



## Washington Natural Heritage Program 2016 Ecological Systems List

The following list includes those Ecological Systems known to occur in Washington State. More information about the Ecological Systems classification and detailed descriptions of the types listed below can be found [here](#).

Ecological System Name	State Rank
Columbia Basin Foothill and Canyon Dry Grassland	S1S2
Columbia Basin Foothill Riparian Woodland and Shrubland	S1
Columbia Basin Palouse Prairie	S1
Columbia Plateau Low Sagebrush Steppe	S1S2
Columbia Plateau Scabland Shrubland	S5
Columbia Plateau Steppe and Grassland	S2
Columbia Plateau Vernal Pool	S2S3
Columbia Plateau Western Juniper Woodland and Savanna	S3S4
East Cascades Mesic Montane Mixed-Conifer Forest and Woodland	S3S4
East Cascades Oak-Ponderosa Pine Forest and Woodland	S1S2
Inter-Mountain Basins Active and Stabilized Dune	S1
Inter-Mountain Basins Alkaline Closed Depression	S2
Inter-Mountain Basins Big Sagebrush Steppe	S2
Inter-Mountain Basins Cliff and Canyon	S5
Inter-Mountain Basins Curl-leaf Mountain-mahogany Woodland and Shrubland	S1
Inter-Mountain Basins Greasewood Flat	S1
Inter-Mountain Basins Montane Sagebrush Steppe	S3S4
Inter-Mountain Basins Playa	S1
Inter-Mountain Basins Semi-Desert Shrub-Steppe	S1
Inter-Mountain Basins Wash	S3
Modoc Basalt Flow Vernal Pool	S2
North American Arid West Emergent Marsh	S2
North American Glacier and Ice Field	S3?

Ecological System Name	State Rank
North Pacific Active Volcanic Rock and Cinder Land	S5
North Pacific Alpine and Subalpine Bedrock and Scree	S4?
North Pacific Alpine and Subalpine Dry Grassland	S4S5
North Pacific Avalanche Chute Shrubland	S4
North Pacific Bog and Fen	S2
North Pacific Broadleaf Landslide Forest and Shrubland	S2S3
North Pacific Coastal Cliff and Bluff	S4
North Pacific Coastal Interdunal Wetland	S1
North Pacific Dry and Mesic Alpine Dwarf-Shrubland, Fell-Field and Meadow	S4
North Pacific Dry Douglas-fir-(Madrone) Forest and Woodland	S2
North Pacific Dry-Mesic Silver Fir-Western Hemlock-Douglas-fir Forest	S5
North Pacific Hardpan Vernal Pool	S2S3
North Pacific Hardwood-Conifer Swamp	S2
North Pacific Herbaceous Bald and Bluff	S3
North Pacific Hypermaritime Shrub and Herbaceous Headland	S3S4
North Pacific Hypermaritime Western Red-cedar-Western Hemlock Forest	S1S2
North Pacific Intertidal Freshwater Wetland	S1
North Pacific Lowland Riparian Forest and Shrubland	S2
North Pacific Maritime Coastal Sand Dune and Strand	S1
North Pacific Maritime Dry-Mesic Douglas-fir-Western Hemlock Forest	S2S3
North Pacific Maritime Eelgrass Bed	S3
North Pacific Maritime Mesic Subalpine Parkland	S4
North Pacific Maritime Mesic-Wet Douglas-fir-Western Hemlock Forest	S3S4
North Pacific Mesic Western Hemlock-Silver Fir Forest	S5
North Pacific Montane Massive Bedrock, Cliff and Talus	S4S5
North Pacific Montane Riparian Woodland and Shrubland	S4
North Pacific Montane Shrubland	S3S4
North Pacific Mountain Hemlock Forest	S4S5
North Pacific Oak Woodland	S1
North Pacific Seasonal Sitka Spruce Forest	S1S2
North Pacific Serpentine Barren	S4
North Pacific Shrub Swamp	S3
North Pacific Wooded Volcanic Flowage	S4

Ecological System Name	State Rank
Northern Columbia Plateau Basalt Pothole Pond	S1S2
Northern Rocky Mountain Avalanche Chute Shrubland	S1
Northern Rocky Mountain Conifer Swamp	S3
Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest	S3S4
Northern Rocky Mountain Foothill Conifer Wooded Steppe	S3S5
Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland	S2
Northern Rocky Mountain Lower Montane, Foothill and Valley Grassland	S3S4
Northern Rocky Mountain Mesic Montane Mixed Conifer Forest	S3S4
Northern Rocky Mountain Montane-Foothill Deciduous Shrubland	S4?
Northern Rocky Mountain Ponderosa Pine Woodland and Savanna	S2
Northern Rocky Mountain Subalpine Deciduous Shrubland	S4
Northern Rocky Mountain Subalpine Woodland and Parkland	S4
Northern Rocky Mountain Subalpine-Upper Montane Grassland	S3S4
Northern Rocky Mountain Western Larch Savanna	S1
Rocky Mountain Alpine Bedrock and Scree	S4?
Rocky Mountain Alpine Dwarf-Shrubland	S4
Rocky Mountain Alpine Fell-Field	S4
Rocky Mountain Alpine Turf	S4
Rocky Mountain Alpine-Montane Wet Meadow	S3
Rocky Mountain Aspen Forest and Woodland	S2
Rocky Mountain Cliff, Canyon and Massive Bedrock	S4S5
Rocky Mountain Lodgepole Pine Forest	S3S4
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	S3S5
Rocky Mountain Subalpine Mesic-Wet Spruce-Fir Forest and Woodland	S5
Rocky Mountain Subalpine-Montane Fen	S3
Rocky Mountain Subalpine-Montane Mesic Meadow	S3S5
Rocky Mountain Subalpine-Montane Riparian Shrubland	S3
Rocky Mountain Subalpine-Montane Riparian Woodland	S4
Temperate Pacific Freshwater Aquatic Bed	S3
Temperate Pacific Freshwater Emergent Marsh	S2
Temperate Pacific Freshwater Mudflat	S1
Temperate Pacific Intertidal Flat	S3S4
Temperate Pacific Subalpine-Montane Wet Meadow	S4

