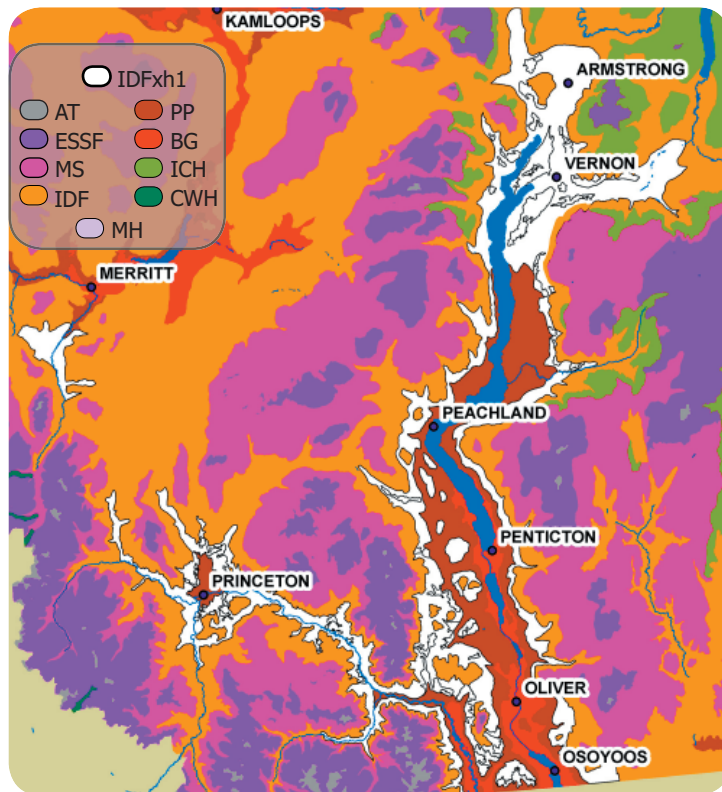


# IDF<sub>xh1</sub>

## OKANAGAN VERY DRY HOT INTERIOR DOUGLAS-FIR VARIANT

**Distribution:** The IDF<sub>xh1</sub> variant occurs at low elevations of the Okanagan basin from Armstrong south to the US border. It occupies the lower reaches of most creeks draining into Okanagan Lake. South of Vernon it occurs above the PP<sub>xh1</sub>, while north and east of Vernon it occupies the valley bottom. It also occurs along the Similkameen and lower Ashonola River drainages. North and west of Princeton it occurs in the lower reaches of the Tulameen, Hayes, Whipsaw, Allison, and Wolfe Creeks.

IDF<sub>xh1</sub> - 1

**Elevational Range (Mean):** The IDF<sub>xh1</sub> begins at 400-900 m where it occupies valley bottoms. Where it lies above the PP<sub>xh1</sub> it begins at about 900-950 m on north aspects and 950-1050 m on south aspects. It extends upslope to about 1100-1150 m on north slopes and 1150-1250 m on south slopes.

**Climate:** The IDF zone is characterized by a warm, dry climatic regime with a relatively long growing season and mid summer soil moisture deficits, particularly on south aspects. The IDF<sub>xh1</sub> is the hottest and driest Interior Douglas-fir biogeoclimatic unit. The mean annual precipitation ranges from 32-45 cm. Snow depths rarely exceed 40 cm and consequently the IDF<sub>xh1</sub> provides important winter habitat for large ungulates including big horn sheep and deer. Growing season moisture deficits limit tree and forage productivity.

**Forest Cover:** Much of the IDF<sub>xh1</sub> landscape is dominated by mature seral and climax stands of Fd. Py is a co-dominant species on many steep southern exposures and is a common seral species on mesic sites. Floodplains generally contain Act, Ep, Fd and Py. Sxw and Cw occasionally occur in riparian areas and gullies that receive supplemental subsurface seepage. Stands on steep southern exposures tend to have a very open structure and very little undergrowth. As a consequence wildfires generally result in stand maintaining underburns that rejuvenate shrubs and grasses. In contrast north and east facing slopes tend to have relatively dense multi-storied stands that are more susceptible to stand destroying wildfires. As a result climax stands dominate south aspects and mixed mature seral and late succession stands dominate northern exposures. Isolated individuals or small patches of Fd and/or Lw vets occupy many stands as a testament to their fire resistance. The 50 year site index for Fd ranges from 14-17 m. Py grows 1-2 meters taller than Fd over the same period, particularly on drier site series. Growing season soil moisture deficits limit forest and range productivity.

**Zonal Vegetation and Soils:** Mature seral stands are dominated by a Fd and varying amounts of Py. Fd is the principle tree species regenerating in the understory. The shrub layer is poor to moderately well developed and includes snowberry, saskatoon, birch-leaved spirea and Oregon grape. The herb layer is dominated by pinegrass and also includes showy aster, heart-leaved arnica and kinnikinnick. The moss layer is very poorly developed but commonly contains ragged moss and pelt lichens. Soils are Eutric Brunisols with a Moder or Mor humus form.

**Adjacent Biogeoclimatic Subzones:** The IDF<sub>xh1</sub> occupies the valley floor or occurs above the PP<sub>xh1</sub>. It often occurs below the IDF<sub>dk1</sub>, however it also occurs below the IDF<sub>dm1</sub>, dk2 and mw1. At its northern limits it abuts the IDF<sub>xh2</sub> at similar elevations.

IDF<sub>xh1</sub> - 2

**Distinguishing adjacent Biogeoclimatic units from the IDF<sub>xh1</sub>****IDF<sub>xh2</sub>**

- Py is less abundant
- moss layer is better developed
- snowbrush and Idaho fescue absent from dry sites
- balsamroot is less common on drier sites

**IDF<sub>dk1, dk2 and dm1</sub>**

- PI common as a seral species on zonal sites
- Py is less abundant and generally restricted to southern exposures.
- rattlesnake plantain, one-sided wintergreen and twinflower are more common
- moss layer is better developed

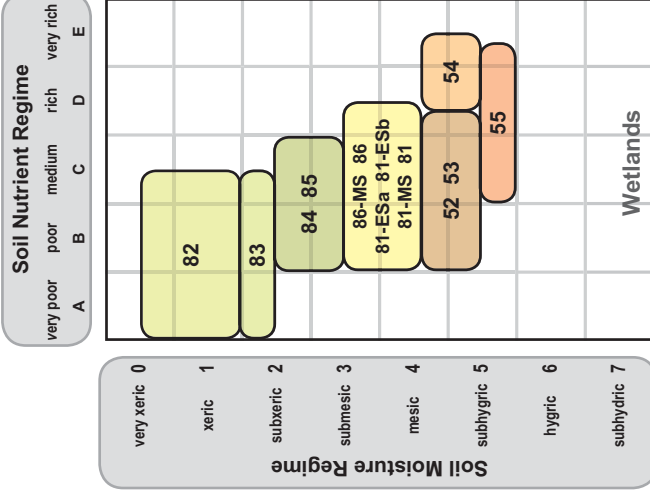
**IDF<sub>mw1</sub>**

- Cw is a climax species on zonal sites,
- Ep and PI are common seral tree species
- pinegrass is less common and less abundant on zonal sites
- shrub dominated understory includes falsebox
- thimbleberry, hooker's fairybells, sarsaparilla and queen's cup are present

**PP<sub>xh1</sub>**

- Py is the dominant climax tree species on zonal sites
- pinegrass is absent or restricted to steep north aspects
- bluebunch wheatgrass dominates zonal sites
- rough fescue and Idaho fescue are present on zonal sites
- heart-leaved arnica, birch-leaved spirea and showy aster are generally absent

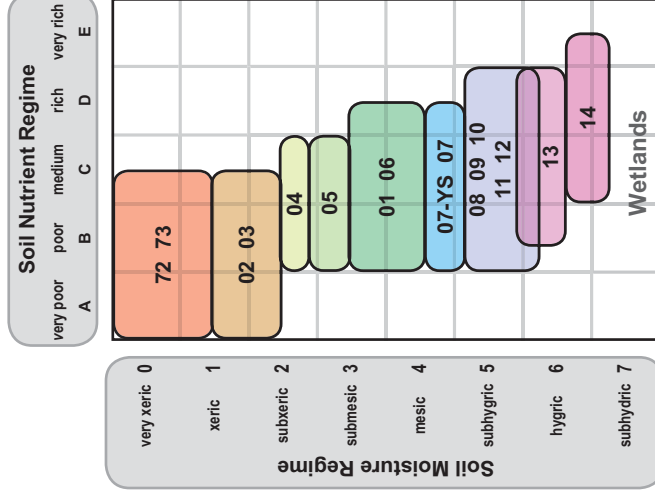
**Edatopic Grid**



- 82 Bluebunch wheatgrass — Parsnip-flowered buckwheat
- 83 Stiff needlegrass — Red three-awn
- 84-ES \$Needle and thread grass — Cheatgrass
- 84-MS \$Big sage — Bluebunch wheatgrass
- 84 Bluebunch wheatgrass — Balsamroot
- 85-MS \$Big sage — Idaho fescue
- 85 Bluebunch wheatgrass — Idaho fescue
- 86-MS \$Bluebunch wheatgrass — Rough fescue
- 86 Rough fescue
- 81-ESA \$Kentucky bluegrass — Stiff needlegrass
- 81-ESb \$Big sage — Kentucky bluegrass
- 81-MS \$Bluebunch wheatgrass — Kentucky bluegrass
- 81 Idaho fescue
- 52 Snowberry — Kentucky bluegrass
- 53 Snowberry — Pinegrass
- 54 Snowberry — Hawthorn
- 55 Dogwood — Rose

IDFxb1 - 5

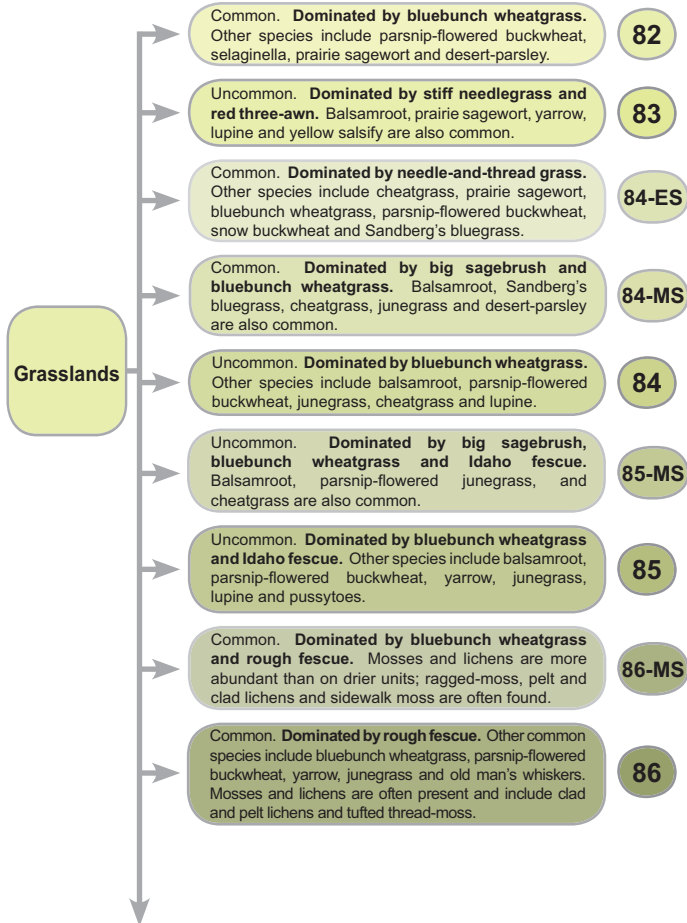
**Edatopic Grid**



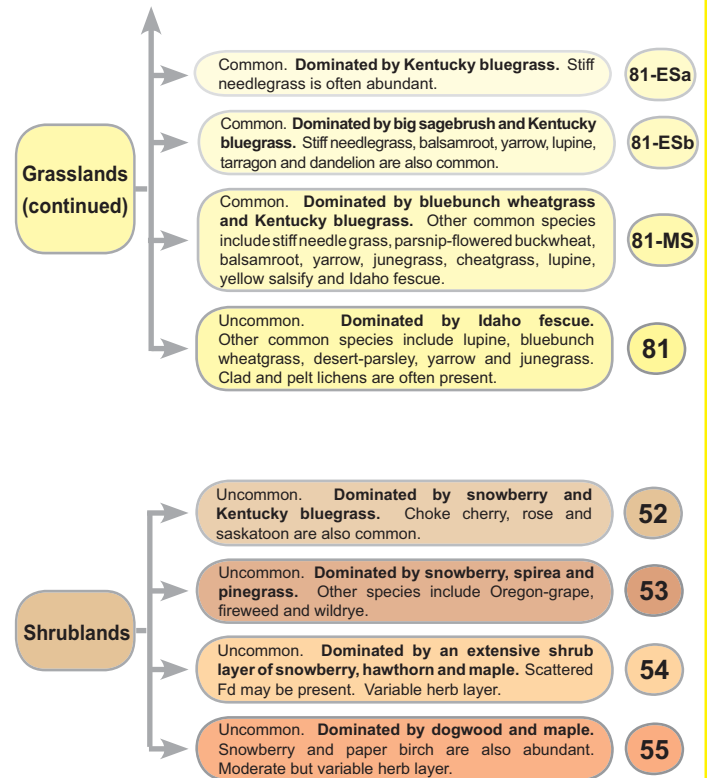
- 72 Saskatoon — Sidewalk moss
- 73 Selaginella — Clad lichens
- 02 FdPy — Juniper — Pinegrass
- 03 FdPy — Mock orange — Bluebunch wheatgrass
- 04 FdPy — Bluebunch wheatgrass — Balsamroot
- 05 FdPy — Bluebunch wheatgrass — Pinegrass
- 01 FdPy — Pinegrass
- 06 Fd — Feathermoss
- 07-YS \$At — Snowberry — Kentucky bluegrass
- 07 FdPy — Snowberry
- 08-YS \$At — Snowberry — Rose
- 09 CwFd — Gooseberry — Sarsaparilla
- 10 \$ActEp — Snowberry — Douglas maple
- 11 \$Act — Dogwood — Snowberry
- 12 SxwFd — Dogwood — Snowberry
- 13 Sxw — Horsetail
- 14 Sxw — Alder — Soft-leaved sedge
- Wf01 Water sedge — Beaked sedge
- Wm01 Beaked sedge — Water sedge
- Wm05 Cattail
- Wm06 Great bulrush
- Wm07 Baltic rush
- Wm08 Sharp bulrush

IDFxb1 - 6

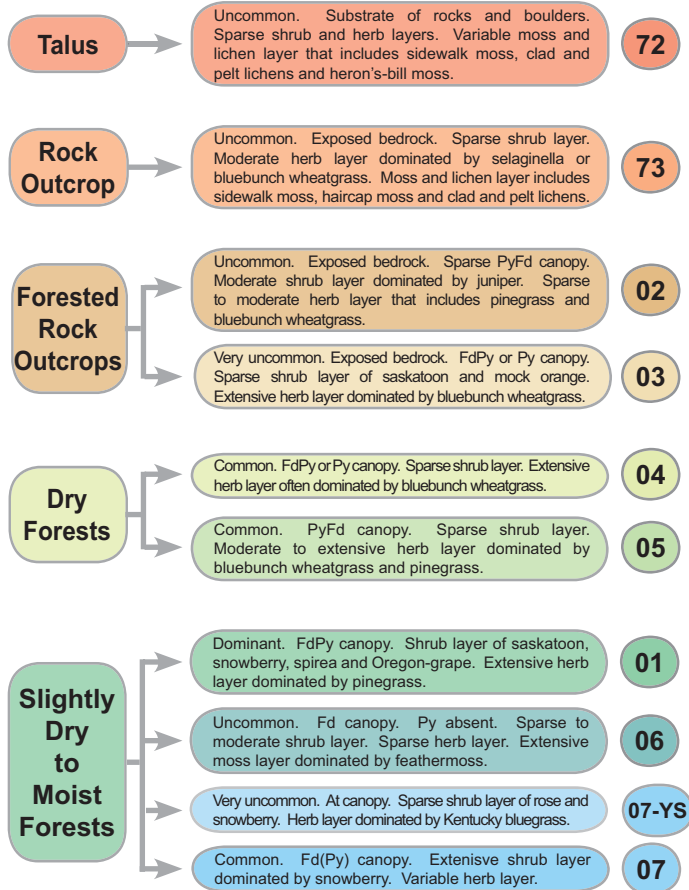
## Site Unit Flowchart



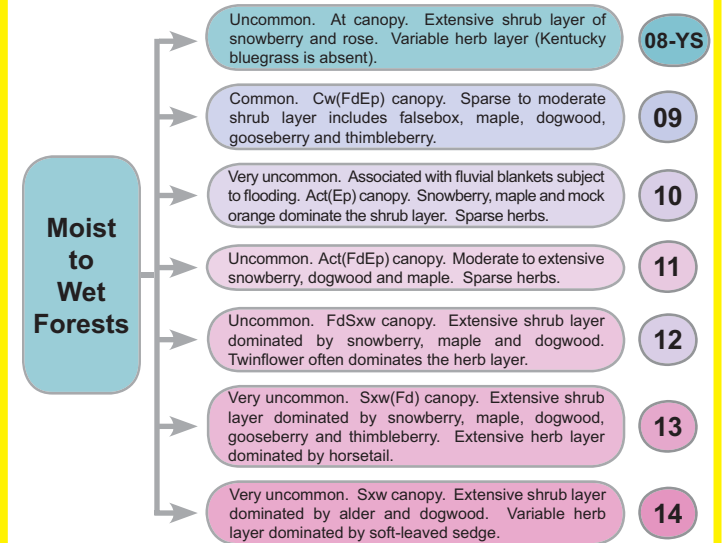
## Site Unit Flowchart



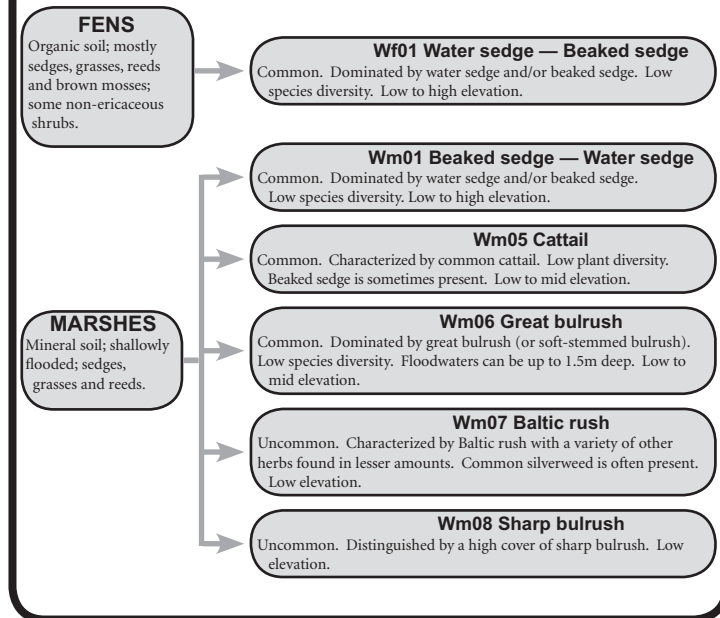
## Site Unit Flowchart



## Site Unit Flowchart



### Site Unit Flowchart



Refer to the wetland section in the package of BEC materials for a more thorough characterization of wetland ecosystems.

Vegetation Table

	Grasslands										
	82	83	84-ES	84-MS	84	85-MS	85	86-MS	86		
<b>Trees</b>											
<b>Shrubs</b>											
<b>Herbs</b>											

IDFxb1 - 13

	Grasslands									
	82	83	84-ES	84-MS	84	85-MS	85	86-MS	86	
<b>Herbs</b>										
<b>Mosses &amp; Lichens</b>										

IDFxb1 - 14

Frequency of Occurrence: >80% >25% 1-7% <1%

Abundance (Average Percent Cover): >25% 1-7% <1%

Vegetation Table

	Grasslands						Shrublands			
	81-ESa	81-ESb	81-MS	81	52	53	54	55		
<b>Trees</b>	15	5	7	3	7	2	2	4		
<b>Shrubs</b>										
<b>Herbs</b>										

Site Units	81-ESa	81-ESb	81-MS	81	52	53	54	55
No. of Plots	15	5	7	3	7	2	2	4
<i>Pinus ponderosa</i>	*		*					
<i>Pseudotsuga menziesii</i>		■						
<i>Artemisia tridentata</i> var. <i>tridentata</i>		■						
<i>Amelanchier alnifolia</i>			*					
<i>Symphoricarpos albus</i>				*				
<i>Prunus virginiana</i>								
<i>Rosa</i> sp.								
<i>Mahonia aquifolium</i>								
<i>Spiraea betulifolia</i>								
<i>Acer glabrum</i>								
<i>Crataegus douglasii</i>								
<i>Cornus stolonifera</i>								
<i>Betula papyrifera</i>								
<i>Rubus parviflorus</i>								
<i>Salix</i> sp.								
<i>Sedum</i> sp.								
<i>Artemisia frigida</i>	*							
<i>Balsamorhiza sagittata</i>		■						
<i>Pseudocymoptera spicata</i>	*	■						
<i>Eriogonum heracleoides</i>	*	■						
<i>Lomatium</i> sp.								
<i>Artemisia tripartita</i>								
<i>Aristida purpurea</i>								
<i>Achnatherum occidentale</i>								
<i>Achillea millefolium</i>								
<i>Keiskeleia macrantha</i>								
<i>Collinsia parviflora</i>								
<i>Calochortus macrocarpus</i>								
<i>Crepis ariflora</i>								
<i>Hesperostipa comata</i> ssp. <i>comata</i>								
<i>Bromus tectorum</i>								
<i>Lithospermum rufiale</i>								
<i>Calochortus apiculatus</i>								
<i>Eriogonum niveum</i>								
<i>Lepidosiphon sericeus</i>								
<i>Trifolium</i> sp.								
<i>Lomatium dissectum</i>								
<i>Artemisia dracunculoides</i>								

ponderosa pine								
Douglas-fir								
big sagebrush		■						
saskatoon								
common snowberry								
choke cherry								
rose								
tall Oregon-grape								
birch-leaved spirea								
Douglas maple								
black hawthorn								
red-osler dogwood								
paper birch								
himberrry								
compact sagehnelia								
sagebrush								
arroyo leaf balsamroot								
bluebunch wheatgrass								
parsnip-flowered buckwheat								
desert-parsley								
threestip sagebrush								
red three-awn								
stiff needlegrass								
yarrow								
junegrass								
small-flowered blue-eyed Mary								
sagebrush manpusa lily								
slender hawkbeard								
needle-and-thread grass								
cheatgrass								
lemonweed								
three-spot manpusa lily								
snow buckwheat								
silky lupine								
San Diego bluegrass								
Utah bluegrass								
fern-leaved desert-parsley								
tarragon								

	Grasslands						Shrublands			
	81-ESa	81-ESb	81-MS	81	52	53	54	55		
<b>Herbs</b>										
<b>Mosses &amp; Lichens</b>										

Site Units	81-ESa	81-ESb	81-MS	81	52	53	54	55
<i>Zigadenus venenosus</i>	*							
<i>Tragopogon dubius</i>								
<i>Prosartes trachycarpa</i>								
<i>Cassileja thompsonii</i>								
<i>Festuca idahoensis</i>				■				
<i>Potentilla glandulosa</i>				■				
<i>Rumex maritimus</i>								
<i>Gaillardia aristata</i>								
<i>Asragalus miser</i>								
<i>Poa pratensis</i>								
<i>Taraxacum officinale</i>								
<i>Geum triflorum</i>								
<i>Festuca campestris</i>								
<i>Elymus repens</i>								
<i>Calamagrostis rubescens</i>								
<i>Erigeron phillyriae</i>								
<i>Epilobium angustifolium</i>								
<i>Gallium triflorum</i>								
<i>Osmorhiza</i> sp.								
<i>Aster conspicuus</i>								
<i>Malianthemum stellatum</i>								
<i>Tortula ruralis</i>								
<i>Polytrichum piliferum</i>								
<i>Cladonia</i> sp.								
<i>Peltigera</i> sp.								
<i>Bryum caespiticium</i>								
<i>Brachythecium</i> sp.								

meadow death-camas								
yellow salsify								
rough-fruited fairybells								
Thompson's paintbrush								
Idaho fescue								
sticky cinquefoil								
golden dock								
brown-eyed Susan								
timber milk-vetch								
Kentucky bluegrass								
common dandelion								
old man's whiskers								
rough fescue								
quackgrass								
pinegrasses								
blueberry								
fireweed								
sweet-scented bedstraw								
sweet-cicely								
showy aster								
star-flowered false Solomon's-seal								
sidewalk moss								
awned haircap moss								
clad lichens								
pelt lichens								
tufted thread-moss								
ragged-moss								

Frequency of Occurrence: ■ >80% ■ >25% ■ 15-25% ■ 7-15% ■ 1-7% ■ <1%  
 Abundance (Average Percent Cover): ■ >40% and > 10% cover \* <40% and <10% cover

Vegetation Table

Site Units No. of Plots	Forests					
	72	73	02	03	04	05
<b>Trees</b>	7	24	8	7	41	56
<i>Pinus ponderosa</i>	■	■	■	■	■	■
<i>Pseudotsuga menziesii</i>	■	■	■	■	■	■
<i>Populus tremuloides</i>	■	■	■	■	■	■
<i>Betula papyrifera</i>	■	■	■	■	■	■
<i>Thuja plicata</i>	■	■	■	■	■	■
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	■	■	■	■	■	■
<i>Picea engelmannii</i> x <i>glauca</i>	■	■	■	■	■	■
<i>Pinus ponderosa</i>	■	■	■	■	■	■
<i>Pseudotsuga menziesii</i>	■	■	■	■	■	■
<i>Thuja plicata</i>	■	■	■	■	■	■
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	■	■	■	■	■	■
<i>Picea engelmannii</i> x <i>glauca</i>	■	■	■	■	■	■
<i>Juniperus communis</i>	■	■	■	■	■	■
<i>Amelanchier alnifolia</i>	■	■	■	■	■	■
<i>Symphoricarpos albus</i>	■	■	■	■	■	■
<i>Sorbus pedunculata</i>	■	■	■	■	■	■
<i>Mahonia aquifolium</i>	■	■	■	■	■	■
<i>Rosa sp.</i>	■	■	■	■	■	■
<i>Paxistima myrsinites</i>	■	■	■	■	■	■
<i>Populus tremuloides</i>	■	■	■	■	■	■
<i>Acer glabrum</i>	■	■	■	■	■	■
<i>Philadelphus lewisii</i>	■	■	■	■	■	■
<i>Cornus stolonifera</i>	■	■	■	■	■	■
<i>Ribes lacustre</i>	■	■	■	■	■	■
<i>Alnus incana</i>	■	■	■	■	■	■
<i>Rubus parviflorus</i>	■	■	■	■	■	■
<i>Ribes hudsonianum</i>	■	■	■	■	■	■
<i>Poa secunda</i>	■	■	■	■	■	■
<i>Bromus tectorum</i>	■	■	■	■	■	■
<i>Penstemon fruticosus</i>	■	■	■	■	■	■
<i>Selaginella densa</i>	■	■	■	■	■	■
<i>Keiskeia macrantha</i>	■	■	■	■	■	■
<i>Heuchera cylindrica</i>	■	■	■	■	■	■
<i>Arctostaphylos uva-ursi</i>	■	■	■	■	■	■
<i>Asterias trifida</i>	■	■	■	■	■	■
<i>Pseudotsuga menziesii</i>	■	■	■	■	■	■
<i>Ascholaria filiformis</i>	■	■	■	■	■	■
<i>Festuca campestris</i>	■	■	■	■	■	■
<i>Balsamorhiza sagittata</i>	■	■	■	■	■	■
<b>Herbs</b>	■	■	■	■	■	■
<i>Idaho fescue</i>	■	■	■	■	■	■
<i>pinegrass</i>	■	■	■	■	■	■
<i>spreading dogbane</i>	■	■	■	■	■	■
<i>showy aster</i>	■	■	■	■	■	■
<i>heart-leaved amica</i>	■	■	■	■	■	■
<i>rattlesnake-plantain</i>	■	■	■	■	■	■
<i>Kentucky bluegrass</i>	■	■	■	■	■	■
<i>blue wildrye</i>	■	■	■	■	■	■
<i>false Solomon's-seal</i>	■	■	■	■	■	■
<i>sweet-cicely</i>	■	■	■	■	■	■
<i>star-flowered false Solomon's-seal</i>	■	■	■	■	■	■
<i>violet</i>	■	■	■	■	■	■
<i>wild sarapanilla</i>	■	■	■	■	■	■
<i>twintower</i>	■	■	■	■	■	■
<i>wood strawberry</i>	■	■	■	■	■	■
<i>unlimited bedstraw</i>	■	■	■	■	■	■
<i>mitrewort</i>	■	■	■	■	■	■
<i>wood horsetail</i>	■	■	■	■	■	■
<i>cow-parsnip</i>	■	■	■	■	■	■
<i>enchanter's-nightshade</i>	■	■	■	■	■	■
<i>dwarf red raspberry</i>	■	■	■	■	■	■
<i>common horsetail</i>	■	■	■	■	■	■
<i>lacy fern</i>	■	■	■	■	■	■
<i>soft-leaved sedge</i>	■	■	■	■	■	■
<i>Dewey's sedge</i>	■	■	■	■	■	■
<i>sidewalk moss</i>	■	■	■	■	■	■
<i>haircap moss</i>	■	■	■	■	■	■
<i>clad lichens</i>	■	■	■	■	■	■
<i>pelt lichens</i>	■	■	■	■	■	■
<i>ragged-moss</i>	■	■	■	■	■	■
<i>heron's-bill moss</i>	■	■	■	■	■	■
<i>electrified cat-tail moss</i>	■	■	■	■	■	■
<i>red-stemmed feathermoss</i>	■	■	■	■	■	■
<i>step moss</i>	■	■	■	■	■	■
<i>leaty moss</i>	■	■	■	■	■	■

Site Units No. of Plots	Forests					
	72	73	02	03	04	05
<b>Herbs</b>	7	24	8	7	41	56
<i>Festuca idahoensis</i>	■	■	■	■	■	■
<i>Calamagrostis rubescens</i>	■	■	■	■	■	■
<i>Apocynum androsaemifolium</i>	■	■	■	■	■	■
<i>Aster conspicuus</i>	■	■	■	■	■	■
<i>Arnica cordifolia</i>	■	■	■	■	■	■
<i>Goodyera oblongifolia</i>	■	■	■	■	■	■
<i>Poa pratensis</i>	■	■	■	■	■	■
<i>Elymus glaucus</i>	■	■	■	■	■	■
<i>Meianthemum racemosum</i>	■	■	■	■	■	■
<i>Osmorhiza sp.</i>	■	■	■	■	■	■
<i>Maianthemum stellatum</i>	■	■	■	■	■	■
<i>Viola sp.</i>	■	■	■	■	■	■
<i>Aralia nudicaulis</i>	■	■	■	■	■	■
<i>Linnaea borealis</i>	■	■	■	■	■	■
<i>Fragaria vesca</i>	■	■	■	■	■	■
<i>Galium aparine</i>	■	■	■	■	■	■
<i>Mitella sp.</i>	■	■	■	■	■	■
<i>Equisetum sylvaticum</i>	■	■	■	■	■	■
<i>Heracleum maximum</i>	■	■	■	■	■	■
<i>Circaea alpina</i>	■	■	■	■	■	■
<i>Rubus pubescens</i>	■	■	■	■	■	■
<i>Equisetum arvense</i>	■	■	■	■	■	■
<i>Althium filix-femina</i>	■	■	■	■	■	■
<i>Carex disperma</i>	■	■	■	■	■	■
<i>Carex deweyana</i>	■	■	■	■	■	■
<i>Tortula ruralis</i>	■	■	■	■	■	■
<i>Polytrichum sp.</i>	■	■	■	■	■	■
<i>Cladonia sp.</i>	■	■	■	■	■	■
<i>Pelligera sp.</i>	■	■	■	■	■	■
<i>Brachythecium sp.</i>	■	■	■	■	■	■
<i>Dicranum sp.</i>	■	■	■	■	■	■
<i>Rhytidiadelphus triquetrus</i>	■	■	■	■	■	■
<i>Pleurozium schreberi</i>	■	■	■	■	■	■
<i>Hylacomium splendens</i>	■	■	■	■	■	■
<i>Plagioglossum sp.</i>	■	■	■	■	■	■
<b>Mosses &amp; Lichens</b>	■	■	■	■	■	■
<i>Idaho fescue</i>	■	■	■	■	■	■
<i>pinegrass</i>	■	■	■	■	■	■
<i>spreading dogbane</i>	■	■	■	■	■	■
<i>showy aster</i>	■	■	■	■	■	■
<i>heart-leaved amica</i>	■	■	■	■	■	■
<i>rattlesnake-plantain</i>	■	■	■	■	■	■
<i>Kentucky bluegrass</i>	■	■	■	■	■	■
<i>blue wildrye</i>	■	■	■	■	■	■
<i>false Solomon's-seal</i>	■	■	■	■	■	■
<i>sweet-cicely</i>	■	■	■	■	■	■
<i>star-flowered false Solomon's-seal</i>	■	■	■	■	■	■
<i>violet</i>	■	■	■	■	■	■
<i>wild sarapanilla</i>	■	■	■	■	■	■
<i>twintower</i>	■	■	■	■	■	■
<i>wood strawberry</i>	■	■	■	■	■	■
<i>unlimited bedstraw</i>	■	■	■	■	■	■
<i>mitrewort</i>	■	■	■	■	■	■
<i>wood horsetail</i>	■	■	■	■	■	■
<i>cow-parsnip</i>	■	■	■	■	■	■
<i>enchanter's-nightshade</i>	■	■	■	■	■	■
<i>dwarf red raspberry</i>	■	■	■	■	■	■
<i>common horsetail</i>	■	■	■	■	■	■
<i>lacy fern</i>	■	■	■	■	■	■
<i>soft-leaved sedge</i>	■	■	■	■	■	■
<i>Dewey's sedge</i>	■	■	■	■	■	■
<i>sidewalk moss</i>	■	■	■	■	■	■
<i>haircap moss</i>	■	■	■	■	■	■
<i>clad lichens</i>	■	■	■	■	■	■
<i>pelt lichens</i>	■	■	■	■	■	■
<i>ragged-moss</i>	■	■	■	■	■	■
<i>heron's-bill moss</i>	■	■	■	■	■	■
<i>electrified cat-tail moss</i>	■	■	■	■	■	■
<i>red-stemmed feathermoss</i>	■	■	■	■	■	■
<i>step moss</i>	■	■	■	■	■	■
<i>leaty moss</i>	■	■	■	■	■	■

Frequency of Occurrence: ■ >80% ■ 40-80% ■ 15-25% ■ 7-15% ■ 1-7% ■ <1%  
 Abundance (Average Percent Cover): ■ >40% and > 10% cover ■ <40% and <10% cover



Environment Table

Site Units	Grasslands							86	
	82	83	84-ES	84-MS	84	85-MS	85		86-MS
<b>Soil Moisture Regime</b>	X (VX)	SX	SX (SM)	SX (SM)	SX (SM)	SM (SX)	SM (SX)	SM M	SM M
<b>Mesoslope Position</b>	UP (CR)	MD UP	MD UP	MD UP	MD UP	MD	MD	MD UP	MD UP
<b>Slope Gradient</b>	Steep (Gentle)	Gentle Steep	Gentle Steep	Gentle Steep	Gentle Steep	Steep	Steep	Steep Gentle	Steep Gentle
<b>Aspect</b>	Warm (Cool)	Neutral Warm	Variable	Variable	Variable	Warm (Cool)	Warm (Cool)	Cool Neutral	Cool Neutral
<b>Parent Materials</b>	Cv Mv Mb R	Mb Cb	Mb (Cb)	Mb (Cb)	Mb (Cb)	Mb Cb	Mb Cb	Mb Cb	Mb Cb
<b>Soil Texture Class</b>	Medium	Coarse	Coarse (Medium)	Coarse (Medium)	Coarse (Medium)	Medium	Medium	Medium	Medium
<b>Important Features</b>	Bedrock 0-100 cm								
<b>Successional Stage<sup>1</sup></b>	LS PNC	LS	ES	MS	LS	MS	LS	MS	PNC LS
<b>Occurrence</b>	Common	Scarce	Common	Common	Uncommon	Uncommon	Uncommon	Uncommon	Uncommon

<sup>1</sup> Successional stages in grasslands: ES = Early Seral YS = Young Seral MS = Mid Seral LS = Late Seral PNC = Potential natural climax

Environment Table

Site Units	Grasslands				Shrublands			
	81-ESa	81-ESb	81-MS	81	52	53	54	55
<b>Soil Moisture Regime</b>	SM M	SM M	SM M	SM M	M SHG	M SHG	SHG M	SHG
<b>Mesoslope Position</b>	MD LW (TO)	MD LW (TO)	MD LW (TO)	MD LW (TO)	MD LW LV	MD LW LV	LW TO	LW (TO GU)
<b>Slope Gradient</b>	Gentle	Gentle	Gentle	Gentle	Gentle Level	Gentle Level	Level Gentle	Level Gentle
<b>Aspect</b>	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
<b>Parent Materials</b>	Mb (Cb Fb)	Mb (Cb Fb)	Mb (Cb Fb)	Mb (Cb Fb)	Mb (Cb Fb)	Mb (Cb Fb)	Mb (Cb Fb)	Fb Mb (Lb)
<b>Soil Texture Class</b>	Medium (Coarse)	Medium (Coarse)	Medium (Coarse)	Medium (Coarse)	Medium (Fine)	Medium (Fine)	Medium (Fine)	Medium (Fine)
<b>Important Features</b>								Seepage at depth
<b>Successional Stage<sup>1</sup></b>	ES	ES	MS	LS				
<b>Occurrence</b>	Common	Common	Common	Uncommon	Uncommon	Uncommon	Scarce	Uncommon

Environment Table

Site Units	Forests										
	Talus	72	73	02	03	04	05	01	06		
<b>Soil Moisture Regime</b>	VX X	VX X	X (SX)	SX X	SX	SM (SX)	M SM	M	M (SM)		
<b>Mesoslope Position</b>	MD (UP)	CR (UP MD)	UP (CR MD)	MD (UP)	MD (UP)	MD (UP)	MD LV	MD	MD (LW)		
<b>Slope Gradient</b>	Steep	Steep (Gentle)	Steep (Gentle)	Gentle Steep	Steep Gentle	Variable	Gentle Level	Steep Gentle	Steep Gentle		
<b>Aspect</b>	Cool Warm	Warm (Neutral)	Cool (Neutral)	Neutral Warm	Warm (Neutral)	Variable	Neutral	Cool Neutral	Cool Neutral		
<b>Parent Materials</b>	Cb	R (Cv)	Cv (R)	Cv Mv Mb (R)	Mb (FG)	Mb	Mb (FG)	Mb	Mb		
<b>Soil Texture Class</b>	Fragmental	Medium (Fragmental)	Coarse (Fragmental)	Medium	Variable	Coarse (Medium)	Medium (Coarse)	Medium	Medium		
<b>Important Features</b>	Rocks & boulders	Bedrock 0-50 cm	Bedrock 0-50 cm	Often bedrock 20-100 cm							
<b>Successional Stage</b>	MC	MC	MC	MC	MC	MC	MC	MC	MC (YC)		
<b>Occurrence</b>	Uncommon	Uncommon	Uncommon	Scarce	Common	Common	Dominant	Uncommon	Uncommon		

Environment Table

Site Units	Forests													
	07-Y5	07	08-Y5	09	10	11	12	13	14					
<b>Soil Moisture Regime</b>	M (SHG)	M (SHG)	SHG (HG)	SHG (HG)	SHG (HG)	SHG (HG)	SHG (HG)	HG (SHG)	HG SHD					
<b>Mesoslope Position</b>	LW TO LV (MD)	LW TO LV (MD)	TO GU LW LV (MD)	TO GU LW LV	LV (TO)	LV (TO DP)	LV GU LW	LV (TO DP)	DP LV					
<b>Slope Gradient</b>	Gentle Level	Gentle Level	Gentle Level (Gentle)	Level	Level	Gentle Level	Level	Level	Level					
<b>Aspect</b>	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral					
<b>Parent Materials</b>	Mb	Mb FG Fb	Mb (Fb)	Fb	Fb	Fb (Lb)	Fb	Fb (Ob)	Ob OvFb FG					
<b>Soil Texture Class</b>	Medium	Medium (Coarse)	Medium	Coarse (Medium)	Coarse (Medium)	Variable	Variable	Variable	Organic					
<b>Important Features</b>			Seepage at depth	Seepage at depth	Seepage at depth	Seepage at depth	Seepage at depth	Water table 20-75 cm	Water table 0-35 cm					
<b>Successional Stage</b>	YS	MC (MS)	YS	MC YC	MS	MS	MC (YC)	MC	MC					
<b>Occurrence</b>	Scarce	Common	Uncommon	Common	Scarce	Uncommon	Uncommon	Scarce	Scarce					

**82 Bluebunch wheatgrass — Parsnip-flowered buckwheat**

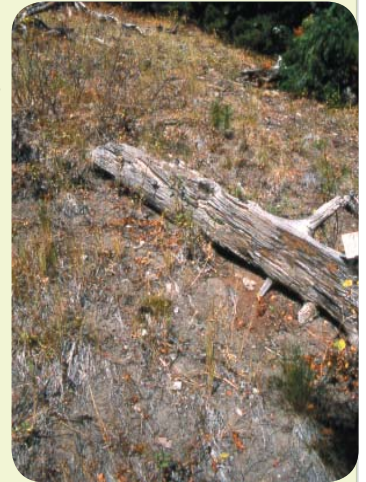
This unit is common and occurs on shallow soils on gentle or steep and warm upper slopes or crests. Exposed bedrock is sometimes present. The sparse to moderate herb layer is dominated by bluebunch wheatgrass. Other common species include parsnip-flowered buckwheat, compact selaginella, prairie sagewort and desert-parsley. The moss and lichen layer is sparse to moderate; common species include clad and pelt lichens. Some sites may have abundant awned haircap moss.

**83 Stiff needlegrass — Red three-awn**

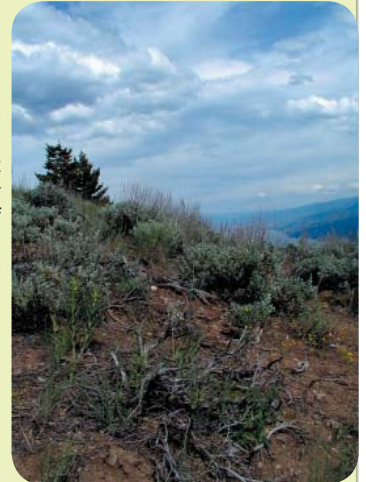
The 83 unit is very uncommon and is found on gentle or steep and warm middle and upper slopes. The herb layer is dominated by stiff needlegrass and red three-awn. Other common species include arrowleaf balsamroot, prairie sagewort, yarrow, silky lupine and yellow salsify. Mosses and lichens are sparse or absent.

**84-ES \$Needle and thread grass — Cheatgrass**

This early seral site unit is common and is found on gentle or steep middle and upper slopes. The extensive herb layer is dominated by needle-and-thread grass. Other common species include cheatgrass, prairie sagewort, bluebunch wheatgrass, parsnip-flowered buckwheat, snow buckwheat and Sandberg's bluegrass. Mosses and lichens are sparse or absent.

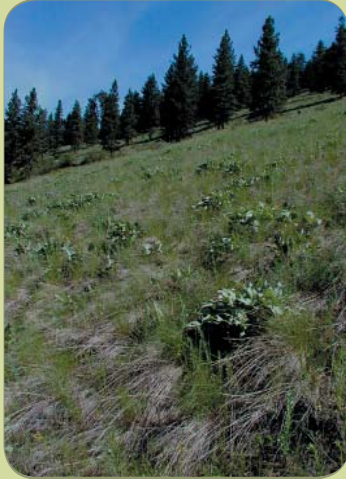
**84-MS \$Big sagebrush — Bluebunch wheatgrass**

The 84-MS site unit is common and is found on gentle or steep middle and upper slopes. Unlike the 84-ES unit, big sagebrush is common and abundant (>10%) and needle-and-thread grass is absent. The extensive herb layer is dominated by abundant bluebunch wheatgrass. Other common species include arrowleaf balsamroot, Sandberg's bluegrass, cheatgrass, junegrass and desert-parsley. Mosses and lichens are sparse or absent.



**84 Bluebunch wheatgrass — Balsamroot**

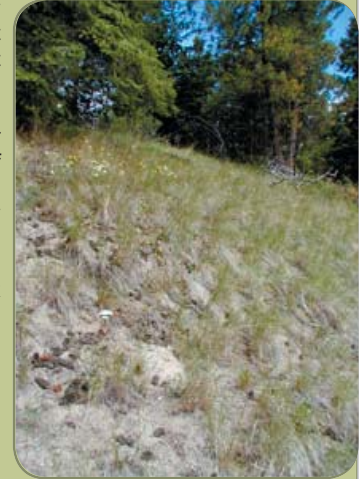
This late seral site unit is less common than the 84-ES and 84-MS units. It occurs on gentle or steep middle and upper slopes. Unlike the 84-MS unit, big sagebrush is absent. The herb layer is dominated by bluebunch wheatgrass (>10%). Other common species include arrowleaf balsamroot, parsnip-flowered buckwheat, junegrass, cheatgrass and silky lupine. Mosses and lichens are sparse or absent.

**85-MS \$Big sage — Idaho fescue**

This mid seral site unit is uncommon and is found on steep middle slopes. It is similar to the 84-MS unit in that big sagebrush is abundant (>10%). In addition, the herb layer is composed of many of the same species and includes abundant bluebunch wheatgrass, junegrass and cheatgrass. It differs in that Idaho fescue is abundant (>10%) and sometimes exceeds the cover of bluebunch wheatgrass. Lichens and mosses are sparse to absent.

**85 Bluebunch wheatgrass — Idaho fescue**

This uncommon late seral community is found on steep middle slopes. It is similar to the 85-MS unit except it lacks abundant big sagebrush. The herb layer is dominated by bluebunch wheatgrass and Idaho fescue. Other common species include arrowleaf balsamroot, parsnip-flowered buckwheat, yarrow, junegrass, silky lupine and umber pussytoes. Mosses and lichens are sparse or absent; common species include sidewalk moss and clad lichens.

**86-MS \$Bluebunch wheatgrass — Rough fescue**

The 86-MS unit is common and occurs on steep and cool or gentle middle and upper slopes. The herb layer is dominated by abundant bluebunch wheatgrass (>10%) and rough fescue (>10%). Other common species include yarrow, junegrass, and cheatgrass. Unlike drier units, mosses and lichens tend to be more abundant and ragged-moss, pelt and clad lichens and sidewalk moss are common species.



**86 Rough fescue**

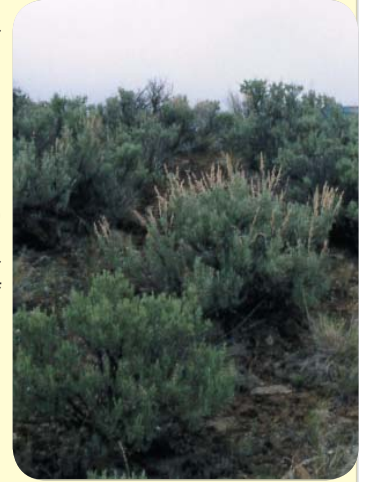
This site series is common and is found on steep and cool or gentle middle and upper slopes. It is similar to the 86-MS unit except bluebunch wheatgrass is much less abundant (<10%) and rough fescue is the most abundant species. Other common species include those found on drier sites and include parsnip-flowered buckwheat, yarrow, junegrass and old man's whiskers. Like the 86-MS unit, mosses and lichens are often present and include clad and pelt lichens and tufted thread-moss.

**81-ESa \$Kentucky bluegrass — Stiff needlegrass**

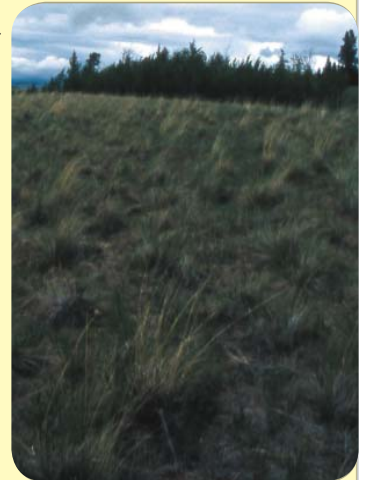
This early seral unit is common and occurs on gentle middle, lower and toe slopes. Common snowberry is often present in small patches. The extensive herb layer is dominated by Kentucky bluegrass. A variety of other herb species may be present and may include minor amounts of bluebunch wheatgrass, yarrow and silky lupine. The early successional species, stiff needlegrass, is often abundant. Mosses and lichens are sparse to absent.

**81-ESb \$Big sage — Kentucky bluegrass**

This early seral unit is common and occurs on gentle middle, lower and toe slopes. Unlike the 81-ESa unit, big sagebrush is common and abundant (>10%). Common snowberry may also be present in small patches. The herb layer is similar in that Kentucky bluegrass is the most abundant species (>20%) whereas stiff needlegrass may be common but is not abundant. Other common species include arrowleaf balsamroot, yarrow, silky lupine, tarragon and common dandelion. Mosses and lichens are sparse to absent.

**81-MS \$Bluebunch wheatgrass — Kentucky bluegrass**

This mid-seral site unit is common and is found on gentle middle, lower and toe slopes. Unlike the 81-Esb unit, big sagebrush is absent. Like the 81-ESa unit, stiff needlegrass may be present but the 81-ESa unit lacks abundant bluebunch wheatgrass (>10%) which may be as abundant as Kentucky bluegrass on 81-MS sites. Other common herbs include parsnip-flowered buckwheat, arrowleaf balsamroot, yarrow, junegrass, cheatgrass, silky lupine, yellow salsify and Idaho fescue. Mosses and lichens are sparse to absent..



**81 Idaho fescue**

This late successional site series is uncommon. It occurs on gentle middle, lower and toe slopes. Unlike the 81-MS unit, the successional species, Kentucky bluegrass, is sparse or absent whereas Idaho fescue is the most abundant species (>20%) and dominates the vegetation. Other common species include those found on earlier successional stages and include silky lupine, bluebunch wheatgrass, desert-parsley, yarrow and junegrass. Clad and pelt lichens are often present in minor amounts.

**51 Snowberry — Kentucky bluegrass**

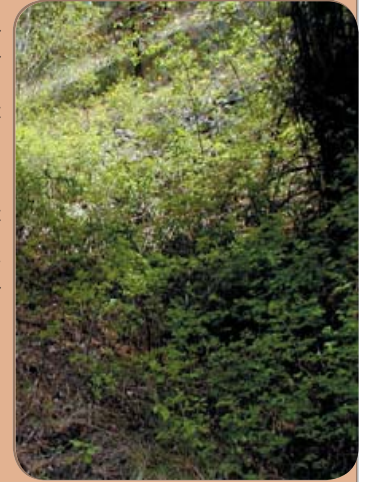
This shrub-dominated unit is uncommon and is found on gentle middle and lower slopes and level areas. Common snowberry is very abundant (>15%). Other common shrubs include choke cherry, rose and saskatoon. The herb layer is extensive and Kentucky bluegrass is often the most abundant species. Other herbs are sparse to absent. A sparse amount of ragged-moss is sometimes present.



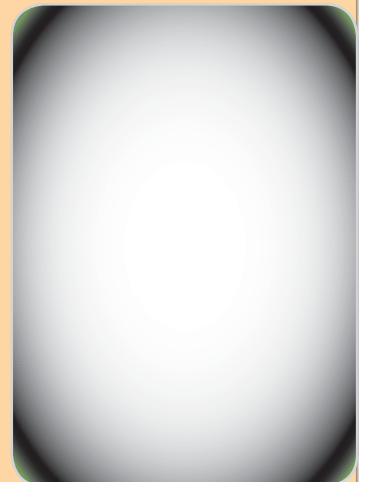
IDFxb1 - 31

**52 Snowberry — Pinegrass**

This is an uncommon unit that is found on gentle middle and lower slopes and level areas. It is similar to the previous unit in that common snowberry is often very abundant (>15%). Other common shrubs include birch-leaved spirea and tall Oregon-grape. The herb layer is sparse to moderate and the dominant species is pinegrass. Fireweed and blue wildrye are also frequently present. The moss and lichen layer is very sparse and sidewalk moss and ragged-moss are sometimes present.

**53 Snowberry — Hawthorn**

The 53 unit is very uncommon and is found on moist lower and toe slopes. Fd may be present as scattered individuals or patches (<10%). The extensive shrub layer is dominated by common snowberry, black hawthorn, Douglas maple and saskatoon. The sparse to moderate herb layer is variable and may include Kentucky bluegrass, common dandelion, pinegrass and sweet-scented bedstraw. Mosses and lichens are sparse to absent.



IDFxb1 - 32

**54 Dogwood — Rose**

This shrub unit is uncommon and is found on moist lower and toe slopes and gullies. The shrub layer is extensive and abundant species include common snowberry, Douglas maple, red-osier dogwood and paper birch. Other common species include rose, saskatoon, tall Oregon-grape and thimbleberry. The moderate herb layer is variable and may include blue wildrye, sweet-cicely, showy aster and star-flowered Solomon's-seal. Mosses and lichens are sparse to absent.



**72 Saskatoon — Sidewalk moss**

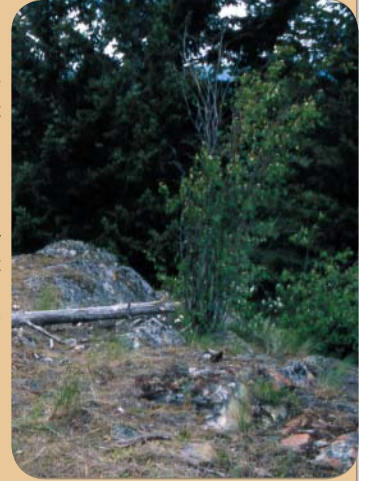
This talus unit is uncommon and occurs on middle and upper steep slopes. The substrate is composed of boulders and stones. Scattered Fd and Py may be present. The sparse shrub layer usually contains scattered saskatoon, common snowberry, Douglas maple and mock-orange. The herb layer is very sparse and may include trace amounts of bluebunch wheatgrass. The moss and lichen layer is variable; the most common species include sidewalk moss, clad and pelt lichens and heron's-bill moss.

**73 Selaginella — Clad lichens**

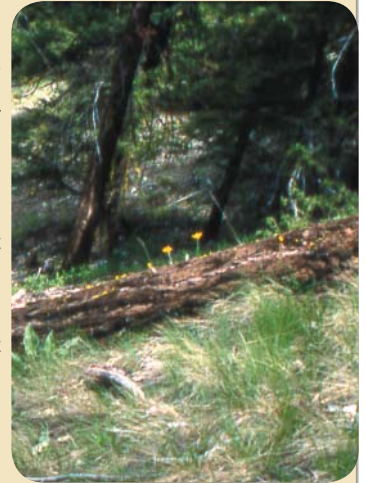
This unit is uncommon and is found on steep and warm or gentle middle and upper slopes and crests where exposed bedrock is present. Fd may occur as scattered individuals (<10%). The sparse shrub layer often contains saskatoon and common snowberry. The moderate herb layer is often dominated by compact selaginella or bluebunch wheatgrass. Other species include cheatgrass, shrubby penstemon, yarrow and junegrass. The sparse to moderate moss and lichen layer includes sidewalk moss, haircap moss, clad and pelt lichens

**02 FdPy — Juniper — Pinegrass**

This forested unit is uncommon and is found on steep and cool or gentle middle and upper slopes and crests where bedrock is at or just below the soil surface. The sparse forest canopy (>10%) consists of Py and Fd. The moderate shrub layer includes common juniper, saskatoon, common snowberry, birch-leaved spirea and tall Oregon-grape. The herb layer is sparse to moderate; the most common species include bluebunch wheatgrass, pinegrass and round-leaved alumroot. The moderate moss and lichen layer contains clad and pelt lichens, haircap moss and heron's-bill moss.

**03 FdPy — Mock-orange — Bluebunch wheatgrass**

This unit is uncommon and is found on gentle or steep and warm middle and upper slopes where bedrock is at or just below the soil surface. The sparse to moderate tree layer contains Fd and/or Py. The shrub layer is typically sparse and includes saskatoon and mock-orange. Unlike the 02 unit, the herb layer is extensive and is dominated by abundant bluebunch wheatgrass (>10%). Other common herbs include Idaho fescue, arrowleaf balsamroot, rough fescue, prairie sagewort and compact selaginella. The moss and lichen layer is typically sparse or absent.



**04 FdPy — Bluebunch wheatgrass — Balsamroot**

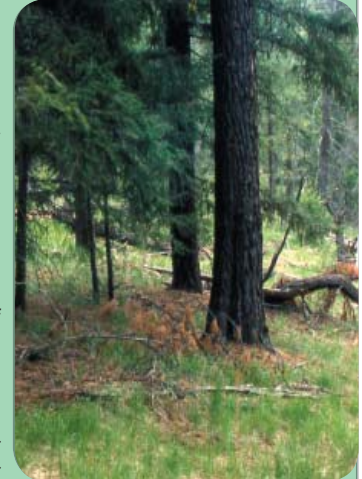
The 04 unit is common and occurs on steep and warm or gentle middle and upper slopes. Unlike the 02 and 03 units, exposed bedrock is absent. The sparse forest canopy consists of Fd and/or Py. The regeneration layer is sparse. The shrub layer is usually sparse and the most common species are saskatoon, common snowberry and tall Oregon-grape. The herb layer is sparse to extensive; bluebunch wheatgrass is often the most abundant species. Other common species include arrowleaf balsamroot, yarrow and spreading dogbane. The moss and lichen layer is typically sparse; the most common species include clad and pelt lichens.

**05 FdPy — Bluebunch wheatgrass — Pinegrass**

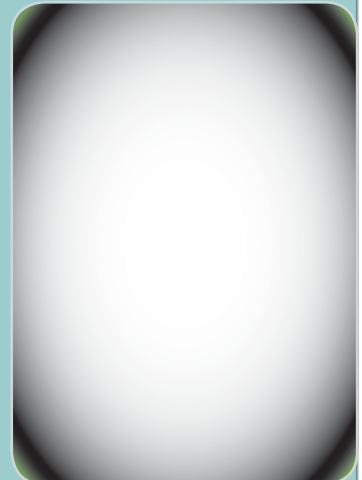
This common unit is found most often on middle and upper slopes on deep soils. The moderate forest canopy and sparse regeneration layer contains a mix of Py and Fd. The shrub layer is sparse to moderate and contains many of the same species found in drier units and includes saskatoon, common snowberry and birch-leaved spirea. The herb layer is moderate to extensive and is usually dominated by a mix of bluebunch wheatgrass and pinegrass. Other common species include arrowleaf balsamroot, rough fescue, kinnikinnick and yarrow. The moss and lichen layer is sparse and consists of sidewalk moss, clad and pelt lichens and ragged-moss.

**01 FdPy — Pinegrass**

The zonal site series occurs on gentle middle slopes and level areas. Fd is usually the dominant tree species although Py is often abundant and sometimes dominant. The sparse regeneration layer is dominated by Fd. The sparse to moderate shrub layer is similar to that of drier units and contains saskatoon, common snowberry, birch-leaved spirea and tall Oregon-grape. The extensive herb layer differs from drier units in the bluebunch wheatgrass and arrowleaf balsamroot are uncommon or absent. Instead, pinegrass dominates the herb layer (>10%) and heart-leaved arnica and showy aster are often present. The moss and lichen layer is sparse and resembles that of drier units.

**06 Fd — Feathermoss**

The 06 unit is uncommon. It occurs on steep and cool or gentle middle and lower slopes. The tree and regeneration layers are composed of Fd. Unlike drier units, Py is sparse or absent. The sparse to moderate shrub layer is similar to that of drier units although Douglas maple and falsebox are more frequently present. The herb layer is usually sparse but pinegrass is sometimes abundant. Unlike all other units, the moss layer forms an extensive carpet and is dominated by red-stemmed feathermoss. Other abundant species include step moss and heron's-bill moss.



**07-YS \$At — Snowberry — Kentucky bluegrass**

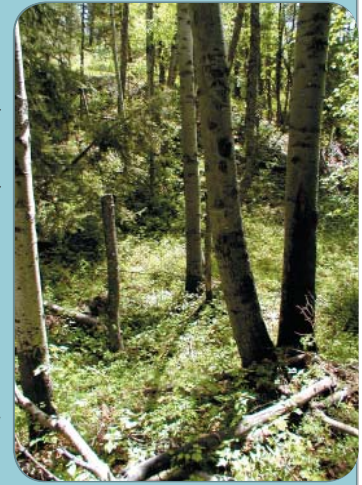
This seral unit is very uncommon and is found on gentle lower and toe slopes and level areas. The canopy consists of At. The shrub layer is sparse and contains common snowberry and rose. The herb layer is dominated by Kentucky bluegrass; other species are typically uncommon and sparse. The moss and lichen layer is sparse or absent.

**07 FdPy — Snowberry**

The 07 unit is common and occurs on gentle middle, lower and toe slopes and level areas. Fd dominates the tree layer and a minor amount of Py is often present. Fd is the dominant species in the sparse regeneration layer. The shrub layer is extensive and is dominated by abundant common snowberry. Other common species include saskatoon, birch-leaved spirea, tall Oregon-grape, rose and Douglas maple. The herb layer is variable both in composition and abundance. Pinegrass may be very abundant, sparse or absent. Other common species include heart-leaved arnica, showy aster, blue wildrye and false Solomon's seal. The moss and lichen layer is typically sparse and ragged-moss is the most

**08-YS \$At — Snowberry — Rose**

This seral unit is uncommon and occurs on gentle middle, lower and toe slopes, gullies and level areas where seepage is present. The canopy is dominated by At. A minor amount of Fd may be present. The extensive shrub layer is dominated by snowberry and rose. Other common species include saskatoon, tall Oregon-grape, Douglas maple and red-osier dogwood. Unlike the 07-YS unit, Kentucky bluegrass is uncommon and sparse or absent. The herb layer is variable and pinegrass, blue wildrye, sweet-cicely, star-flowered false Solomon's-seal, violets and sweet-scented bedstraw are common species. Mosses and lichens are sparse or absent.

**09 CwFd — Gooseberry — Sarsaparilla**

The 09 unit is common and is found on gentle lower and toe slopes, gullies and level areas where seepage is present. The forest canopy is dominated by Cw; minor Fd and Ep may be present. The shrub layer is sparse to moderate and falsebox, Douglas maple, red-osier dogwood, black gooseberry and thimbleberry are the most common species. The herb layer is typically sparse and the most common species include twinflower, sweet-scented bedstraw, star-flowered false Solomon's-seal, sweet-cicely, false Solomon's-seal and rattlesnake-plantain. The moss layer is typically sparse.



**10 ActEp — Snowberry — Douglas maple**

This seral unit is very uncommon and is found on toe slopes, level areas and depressions where seepage is present. It is associated with fluvial blankets that are occasionally subjected to flooding. The canopy is dominated by Act although Ep may also be abundant. The shrub layer is dominated by abundant common snowberry, Douglas maple and mock-orange. The herb layer is sparse and includes blue wildrye, violet, false Solomon's-seal, Kentucky bluegrass and heart-leaved arnica. Mosses and lichens are sparse or absent.

**11 Act — Dogwood — Snowberry**

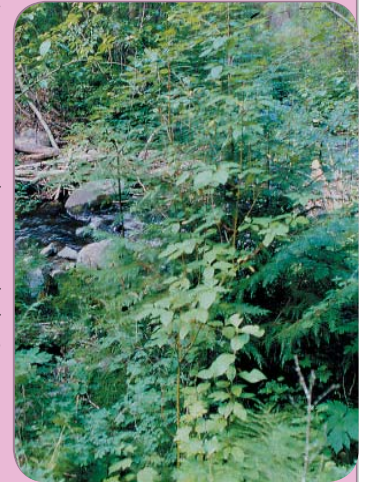
This mature seral unit is uncommon and is found on toe slopes, level areas and depressions where seepage is present. The forest canopy is dominated by Act. Fd and Ep may be present in minor amounts. The shrub layer is moderate to extensive and is dominated by common snowberry, red-osier dogwood and Douglas maple. Other common shrubs include black gooseberry, rose and saskatoon. The sparse herb layer may include false Solomon's-seal and star-flowered false Solomon's-seal. Mosses and lichens are sparse to absent.

**12 SxwFd — Dogwood — Snowberry**

The 11 site unit is uncommon and is found on lower slopes, level areas and gullies on fluvial deposits with seepage. The forest canopy may be dominated by Fd or Sxw. The sparse regeneration layer is usually dominated by Sxw. The shrub layer is extensive and the most abundant species include common snowberry, Douglas maple and red-osier dogwood. The moderate herb layer is sometimes dominated by twinflower. Other common species include sweet-cicely, violet, wood strawberry and mitrewort. Mosses and lichens are sparse or absent.

**13 Sxw — Horsetail**

This wet forested unit is very uncommon and is found on toe slopes, level areas and depressions where the water table is near the surface. The tree layer is usually dominated by Sxw. Fd is often present. The shrub layer is extensive and common snowberry, Douglas maple, red-osier dogwood, black gooseberry and thimbleberry are the most common species. The moderate to extensive herb layer is dominated by either common or wood horsetail. Other common species may include sweet-cicely, wild sarsaparilla, twinflower, sweet-scented bedstraw, cow-parsnip and soft-leaved sedge. The moss layer is variable; common species include ragged-moss, leafy moss and pelt lichens.



**14 Sxw — Alder — Soft-leaved sedge**

This site unit is very uncommon and is found on level areas and depressions where the water table is at or near the surface. The tree layer is sparse and is typically dominated by Sxw. The extensive shrub layer is dominated by mountain alder and red-osier dogwood; other common species include black gooseberry and northern blackcurrant. The moderate herb layer is variable; soft-leaved sedge or Dewey's sedge may be the dominant species. Other common species present in minor amounts include mitrewort, sweet-scented bedstraw and star-flowered Solomon's-seal. Leafy mosses occupy the sparse to moderate moss layer.

