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Northwest Oregon westside Cascades



Cascades key

- A. Herbaceous community, coltsfoot not dominant herb; rocky substrate within channel
 - 1. Streambank springbeauty dominant; small patches on bedrock or boulders **Streambank springbeauty** p. 43
 - 2. Coldwater corydalis dominant; narrow gravel deposits beside cold water channels..... **Coldwater corydalis** p. 46
 - 3. Yellow monkeyflower dominant; in cobbles or on boulders **Yellow monkeyflower** p. 44

- B. Coltsfoot dominant or codominant herb
 - 1. Sitka willow an important shrub; point bars or cobble bars within highwater line **Coltsfoot-Sitka willow phase** p. 50
 - 2. Common horsetail present..... **Coltsfoot-common horsetail phase** p. 53
 - 3. Stink currant a dominant shrub; channel margins **Stink currant/coltsfoot** p. 68
 - 4. Stink currant and Sitka willow absent or minor; sandy cobble or boulder bars/active channel shelves **Coltsfoot-Cooley’s betony** p. 56

- C. Oval-leaved mitrewort and coastal boykinia both present; channel margins **Coastal boykinia-oval-leaved mitrewort** p. 61

- D. Foamflower dominant herb, shrubs absent or trace; channel margins **Foamflower** p. 66

- E. Sorrel dominant, with Pacific waterleaf; sword fern and lady fern often abundant; red alder overstory may be present; moderate to steep banks **Sorrel-Pacific waterleaf** p. 116

- F. Maidenhair an important herb;seeps, often steep, rocky banks **Maidenhair** p. 150

- G. Arrowleaf groundsel and broad-leaved marsh-marigold and/or large boykinia present; shrubs nearly absent; fine soils, water tables near the surface, moderate to high elevations **Arrowleaf groundsel-broad-leaved marsh-marigold** p. 154
 See related communities in herbaceous wetlands key (Christy pp. 18-20), especially *Calamagrostis canadensis* Association (Christy p. 73), *Caltha*

leptosepala ssp. howellii Association (Christy p. 76), and *Caltha leptosepala ssp. howellii-Carex obnupta* Association (Christy p. 77)

- H. Arrowleaf groundsel, with cow –parsnip, great northern aster, and/or Columbian monkshood; shrubs varied; flat to gently sloping cobble bars or active floodplains at mid- to high elevations
 **Arrowleaf groundsel-great northern aster** p. 72

See related communities in herbaceous wetlands key (Christy pp. 18-20), especially *Senecio triangularis* Association (Christy p. 143)

For more herb-dominated communities (aquatic beds, emergent marshes, marshes, fens/peatlands, or wet prairies), see herbaceous wetlands key (Christy pp.18-20).

I. Red alder/herb communities

- 1. Blue wildrye dominant under red alder; cobbly floodplains or islands
 **Red alder/blue wildrye** p. 74
- 2. Siberian miners lettuce and piggyback plant dominant under red alder; active floodplains/cobble bars
 **Red alder/piggyback plant-Siberian miners lettuce** p. 78
- 3. Sorrel dominant, with Pacific waterleaf. Sword fern and lady fern often abundant. Red alder overstory may be present; Moderate to steep banks
 **Sorrel-Pacific waterleaf** p. 116
- 4. Sorrel and sword fern co-dominant under variety of tree species; vine maple often important, other shrubs minor or absent; steep banks, terraces **Red alder~big leaf maple/sorrel** p. 119

5. Red alder/skunk cabbage swamps

- a. Slough sedge >=5%, dominant or co-dominant with skunk cabbage.....
Alnus rubra/Carex obnupta-Lysichiton americanus Association (Christy p. 22)
- b. Slough sedge <5%, lady fern may be co-dominant with skunk cabbage.
Alnus rubra/Athyrium filix-femina-Lysichiton americanus Association (Christy p. 21)

- J. Shrub communities (may have tree overstories)—not dominated by salmonberry and/or stink currant
 - 1. Oval-leaved huckleberry/Alaska huckleberry dominant or co-dominant
 - a. Two or more members of the moderate to high elevation suite of herbs (vanilla leaf, dogwood bunchberry, twinflower, coolwort foamflower, queencub beadlily) represented; active floodplains,banks, cobble bars, moderate to higher elevations.....**Oval-leaved huckleberry** p. 110
 - b. Salmonberry an important shrub, mature conifer cover <20%, skunk cabbage present; poorly drained sites at moderate to higher elevations **Oval-leaved huckleberry-salmonberry/skunk cabbage** p. 170
 - c. Mature conifer cover >20% and silver fir present >5%; wetland indicators (marsh marigold, skunk cabbage, or marsh violet) present; silver fir zone; alternating hummocks and swales**Silver fir/oval-leaved huckleberry wetland** p. 176
 - 2. Big huckleberry dominant, under Engelmann spruce in mountain hemlock zone **Engelmann spruce/big huckleberry** p. 168
 - 3. Sitka alder dominant, often with oval leaved huckleberry and black gooseberry, with members of the moderate to high elevation suite of herbs (vanilla leaf, dogwood bunchberry, twinflower, coolwort foamflower, queencup beadlily) represented; cobble bars and active floodplains in mid-to upper elevations.....**Sitka alder** p. 108
 - 4. Thimbleberry among several shrubs with members of the moderate to high elevation suite of herbs (vanilla leaf, dogwood bunchberry, twinflower, coolwort foamflower, queencub beadlily) represented, salmonberry minor or absent; low terraces or narrow flats behind cobble levees **Thimbleberry/vanilla leaf** p. 76
 - 5. Common snowberry dominant, salmonberry >=5%; terraces/steep banks **Red alder/common snowberry-salmonberry** p. 134
 - 6. California hazel>5%, often large floodplains and terraces of major rivers **Forested California hazel/sword fern group** p. 139
 - a. Sword fern>sorrel**California hazel/sword fern-hardwood phase** p. 141

- b. Vine maple dominant or co-dominant
 - 1) Sorrel > sword fern; western hemlock often in tree layer.....
California hazel/sword fern-western hemlock/vine maple-sorrel phase p. 143
 - 2) Sorrel absent, sword fern < 5%, big leaf maple and Douglas-fir frequently in tree layer
California hazel/sword fern-big leaf maple/vine maple phase p. 146

- 7. California hazel =<5%, foamflower >=2%; several tree species in overstory including big leaf maple, western redcedar, western hemlock; wide terrace/elevated floodplains of large river valleys
(Big leaf maple-red alder)/vine maple/foamflower p. 137

- 8. Red osier dogwood dominant shrub, herb layer >10% skunk cabbage
Cornus sericea/Lysichiton americanus Association (Christy p. 40)

- 9. Douglas spiraea thicket..... *Spiraea douglassii* Association (Christy p. 58)

- 10. Willow communities
 - a. Pacific willow co-dominant with Sitka willow, skunk cabbage swamp.....
Salix lucida ssp. lasiandra/Salix sitchensis/Lysichiton americanus Association (Christy p. 56)

 - b. Sitka willow minor or absent, Sitka willow dominant, with skunk cabbage and/or aquatic sedge the dominant herbs
Salix sitchensis complex (Christy p. 57)

- 11. Western redcedar dominant overstory tree, skunk cabbage dominant herb, sorrel <5%
Thuja plicata/Lysichiton americanus Association (Christy p. 34)

K. Shrub layers dominated by salmonberry, stink currant and/or devil’s club

- 1. Devil’s club dominant or co-dominant with salmonberry and/or stink currant..... **Devil’s club-salmonberry group** p. 156
 - a. Western redcedar overstory
..... **Devil’s club-salmonberry-western redcedar phase** p 165
 - b. Red alder and/or western hemlock dominant tree overstory (western redcedar minor or absent)
..... **Devil’s club-salmonberry-red alder phase** p. 161
 - c. Tree overstory absent.. **Devils club-salmonberry-shrub phase** p. 158
- 2. Stink currant dominant or co-dominant
 - a. Stink currant dominant or co-dominant with salmonberry, coltsfoot or Cooley’s betony the dominant herb; cobble bars/banks, active floodplains..... **Stink currant/coltsfoot** p. 68
 - b. Thimbleberry among several shrubs with members of the moderate to high elevation suite of herbs (vanilla leaf, dogwood bunchberry, twinflower, coolwort foamflower, queencub beadlily) represented, salmonberry minor or absent
..... **Thimbleberry/vanilla leaf** p. 76
 - c. Sorrel <3%, piggyback plant >2%; red alder and/or big leaf maple often present.....
(Red alder-big leaf maple)/stink currant-salmonberry/piggyback
p. 80
 - d. Sorrel >3%
 - 1) Sorrel, foamflower and oval-leaved mitrewort each >3%
Stink currant-salmonberry/foamflower-oval-leaved mitrewort
p. 94
 - 2) Oval-leaved mitrewort absent
..... **Stink currant-salmonberry/sorrel group** p. 99
 - a) Tree overstory present, generally red alder and/or western redcedar
..... **Stink currant-salmonberry/sorrel-red alder phase** p. 105
 - b) Tree overstory absent or minor
..... **Stink currant-salmonberry/sorrel shrub phase** p. 102

3. Salmonberry dominant shrub; stink currant absent or minor

a. Skunk cabbage swamps

1) Salmonberry and oval-leaved huckleberry generally co-dominant shrubs. Other cool, moist indicator shrubs (black gooseberry, mountain alder, highbush-cranberry) often present, mature conifer cover <20%, skunk cabbage present
.... **Oval-leaved huckleberry-salmonberry/skunk cabbage** p. 170

2) Western redcedar in overstory; sorrel >=5%; stink currant can be present
.... **Western redcedar/salmonberry/skunk cabbage-sorrel** p. 173

b. Common snowberry dominant or co-dominant, salmonberry >=5%; terraces/steep banks
..... **Red alder/common snowberry-salmonberry** p. 134

c. Piggyback plant important herb
..... **Salmonberry/piggyback plant group** p. 83

1) Piggyback plant>=sorrel; thimbleberry often important; trees absent or minor **Salmonberry/piggyback plant-shrub phase** p. 86

2) Red alder and/or big leaf maple in overstory, piggyback plant dominant or codominant with sorrel
..... **Salmonberry/piggyback plant-red alder phase** p. 90

d. Sorrel dominant herb, piggyback plant minor or absent; terrace, banks, floodplains..... **Salmonberry/sorrel group** p. 123

1) Western redcedar in overstory
..... **Salmonberry/sorrel-western redcedar phase** p. 131

2) Red alder in overstory
..... **Salmonberry/sorrel-red alder phase** p. 129

3) Overstory trees minor or absent
..... **Salmonberry/sorrel-shrub phase** p. 126

For more shrub-dominated communities (shrub swamps), see shrubland wetlands key (Christy p. 15).

For more tree-dominated communities (forested swamps), see forest and woodlands wetlands key (Christy p. 13).

In channel plant communities

Streambank springbeauty, MOPA2..... p. 43

Yellow monkeyflower, MIGU p. 44

Cold water Corydalis, COAQ p. 46

Coltsfoot group, PEFR5 GROUP p. 48

- Coltsfoot-*Sitka willow phase*, PEFR5-SASI2 phase p. 50
- Coltsfoot-*common horsetail phase*, PEFR5-EQAR phase..... p. 53



Montia parvifolia
Streambank springbeauty
MOPA2

N=4 (MHNF 4)

SPECIES	COMMON NAME	CONSTANCY %	TYPICAL COVER %
Shrubs			
<i>Rubus spectabilis</i>	Salmonberry	50	2
Herbs			
<i>Montia parvifolia</i>	Streambank springbeauty	100	14
<i>Mimulus guttatus</i>	Yellow monkeyflower	75	3
<i>Oxalis</i>	Sorrel	75	1
<i>Tolmiea menziesii</i>	Piggyback plant	50	2
<i>Claytonia sibirica</i>	Siberian miner's lettuce	50	2
<i>Galium triflorum</i>	Sweetscented bedstraw	50	1
<i>Polystichum munitum</i>	Sword fern	50	1
<i>Circaea alpina</i>	Enchanter's-nightshade	50	1

Elevations: 800 to 2500 feet (average 1550 feet).

Community: The Streambank springbeauty community is found in small patches on bedrock or boulders in or adjacent to the channel. It is herb dominated; streambank springbeauty with minor amounts of yellow monkeyflower and sorrel are typical.

Geomorphic environment: Sites were generally small patches of vegetation growing in pockets of soil on bedrock or large boulders.

Wetland rating:

Community meets wetland test	Yes
Plots meeting wetland criteria	75%
Wetland indicators among dominant species	80% (range 50-100%)

Non-natives: Exotic species were found on 50% of the sample.

EXOTIC	COMMON NAME	CONSTANCY %	PLOTS	TYPICAL COVER %
<i>Lactuca muralis</i>	Wall-lettuce	25	1	1
<i>Ranunculus repens</i>	Creeping buttercup	25	1	5

Mimulus guttatus
Yellow monkeyflower
MIGU

N=9 (MHNF 8, WNF 1)

SPECIES	COMMON NAME	CONSTANCY %	TYPICAL COVER %
Herbs			
<i>Mimulus guttatus</i>	Yellow monkeyflower	100	22
<i>Epilobium</i> sp.	Willowherb	100	8
<i>Cardamine cordifolia</i>	Heartleaf bittercress	44	2
<i>Glyceria striata</i>	Tall mannagrass	33	8
<i>Athyrium filix-femina</i>	Lady fern	33	3
<i>Montia parvifolia</i>	Streambank springbeauty	33	3
<i>Luzula parviflora</i>	Small-flowered wood-rush	33	2

Elevations: 240 to 3800 feet (average 2685 feet).



Yellow monkeyflower in the channel.

Community: The Yellow monkeyflower community is an herbaceous type found on boulders, cobbles at or within the high water line. Yellow monkeyflower is the dominant herb, though fireweeds are also present. Grasses are almost always present (89% constancy), averaging 7% cover. Graminoids are present in 56% of the plots, averaging 5% cover. The surrounding plant series include western hemlock and silver fir.

Geomorphic environment: Patches of the Yellow monkeyflower community are in the active channel area, where cobbles, logs, or boulders have accumulated pockets of sands or silt.

Wetland rating:

Community meets wetland test	Yes
Plots meeting wetland criteria	67%
Wetland indicators among dominant species	78% (range 40-100%)

Non-natives: Exotics were found on 33% of the plots. These included an unusually varied list of non-native species.

EXOTIC	COMMON NAME	CONSTANCY %	PLOTS	TYPICAL COVER %
<i>Rumex crispus</i>	<i>Curled dock</i>	22	2	1
<i>Poa trivialis</i>	<i>Rough bluegrass</i>	11	1	15
<i>Lactuca muralis</i>	<i>Wall-lettuce</i>	11	1	8
<i>Geranium columbinum</i>	<i>Longstalk cranesbill</i>	11	1	5
<i>Hypericum perforatum</i>	<i>Common St. John's-wort</i>	11	1	2
<i>Digitalis purpurea</i>	<i>Common foxglove</i>	11	1	1
<i>Ranunculus repens</i>	<i>Creeping buttercup</i>	11	1	1
<i>Sagina procumbens</i>	<i>Bird-eye pearlwort</i>	11	1	1
<i>Senecio vulgaris</i>	<i>Common groundsel</i>	11	1	1
<i>Stellaria media</i>	<i>Chickweed</i>	11	1	1

Other studies: This community has previously been described for the Mt. Hood NF in Diaz and Mellen (1996) as the MIGU Plant Association (Ecoclass FW4224). The *Mimulus guttatus* clan, described for the mid-Willamette NF in Campbell and Franklin (1979), is also similar.

Corydalis aquae-gelidae
Cold-water corydalis
COAQ

N=3 (MHNF 3)

SPECIES	COMMON NAME	CONSTANCY %	TYPICAL COVER %
Herbs			
<i>Corydalis aquae-gelidae</i>	Cold-water corydalis	100	67
<i>Senecio pseud aureus</i>	False-gold groundsel	67	5
<i>Senecio triangularis</i>	Arrow-leaved groundsel	67	2
<i>Aconitum columbianum</i>	Columbian monkshood	67	1
<i>Aster modestus</i>	Great northern aster	67	1
<i>Delphinium glareosum</i>	Olympic larkspur	67	1

Elevations: 3140 feet to 3170 feet (average 3155 feet).

Community: Cold-water corydalis is an herbaceous community of mid- to upper elevations. It found on the Mt. Hood NF. It is dominated by cold-water corydalis, which dominates the narrow gravel deposits beside cold water channels. Common associates include streambank groundsel, arrowleaf groundsel, monkshood, great northern aster, and larkspur. Mountain alder and ninebark may be present in trace amounts. Adjacent upland plant associations are in the silver fir and western hemlock plant series.

The cold-water corydalis is a Sensitive Plant Species for Oregon and Washington. The community is fairly uncommon. All three plots in this sample are from Stone Creek, Bear Springs Ranger District, Mt. Hood NF.

Geomorphic environment: Geomorphic surfaces are gravel/cobble bars on islands or banks, with 0 to 2 cm of sands or silts over the coarser fragments. The community occurs from 0 to one foot above high water line. Plot notes from one site measured in mid-July noted that the corydalis was growing in the stream, though the site might be above water level during summer low flow.

Wetland rating:

Community meets wetland test	Yes
Plots meeting wetland criteria	100%
Wetland indicators among dominant species	100%

Non-natives: Exotic species were recorded on 33% of the plots.

EXOTIC	COMMON NAME	CONSTANCY %	PLOTS	TYPICAL COVER %
<i>Hypericum perforatum</i>	<i>Common St. John's-wort</i>	33	1	2
<i>Phalaris arundinacea</i>	<i>Reed canarygrass</i>	33	1	1

Other studies: This community has previously been described for the Mt. Hood NF in Diaz and Mellen (1996) as the COAQ Plant Community (Ecoclass FW4321).

***Petasites frigidus* group**
Coltsfoot group
PEFR5 group

Group description followed by descriptions of two phases: *Petasites frigidus-Salix sitchensis* phase and *Petasites frigidus-Equisetum arvense* phase

N=11 (MHNF 11)

SPECIES	COMMON NAME	CONSTANCY %	TYPICAL COVER %
Trees-seedlings			
<i>Alnus rubra</i>	Red alder	64	2
Shrubs			
<i>Salix sitchensis</i>	Sitka willow	82	23
<i>Rubus spectabilis</i>	Salmonberry	27	3
Herbs			
<i>Petasites frigidus</i>	Coltsfoot	91	25
<i>Mimulus guttatus</i>	Yellow monkeyflower	82	2
<i>Equisetum arvense</i>	Common horsetail	73	15
<i>Stachys cooleyae</i>	Cooley's betony	73	3
Grass (unknown)	Grass (unknown)	55	1
<i>Athyrium filix-femina</i>	Lady fern	45	2
<i>Aster modestus</i>	Great northern aster	45	1
<i>Tolmiea menziesii</i>	Piggyback plant	45	1
<i>Oxalis</i>	Sorrel	45	1
<i>Montia parvifolia</i>	Streambank springbeauty	45	1
<i>Cinna latifolia</i>	Wood reedgrass	36	1

Elevations: 220 to 2280 feet (average 1650 feet).

Community: The Coltsfoot group is a lower elevation early seral community found on cobbly bars and banks within the active channel. Typically it is dominated by Sitka willow, with coltsfoot and common horsetail. Yellow monkey flower and Cooley’s betony are also important associated species. Red alder seedlings are present on almost two-thirds of the plots.

Geomorphic environment: Geomorphic surfaces were cobble or boulder bars or banks at or below the normal high water line.

Substrates are sands or gravelly sands in a cobble or boulder matrix. These sites do not have developed soils, and have very little accumulations of fine sediments or organic material. The surfaces are subject to seasonal high energy flow. They are wet much of the year, but have little moisture or nutrient holding capacity.

Willow, coltsfoot, common horsetail, and trillium-leaved sorrel are common pioneer species on freshly scoured or deposited cobble bars. They are among the riparian species that can be delivered to a site by flood waters and root in an in- or near-channel surface. This appeared most common where large debris was deposited on the cobbly surface.

Similar types: The Sitka alder/coltsfoot and Coltsfoot-common horsetail phases are similar to the Coltsfoot-Cooley's betony plant community. The Coltsfoot-Cooley's betony type tends to have more active floodplain species (stink currant, Cooley's betony, lady fern, trillium-leaved sorrel), and less yellow monkeyflower, a very wet indicator.

Wetland rating:

Community meets wetland test	Yes
Plots meeting wetland criteria	100%
Wetland indicators among dominant species	98% (range 80-100%)

Non-natives: Exotics were present on 45% of the plots. Eleven species were recorded.

EXOTIC	COMMON NAME	PLOTS	CONSTANCY %	TYPICAL COVER %
<i>Lactuca muralis</i>	Wall-lettuce	2	18	1
<i>Lotus corniculatus</i>	Bird's-foot trefoil	1	9	3
<i>Rumex crispus</i>	Curled dock	1	9	2
<i>Cirsium vulgare</i>	Bull thistle	1	9	1
<i>Polygonum hydropiper</i>	Marshpepper smartweed	1	9	1
<i>Dactylis glomerata</i>	Orchard grass	1	9	1
<i>Digitalis purpurea</i>	Foxglove	1	9	1
<i>Hypericum perforatum</i>	Common St. John's-wort	1	9	1
<i>Hypochaeris</i>	Cat's-ear	1	9	1
<i>Leucanthemum vulgare</i>	Oxeye daisy	1	9	1
<i>Senecio vulgaris</i>	Common groundsel	1	9	1

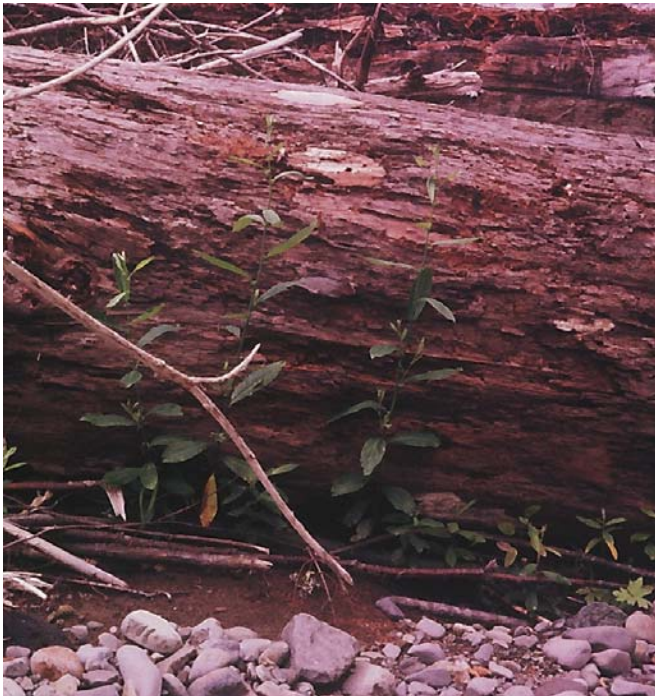
Other studies: This group is similar to the *Petasites frigidus* community described for the mid-Willamette NF in Campbell and Franklin (1979).

***Petasites frigidus-Salix sitchensis* phase**
Coltsfoot-Sitka willow phase
PEFR5-SASI2 phase

N=6 (MHNF 6)

SPECIES	COMMON NAME	CONSTANCY %	TYPICAL COVER %
Trees-seedlings			
<i>Alnus rubra</i>	Red alder	50	2
Shrubs			
<i>Salix sitchensis</i>	Sitka willow	100	32
<i>Rubus spectabilis</i>	Salmonberry	33	4
Herbs			
<i>Petasites frigidus</i>	Coltsfoot	83	10
<i>Stachys cooleyae</i>	Cooley's betony	67	5
<i>Mimulus guttatus</i>	Yellow monkeyflower	67	3
<i>Equisetum arvense</i>	Common horsetail	50	1
<i>Oxalis</i>	Sorrel	50	1
<i>Montia parvifolia</i>	Streambank springbeauty	50	1
<i>Tolmiea menziesii</i>	Piggyback plant	50	1

Elevations: 220 to 2100 feet (average 1550 feet).



Community: Coltsfoot-Sitka willow phase is a community of cobbly bars and lower banks at or within the normal high water line. Young red alder and minor amounts of salmonberry are sometimes found. Sitka willow dominates the community. The most common and abundant herb species are coltsfoot, Cooley's betony, and yellow monkeyflower.

Sitka willow and coltsfoot sprout beneath flood-deposited log.



Coltsfoot-Sitka willow phase community: coltsfoot is flowering.

Geomorphic environment: Geomorphic surfaces were cobbly bars or lower banks, often point bars, within the normal high water line.

Substrates are sands or gravelly sands in a cobble or boulder matrix. One plot was on bedrock “with some pockets of cobbles, sands, and gravels”. No litter or decomposing organic layers were found.

These sites are inundated annually, and have not accumulated fine sediments. They are generally wet for much of the year, but have little moisture or nutrient holding capacity. Willow, coltsfoot, and trillium-leaved sorrel are among the riparian species that can be delivered to a site by flood waters and root in an in- or near-channel surface. This appeared most common where large debris was deposited on the cobbly surface.

Wetland rating:

Community meets wetland test	Yes
Plots meeting wetland criteria	100%
Wetland indicators among dominant species	97% (range 80-100%)

Non-natives: Fifty percent of the plots had exotic species. Wall-lettuce was the only species found on more than one plot.

EXOTIC	COMMON NAME	CONSTANCY %	PLOTS	TYPICAL COVER %
<i>Lactuca muralis</i>	Wall-lettuce	33	2	1
<i>Lotus corniculatus</i>	Bird's-foot trefoil	17	1	3
<i>Rumex crispus</i>	Curled dock	17	1	2
<i>Cirsium vulgare</i>	Bull thistle	17	1	1
<i>Dactylis glomerata</i>	Orchard grass	17	1	1
<i>Digitalis purpurea</i>	Foxglove	17	1	1
<i>Leucanthemum vulgare</i>	Oxeye daisy	17	1	1
<i>Polygonum hydropiper</i>	Marshpepper smartweed	17	1	1
<i>Senecio vulgaris</i>	Common groundsel	17	1	1

Other studies: This community is similar to the type described for the Mt. Hood NF in Diaz and Mellen (1996) as the SASI2/PEFR2 Plant Community (Ecoclass SW1132). It is also somewhat similar to the Sitka alder/common horsetail community (SASI/EQAR) described for the Olympic Experimental State Forest in Chappell (1999).

***Petasites frigidus- Equisetum arvense* phase**
Coltsfoot-common horsetail phase
PEFR5-EQAR phase

N=5 (MHNF 5)

SPECIES	COMMON NAME	CONSTANCY %	TYPICAL COVER %
Trees-seedlings			
<i>Alnus rubra</i>	Red alder	80	3
Shrubs			
<i>Salix sitchensis</i>	Sitka willow	60	6
Herbs			
<i>Petasites frigidus</i>	Coltsfoot	100	37
<i>Equisetum arvense</i>	Common horsetail	100	22
<i>Mimulus guttatus</i>	Yellow monkeyflower	100	2
<i>Stachys cooleyae</i>	Cooley's betony	80	3
Unknown grass	Grass	80	1
<i>Athyrium filix-femina</i>	Lady fern	60	2
<i>Aster modestus</i>	Great northern aster	60	1
<i>Epilobium glaberrimum</i>	Smooth willowherb	40	8
<i>Circaea alpina</i>	Enchanter's-nightshade	40	1
<i>Tolmiea menziesii</i>	Piggyback plant	40	1
<i>Angelica arguta</i>	Sharptooth angelica	40	1
<i>Cinna latifolia</i>	Wood reedgrass	40	1
<i>Montia parvifolia</i>	Streambank springbeauty	40	1
<i>Juncus ensifolius</i>	Dagger-leaved rush	40	Tr
<i>Oxalis</i>	Sorrel	40	Tr

Elevations: 1480 to 2280 feet (average 1510 feet).

Community: The *Coltsfoot-common horsetail phase* is an herb community that occurs on cobble bars, especially point bars within the normal high water line. Minor amounts of red alder seedlings and Sitka willow frequently occur. The dominant species are coltsfoot, common horsetail, and yellow monkeyflower. Other associated species include Cooley's betony, lady fern, and great northern aster. Sedges and rushes are generally present (80% constancy), summed cover averaging 4%. The yellow monkeyflower particularly indicates that these sites are very wet much of the year.

Geomorphic environment: Geomorphic surfaces are cobble bars at or below normal high water line.



Coltsfoot-common horsetail phase: on cobble bar in channel.

Plot notes typically describe substrate as “rocks with sand in between them”, or “very cobbly with some sand deposits”. These sites do not have developed soils, and have very little accumulations of fine sediments or organic material. The surfaces are subject to seasonal high energy flow. They are wet much of the year, but have little moisture or nutrient holding capacity.

Field observations immediately after a major flood note that coltsfoot and common horsetail are common pioneer species on freshly scoured or deposited cobble bars. Coltsfoot and sorrel often root from pieces deposited during the flood.

Wetland rating:

Community meets wetland test	Yes
Plots meeting wetland criteria	100%
Wetland indicators among dominant species	100%

Non-natives: Exotic species were recorded on 40% of the plots.

EXOTIC	COMMON NAME	CONSTANCY %	PLOTS	TYPICAL COVER %
<i>Hypericum perforatum</i>	Common St. John's-wort	20	1	1
<i>Hypochaeris</i>	Cat's-ear	20	1	1

Other studies: This community is somewhat similar to the Sitka alder/common horsetail community (SASI/EQAR) described for the Olympic Experimental State Forest in Chappell (1999).