Ecological System Name	State Rank
Temperate Pacific Tidal Salt and Brackish Marsh	S2
Willamette Valley Upland Prairie and Savanna	S1
Willamette Valley Wet Prairie	S1

The following Ecological Systems have been misreported or are extirpated from Washington.

Ecological System Name	Comments
Boreal Depressional Shrub Bog	Does not occur in Washington, although it has been listed for WA in the past. Any areas mapped as this system are most likely the Rocky Mountain Subalpine-Montane Fen.
Columbia Plateau Ash and Tuff Badland	Does not occur in Washington, although it had been previously listed for WA.
Columbia Plateau Silver Sagebrush Seasonally Flooded Shrub-Steppe	Does not currently occur in Washington. There is uncertainty as to whether the type historically occurred in the State but has since been extirpated or if it never occurred in Washington. Areas mapped as this System are likely either the Columbia Basin Foothill Riparian Woodland and Shrubland or Inter-Mountain Basins Big Sagebrush Steppe or Inter-Mountain Basins Semi-desert Shrub-Steppe systems.
Inter-Mountain Basins Big Sagebrush Shrubland	Previously thought to occur in Washington but WANHP believes areas matching the description of this system in Washington are actually degraded areas or simply areas of dense cover of sagebrush within the Inter-Mountain Basins Big Sagebrush Steppe and Inter-Mountain Basins Semi-Desert Shrub-Steppe.
Inter-Mountain Basins Interdunal Swale Wetland	Currently does not occur in Washington but historically may have been found in the sand dune areas near Moses Lake prior to irrigation development. It is not included in the <a href="#">Ecological Systems map</a> .
Inter-Mountain Basins Mixed Salt Desert Scrub	Not certain it occurs in Washington. What is currently mapped by GAP as this system better fits the Inter-Mountain Basins Semi-Desert Shrub-Steppe. Areas with <i>Grayia spinosa</i> , <i>Krascheninnikovia lanata</i> , on Ringold formation in Hanford area and on glacial lake flood deposits and old sand dune deposits might better fit into Inter-Mountain Basins Active and Stabilized Dune Ecological System.
Inter-Mountain Basins Semi-Desert Grassland	WANHP has not observed this system in WA. However, if it does occur in Washington it would not be distributed as currently depicted on the <a href="#">Ecological Systems map</a> .
North Pacific Lowland Mixed Hardwood-Conifer Forest	This system, <a href="#">as mapped in Washington</a> , reflects early seral stands or recently disturbed areas associated with the North Pacific Maritime Dry-Mesic and Mesic-Wet Douglas-fir-Western Hemlock Forest systems or occurrences of the North Pacific Broadleaf Landslide Forest and Shrubland.
Northern Rocky Mountain Wooded Vernal Pool	Vernal pools near Spokane (e.g, Turnbull NWR) may fit this Ecological System. The pools in these areas aren't treed but occur in a forested/wooded landscape. More inventory and assessment of these pool are needed before classifying them as this system type. Until such research is conducted those vernal pools are included as part of the Columbia Basin Vernal Pool system.
Rocky Mountain Poor-Site Lodgepole Pine Forest	Does not occur in Washington although it has been mapped as occurring in Washington in the past.

**Global Rank** characterizes the relative rarity or endangerment of the element world-wide.

- G1 = Critically Imperiled - At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
- G2 = Imperiled - At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- G3 = Vulnerable - At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- G4 = Apparently Secure - At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- G5 = Secure - At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
- GH = Possibly Extinct - Known from only historical occurrences but still some hope of rediscovery.
- GU = Unrankable - Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- GX = Presumed Extinct - Not located despite intensive searches and virtually no likelihood of rediscovery.
- GNR = Unranked - Global rank not yet assessed.
- G#G# = Range Rank - A numeric range rank (e.g., G2G3, G1G3) is used to indicate uncertainty about the exact status of a taxon or ecosystem type.

**State Rank** characterizes the relative rarity or endangerment within the state of Washington.

- S1 = Critically Imperiled - At very high risk of extirpation in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.
- S2 = Imperiled - At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- S3 = Vulnerable - At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- S4 = Apparently Secure - At a fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- S5 = Secure - At very low or no risk of extirpation in the state due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.
- SH = Possibly Extirpated - Known from only historical records but still some hope of rediscovery.
- SX = Presumed Extirpated - Species is believed to be extirpated from the state. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.
- SU = Unrankable - Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
- SNR = Unranked - Subnational conservation status not yet assessed
- SNA = Not Applicable - A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities.