1989. Ecological effects of fire in Willamette Valley Prairies: Effects on rare and endangered plants and ecosystems. Progress report 1. Unpublished report to the U.S. Army Corps of Engineers, on file at The Nature Conservancy, Oregon Field Office, Portland, OR.
- Kauffman, J. B., W. C. Krueger, and M. Vaura. 1985. Ecology and plant communities of the riparian area associated with Catherine Creek in northeastern Oregon. Technical Bulletin 147. Eastern Oregon Agricultural Experiment Station, Oregon State University, Corvallis. 35 pp.
- Keammerer, W. R. 1974b. Vegetation of Parachute Creek Valley. Pages 4-91 in: Environmental inventory and impact analysis of a proposed utilities corridor in Parachute Creek Valley, Co. Unpublished report prepared for Colony Development Operation, Denver, CO.
- Keammerer, W. R. 1977. Final report: Vegetation baseline studies, oil shale tract C-b. Unpublished report. Stoecker-Keammerer and Associates, Ecological Consultants, Boulder, CO. 183 pp.
- Keammerer, W. R., and R. E. Stoecker. 1975. Vegetation and wildlife studies along proposed corridors for oil shale tract C-b. Unpublished report prepared for Shell Oil Co., Denver, by Stoecker-Keammerer and Associates, Boulder, CO. 86 pp.
- Keammerer, W. R., and R. E. Stoecker. 1980. Vegetation and wildlife studies for the Mount Emmons project. Unpublished report prepared for AMAX Environmental Services, Inc., by Stoecker-Keammerer and Associates, Ecological Consultants, Boulder, CO. 3 volumes.
- Keammerer, W. R., and S. J. Peterson. 1981. Vegetation studies on the Naval Oil Shale Reserve. Unpublished report prepared for TRW Energy Systems Group, McLean, Virginia, by Stoecker-Keammerer and Associates, Ecological Consultants, Boulder, CO. 77 pp.
- Kearsley, M. J. C., K. Green, M. Tukman, M. Reid, M. Hall, T. J. Ayers, and K. Christie. 2015. Grand Canyon National Park-Grand Canyon / Parashant National Monument vegetation classification and mapping project. Natural Resource Report NPS/GRCA/NRR--2015/913. National Park Service, Fort Collins, CO. 75 pp. plus appendices.
- Keeler-Wolf, T. 1990a. Ecological surveys of Forest Service Research Natural Areas in California. General Technical Report PSW-125. USDA Forest Service, Pacific Southwest Research Station, Berkeley, CA. 165 pp.
- Keeler-Wolf, T. 2002. Classification of the vegetation of Yosemite National Park and surrounding environs in Tuolumne, Mariposa, Madera and Mono counties, California. NatureServe in cooperation with the California Native Plant Society and California Natural Heritage Program, Wildlife and Habitat Data Analysis Branch, California Department of Fish and Game, Sacramento, CA. August 2002.
- Keeler-Wolf, T. 2007. Mojave Desert scrub vegetation. Pages 609-656 in: M. G. Barbour, T. Keeler-Wolf, and A. A. Schoenherr, editors. Terrestrial vegetation of California. Third edition. University of California Press, Berkeley.
- Keeler-Wolf, T., and J. Evens. 2006. Vegetation classification of the Santa Monica Mountains National Recreation Area and environs in Ventura and Los Angeles counties, California. A report submitted to National Park Service, Santa Monica Mountains National Recreation Area by California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch and The California Native Plant Society, Vegetation Program, Sacramento, CA.
- Keeler-Wolf, T., and M. Vaghti. 2000. Vegetation mapping of Suisun Marsh, Solano County, California. A report to the California Department of Water Resources. California Department of Fish and Game, California Natural Diversity Database, Sacramento, CA.
- Keeler-Wolf, T., M. Schindel, S. San, P. Moore, and D. Hickson. 2003a. Classification of the vegetation of Yosemite National Park and surrounding environs in Tuolumne, Mariposa, Madera and Mono counties, California. Unpublished report by NatureServe in cooperation with the California Native Plant Society and California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch, Sacramento, CA.
- Keeler-Wolf, T., P. E. Moore, E. T. Reyes, J. M. Menke, D. N. Johnson, and D. L. Karavidas. 2012. Yosemite National Park vegetation classification and mapping project report. Natural Resource Technical Report NPS/YOSE/NRTR--2012/598. National Park Service, Fort Collins, CO.
- Keim, F. D., A. L. Frolik, and G. W. Beadle. 1932. Studies of prairie hay in north central Nebraska. Research Bulletin 60. University of Nebraska Agricultural Experiment Station. Lincoln. 54 pp.

- Kerr, C. W., and J. A. Henderson. 1979. Upland vegetation classification and map for a test area, Manti-La Sal National Forest. Appendix Report 15 in: J. A. Henderson, L. S. Davis, and E. M. Ryberg, editors. ECOSYM: A classification and information system for wildlife resource management. Utah State University, Logan. 53 pp.
- Kerr, M. J. J. 2000. Classification of active floodplain plant communities on a portion of the Twist River, Okanogan County, Washington. MS thesis, Washington State University, Pullman.
- Kettler, S., and A. McMullen. 1996. Routt National Forest riparian vegetation classification. Report prepared for Routt National Forest by the Colorado Natural Heritage Program, Colorado State University, Fort Collins.
- Kierstead, J., and T. Pogson. 1976. A summer flora of the Alvord Basin. Appendix 1. Pages 1-1 to 1-54 in: K. Roberts, editor. A preliminary ecological survey of the Alvord Basin. Final Technical Report. NSF-SOS (76-08175). Eastern Oregon State College. 15 pp. plus 6 appendices.
- Kittel, G. 1993. A preliminary classification of the riparian vegetation of the White River Basin. Unpublished report prepared for the Colorado Department of Natural Resources and the Environmental Protection Agency by the Colorado Natural Heritage Program. 106 pp.
- Kittel, G. M. 1994. Montane vegetation in relation to elevation and geomorphology along the Cache la Poudre River, Colorado. Unpublished thesis, University of Wyoming, Laramie.
- Kittel, G. M., and N. D. Lederer. 1993. A preliminary classification of the riparian vegetation of the Yampa and San Miguel/Dolores river basins. Unpublished report prepared for Colorado Department of Health and the Environmental Protection Agency by The Nature Conservancy, Colorado Field Office, Boulder.
- Kittel, G., E. Reyes, J. Evens, J. Buck, and D. Johnson. 2012a. Vegetation classification and mapping project report, Pinnacles National Monument. Natural Resource Report NPS/SFAN/NRR-2012/574. National Park Service, Fort Collins, CO. 428 pp.
- Kittel, G., E. Van Wie, and M. Damm. 1997a. A classification of the riparian vegetation of the South Platte Basin (and part of Republican River Basin), Colorado. Submitted to Colorado Department of Natural Resources and the Environmental Protection Agency, Region VIII. Prepared by Colorado Natural Heritage Program, Colorado State University, Fort Collins.
- Kittel, G., E. Van Wie, and M. Damm. 1997b. *Populus deltoides* ssp. *monilifera* / *Symphoricarpos occidentalis* Community Characterization Abstract-Subnational Basic, draft March 12, 1997. Colorado Natural Heritage Program, Fort Collins, CO.
- Kittel, G., E. Van Wie, M. Damm, R. Rondeau, S. Kettler, A. McMullen, and J. Sanderson. 1999b. A classification of riparian and wetland plant associations of Colorado: A user's guide to the classification project. Colorado Natural Heritage Program, Colorado State University, Fort Collins CO. 70 pp. plus appendices.
- Kittel, G., E. Van Wie, M. Damm, R. Rondeau, S. Kettler, and J. Sanderson. 1999a. A classification of the riparian plant associations of the Rio Grande and Closed Basin watersheds, Colorado. Unpublished report prepared by the Colorado Natural Heritage Program, Colorado State University, Fort Collins.
- Kittel, G., R. Rondeau, and A. McMullen. 1996. A classification of the riparian vegetation of the Lower South Platte and parts of the Upper Arkansas River basins, Colorado. Submitted to Colorado Department of Natural Resources and the Environmental Protection Agency, Region VIII. Prepared by Colorado Natural Heritage Program, Fort Collins. 243 pp.
- Kittel, G., R. Rondeau, and S. Kettler. 1995. A classification of the riparian vegetation of the Gunnison River Basin, Colorado. Submitted to Colorado Department of Natural Resources and the Environmental Protection Agency. Prepared by Colorado Natural Heritage Program, Fort Collins. 114 pp.
- Kittel, G., R. Rondeau, N. Lederer, and D. Randolph. 1994. A classification of the riparian vegetation of the White and Colorado River basins, Colorado. Final report submitted to Colorado Department of Natural Resources and the Environmental Protection Agency. Colorado Natural Heritage Program, Boulder. 166 pp.
- Klein, A., J. Crawford, J. Evens, T. Keeler-Wolf, and D. Hickson. 2007. Classification of the vegetation alliances and associations of the northern Sierra Nevada foothills, California. Volumes 1 and 2. Report prepared for California Department of Fish and Game, Habitat Conservation Division. California Native Plant Society, Sacramento, CA.  
[<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18232&inline=1>]
- Klinka, K., H. Qian, J. Pojar, and D. V. Meidinger. 1996. Classification of natural forest communities of coastal British Columbia. *Vegetatio* 125:149-168.
- Klippel, G. E., and D. F. Costello. 1960. Vegetation and cattle responses to different intensities of grazing on short-grass ranges of the central Great Plains. Technical Bulletin 1216. USDA Forest Service. 82 pp.

- Knight, D. H., G. P. Jones, Y. Akashi, and R. W. Myers. 1987. Vegetation ecology in the Bighorn Canyon National Recreation Area. Unpublished report prepared for the USDI National Park Service and University of Wyoming-National Park Service Research.
- Knight, D. H., R. J. Hill, and A. T. Harrison. 1976. Potential natural landmarks in the Wyoming Basin, terrestrial and aquatic ecosystems. Unpublished report prepared for the USDI National Park Service. Contract 9900X20047.
- Kojima, S., and V. J. Krajina. 1975. Vegetation and environment of the coastal western hemlock zone in Strathcona Provincial Park, British Columbia, Canada. *Syesis* 8(suppl. 1):1-123.
- Komarkova, V. 1976. Alpine vegetation of the Indian Peaks Area, Front Range, Colorado Rocky Mountains. Unpublished dissertation, University of Colorado, Boulder. 655 pp.
- Komarkova, V. 1986. Habitat types on selected parts of the Gunnison and Uncompahgre national forests. Unpublished final report prepared for USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. Fort Collins, CO. 270 pp. plus appendices.
- Komarkova, V. K., R. R. Alexander, and B. C. Johnston. 1988b. Forest vegetation of the Gunnison and parts of the Uncompahgre national forests: A preliminary habitat type classification. Research Paper RM-163. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 65 pp.
- Komarkova, V., A. Peters, G. Kamani, W. Jones, V. Howard, H. Gordon, and K. Southwick. 1988a. Natural recovery of plant communities on disturbance plots and history of land use in the Niwot Ridge/Green Lakes Valley, Front Range, Colorado. University of Colorado Longterm Ecological Research Working Paper 88/1. Boulder, CO. 46 pp.
- Koterba, W. D., and J. R. Habeck. 1971. Grasslands of the North Fork Valley, Glacier National Park, Montana. *Canadian Journal of Botany* 49:1627-1636.
- Kovalchik, B. L. 1987. Riparian zone associations - Deschutes, Ochoco, Fremont, and Winema national forests. Technical Paper 279-87. USDA Forest Service, Pacific Northwest Region, Portland, OR. 171 pp.
- Kovalchik, B. L. 1993. Riparian plant associations on the national forests of eastern Washington - Draft version 1. USDA Forest Service, Colville National Forest, Colville, WA. 203 pp.
- Kovalchik, B. L. 2001. Classification and management of aquatic, riparian and wetland sites on the national forests of eastern Washington. Part 1: The series descriptions. 429 pp. plus appendix. [[http://www.reo.gov/col/wetland\\_classification/wetland\\_classification.pdf](http://www.reo.gov/col/wetland_classification/wetland_classification.pdf)]
- Krajina, V. J. 1969. Ecology of western North America. Volume II. Illustrated, University of British Columbia, Department of Botany.
- Kratz, A. M. 1975. Vegetational analysis of the coastal *Picea sitchensis* forest zone in Olympic National Park, Washington. Unpublished thesis, Western Washington University, Bellingham.
- Küchler, A. W. 1964. Potential natural vegetation of the conterminous United States. American Geographic Society Special Publication 36. New York, NY. 116 pp.
- Kudray, G., P. Hendricks, E. Crowe, and S. Cooper. 2004. Riparian forests of the Wild and Scenic Missouri River: Ecology and management. Report to the Lewistown Field Office, Bureau of Land Management. Montana Natural Heritage Program, Helena, MT. 29 pp. plus appendices.
- Kumler, M. L. 1969. Plant succession on the sand dunes of the Oregon coast. *Ecology* 50:695-704.
- Kunze, L. M. 1984. Puget Trough coastal wetland sanctuaries: A summary report of recommended sites. Report to Washington Department of Ecology, Contract No. C-83061. Washington Natural Heritage Program, Washington Department of Natural Resources, Olympia.
- Kunze, L. M. 1994. Preliminary classification of native, low elevation, freshwater wetland vegetation in western Washington. Washington State Department of Natural Resources, Natural Heritage Program. 120 pp.
- Kuramoto, R. T., and L. C. Bliss. 1970. Ecology of subalpine meadows in the Olympic Mountains, Washington. *Ecological Monographs* 40:317-347.
- Larkin, G. J. 1990. Plant community survey at the Middle Fork of the John Day River Preserve. The Nature Conservancy, Oregon Field Office, Portland. 14 pp.
- Larson, M., and W. H. Moir. 1987. Forest and woodland habitat types of northern New Mexico and northern Arizona. Edition 2. USDA Forest Service, Southwestern Region, Albuquerque, NM.
- Lauver, C. L., K. Kindscher, D. Faber-Langendoen, and R. Schneider. 1999. A classification of the natural vegetation of Kansas. *The Southwestern Naturalist* 44:421-443.

- Lawyer, J. 1979. A biophysical inventory of and management suggestions for the Rockaway relic old growth cedar swamp. Unpublished report prepared for The Nature Conservancy, Portland, OR.
- Layser, E. F. 1980. Flora of Pend Oreille County, Washington. Washington State University Cooperative Extension, Pullman. 146 pp.
- Leavell, D. 2000. Vegetation and process of the Kootenai National Forest. Ph.D. dissertation, University of Montana, Missoula. 508 pp.
- Lertzman, K., D. Gavin, D. Hallett, L. Brubaker, D. Lepofsky, and R. Mathewes. 2002. Long-term fire regime estimated from soil charcoal in coastal temperate rainforests. *Conservation Ecology* 6:5.
- Lesica, P. 1990. Vegetation and sensitive plant species of wetlands associated with geothermal areas in the greater Yellowstone ecosystem in Montana. Unpublished report on file at the Montana Field Office, The Nature Conservancy, Helena. 9 pp.
- Lesica, P. 2002. A flora of Glacier National Park, Montana. Oregon State University Press, Corvallis. 512 pp.
- Lesica, P., and R. L. DeVelice. 1992. Plant communities of the Pryor Mountains. Preliminary report prepared by the Montana Natural Heritage Program, Helena, MT.
- Lewis, M. E. 1971. Flora and major plant communities of the Ruby-East Humboldt Mountains with special emphasis on Lamoille Canyon. Unpublished report compiled for USDA Forest Service, Region IV, Ogden, UT. 62 pp.
- Lewis, M. E. 1975a. Plant communities of the Jarbidge Mountain Complex, Humboldt National Forest. Unpublished report compiled for USDA Forest Service, Region IV, Ogden, UT. 22 pp.
- Lillybridge, T. R., B. L. Kovalchik, C. K. Williams, and B. G. Smith. 1995. Field guide for forested plant associations of the Wenatchee National Forest. General Technical Report PNW-GTR-359. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. 335 pp.
- Lindauer, I. E. 1978. A comparison of the vegetative communities of the South Platte and Arkansas River drainages in eastern Colorado. Pages 56-72 in: W. D. Graul and S. J. Bissel, editors. *Lowland River and Stream Habitat in Colorado: A Symposium*, 4-5 October 1978. Colorado Chapter of Wildlife Society and Audubon Council.
- Lindauer, I. E., and S. J. Christy. 1972. An analysis of the woody vegetation on the South Platte River floodplain in northeastern Colorado. Unpublished report to the U.S. Bureau of Reclamation, Denver, CO, by the University of Northern Colorado, Biology Department, Greeley.
- Lippert, B. E., and D. L. Jameson. 1964. Plant succession in temporary ponds of the Willamette Valley, Oregon. *American Midland Naturalist* 71:181-197.
- Lotan, J. E., and D. A. Perry. 1983. Ecology and regeneration of lodgepole pine. *Agriculture Handbook* 606. USDA Forest Service, Washington, DC. 51 pp.
- Lynch, D. 1955. Ecology of the aspen groveland in Glacier County, Montana. *Ecological Monographs* 25:321-344.
- Macdonald, C. A. 1989. Plant colonization of gopher mounds in adjacent pasture and prairie communities. Unpublished thesis, Oregon State University, Corvallis. 67 pp.
- Macdonald, K. B. 1977. Plant and animal communities of Pacific North American salt marshes. Pages 167-191 in: V. J. Chapman, editor. *Ecosystems of the world. 1. Wet coastal ecosystems*. Elsevier Scientific Publications Company, New York.
- Mack, R. N. 1988. First comprehensive botanical survey of the Columbia Plateau, Washington, the Sandberg and Leiberg expedition of 1893. *Northwest Science* 62:118-127.
- MacKenzie, W. H., and J. R. Moran. 2004. Wetlands of British Columbia: A guide to identification. *Land Management Handbook* No. 52. Research Branch, British Columbia Ministry of Forests and Lands, Victoria, BC. 287 pp.
- Magee, T. 1985. Baseline vegetation description and establishment of a monitoring system to evaluate vegetation change in response to fire at Wren Prairie Preserve. Unpublished report prepared for The Nature Conservancy, Portland, OR.
- Mahony, T. M., and J. D. Stuart. 2000. Old-growth forest associations in the northern range of coastal redwood. *Madroño* 47:53-60.
- Manning, M. 1988. Ecology and rooting characteristics of four intermountain meadow community types. Unpublished thesis, University of Nevada, Reno.

- Manning, M. E., and W. G. Padgett. 1989. Preliminary riparian community type classification for Nevada. Draft report prepared for USDA Forest Service, Intermountain Region, Ogden, UT. 134 pp.
- Manning, M. E., and W. G. Padgett. 1991. Riparian community type classification for the Humboldt and Toiyabe national forests, Nevada and eastern California. Unpublished draft report prepared for USDA Forest Service, Intermountain Region Ecology and Classification Program, Ogden, UT. 490 pp.
- Manning, M. E., and W. G. Padgett. 1992. Riparian community type classification for the Humboldt and Toiyabe national forests, Nevada and eastern California. USDA Forest Service, Intermountain Region Ecology and Classification Program. 274 pp.
- Manning, M. E., and W. G. Padgett. 1995. Riparian community type classification for Humboldt and Toiyabe national forests, Nevada and eastern California. USDA Forest Service, Intermountain Region. 306 pp.
- Marr, J. W., D. A. Boyce, and J. W. Todd. 1973b. Preliminary report on the Redcliff project, Eagle County, Colorado. Unpublished report to the D. E. Fleming Company, Denver, and the Colorado River Water Conservation District, Glenwood Springs, by University of Colorado, Boulder. 9 pp.
- Marriott, H. J., and D. Faber-Langendoen. 2000. The Black Hills community inventory. Volume 2: Plant community descriptions. The Nature Conservancy, Midwest Conservation Science Center and Association for Biodiversity Information, Minneapolis, MN. 326 pp.
- Marriott, H. J., D. Faber-Langendoen, A. McAdams, D. Stutzman, and B. Burkhart. 1999. The Black Hills Community Inventory: Final report. The Nature Conservancy, Midwest Conservation Science Center, Minneapolis, MN.
- Marsh, F., R. Helliwell, and J. Rodgers. 1987. Plant association guide for the commercial forest of the Warm Springs Indian Reservation. Confederated Tribes of the Warm Springs Indians.
- Marshall, J. 1985. Value assessment of Jackson-Frazier wetland, Benton County, Oregon: A case study. M.S. thesis, Oregon State University, Corvallis. 147 pp.
- Martin, R. C., and R. E. Frenkel. 1978. Preserve analysis: Blacklock Point. Oregon Natural Area Preserves Advisory Committee to the State Land Board, Salem, OR. 63 pp.
- Martin, R. R., S. J. Trull, W. W. Brady, R. A. West, and J. M. Downs. 1995. Forest plant association management guide, Chatham Area, Tongass National Forest. R10-RP-57. USDA Forest Service, Alaska Region.
- Masek, J. 1979. Vegetation community descriptions for the South Platte River in Colorado and Nebraska. Unpublished report prepared for the Water and Power Resources Service, Denver, CO. 23 pp.
- Mattson, D. J. 1984. Classification and environmental relationships of wetland vegetation in central Yellowstone National Park. Unpublished thesis, University of Idaho, Moscow. 409 pp.
- Mauk, R. L., and J. A. Henderson. 1984. Coniferous forest habitat types of northern Utah. General Technical Report INT-170. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 89 pp.
- Mayfield, M. M., and J. Kjølmyr. 1984. Boardman Research Natural Area. Supplement No. 17 to: J. F. Franklin, F. C. Hall, C. T. Dyrness, and C. Maser. 1972. Federal Research Natural Areas in Oregon and Washington: A guidebook for scientists and educators. Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- McCain, C. 2004. Riparian Plant Communities of Northwest Oregon: Streamside Plant Communities. PNW Technical Paper, R6-NR-ECOL-TP-10-04. PNW Research Station, Portland, OR.
- McCain, C., and J. A. Christy. 2005. Field guide to riparian plant communities in northwestern Oregon. Technical Paper R6-NR-ECOL-TP-01-05. USDA Forest Service, Pacific Northwest Region, Portland. 357 pp.
- McCain, C., and N. M. Diaz. 2002a. Field guide to the forested plant associations of the northern Oregon Coast Range. Siuslaw National Forest, USFS; Salem District, BLM; Eugene District, BLM. Technical Paper R6-NR-ECOL-TP-03-02. USDA Forest Service, Pacific Northwest Region, Portland, OR. 250 pp.
- McCain, C., and N. M. Diaz. 2002b. Field guide to the forested plant associations of the westside central Cascades of northwest Oregon. Willamette N.F., USFS; Mt. Hood N.F., USFS; Salem District, BLM; Eugene District, BLM. Technical Paper R6-NR-ECOL-TP-02-02. USDA Forest Service, Pacific Northwest Region, Portland, OR.
- McCain, C., C. B. Halpern, and S. Lovtang. 2014. Non-forested plant communities of the northern Oregon Cascades. Technical Paper R6-ECOL-TP-01-14. USDA Forest Service, Pacific Northwest Region, Portland, OR.

- McDonald, P. M., and J. C. Tappeiner, II. 1990. *Arbutus menziesii* Pursh. Pacific madrone. Pages 124-132 in: R. M. Burns and B. H. Honkala, technical coordinators. *Silvics of North America. Volume 2: Hardwoods. Agriculture Handbook 654.* USDA Forest Service, Washington, DC. 877 pp.
- McDonald, P. M., D. Minore, and T. Atzet. 1983. Southwestern Oregon-Northern California hardwoods. Pages 29-32 in: R. M. Burns, technical coordinator. *Silvicultural systems for the major forest types of the United States. Agricultural Handbook 445.* USDA Forest Service, Washington, DC.
- McEachern, K. 1979. Population biology of *Populus sargentii* in northeastern Colorado. Unpublished thesis, University of Northern Colorado, Greeley. 41 pp.
- McLean, A. 1969. Plant communities of the Similkameen Valley, British Columbia, and their relationships to soils. Ph.D. thesis, Washington State University, Pullman. University Microfilms, Inc., Ann Arbor, MI. 133 pp.
- McLean, A. 1970. Plant communities of the Similkameen Valley, British Columbia, and their relationships to soils. *Ecological Monographs* 40(4):403-424.
- McMurray, N. E. 1986a. *Artemisia nova*. In: *Fire Effects Information System* [Online]. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). [<http://www.fs.fed.us/database/feis/>]
- McNeil, R. C. 1975. Vegetation and fire history of a ponderosa pine-white fir forest in Crater Lake National Park. M.S. thesis, Oregon State University, Corvallis.
- McNeil, R. C. and D. B. Zobel. 1980. Vegetation and fire history of a ponderosa pine-white fir forest in Crater Lake National Park. *Northwest Science* 54:30-46.
- Meidinger, D., C. Chappell, C. Cadrin, G. Kittel, C. McCain, K. Boggs, J. Kagan, G. Cushon, A. Banner, and T. DeMeo. 2005. International Vegetation Classification of the Pacific Northwest: International correlation of temperate coastal forest plant associations of Oregon, Washington, British Columbia and Alaska. Contributors: B.C. Ministry of Forests, USDA Forest Service, B.C. Conservation Data Centre, Alaska Natural Heritage Program, Washington Natural Heritage Program, and Oregon Natural Heritage Information Center.
- Meinke, R. J. 2014. ODA species profile for *Lepidium davisii*. <https://www.oregon.gov/oda/shared/Documents/Publications/PlantConservation/LepidiumDavisiiProfile.pdf>
- Meinke, R.J. and T.K. Magee. 1986. Ecological monitoring of vascular plant resources at the Governor Tom McCall Preserve at Rowena plateau: initiation of long-term studies for management. Department of Botany, Oregon State University, Corvallis, OR. 74 pp.
- Miller, D. A., D. A. Mouat, and B. D. Treadwell. 1977. Remote sensing analysis and literature survey pertaining to the vegetation of the Petrified Forest National Park. Report of work performed under NASA and the National Park Service. 48 pp.
- Miller, T. B. 1976. Ecology of riparian communities dominated by white alder in western Idaho. Unpublished thesis, University of Idaho, Moscow. 154 pp.
- Mitchell, D. L. 1981. Salt marsh reestablishment following dike breaching in the Salmon River estuary, Oregon. Ph.D. dissertation. Oregon State University, Corvallis. 171 pp.
- Mitchell, R., and W. Moir. 1976. Vegetation of the Abbott Creek Research Natural Area. *Northwest Science* 50:42-58.
- Moir, W. H. 1969a. The lodgepole pine zone in Colorado. *The American Midland Naturalist* 81(1):87-99.
- Moir, W. H., and J. A. Ludwig. 1979. A classification of spruce-fir and mixed conifer habitat types of Arizona and New Mexico. Research Paper RM-207. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 47 pp.
- Moir, W. H., C. Maser, and J. F. Franklin. 1973b. Bagby Research Natural Area. Supplement #2 to: J. F. Franklin, C. T. Dyrness, and C. Maser. 1972. *Federal Research Natural Areas in Oregon and Washington: A guidebook for scientists and educators.* USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- Moir, W. H., J. F. Franklin, and C. Maser. 1973a. Lost Forest Research Natural Area. Supplement #3 to: *Federal Research Natural Areas in Oregon and Washington: A guide book for scientists and educators* by J. F. Franklin, F. C. Hall, C. T. Dyrness and C. Maser. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR.
- Moir, W., and P. Mika. 1972. Prairie vegetation of the Willamette Valley, Benton County, Oregon. Unpublished report on file at the Pacific Northwest Forest and Range Experiment Station, Forestry Science Laboratory, Corvallis, OR. 29 pp. + appendices.

- Mooney, M. J. 1985. A preliminary classification of high elevation sagebrush-grass plant vegetation in northern and central Nevada. Unpublished thesis, University of Nevada, Reno. 118 pp.
- Moseley, R. K. 1986. Establishment record, Snowy Top Research Natural Area within Kaniksu National Forest, Boundary County, Idaho. Unpublished report prepared for USDA Forest Service, Idaho Panhandle National Forests, by The Nature Conservancy, Moscow, ID. 22 pp.
- Moseley, R. K. 1987a. Synecological relationships of alpine spike-fescue (*Leucopoa kingii* (Wats.) Weber) grasslands in eastcentral Idaho, U.S.A. Unpublished manuscript prepared for Arctic and Alpine Research. 33 pp.
- Moseley, R. K. 1987b. Area of Critical Environmental Concern and Research Natural Area proposal for the Malm Gulch and Germer Basin area, Bureau of Land Management, Salmon District, Idaho. Unpublished report prepared for USDI Bureau of Land Management, Salmon District, ID, by The Nature Conservancy, Moscow, ID. 18 pp.
- Moseley, R. K. 1987c. Idaho preserve design package: Formation Spring, Caribou County, Idaho. Unpublished report prepared by The Nature Conservancy, Idaho Field Office, Ketchum, ID. 9 pp.
- Moseley, R. K. 1995. Report on the conservation status of *Lepidium davisii*. Idaho Department of Fish and Game, Boise, ID.
- Moseley, R. K. 1998. Riparian and wetland community inventory of 14 reference areas in southwestern Idaho. Technical Bulletin 98-5. USDI Bureau of Land Management, Boise State Office, Boise, ID. 52 pp.
- Moseley, R. K., R. J. Bursik, and M. Manusco. 1991. Floristic inventory of wetlands in Fremont and Teton counties, Idaho. Unpublished report on file IDCDC Department of Fish & Game, Boise, ID. 60 pp.
- Moseley, R. K., R. J. Bursik, F. W. Rabe, and L. D. Cazier. 1994. Peatlands of the Sawtooth Valley, Custer, and Blaine counties, Idaho. Sawtooth NF/TNC/IdCDC Idaho Department of Fish & Game Cooperative Cost Share Project. SNF Purchase Order #40-0267-3-0233. 64 pp.
- Mueggler, W. F. 1988. Aspen community types of the Intermountain Region. General Technical Report INT-250. USDA Forest Service, Intermountain Research Station, Ogden, UT. 135 pp.
- Mueggler, W. F., and C. A. Harris. 1969. Some vegetation and soil characteristics of mountain grasslands in central Idaho. *Ecology* 50:671-678.
- Mueggler, W. F., and R. B. Campbell, Jr. 1982. Aspen community types on the Caribou and Targhee national forests in southeastern Idaho. Research Paper INT-294. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 32 pp.
- Mueggler, W. F., and R. B. Campbell, Jr. 1986. Aspen community types of Utah. Research Paper INT-362. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT.
- Mueggler, W. F., and W. L. Stewart. 1980. Grassland and shrubland habitat types of western Montana. General Technical Report INT-66. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 154 pp.
- Muldavin, E. H., R. L. DeVelice, and F. Ronco, Jr. 1996. A classification of forest habitat types of southern Arizona and portions of the Colorado Plateau. General Technical Report RM-GTR-287. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 130 pp.
- Muldavin, E., A. Kennedy, C. Jackson, P. Neville, T. Neville, K. Schulz, and M. Reid. 2011b. Vegetation classification and map: Bandelier National Monument. Natural Resource Technical Report NPS/SCPN/NRTR--2011/438. National Park Service, Fort Collins, CO.
- Muldavin, E., and P. Mehlhop. 1992. A preliminary classification and test vegetation map for White Sands Missile Range and San Andreas National Wildlife Refuge, New Mexico. University of New Mexico, New Mexico Natural Heritage Program.
- Muldavin, E., B. Sims, and L. Johnson. 1993b. Pecos Wild and Scenic River in stream flow report. Final report prepared for the USDA Forest Service, Santa Fe National Forest, Santa Fe, NM.
- Muldavin, E., G. Shore, K. Taugher, and B. Milne. 1998d. A vegetation map classification and map for the Sevilleta National Wildlife Refuge, New Mexico. Final report submitted to USDI, U.S. Fish and Wildlife Service, Sevilleta National Wildlife Refuge, Socorro, NM, by the New Mexico Natural Heritage Program, University of New Mexico, Albuquerque. 73 pp. + appendices.
- Muldavin, E., P. Durkin, M. Bradley, M. Stuever, and P. Mehlhop. 2000a. Handbook of wetland vegetation communities of New Mexico. Volume I: Classification and community descriptions. Final report to the New Mexico Environment Department and the Environmental Protection Agency prepared by the New Mexico Natural Heritage Program, University of New Mexico, Albuquerque.



- Muldavin, E., Y. Chauvin, A. Kennedy, T. Neville, P. Neville, K. Schulz, and M. Reid. 2012a. Vegetation classification and map: Salinas Pueblo Missions National Monument. Natural Resource Technical Report NPS/SCPN/NRTR--2012/553. National Park Service, Fort Collins, CO.
- Muldavin, E., Y. Chauvin, and G. Harper. 2000b. The vegetation of White Sands Missile Range, New Mexico: Volume I. Handbook of vegetation communities. Final report to Environmental Directorate, White Sands Missile Range. New Mexico Natural Heritage Program, University of New Mexico, Albuquerque. 195 pp. plus appendices
- Muldavin, E., Y. Chauvin, P. Neville, T. Neville, L. Arnold, P. Arbetan, and A. Fettes. 2012b. A vegetation classification and map: Pecos National Historical Park. Natural Resource Technical Report NPS/SOPN/NRTR--2012/601. National Park Service, Fort Collins, CO.
- Muldavin, E., Y. Chauvin, T. Neville, P. Neville, A. Kennedy, H. Hulse, P. Arbetan, K. Schultz, M. Hall, and M. Reid. 2013c. Vegetation classification and map: El Malpais National Park. Natural Resource Technical Report NPS/SCPN/NRTR--2013/803. National Park Service, Fort Collins, CO. [[http://nhnm.unm.edu/vlibrary/pubs\\_archive/nhnm/nonsensitive/R13MUL01NMUS.pdf](http://nhnm.unm.edu/vlibrary/pubs_archive/nhnm/nonsensitive/R13MUL01NMUS.pdf)]
- Murphy, C. J., and S. K. Rust. 2000. Inventory and assessment of terrestrial vegetation on the 45 Ranch Allotment. Unpublished report prepared for The Nature Conservancy, Idaho Field Office, Boise. 88 pp.
- Murray, M. P. 1996. Landscape dynamics of an island range: Interrelationships of fire and whitebark pine (*Pinus albicaulis*). Unpublished dissertation, College of Graduate Studies, University of Idaho, Moscow.
- Murray, M. P. 2000. Wetland plant associations of the western hemlock zone in the central coastal and westslope Cascade Mountains. Unpublished report, Oregon Natural Heritage Program, Portland, OR. 82 pp. [[http://www.natureserve.org/nhp/us/or/nw\\_or\\_wetlands.pdf](http://www.natureserve.org/nhp/us/or/nw_or_wetlands.pdf)]
- Mutel, C. F. 1973. An ecological study of the plant communities of certain montane meadows in the Front Range of Colorado. Unpublished thesis, University of Colorado, Boulder. 77 pp.
- Mutz, K. M., and J. Queiroz. 1983. Riparian community classification for the Centennial Mountains and South Fork Salmon River, Idaho. Unpublished report prepared for USDA Forest Service Intermountain Region under contract 53-84M8-2-0048 by Meiji Resource Consultants, Layton, UT. 168 pp.
- Mutz, K. M., and R. Graham. 1982. Riparian community type classification-Big Piney Range District, Wyoming. Unpublished report prepared for USDA Forest Service, Intermountain Region under contract 53-84M8-1-974, by Meiji Resource Consultants, Layton, UT. 88 pp.
- Mycek, L. 1994. A classification of riparian plant communities in three geomorphological provinces of the Cascade Mountains in western Washington State. M.S. thesis, University of Washington, Seattle. 122 pp.
- Myhre, J., and E. A. Clements. 1972. A study of the flora of the islands and the shoreline of the Snake River between Grandview, Idaho, and Guffey Butte, Owyhee County, Idaho. Unpublished report prepared for Biology Department, College of Idaho, Caldwell. 18 pp.
- Nachlinger, J. L. 1985. The ecology of subalpine meadows in the Lake Tahoe region, California and Nevada. Unpublished thesis, University of Nevada, Reno. 151 pp.
- Nachlinger, J. L., and G. A. Reese. 1996. Plant community classification of the Spring Mountains National Recreation Area, Clark and Nye counties, Nevada. Unpublished report submitted to USDA Forest Service, Humboldt-Toiyabe National Forest, Spring Mountains National Recreation Area, Las Vegas, NV. The Nature Conservancy, Northern Nevada Office, Reno, NV. 85 pp. plus figures and appendices.
- Neid, S., J. E. Stevens, K. Forest, and M. Fink. 2007. Sand Creek Massacre National Historic Site: Vegetation classification and mapping. Natural Resource Technical Report NPS/SOPN/NRTR--2007/050. National Park Service, Fort Collins, CO. 112 pp.
- Nesser, J. A., G. L. Ford, C. L. Maynard, and D. S. Page-Dumroese. 1997. Ecological units of the Northern Region: Subsections. General Technical Report INT-GTR-369. USDA Forest Service, Intermountain Research Station, Ogden, UT. 88 pp.
- Norton, B. E., J. Tuhy, and S. Jensen. 1981. Riparian community classification for the Grey's River, Wyoming. Unpublished final report prepared by Department of Range Science, Utah State University, Logan for USDA Forest Service, Region 4, Ogden, UT. 188 pp.
- Odion, D. C., D. A. DiPaolo, L. C. Groshong, D. A. Sarr, and S. Mohren. 2013. Vegetation Inventory Project: Oregon Caves National Monument and proposed expansion area. Natural Resource Technical Report NPS/ORCA/NRTR--2013/782. National Park Service, Fort Collins, CO. 272 pp.
- Odion, D. C., R. M. Callaway, W. R. Ferren, and F. W. Davis. 1992. Vegetation of Fish Slough, an Owens Valley wetland ecosystem. Pages 171-196 in: C.A. Hall and B. Widawski, editors. The history of water: Eastern Sierra Nevada, Owens Valley, White-Inyo Mountains. White Mountains Research Station Symposium 4. University of California, White Mountain Research Station, Los Angeles, CA.

- Ogilvie, R. T. 1962. Ecology of spruce forests on the east slope of the Rocky Mountains in Alberta. Unpublished dissertation, Washington State University, Pullman. 189 pp.
- ORBIC [Oregon Biodiversity Information Center]. No date. Unpublished community descriptions and plot data. ORBIC, Portland State University, Portland, Oregon
- Osborn, L. W. 1974. Soil-plant relationships in a saltgrass meadow. Unpublished thesis, Colorado State University, Fort Collins. 41 pp.
- Osborn, R., G. Kittel, and M. Reid. 1998. Colorado riparian plant associations and western states vegetation classification. CDROM. U.S. Geological Survey, Mid-Continent Ecology Research Center, Fort Collins, CO.
- Oswald, H. 1933. Vegetation of the Pacific coast bogs of North America. *Acta Phytogeographica Suecica* 5:1-33.
- Oswald, E. T. 1966. A synecological study of the forested moraines of the valley floor of Grand Teton National Park, Wyoming. Unpublished thesis, Montana State University, Bozeman. 101 pp.
- Owens, T., project coordinator, et al. 2004. U.S. Geological Survey and National Park Service Vegetation Mapping Program: Florissant Fossil Beds National Monument. U.S. Geological Survey and National Park Service. 390 pp.
- Padgett, W. G. 1981. Ecology of riparian plant communities in southern Malheur National Forest. M.S. thesis. Oregon State University, Corvallis. 143 pp.
- Padgett, W. G. 1982. Ecology of riparian plant communities in southern Malheur National Forest. Unpublished thesis, Oregon State University, Corvallis. 143 pp.
- Padgett, W. G., A. P. Youngblood, and A. H. Winward. 1988b. Riparian community type classification of Utah. Publication R4-ECOL-88-01. USDA Forest Service, Forest and Range Experiment Station, Ogden, UT.
- Padgett, W. G., A. P. Youngblood, and A. H. Winward. 1989. Riparian community type classification of Utah and southeastern Idaho. Research Paper R4-ECOL-89-0. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT.
- Parker, K. 1982. Analysis of understory vegetation of a low elevation old growth forest in the Sandy River Gorge. Unpublished undergraduate thesis, Reed College, Portland, OR. 42 pp.
- Parker, T. 1986a. Ecology of western redcedar groves. Unpublished dissertation, University of Idaho. 187 pp.
- Pawuk, W. H., and E. J. Kissinger. 1989. Preliminary forest plant associations of the Stikine Area, Tongass National Forest. Technical Publication R10-TP-72. USDA Forest Service, Alaska Region, Juneau, AK. 126 pp.
- Peet, R. K. 1980. Forest vegetation of the northern Colorado Front Range, USA: I. Community composition. Unpublished manuscript prepared for Cornell University, Ithaca, NY. 83 pp.
- Peet, R. K. 1981. Forest vegetation of the Colorado Front Range. *Vegetatio* 45:3-75.
- Penfound, W. T. 1953. Plant communities of Oklahoma lakes. *Ecology* 34:561-583.
- Peterson, E. B. 2008. International Vegetation Classification alliances and associations occurring in Nevada with proposed additions. Nevada Natural Heritage Program, Carson City, NV. 348 pp.
- Pfister, R. D. 1972. Vegetation and soils in the subalpine forests of Utah. Unpublished dissertation, Washington State University, Pullman. 98 pp.
- Pfister, R. D. 1977. Ecological classification of forest land in Idaho and Montana. Pages 329-358 in: *Proceedings of Ecological Classification of Forest Land in Canada and Northwestern USA*, University of British Columbia, Vancouver.
- Pfister, R. D., B. L. Kovalchik, S. F. Arno, and R. C. Presby. 1977. Forest habitat types of Montana. General Technical Report INT-34. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 174 pp.
- Phillips, C. M. 1977. Willow carrs of the upper Laramie River Valley, Colorado. Unpublished thesis, Colorado State University, Fort Collins. 71 pp.
- Pickart, A. 1987. A classification of northern foredune and its relationship to Menzies' wallflower on the North Spit of Humboldt Bay, California. *The Nature Conservancy*, Arcata, CA. 14 pp.

- Pickart, A. J. 2006. Vegetation of diked herbaceous wetlands of Humboldt Bay National Wildlife Refuge: Classification, description, and ecology. USDI Fish and Wildlife Service. Humboldt Bay National Wildlife Refuge, Arcata, CA.
- Pickart, A. J., and J. O. Sawyer. 1998. Ecology and restoration of northern California coastal dunes, Humboldt County, California. California Native Plant Society, Sacramento, CA.
- Pickart, A., and M. Barbour 2007. Beach and dune. Chapter 6, pages 155-179 in: M. G. Barbour, M. G., T. Keeler-Wolf, and A. A. Schoenherr, editors. Terrestrial vegetation of California. Third edition. University of California Press, Berkeley.
- Pierce, J. R. 1986. Wetland community types of west-central Montana. Unpublished draft report prepared for the USDA Forest Service, Region One, Missoula, MT. 57 pp.
- Pierce, J. R., and Johnson. 1986. Livestock grazing and riparian/stream ecosystems. Pages 39-45 in: Proceedings, Forum - Grazing and riparian/stream ecosystems. Trout Unlimited, Inc., Vienna, VA.
- Piper, C. V., and R. K. Beattie. 1915. Flora of the northwest coast. New Era Printing Company, Lancaster, PA. 418 pp.
- Platts, W. S., C. Armour, G. D. Booth, M. Bryant, J. Bufford, P. Cuplin, S. Jensen, G. W. Lienkaemper, G. W. Minshall, S. B. Monsen, R. L. Nelson, J. R. Sedell, and J. S. Tuhy. 1987. Methods for evaluating riparian habitats with applications to management. General Technical Report INT-221. USDA Forest Service, Intermountain Research Station, Ogden, UT. 177 pp.
- Potter, D. A. 1994. Guide to forested communities of the upper montane in the central and southern Sierra Nevada. Technical Publication R5-ECOL-TP-003. USDA Forest Service, Pacific Southwest Region, San Francisco, CA.
- Potter, D. A. 1998. Forested communities of the upper montane in the central and southern Sierra Nevada. USDA Forest Service, Pacific Southwest Research Station, Albany, CA. 319 pp.
- Potter, D. A. 2000. Riparian community type classification for the west slope central and southern Sierra Nevada, California. Unpublished manuscript available from D. Potter, Stanislaus National Forest, Sonora, CA.
- Potter, D. A. 2005. Riparian plant community classification: West slope, central and southern Sierra Nevada, California. Technical Paper R5-TP-022. USDA Forest Service, Pacific Southwest Region, Vallejo, CA. 634 pp.
- Poulton, C. E. 1955. Ecology of the non-forested vegetation in Umatilla and Morrow counties, Oregon. Unpublished dissertation. State College of Washington, Pullman. 166 pp.
- Powell, D. C. 1988a. Aspen community types of the Pike and San Isabel national forests in south-central Colorado. Report R2-ECOL-88-01. USDA Forest Service, Rocky Mountain Region, Denver, CO. 254 pp.
- Price, J., and T. Seibert. 1981. A vegetational analysis of the Alvord Basin sand dunes. Pages 14-27 in: N. Cobb, E. Gruber, E. Heske, A. Flecker, D. Lightfoot, A. Masters, N. McClintock, J. Price, T. Seibert, and M. Smith. An ecological study of the Alvord Basin dunes, southeastern Oregon. Oregon State University. Final technical report to National Science Foundation.
- Price, J., et al. 1981. Ecological study of the Alvord Basin Dunes, southeastern Oregon. Oregon State University Technical Report, Corvallis.
- Quaye, E. C. 1982. The structure and dynamics of old-growth Sitka spruce (*Picea sitchensis*) forest of the Oregon Coast Range. Ph.D. dissertation, Oregon State University, Corvallis. 109 pp.
- Ralston, G. L. 1969. Plant zonation on dune sands of Washoe Lake, Washoe County, Nevada. Unpublished thesis, University of Nevada, Reno.
- Ramaley, F. 1919a. The role of sedges in some Colorado plant communities. *American Journal of Botany* 6:120-130.
- Ramaley, F. 1930. Zonation at the San Luis Lakes, near Alamosa, Colorado. *Journal of the Colorado-Wyoming Academy of Science* 1(2):19-20 (Abstract).
- Ramaley, F. 1939a. Life forms of plants in Colorado sandhills. *Journal of the Colorado-Wyoming Academy of Science* 2(5):33 (Abstract).
- Ramaley, F. 1939b. Sand-hill vegetation of northeastern Colorado. *Ecological Monographs* 9:1-51.
- Ramaley, F. 1942. Vegetation of the San Luis Valley in southern Colorado. *University of Colorado Studies, Series D*, 1:231-277.
- Ramaley, F., and W. W. Robbins. 1909. Studies in lake and streamside vegetation. I. Redrock Lake near Ward, Colorado. *University of Colorado Studies* 6:133-168.

- Randall, V. D. 1996. Port-Orford-cedar series. Pages CHLA1-CHAL21 in: T. Atzet, D. E. White, L. A. McCrimmon, P. A. Martinez, P. R. Fong, and V. D. Randall. Field guide to the forested plant associations of southwestern Oregon. Technical Paper R6-NR-ECOL-TP-17-96. USDA Forest Service, Pacific Northwest Research Station, Portland, OR.
- Ratliff, R. D. 1982. A meadow site classification for the Sierra Nevada, California. General Technical Report PSW-10. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, Berkeley, CA. 16 pp.
- Reed, R. M. 1969. A study of forest vegetation in the Wind River Mountains, Wyoming. Unpublished dissertation, Washington State University, Pullman. 77 pp.
- Reed, R. M. 1971. Aspen forests of the Wind River Mountains, Wyoming. *The American Midland Naturalist* 86(2):327-343.
- Reed, R. M. 1976. Coniferous forest habitat types of the Wind River Mountains, Wyoming. *The American Midland Naturalist* 95(1):159-173.
- Reid, E. H., G. S. Strickler, and W. B. Hall. 1980. Green fescue grassland: Forty years of secondary succession. Research Paper PNW-274. USDA Forest Service, Pacific Northwest Experiment Station, Portland, OR.
- Reid, M. 1990. Yampa River Basin riparian vegetation classification project. Unpublished data prepared for The Nature Conservancy, Colorado Field Office and Western Heritage Task Force, Boulder, CO.
- Reid, M. S., and M. E. Hall. 2010. Vegetation classification of Grand Canyon National Park. Draft report submitted to National Park Service, Fort Collins, CO.
- Reid, M. S., L. S. Engelking, and P. S. Bourgeron. 1994. Rare plant communities of the conterminous United States, Western Region. Pages 305-620 in: D. H. Grossman, K. L. Goodin, and C. L. Reuss, editors. Rare plant communities of the conterminous United States, an initial survey. The Nature Conservancy, Arlington, VA.
- Reid, M. S., S. V. Cooper, and G. Kittel. 2004. Vegetation classification of Waterton-Glacier International Peace Park. Final report for USGS-NPS Vegetation Mapping Program, International Peace Park Mapping Project. NatureServe, Arlington VA.
- Reznicek, A. A. 1987. Key to *Carex rostrata* complex in North America. Unpublished key. 3 pp.
- Rice, P. M., E. W. Schweiger, W. Gustafson, C. Lea, D. Manier, D. Shorrock, B. Frakes, and L. O'Gan. 2012c. Vegetation classification and mapping project report, Grant-Kohrs Ranch National Historic Site. Natural Resource Report NPS/ROMN/NRR--2012/589. National Park Service, Fort Collins, CO. 176 pp.
- Rice, P. M., E. W. Schweiger, W. Gustafson, C. Lea, D. Manier, D. Shorrock, B. Frakes, and L. O'Gan. 2012b. Vegetation classification and mapping project report: Little Bighorn Battlefield National Monument. Natural Resource Report NPS/ROMN/NRR--2012/590. National Park Service, Fort Collins, CO. 147 pp.
- Richard, C., G. Kittel, and S. Kettler. 1996. A classification of the riparian vegetation of the San Juan National Forest. Draft 1 report. Colorado Natural Heritage Program, Colorado State University, Fort Collins.
- Rickard, W. H., and J. C. Beatley. 1965. Canopy-coverage of the desert shrub vegetation mosaic of the Nevada Test Site. *Ecology* 46(4):524-529.
- Riegel, G. M., B. G. Smith, and J. F. Franklin. 1992. Foothill oak woodlands of the interior valleys of southwestern Oregon. *Northwest Science* 66(2):66-76.
- Ripley, J. D. 1983. Description of the plant communities and succession of the Oregon coast grasslands. Unpublished Ph.D. thesis, Oregon State University, Corvallis. 202 pp.
- Roach, A. W. 1952. Phytosociology of the Nash Crater lava flows, Linn County, Oregon. *Ecological Monographs* 22:169-193.
- Robbins, W. W. 1918. Successions of vegetation in Boulder Park, Colorado. *Botanical Gazette* 65(6):493-525.
- Roberts, D. W. 1980. Forest habitat types of the Bear's Paw Mountains and Little Rocky Mountains, Montana. Unpublished thesis, Department of Forestry, University of Montana, Missoula. 116 pp.
- Roberts, D. W., D. W. Wight, and G. P. Hallsten. 1992. Plant community distribution and dynamics in Bryce Canyon National Park. Unpublished final report for Bryce Canyon National Park Project PX1200-7-0966. 146 pp.
- Roberts, K., editor. 1979. A preliminary ecological survey of the Alvord Basin. Final Technical Report NSF-SOS (76-08175). Eastern Oregon State College, La Grande.

- Robertson, D. R., J. L. Nielsen, and N. H. Bare. 1966. Vegetation and soils of alkali sagebrush and adjacent big sagebrush ranges in North Park, Colorado. *Journal of Range Management* 19:17-20.
- Rocchio, F. J., R. C. Crawford, and C. C. Thompson. 2012. San Juan Island National Historical Park vegetation classification and mapping project. Natural Resource Report NPS/NCCN/NRR--2012/603. National Park Service, Fort Collins, CO. 188 pp.
- Rodriguez, D., K. G. Sikes, T. Keeler-Wolf, G. Kittel, J. Curtis, C. Curley, and J. Evens. 2017. Vegetation classification of Channel Islands National Park. Report to the National Park Service, Fort Collins, CO.
- Rodwell, J. S., editor. 1995a. British plant communities. Volume 4. Aquatic communities, swamps and tall-herb fens. Cambridge University Press, Cambridge. 283 pp.
- Rodwell, M. L. 1995b. The European vegetation survey. *Bulletin of the British Ecological Society* 26(3):167-172.
- Rogers, C. M. 1953. The vegetation of the Mesa de Maya region of Colorado, New Mexico, and Oklahoma. *Lloydia* 16(4):257-290.
- Rolfsmeier, S. B., and G. Steinauer. 2010. Terrestrial ecological systems and natural communities of Nebraska (Version IV - March 9, 2010). Nebraska Natural Heritage Program, Nebraska Game and Parks Commission. Lincoln, NE. 228 pp.
- Rolston, L. K. 1961. The subalpine coniferous forest of the Bighorn Mountains, Wyoming. Unpublished thesis, University of Wyoming, Laramie.
- Romme, W. H., K. D. Heil, J. M. Porter, and R. Fleming. 1993. Plant communities of Capitol Reef National Park, Utah. USDI National Park Service, Technical Report NPS/NAUCARE/NRTER-93/02. Cooperative Park Studies Unit, Northern Arizona University. 37 pp.
- Rust, S. K. 1997a. Community concepts and applications for conservation. Unpublished report prepared for USDA Forest Service, Northern Region, Intermountain Region and Intermountain Research Station. Conservation Data Center, Idaho Department of Fish and Game, Boise. 67 pp.
- Rust, S. K. 1998. Establishment record for Patrick Butte Research Natural Area within Payette National Forest, Idaho County, Idaho. Unpublished report prepared for the USDA Forest Service Rocky Mountain Research Station, Ogden, UT. 19 pp. plus appendices and maps.
- Rust, S. K. 1999. Pinyon-juniper woodland classification and description in Research Natural Areas of southeastern Idaho. In: S. B. Monson and R. Stevens, compilers. *Proceedings: Ecology and management of pinyon-juniper communities within the interior west; 1997 September 15-18; Provo, UT. Proceedings RMRS-P-9.* USDA Forest Service, Rocky Mountain Research Station, Ogden, UT. 411 pp.
- Rust, S. K., C. J. Murphy, G. Easdale, and C. Coulter. 2000b. Owyhee Plateau vegetation mapping project: Fixed area plots and stand level community observations, 1998-2000. Unpublished data on file at Idaho Fish and Game, Idaho Conservation Data Center, Boise, ID.
- Rust, S., C. Murphy, J. Miller, and C. Coulter. 2003. Inventory and assessment of vegetation of the Pioneer Mountain Foothills: Fish Creek, West Fork Fish Creek, Friedman Creek, and Little Wood River. Unpublished draft report prepared for Bureau of Land Management, Shoshone Field Office; The Nature Conservancy; and Lava Lake Land and Livestock LLC by Idaho Conservation Data Center, Idaho Department of Fish and Game, Boise. 173 pp.
- Sabinske, D. W. 1972. The sagebrush community of Grand Teton National Park: A vegetation analysis. Unpublished thesis, University of Wyoming, Laramie.
- Salas, D. E., and M. J. Pucherelli. 1998b. USGS-NPS vegetation mapping, Jewel Cave National Monument, South Dakota. USDI Bureau of Reclamation, Technical Memorandum No. 8260-98-06. Denver, CO.
- Salas, D. E., and M. J. Pucherelli. 2002a. USGS-NPS Vegetation Mapping, Fort Union Trading Post National Historic Site. Technical Memorandum 8260-02-08. Bureau of Reclamation, Denver, CO. 128 pp.
- Salas, D. E., D. Wegner, and L. Floyd-Hanna. 2009. Vegetation mapping and classification report: Aztec Ruins National Monument. Natural Resource Technical Report NPS/SCPN/NRTR--2009/244. National Park Service, Fort Collins, CO. 90 pp.
- Salas, D. E., J. Stevens, K. Schulz, M. Artmann, B. Friesen, S. Blauer, E. W. Schweiger, and A. Valdez. 2010b. Vegetation classification and mapping project report: Great Sand Dunes National Park and Preserve. Natural Resource Report NPS/ROMN/NRR--2010/179. National Park Service, Fort Collins, CO.
- Salas, D., J. Stevens, and K. Schulz. 2005. USGS-NPS Vegetation Mapping Program: Rocky Mountain National Park, Colorado. Technical Memorandum No. 8260-05-02. USDI Bureau of Reclamation, Denver, CO. 161 pp. plus Appendices A-L (733 pp.).

- Salas, D., L. Floyd-Hanna, and D. Hanna. 2011. Vegetation classification and mapping project report: Chaco Culture National Historical Park. Natural Resource Technical Report NPS/SCPN/NRTR--2011/452. National Park Service, Fort Collins, CO. 142 pp.
- Sanville, W. D., H. P. Eilers, T. R. Boss, and T. G. Pflieger. 1986. Environmental gradients in northwest freshwater wetlands. *Environmental Management* 10:125-134.
- Saul, S. 1974. A report on the proposed Harney Lake Research Natural Area. Malheur National Wildlife Refuge, Burns, OR. 16 pp.
- Savonen, C. 1988. Historical wetlands of the west Eugene study area. Lane Council of Governments, Eugene, OR. 10 pp.
- Sawyer, J. O. 2006. Northwest California: A natural history. University of California Press, Berkeley, CA.
- Sawyer, J. O., and D. A. Thornburgh. 1977. Montane and subalpine vegetation of the Klamath Mountains. Pages 699-732 in: M. G. Barbour and J. Major, editors. *Terrestrial vegetation of California*. John Wiley and Sons, New York.
- Sawyer, J. O., and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, Sacramento. 471 pp.
- Sawyer, J. O., T. Keeler-Wolf, and J. Evens. 2009. A manual of California vegetation. Second edition. California Native Plant Society, Sacramento CA. 1300 pp.
- Scheldt, R.S. 1969. Ecology and utilization of curl-leaf mountain mahogany in Idaho. MS Thesis, University of Idaho, Moscow, ID.
- Schirokauer, D., T. Keeler-Wolf, J. Meinke, and P. van der Leeden. 2003. Plant community classification and mapping project. Point Reyes National Seashore, Golden Gate National Recreation Area, San Francisco Water Department Watershed Lands, Mount Tamalpais, Tomales Bay, and Samuel P. Taylor State Parks. Final report. California State Department of Fish and Game, Wildlife and Habitat Data Analysis Branch, Sacramento, National Park Service, Point Reyes Station, and Aerial Information Systems, Redlands, CA. 82 pp. [[http://biology.usgs.gov/npsveg/pore\\_goga/index.html](http://biology.usgs.gov/npsveg/pore_goga/index.html)]
- Schlatterer, E. F. 1972. A preliminary description of plant communities found on the Sawtooth, White Cloud, Boulder, and Pioneer mountains. Unpublished report prepared for USDA Forest Service, Intermountain Region, Ogden, UT. 111 pp.
- Schmidt, W. C., and K. J. McDonald, compilers. 1990. Proceedings-Symposium on whitebark pine ecosystems: Ecology and management of a high-mountain resource. March 29-31 1989, Bozeman, MT. General Technical Report INT-270. USDA Forest Service, Intermountain Research Station, Ogden, UT. 386 pp.
- Schreiner, E. G. 1994. Appendix A1: Vegetation sampling. In: D. B. Houston, E. C. Schriener and B. B. Moorhead, editors. *Mountain goats in Olympic National Park: Biology and management of an introduced species*. Scientific Monograph NPS/NROLYN/NRSM 94/25. USDI National Park Service.
- Schuller, R., and S. Evans. 1986. Botanical reconnaissance of Meeks Table Research Natural Area, Washington. Research Note PNW-RN-451. Portland, OR.
- Schuller, S. R. 1978. Vegetation ecology of selected mountain hemlock (*Tsuga mertensiana*) communities along the eastern High Cascades, Oregon. Unpublished thesis, Oregon State University, Corvallis, OR. 79 pp.
- Schulz, K. A., and M. E. Hall. 2011. Vegetation inventory project: Great Basin National Park. Unpublished report submitted to USDI National Park Service, Mojave Desert Inventory and Monitoring Network. NatureServe, Western Regional Office, Boulder, CO. 30 pp. plus Appendices A-H.
- Segura-Bustamante, M. 1970. Ecology of bitterbrush (*Purshia tridentata* (Pursh) DC) in the Silver Lake Deer Winter Range, Oregon. Unpublished dissertation, Oregon State University, Corvallis. 342 pp.
- Severson, K. E., and J. F. Thilenius. 1976. Classification of quaking aspen stands in the Black Hills and Bear Lodge Mountains. Research Paper RM-166. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 24 pp.
- Seyer, S. C. 1979. Vegetative ecology of a montane mire, Crater Lake National Park, Oregon. Unpublished thesis, Oregon State University, Corvallis. 87 pp.
- Seyer, S. C. 1981. Survey of vegetation of 18 lakes in Wallowa-Whitman National Forest, Oregon. USDA Forest Service, Forest Sciences Laboratory, Corvallis, OR. 47 pp.
- Seyer, S. C. 1983. Ecological analysis, Multorpor Fen Preserve, Oregon. The Nature Conservancy, Oregon Field Office, Portland. 28 pp.

- Shanks, D. L. 1977. Aerial photo densitometry for rangeland planning and evaluation. Unpublished thesis, Colorado State University, Fort Collins. 66 pp.
- Shaw, R. B., S. L. Anderson, K. A. Schultz, and V. E. Diersing. 1989. Plant communities, ecological checklist, and species list for the U.S. Army Pinon Canyon Maneuver Site, Colorado. Colorado State University, Department of Range Science, Science Series No. 37, Fort Collins. 71 pp.
- Shephard, M. E. 1995. Plant community ecology and classification of the Yakutat Foreland, Alaska. R10-TP-56. USDA Forest Service, Alaska Region. 213 pp. plus appendices.
- Shepherd, H. R. 1975. Vegetation of two dissimilar bighorn sheep ranges in Colorado. Colorado Division of Wildlife Report 4. 223 pp.
- Shiflet, T. N., editor. 1994. Rangeland cover types of the United States. Society for Range Management. Denver, CO. 152 pp.
- Shupe, J. B., J. D. Brotherson, and S. R. Rushforth. 1986. Patterns of vegetation surrounding springs in Goshen Bay, Utah County, Utah, U.S.A. *Hydrobiologia* 139:97-107.
- Singh, T., and N. E. West. 1971. Comparison of some multivariate analyses of perennial *Atriplex* vegetation in southeastern Utah. *Vegetatio* 23(5-6):289-313.
- Smith, S. 1994b. Ecological guide to eastside pine plant associations, northeastern California. R5-ECOL-TP-004. USDA Forest Service, Pacific Southwest Region, San Francisco, CA. 174 pp.
- Smith, S. 1998b. Riparian community type classification for national forests in northeastern California: First approximation. USDA Forest Service, Pacific Southwest Research Station, Berkeley, CA.
- Smith, S., and S. Smith. 1976. Vegetative types and landform classes. Pages 40-268 in: J. Tabor, editor. Inventory of riparian habitats and associated wildlife along the Columbia River. Final report prepared for Oregon State University Cooperative Wildlife Research Unit, Corvallis. 771 pp.
- Smith, W. P. 1985. Plant associations within the interior valleys of the Umpqua River Basin, Oregon. *Journal of Range Management* 38:526-530.
- Solomeshch, A., and M. Barbour. 2006. Defining restoration targets for Great Valley Grassland State Park. *Grasslands* 16:1, 12-17.
- Sproul, F., T. Keeler-Wolf, P. Gordon-Reedy, J. Dunn, A. Klein, and K. Harper. 2011. Vegetation classification manual for western San Diego County. AECOM, California Department of Fish and Game, San Diego Area Governments.
- Stearns-Roger, Inc. 1978. Rawhide Energy Project. Transmission system, ecological investigations. Volume II. Technical baseline report to Platte River Power Authority. 51 pp.
- Steele, R., R. D. Pfister, R. A. Ryker, and J. A. Kittams. 1981. Forest habitat types of central Idaho. General Technical Report INT-114. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 138 pp.
- Steele, R., S. V. Cooper, D. M. Ondov, D. W. Roberts, and R. D. Pfister. 1983. Forest habitat types of eastern Idaho - western Wyoming. General Technical Report INT-144. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 122 pp.
- Steen, O. A., and R. L. Dix. 1974. A preliminary classification of Colorado subalpine forests: A working guide. Unpublished report prepared by the USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 9 pp.
- Steinauer, G., and S. Rolfsmeier. 1997. Terrestrial natural communities of Nebraska. Draft - October 28, 1997. Nebraska Game and Parks Commission, Lincoln, NE. 117 pp.
- Stephens, F. R. 1966. Lodgepole pine-soil relations in the northwest Oregon Cascade Mountains. *Journal of Forestry* 64(3):184-186.
- Stevens, J. E., D. S. Jones, and K. J. Benner. 2015. Vegetation classification and mapping project report: Bighorn Canyon National Recreation Area. Natural Resource Report NPS/GRYN/NRR--2015/1070. National Park Service, Fort Collins, CO. 350 pp.
- Stevens, J. E., K. Forrest, S. Neid, and M. Fink. 2007. Bent's Old Fort National Historic Site: Vegetation classification and mapping. Natural Resource Technical Report NPS/SOPN/NRTR--2007/049. National Park Service, Fort Collins, CO. 115 pp.
- Stoddart, L. A. 1941. The palouse grassland association in northern Utah. *Ecology* 22(2):158-163.

- Stout, H., editor. 1976. Netarts Bay: The natural resources and human utilization of Netarts Bay, Oregon. NSF student-originated grant EPP75-08901. Oregon State University, Corvallis. 247 pp.
- Streatfield, R., and R. E. Frenkel. 1997. Ecological survey and interpretation of the Willamette Floodplain Research Natural Area, W.L. Finley National Wildlife Refuge, Oregon, USA.
- Strong, L. L. 1980. Estimating phytomass production of habitat types on sagebrush steppe. Unpublished thesis, Colorado State University, Fort Collins. 133 pp.
- Stuever, M. C., and J. S. Hayden. 1997a. Plant associations of Arizona and New Mexico, edition 3. Volume 1: Forests. USDA Forest Service, Southwestern Region. Habitat Typing Guides. 291 pp.
- Stumpf, K. A., Cogan Technology, and Kier Associates. 2017. Vegetation mapping and classification project: Redwood National and State Parks, California. Natural Resource Report NPS/REDW/NRR--2017/1431. National Park Service, Fort Collins, CO. 270 pp.
- Taylor, A. H. 1980. Plant communities and elevation in the diked portion of Joe Ney Slough: A baseline assessment of a marsh restoration project in Coos Bay, Oregon. M.S. thesis. Oregon State University, Corvallis. 105 pp.
- Taylor, A. H., and R. E. Frenkel. 1979. Ecological inventory of Joe Ney Slough marsh restoration site. Part 2. Tideland mitigation requirements in the Oregon estuarine resources planning goal: a study of the proposed North Bend, Oregon airport extension. Oregon Department of Land Conservation and Development. 123 pp.
- Taylor, D. W. 1984. Vegetation of the Harvey Monroe Hall Research Natural Area, Inyo National Forest, California. Unpublished report. USDA Forest Service, Pacific Southwest Research Station, Berkeley, CA.
- Taylor, D. W., and K. A. Teare. 1979a. Ecological survey of the vegetation of the proposed Trelorita Research Natural Area, Shasta-Trinity National Forest, Trinity County, California. Unpublished report. USDA Forest Service, Pacific Southwest Research Station, Berkeley, CA.
- Tendick, A., B. Friesen, G. Kittel, P. Williams, J. Coles, A. Wight, G. Wakefield, and A. Evenden. 2011a. Vegetation classification and mapping project report, Cedar Breaks National Monument. Natural Resource Technical Report NPS/NCPN/NRTR--2011/470. National Park Service, Fort Collins, CO.
- Tendick, A., G. Kittel, J. Von Loh, P. Williams, D. Cogan, J. Coles, A. Wight, G. Wakefield, and A. Evenden. 2011b. Vegetation classification and mapping project report, Bryce Canyon National Park. Natural Resource Technical Report NPS/NCPN/NRTR--2011/442. National Park Service, Fort Collins, CO.
- Tendick, A., J. Coles, K. Decker, M. Hall, J. Von Loh, T. Belote, A. Wight, G. Wakefield, and A. Evenden. 2012. Vegetation classification and mapping project report, Canyonlands National Park. Natural Resource Technical Report NPS/NCPN/NRTR--2012/577. National Park Service, Fort Collins, CO.
- Tendick, A., J. Coles, P. Williams, G. Bradshaw, G. Manis, A. Wight, G. Wakefield, and A. Evenden. 2010. Vegetation classification and mapping project report, Curecanti National Recreation Area. Natural Resource Technical Report NPS/NCPN/NRTR--2010/408. National Park Service, Fort Collins, CO. 797 pp.
- Tendick, A., J. Spence, M. Reid, K. Shulz, G. Kittel, K. Green, A. Wight, and G. Wakefield. 2017. Vegetation classification and mapping project report, Glen Canyon National Recreation Area and Rainbow Bridge National Monument. Natural Resource Report NPS/NCPN/NRR—2017/1500. National Park Service, Fort Collins, CO. 1464 pp.
- Terwilliger, C., Jr., K. Hess, and C. H. Wasser. 1979b. The habitat types of Region II. USDA Forest Service: A preliminary list and description. Unpublished initial progress report for Habitat Type Classification, Region 2, USDA Forest Service.
- Terwilliger, C., K. Hess, and C. Wasser. 1979a. Key to the preliminary habitat types of Region 2. Addendum to initial progress report for habitat type classification. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. Fort Collins, CO.
- Thilenius, J. F. 1968. The *Quercus garryana* forests of the Willamette Valley, Oregon. *Ecology* 49:1124-1133.
- Thilenius, J. F., G. R. Brown, and A. L. Medina. 1995. Vegetation on semi-arid rangelands, Cheyenne River Basin, Wyoming. General Technical Report RM-GTR-263. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 60 pp.
- Thomas, D. W. 1980. Study of the intertidal vegetation of the Columbia River estuary, July-September 1980. Columbia River Estuary Study Task Force, Astoria, OR. 22 pp.



- Thomas, K. A., M. L. McTeague, A. Cully, K. Schulz, and J. M. S. Hutchinson. 2009a. Vegetation classification and distribution mapping report: Petrified Forest National Park. National Resource Technical Report NPS/SCPN/NRTR--2009/273. National Park Service, Fort Collins, CO. 294 pp.
- Thomas, K. A., M. L. McTeague, L. Ogden, K. Schulz, T. Fancher, R. Waltermire, and A. Cully. 2010. Vegetation classification and distribution mapping report: Canyon de Chelly National Monument. National Resource Technical Report NPS/SCPN/NRTR-2010/306. National Park Service, Fort Collins, CO. 338 pp.
- Thomas, K. A., M. L. McTeague, L. Ogden, M. L. Floyd, K. Schulz, B. Friesen, T. Fancher, R. Waltermire, and A. Cully. 2009b. Vegetation classification and distribution mapping report: Mesa Verde National Park. National Resource Report NPS/SCPN/NRR--2009/112. National Park Service, Fort Collins, CO. 352 pp.
- Thompson, W. H., and P. L. Hansen. 2002. Classification and management of riparian and wetland sites of Alberta's Grasslands Natural Region and adjacent subregions. Bitterroot Restoration, Inc., Cows and Fish, Lethbridge. 416 pp.
- Thorne, R. F. 1976. The vascular plant communities of California. Pages 1-31 in: J. Latting, editor. Plant communities of southern California. California Native Plant Society, Sacramento.
- Thorne, R. F. 1982. The desert and other transmontane plant communities of southern California. *Aliso* 10(2):219-257.
- Tiedemann, A. R., and G. O. Klock. 1977. Meeks Table Research Natural Area reference sampling and habitat classification. Research Report PNW-223. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland. 19 pp.
- Tiedemann, J. A., R. E. Francis, C. Terwilliger, Jr., and L. H. Carpenter. 1987. Shrub-steppe habitat types of Middle Park, Colorado. Research Paper RM-273. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 20 pp.
- Tirmenstein, D. 1999a. *Juniperus communis*. In: Fire Effects Information System [Online]. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). [<http://www.fs.fed.us/database/feis/>] (accessed 9 March 2005).
- Tisdale, E. M., and M. Bramble-Brodahl. 1983. Relationships of site characteristics to vegetation in canyon grasslands of west-central Idaho and adjacent areas. *Journal of Range Management* 36:775-778.
- Tisdale, E. W. 1947. The grasslands of the southern interior of British Columbia. *Ecology* 28(4):346-382.
- Tisdale, E. W. 1979. A preliminary classification of Snake River Canyon grasslands in Idaho. *Forestry, Wildlife, and Range Experiment Station Bulletin No. 32*, University of Idaho, Moscow. 8 pp.
- Tisdale, E. W. 1982. Grasslands of western North America: The Pacific Northwest bunchgrass. Pages 223-245 in: A. C. Nicholson, A. Mclean, and T. E. Baker, editors. *Grassland Ecology and Classification Symposium*, Kamloops, BC.
- Tisdale, E. W. 1986. Canyon grasslands and associated shrublands of west-central Idaho and adjacent areas. *Bulletin No. 40*. Forest, Wildlife and Range Experiment Station, University of Idaho, Moscow. 42 pp.
- Tisdale, E. W., and A. McLean. 1957. The Douglas fir zone of southern British Columbia. *Ecological Monographs* 27:247-266.
- Tisdale, E. W., M. Hironaka, and M. A. Fosberg. 1965. An area of pristine vegetation in Craters of the Moon National Monument, Idaho. *Ecology* 46(3):349-352.
- Titus, J. H. 1995a. Vegetation of Foster Flat Research Natural Area. Oregon Natural Heritage Program, The Nature Conservancy, Portland, OR.
- Titus, J. H. 1995b. Unpublished vegetation data, Vee Pasture Research Natural Area. Oregon Natural Heritage Program, The Nature Conservancy, Portland, OR.
- Titus, J. H. 1996. Unpublished vegetation data for French Flat, Bruno Meadows, Hill Creek, and Tater Hill. Oregon Natural Heritage Program, The Nature Conservancy, Portland.
- Titus, J. H. 1998a. Willamette Valley Riparian and Wetlands Communities. Plot data and initial descriptions. Unpublished report, Oregon Natural Heritage Program, The Nature Conservancy, Portland.
- Titus, J. H., and J. A. Christy. 1996a. Vegetation of Big Marsh, Deschutes National Forest, Oregon. Report to Deschutes National Forest. Oregon Natural Heritage Program, The Nature Conservancy, Portland.
- Titus, J. H., and J. A. Christy. 1997. Willamette Valley riparian zones and wetlands. Unpublished report. Oregon Natural Heritage Program, The Nature Conservancy, Portland, OR.

- Titus, J. H., and J. A. Christy. 1999. Vegetation of Big Marsh, Deschutes National Forest. *Natural Areas Journal*. Report to the USDA Forest Service. Unpublished manuscript at ORNHP, Portland. [in press]
- Titus, J. H., and J. A. Christy. 2017. Wetlands data and descriptions from southwestern Oregon between 1996 and 1998. Unpublished report, Oregon Natural Heritage Program, Portland, Oregon. [https://ir.library.oregonstate.edu/concern/technical\\_reports/th83m4265](https://ir.library.oregonstate.edu/concern/technical_reports/th83m4265)
- Titus, J. H., and J.A. Christy. 1996b. Unpublished vegetation data, Popcorn Swale Preserve. Oregon Natural Heritage Program, The Nature Conservancy, Portland.
- Titus, J. H., J. A. Christy, D. Vander Schaaf, J. S. Kagan, and E. R. Alverson. 1996. Native wetland, riparian, and upland plant communities and their biota in the Willamette Valley, Oregon. Report to the Environmental Protection Agency, Region X, Seattle, WA. Willamette Basin Geographic Initiative. Oregon Natural Heritage Program, The Nature Conservancy, Portland, OR.
- Titus, J. H., M. Kerr, E. Crowe, and B. Kovalchik. 1998. Riparian zones of eastern Oregon. Oregon Natural Heritage Program, Portland.
- Titus, J. H., P. J. Titus, and R. del Moral. 1999. Wetland development in primary and secondary successional substrates; fourteen years after the eruption of Mount St. Helens, Washington, USA. *Northwest Science* 73:186-204.
- Tolstead, W. L. 1942. Vegetation of the northern part of Cherry County, Nebraska. *Ecological Monographs* 12(3):257-292.
- Topik, C. 1989. Plant associations and management guide for the *Abies grandis* zone Gifford Pinchot National Forest. R6-ECOL-TP-006-88. USDA Forest Service, Pacific Northwest Region, Portland, OR. 110 pp.
- Topik, C., N. M. Halverson, and D. G. Brockway. 1986. Plant associations and management guide for the western hemlock zone. R6-ECOL-230a-1986. USDA Forest Service, Gifford Pinchot National Forest, Pacific Northwest Region, Portland, OR. 137 pp.
- Topik, C., N. M. Halverson, and T. High. 1988. Plant associations and management guide of the ponderosa pine, Douglas-fir, and grand fir zone, Mt. Hood National Forest. R6-ECOL-TP-004-88. USDA Forest Service, Pacific Northwest Region, Portland, OR. 136 pp.
- Townsend, T. W. 1966. Plant characteristics relating to the desirability of rehabilitating the *Arctostaphylos patula*-*Ceanothus velutinus*-*Ceanothus prostratus* association on the east slope of the Sierra Nevada. Unpublished thesis, University of Nevada, Reno. 90 pp.
- Tueller, P. T., and R. E. Eckert, Jr. 1987. Big sagebrush (*Artemisia tridentata* vaseyana) and longleaf snowberry (*Symphoricarpos oreophilus*) plant associations in northeastern Nevada. *Great Basin Naturalist* 47(1):117-131.
- Tuhy, J. S. 1981. Stream bottom community classification for the Sawtooth Valley, Idaho. Unpublished thesis, University of Idaho, Moscow. 230 pp.
- Tuhy, J. S., and S. Jensen. 1982. Riparian classification for the Upper Salmon and Middle Fork Salmon River drainages, Idaho. Unpublished report prepared for the USDA Forest Service, Intermountain Region by White Horse Associates, Smithfield, UT. 183 pp.
- Turner, G. T. 1969. Response of mountain grassland vegetation to gopher control, reduced grazing, and herbicide. *Journal of Range Management* 22:377-383.
- Tweit, S., and K. Houston. 1980. Grassland and shrubland habitat types of the Shoshone National Forest. USDA Forest Service, Rocky Mountain Region, Shoshone National Forest.
- Uchytel, R. J. 1991b. *Pseudotsuga menziesii* var. *menziesii*. In: Fire Effects Information System [Online]. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). [<http://www.fs.fed.us/database/feis/>]
- Ueckert, D. N. 1968. Diets of some grasshoppers common on mountain hermland in northern Colorado. Unpublished thesis, Colorado State University, Fort Collins. 37 pp.
- Ungar, I. A. 1967. Vegetation-soil relationships on saline soils in northern Kansas. *The American Midland Naturalist* 78(1):98-121.
- Ungar, I. A. 1968. Species-soil relationships on the Great Salt Plains of northern Oklahoma. *The American Midland Naturalist* 80(2):392-407.
- Ungar, I. A. 1970. Species-soil relationships on sulfate dominated soils of South Dakota. *The American Midland Naturalist* 83(2):343-357.
- Ungar, I. A. 1972. The vegetation of inland saline marshes of North America, north of Mexico. *Basic Problems and Methods in Phytosociology* 14:397-411.

- Ungar, I. A. 1974c. Halophyte communities of Park County, Colorado. *Bulletin of the Torrey Botanical Club* 101:145-152.
- Ungar, I. A., W. Hogan, and M. McClennand. 1969. Plant communities of saline soils at Lincoln, Nebraska. *The American Midland Naturalist* 82(2):564-577.
- Utzig, G. F., P. G. Comeau, D. I. Macdonald, M. V. Ketcheson, T. F. Braumandl, A. K. Warner, and G. W. Still. 1986. A field guide for identification and interpretation of ecosystems in the Nelson Forest Region. Ministry of Forests, British Columbia. 81 pp.
- Van Pelt, N. S. 1978. Woodland parks in southeastern Utah. Unpublished thesis, University of Utah, Salt Lake City.
- Vest, E. D. 1962b. The plant communities and associated fauna of Dugway Valley in western Utah. Unpublished dissertation, University of Utah, Salt Lake City.
- Vestal, A. G. 1914. Prairie vegetation of a mountain-front area in Colorado. *Botanical Gazette* 58(5):377-400.
- Viereck, L. A., C. T. Dyrness, A. R. Batten, and K. J. Wenzlick. 1992. The Alaska vegetation classification. General Technical Report PNW-GTR286. USDA Forest Service, Pacific Northwest Research Station, Portland, OR. 278 pp.
- Vogl, R. J., W. P. Armstrong, K. L. White, and K. L. Cole. 1988. The closed-cone pines and cypresses. Pages 295-358 in: M. G. Barbour and J. Major, editors. 1988. *Terrestrial vegetation of California: New expanded edition*. California Native Plant Society, Special Publication 9, Sacramento. 1030 pp.
- Volland, L. A. 1976. Plant communities of the central Oregon pumice zone. USDA Forest Service R-6 Area Guide 4-2. Pacific Northwest Region, Portland, OR. 113 pp.
- Volland, L. A. 1985. Plant associations of the central Oregon pumice zone. USDA Forest Service R6-ECOL-104-1985. Pacific Northwest Region, Portland, OR. 138 pp.
- Volland, L. A., and J. D. Dell. 1981. Fire effects on Pacific Northwest forest and range vegetation. USDA Forest Service. Pacific Northwest Region, Portland, OR. 23 pp.
- Von Loh, J. 2000. Draft local descriptions of the vegetation associations of Ouray National Wildlife Refuge. USGS Bureau of Reclamation, Remote Sensing and GIS Group, Denver Federal Center, Denver.
- Von Loh, J., D. Cogan, D. Faber-Langendoen, D. Crawford, and M. Pucherelli. 1999. USGS-NPS Vegetation Mapping Program, Badlands National Park, South Dakota. USDI Bureau of Reclamation. Technical Memorandum No. 8260-99-02. Denver, CO.
- Von Loh, J., D. Cogan, K. Schulz, D. Crawford, T. Meyer, J. Pennell, and M. Pucherelli. 2002. USGS-USFWS Vegetation Mapping Program, Ouray National Wildlife Refuge, Utah. USDI Bureau of Reclamation, Remote Sensing and GIS Group, Technical Memorandum 8260-02-03. Denver Federal Center, Denver, CO. 225 pp.
- Von Loh, J., G. Wakefield, A. Wight, A. Evenden, and J. Coles. 2008. Vegetation classification and mapping project report, Hovenweep National Monument. Natural Resource Report NPS/NCPN/NRTR--2008/092. National Park Service, Fort Collins, CO. 328 pp.
- Von Loh, J., K. Landgraf, A. Evenden, T. Owens, S. Blauer, and M. Reid. 2007. Vegetation classification and mapping project report, Colorado National Monument. Natural Resource Report NPS/NCPN/NRTR--2007/061. National Park Service, Fort Collins, CO. 564 pp.
- Vories, K. C. 1974. A vegetation inventory and analysis of the Piceance Basin and adjacent drainages. Unpublished thesis. Western State College of Colorado, Gunnison. 243 pp.
- Walford, G. M. 1996. Statewide classification of riparian and wetland dominance types and plant communities - Bighorn Basin segment. Report submitted to the Wyoming Department of Environmental Quality, Land Quality Division by the Wyoming Natural Diversity Database. 185 pp.
- Walford, G., G. Jones, W. Fertig, and K. Houston. 1997. Riparian and wetland plant community types of the Shoshone National Forest. Unpublished report. Wyoming Natural Diversity Database for The Nature Conservancy, and the USDA Forest Service. Wyoming Natural Diversity Database, Laramie. 227 pp.
- Walford, G., G. Jones, W. Fertig, S. Mellman-Brown, and K. Houston. 2001. Riparian and wetland plant community types of the Shoshone National Forest. General Technical Report RMRS-GTR-85. USDA Forest Service, Rocky Mountain Research Station, Fort Collins, CO. 122 pp.
- Walker, G. R., and J. D. Brotherson. 1982. Habitat relationships of basin wildrye in the high mountain valleys of central Utah. *Journal of Range Management* 35(5):628-633.

- Walkup, C. J. 1991b. *Mahonia repens*. In: Fire Effects Information System [Online]. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). [http://www.fs.fed.us/database/feis/]
- Ward, P., G. Radcliffe, J. Kirkby, J. Illingworth, and C. Cadrin. 1998. Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997. Volume 1: Methodology, Ecological Descriptions and Results. Technical Report Series No. 320, Canadian Wildlife Service, Pacific and Yukon Region, Victoria, BC. [http://a100.gov.bc.ca/appsdata/acat/documents/r2124/SEI\_4206\_rpt1\_1111625239116\_8be42252200c4f0283b18cac66eed366.pdf]
- Ward, R. T., W. Slauson, and R. L. Dix. 1974. The natural vegetation in the landscape of the Colorado oil shale region. Pages 9-17 in: C. W. Cook, editor. Surface rehabilitation of land disturbances resulting from oilshale development. Information Series 11, Environmental Resource Center, Colorado State University, Fort Collins.
- Waring, R. H. 1969. Forest plants of the eastern Siskiyou: Their environmental and vegetational distribution. *Northwest Science* 43:1-17.
- Wasser, C. H., and K. Hess. 1982. The habitat types of Region II. USDA Forest Service: A synthesis. Final report prepared for USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 140 pp.
- Weaver, J. E. 1965. Native vegetation of Nebraska. University of Nebraska Press, Lincoln. 185 pp.
- Weaver, J. E., and F. W. Albertson. 1956. Grasslands of the Great Plains: Their nature and use. Johnsen Publishing Co., Lincoln, NE. 395 pp.
- Weixelman, D. A., D. C. Zamudio, and K. A. Zamudio. 1996. Central Nevada riparian field guide. USDA Forest Service Technical Report R4-ECOL-96-01. USDA Forest Service, Intermountain Region.
- Weixelman, D. A., D. C. Zamudio, and K. A. Zamudio. 1999. Eastern Sierra Nevada riparian field guide. USDA Forest Service, Humboldt-Toiyabe National Forest. Sparks, NV. 92 pp.
- Wells, A.F. 2006. Deep canyon and subalpine riparian and wetland plant associations of the Malheur, Umatilla, and Wallowa-Whitman National Forests. UDSA Forest Service, PNW-GTR-682. PNW Research Station, Portland, OR. 277 pp.
- West, N.E., and M.A. Hassan. 1985. Recovery of sagebrush-grass vegetation following wildfire. *Journal of Range Management* 38:131-134.
- Wiedemann, A. M. 1966. Contributions to the plant ecology of the Oregon coastal sand dunes. Ph.D. dissertation, Oregon State University, Corvallis. 255 pp.
- Wiedemann, A. M. 1984. The ecology of Pacific Northwest coastal sand dunes: A community profile. USDI Fish and Wildlife Service Report FWS/OBS-84/04. 130 pp.
- Wiedemann, A. M. 1990. The coastal parabola dune system at Sand Lake, Tillamook County, Oregon, U.S.A. *Proceedings of the Canadian Symposium on Coastal Sand Dunes 1990*:171-194.
- Wiedemann, A. M. 1993. Dry coastal ecosystems of northwestern North America. Pages 341-358 in: E. van der Maarel, editor. *Ecosystems of the World 2B: Dry Coastal Ecosystems - Africa, America, Asia and Oceania*. Elsevier, Amsterdam, The Netherlands.
- Williams, C. 1961. Distribution of vegetation in the Wind River Canyon, Wyoming. *Wyoming Range Management* 150:1-2.
- Williams, C. K. 1978. Vegetation classification for the Badger Allotment, Mt. Hood National Forest. Unpublished dissertation, Oregon State University, Corvallis. 117 pp.
- Williams, C. K., and A. H. Winward. 1976. Plant community types of the Badger Allotment, Barlow Ranger District, Mt. Hood National Forest. USDA Forest Service and Oregon State University Rangeland Resources Program. 68 pp.
- Williams, C. K., and B. G. Smith. 1990. Forested plant associations of the Wenatchee National Forest. Unpublished draft prepared by the USDA Forest Service, Pacific Northwest Region, Portland, OR. 217 pp.
- Williams, C. K., and T. R. Lillybridge. 1983. Forested plant associations of the Okanogan National Forest. R6-Ecol-132b-1983. USDA Forest Service, Pacific Northwest Region, Portland, OR. 140 pp.
- Williams, C. K., and T. R. Lillybridge. 1985. Forested plant associations of the Colville National Forest. Draft. Unpublished field guide prepared for USDA Forest Service.
- Williams, C. K., B. F. Kelly, B. G. Smith, and T. R. Lillybridge. 1995. Forest plant associations of the Colville National Forest. General Technical Report PNW-GTR-360. USDA Forest Service, Pacific Northwest Region, Portland, OR. 140 pp.

- Williams, C. K., T. R. Lillybridge, and B. G. Smith. 1990b. Forested plant associations of the Colville National Forest. Report prepared for USDA Forest Service, Colville National Forest, Colville, WA. 133 pp.
- Willms, W. D., and J. Fraser. 1992. Growth characteristics of rough fescue (*Festuca scabrella* var. *campestris*) after three years of repeated harvesting at scheduled frequencies and heights. *Canadian Journal of Botany* 70:2125-2129.
- Willms, W. D., S. Smoliak, and J. F. Dormaar. 1985. Effects of stocking rate on a rough fescue grassland vegetation. *Journal of Range Management* 39(3):220-225.
- Willoughby, M. 1997. Rangeland Reference Areas: Castle River range condition and trend from 1953-1995. Environmental Protection, Lands and Forest Services, Edmonton, Alberta. 145 pp.
- Willoughby, M. G., C. Stone, C. Hincz, D. Moisey, G. Ehlert, and D. Lawrence. 2004. Guide to range plant community types and carrying capacity for the dry and central mixedwood subregions in Alberta. Fourth Approximation. Alberta Sustainable Resource Development, Public Lands and Forests Division, Edmonton, AB. 245 pp.
- Willoughby, M. G., M. J. Alexander, and K. M. Sundquist. 1998. Range plant community types and carrying capacity for the montane subregion. Environmental Protection, Lands and Forest Services, Edmonton, Alberta. Publication #T/433. 156 pp.
- Wilson, C. E. 1986. Floristic and edaphic aspects of vegetational patterns in subalpine mires of the Cascade Mountains of Oregon. M.S. thesis, University of Oregon, Eugene. 59 pp.
- Wilson, M. V., K. P. Connelly, and L. E. Lantz. 1993. Plant species, habitat, and site information for Fern Ridge Reservoir. A component of the project to develop management guidelines for native wetland communities. Report to Army Corps of Engineers and Soil Conservation Service. Oregon State University. 64 pp. plus figures.
- Wilson, R. A. 1978. Breeding biology of the snowy plover on the Oregon coast: Results of the 1978 field season. Oregon State University, Corvallis.
- Windell, J. T., B. E. Willard, D. J. Cooper, S. Q. Foster, C. F. Knud-Hansen, L. P. Rink, and G. N. Kiladis. 1986. An ecological characterization of Rocky Mountain montane and subalpine wetlands. USDI Fish and Wildlife Service Biological Report 86(11). 298 pp.
- Winward, A. H. 1970. Taxonomic and ecological relationships of the big sagebrush complex in Idaho. Unpublished dissertation, University of Idaho, Moscow. 90 pp.
- Winward, A. H., and B. A. Youtie. 1976. Ecological inventory of the Lawrence Memorial Grassland Preserve. A report presented to the Pacific Northwest chapter of The Nature Conservancy. 43 pp.
- Winward, A. H., and E. D. McArthur. 1995. Lahontan sagebrush (*Artemisia arbuscula* ssp. *longicaulis*): A new taxon. *Great Basin Naturalist* 55(2):151-157.
- Wooten, G., and P. Morrison. 1995. Classification of vascular plant communities of the North Cascades using discreet space boundary analysis. Unpublished report. 113 pp.
- Worley, I. A. 1977. Plant community analysis. Pages 126-239 in: G. P. Streveler and I. A. Worley, editors. Dixon Harbor biological survey. Final report on the summer phase of 1975 field work. U.S. National Park Service, Juneau, AK.
- Wright, H. A., L. F. Neuenschwander, and C. M. Britton. 1979. The role and use of fire in sagebrush-grass and pinyon-juniper plant communities: A state of the art review. General Technical Report INT-58. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT.
- Young, J. A., R. A. Evans, B. A. Roundy, and J. A. Brown. 1986. Dynamic landforms and plant communities in a pluvial lake basin. *Great Basin Naturalist* 46(1):1-21.
- Youngberg, C. T., and W. G. Dahms. 1970. Productivity indices for lodgepole pine on pumice soils. *Journal of Forestry* 68:90-94.
- Youngblood, A. P., and R. L. Mauk. 1985. Coniferous forest habitat types of central and southern Utah. General Technical Report INT-187. USDA Forest Service, Intermountain Research Station, Ogden, UT. 89 pp.
- Youngblood, A. P., and W. F. Mueggler. 1981. Aspen community types on the Bridger-Teton National Forest in western Wyoming. Research Paper INT-272. USDA Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT. 34 pp.
- Youngblood, A. P., W. G. Padgett, and A. H. Winward. 1985a. Riparian community type classification of eastern Idaho-western Wyoming. R4-Ecol-85-01. USDA Forest Service, Intermountain Region, Ogden, UT. 78 pp.

- Youngblood, A. P., W. G. Padgett, and A. H. Winward. 1985b. Riparian community type classification of northern Utah and adjacent Idaho. Unpublished report prepared for USDA Forest Service, Intermountain Region, Ogden, UT. 104 pp.
- Youtie, B. A., and A. H. Winward. 1977. Plants and plant communities of the John Day Fossil Beds National Monument. Unpublished report to USDI National Park Service, John Day. 71 pp.
- Zamora, B. A. 1983. Forest habitat types of the Spokane Indian Reservation. Agricultural Research Center, Washington State University Research Bulletin XB-0936-1983.
- Zamora, B., and P. T. Tueller. 1973. *Artemisia arbuscula*, *A. longiloba*, and *A. nova* habitat types in northern Nevada. *Great Basin Naturalist* 33(4):225-242.
- Zedler, J. B., C. S. Nordby, and B. E. Kus. 1992. The ecology of Tijuana estuary, California: A national estuarine research reserve. Unpublished report. NOAA, Office of Coastal Resources Management, Sanctuaries and Reserves Division, Washington, DC.
- Zedler, J. B., J. C. Callaway, J. S. Desmond, G. Vivian-Smith, G. D. Williams, G. Sullivan, A. E. Brewster, and B. K. Bradshaw. 1999. California salt-marsh vegetation: An improved model of spatial pattern. *Ecosystems* 2:19-35.
- Zobel, D. B., L. F. Roth, and G. M. Hawk. 1985. Ecology, pathology, and management of Port-Orford cedar (*Chamaecyparis lawsoniana*). General Technical Report GTR-PNW-194. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, Portland, OR. 161 pp.