

DESCRIPTIONS OF HABITAT TYPES AND
MAJOR SERAL COMMUNITY TYPES OF
IDAHO

Abies lasiocarpa/Actaea rubra Habitat Type
(Subalpine Fir/Baneberry Habitat Type)

ABILAS/ACTRUB (ABLA/ACRU)

Number Of Stands Sampled in Montana= 7

NOTE: The *Abies lasiocarpa/Actaea rubra* (subalpine fir/baneberry) habitat type has been documented in Idaho according to field surveys conducted in 1994. However, due to time constraints during the 1995 field season, homogeneous stand data could not be collected for this type. In the subsequent discussion, any references to physical site location and vegetation characteristics for this type in Idaho were interpreted from 1994 field surveys. The remainder of this description was taken from the Classification and Management of Montana's Riparian and Wetland Sites (Hansen and others 1995).

LOCATION AND ASSOCIATED LANDFORMS

The *Abies lasiocarpa/Actaea rubra* (subalpine fir/baneberry) habitat type is an incidental type at mid elevations in the mountains of central and eastern Idaho. Elevations of sampled sites range from 1,696 to 1,727 m (5,600 to 5,700 ft). This habitat type occurs on moist but drained alluvial terraces and lower slopes of V- and U-shaped canyons.

VEGETATION

Climax stands in Idaho are codominated by *Abies lasiocarpa* (subalpine fir) and *Pseudotsuga menziesii* (Douglas fir). Dominant shrubs often include *Cornus stolonifera* (red-osier dogwood), *Acer glabrum* (Rocky Mountain maple), and *Betula occidentalis* (water birch). Herbaceous species may consist of *Actaea rubra* (baneberry), *Poa pratensis* (Kentucky bluegrass), *Epilobium angustifolium* (fireweed), and *Geranium viscosissimum* (sticky geranium). Although *Actaea rubra* (baneberry) is present, it may not represent one of the primary understory species for this habitat type.

Climax stands in Montana are codominated by *Abies lasiocarpa* (subalpine fir), *Picea* spp. (spruce) and *Pseudotsuga menziesii* (Douglas fir). The shrub understory is dominated by *Spiraea betulifolia* (shiny-leaf spiraea) and *Symphoricarpos albus* (common snowberry). The herbaceous understory is dominated by *Carex geyeri* (elk sedge), *Arnica latifolia* (broadleaf arnica), *Actaea rubra* (baneberry), and *Thalictrum occidentale* (western meadowrue). *Actaea rubra* (baneberry) is the characteristic species and typically forms small clumps throughout the stands (Table 1). Table 1 reflects vegetation surveyed on sites in Montana only and may not accurately portray species composition and canopy cover for sites identified in Idaho but is provided here for reference purposes.

Table 1. Average canopy cover, range of canopy cover, and constancy for species in Montana recorded in late seral to climax stands of the *Abies lasiocarpa*/*Actaea rubra* (subalpine fir/baneberry) habitat type (number = 7 stands)

Species	% Canopy Cover		
	Average	Range	Constancy
Trees			
<i>Abies lasiocarpa</i> (subalpine fir)	32	20-40	100
<i>Larix occidentalis</i> (western larch)	20	0-20	20
<i>Picea</i> spp. (spruce)	45	0-60	80
<i>Pinus contorta</i> (lodgepole pine)	20	0-40	60
<i>Pseudotsuga menziesii</i> (Douglas fir)	31	0-60	80
Shrubs			
<i>Acer glabrum</i> (Rocky Mountain maple)	12	0-20	40
<i>Alnus sinuata</i> (Sitka alder)	1	0-1	20
<i>Amelanchier alnifolia</i> (western serviceberry)	1	0-3	60
<i>Berberis repens</i> (creeping oregongrape)	1	0-1	40
<i>Cornus canadensis</i> (bunchberry)	20	0-20	20
<i>Cornus stolonifera</i> (red-osier dogwood)	1	0-1	40
<i>Linnaea borealis</i> (twin flower)	1	0-1	40
<i>Lonicera involucrata</i> (twin-berry)	2	0-3	60
<i>Lonicera utahensis</i> (Utah honeysuckle)	1	0-1	80
<i>Menziesia ferruginea</i> (fool's huckleberry)	1	0-1	20
<i>Pachistima myrsinites</i> (mountain-boxwood)	3	0-3	20
<i>Physocarpus malvaceus</i> (mallow ninebark)	1	0-1	20
<i>Ribes lacustre</i> (swamp currant)	1	1-3	100
<i>Rosa acicularis</i> (prickly rose)	1	0-1	20
<i>Rubus parviflorus</i> (thimbleberry)	2	0-3	80
<i>Salix scouleriana</i> (Scouler willow)	1	0-1	40
<i>Sambucus racemosa</i> (red elderberry)	1	0-1	40
<i>Shepherdia canadensis</i> (Canada buffaloberry)	1	0-1	40
<i>Sorbus scopulina</i> (Cascade mountain-ash)	1	0-1	60
<i>Spiraea betulifolia</i> (shiny-leaf spiraea)	27	0-40	60
<i>Symphoricarpos albus</i> (common snowberry)	7	0-20	60
<i>Vaccinium globulare</i> (globe huckleberry)	12	0-20	40
<i>Vaccinium myrtillus</i> (dwarf bilberry)	1	0-1	20
Graminoids			
<i>Bromus vulgaris</i> (Columbia brome)	2	1-3	100
<i>Carex concinnoides</i> (northwestern sedge)	1	0-1	20
<i>Carex geyeri</i> (elk sedge)	12	0-20	40

<i>Festuca occidentalis</i> (western fescue)	1	0-1	40
<i>Melica subulata</i> (Alaska oniongrass)	2	0-3	40
Forbs			
<i>Actaea rubra</i> (baneberry)	13	1-20	100
<i>Angelica arguta</i> (sharptooth angelica)	1	0-1	20
<i>Aquilegia flavescens</i> (yellow columbine)	1	0-1	40
<i>Arnica cordifolia</i> (heart-leaf arnica)	1	0-1	20
<i>Arnica latifolia</i> (broadleaf arnica)	21	1-60	100
<i>Aster conspicuus</i> (showy aster)	1	0-1	60
<i>Aster engelmannii</i> (Engelmann's aster)	1	0-1	20
<i>Aster foliaceus</i> (leafy aster)	1	0-1	20
<i>Calypso bulbosa</i> (fairy-slipper)	1	0-1	20
<i>Campanula rotundifolia</i> (lady's-thimble)	1	0-1	20
<i>Corallorhiza maculata</i> (spotted coral-root)	1	0-1	20
<i>Disporum trachycarpum</i> (wartberry fairy-bell)	1	0-1	20
<i>Epilobium angustifolium</i> (fireweed)	1	0-1	60
<i>Erythronium grandiflorum</i> (glacier-lily)	1	0-1	60
<i>Fragaria vesca</i> (woods strawberry)	1	0-1	20
<i>Fragaria virginiana</i> (Virginia strawberry)	1	0-1	40
<i>Galium boreale</i> (northern bedstraw)	1	0-1	40
<i>Galium triflorum</i> (sweetscented bedstraw)	1	0-3	80
<i>Geranium richardsonii</i> (white geranium)	2	0-3	40
<i>Goodyera oblongifolia</i> (western rattlesnake-plantain)	1	0-3	80
<i>Heracleum lanatum</i> (cow parsnip)	2	0-3	40
<i>Hieracium albiflorum</i> (white-flowered hawkweed)	1	0-1	20
<i>Hydrophyllum capitatum</i> (ballhead waterleaf)	1	0-1	20
<i>Lathyrus ochroleucus</i> (cream-flowered peavine)	1	0-1	40
<i>Listera caurina</i> (western twayblade)	1	0-1	20
<i>Mitella stauropetala</i> (side-flowered mitrewort)	3	0-3	20
<i>Mitella trifida</i> (three-tooth mitrewort)	3	0-3	20
<i>Myosotis sylvatica</i> (wood forget-me-not)	1	0-1	20
<i>Osmorhiza chilensis</i> (mountain sweet-cicely)	1	1-3	100
<i>Osmorhiza occidentalis</i> (western sweet-cicely)	1	0-1	20
<i>Pedicularis bracteosa</i> (bracted lousewort)	1	0-1	60
<i>Pedicularis racemosa</i> (sicketop lousewort)	1	0-1	20
<i>Pyrola asarifolia</i> (pink wintergreen)	1	0-1	40
<i>Pyrola chlorantha</i> (green wintergreen)	1	0-1	20
<i>Pyrola secunda</i> (one-sided wintergreen)	1	1-3	100
<i>Pyrola uniflora</i> (woodnymph)	1	0-1	20
<i>Senecio pseud aureus</i> (streambank groundsel)	1	0-1	40
<i>Smilacina racemosa</i> (false spikenard)	1	0-1	60

<i>Smilacina stellata</i> (starry Solomon-plume)	1	0-3	60
<i>Streptopus amplexifolius</i> (clasping-leaved twisted stalk)	1	0-1	20
<i>Taraxacum officinale</i> (common dandelion)	1	0-1	20
<i>Thalictrum occidentale</i> (western meadowrue)	5	1-20	100
<i>Tiarella trifoliata</i> (trefoil foamflower)	1	0-1	20
<i>Trillium ovatum</i> (white trillium)	1	0-1	20
<i>Urtica dioica</i> (stinging nettle)	1	0-1	20
<i>Valeriana dioica</i> (northern valerian)	40	0-80	40
<i>Veratrum viride</i> (green false hellebore)	1	0-1	60
<i>Vicia americana</i> (American vetch)	1	0-1	40
<i>Viola adunca</i> (Hook violet)	1	0-1	20
<i>Viola orbiculata</i> (round-leaved violet)	1	0-3	80
<i>Xerophyllum tenax</i> (beargrass)	1	0-1	20
<i>Zigadenus elegans</i> (glaucous zigadenus)	1	0-1	20

Ferns and Allies

<i>Athyrium filix-femina</i> (ladyfern)	1	0-1	20
<i>Equisetum arvense</i> (field horsetail)	1	0-1	20
<i>Equisetum hyemale</i> (common scouring-rush)	1	0-1	20

SOILS

Most soils are Mollisols or Entisols (Fluvents). Soils commonly develop from noncalcareous alluvial parent material. Soil texture varies but is typically very cobbly silt loam or sandy loam. Water tables are less than 1 m (39 in) below the soil surface for some part of the growing season. Some sites have organic layers greater than 50 cm (20 in) in depth.

ADJACENT COMMUNITIES

The *Abies lasiocarpa/Actaea rubra* (subalpine fir/baneberry) habitat type is one of the drier wetland types in the *Abies lasiocarpa* series, second only to *Abies lasiocarpa/Galium triflorum* (subalpine fir/sweetscented bedstraw) which generally occupies drier zones. Adjacent upland sites support other *Abies lasiocarpa* (subalpine fir) habitat types while adjacent wetter sites include wetland habitat types from the *Abies lasiocarpa* series.

MANAGEMENT INFORMATION

Additional management information can be found in Appendix A.

Livestock

Grazing potential is low.

Timber

Timber productivity is moderate to high. *Picea* (spruce) regeneration appears to occur readily wherever the shrub layer is reduced. However, *Abies lasiocarpa* (subalpine fir) regeneration may be sporadic. When present, *Pinus con-*

torta (lodgepole pine) and *Pseudotsuga menziesii* (Douglas fir) may be highly productive. Potentially high water tables during the spring and early summer may restrict the use of heavy equipment.

Wildlife

Forage productivity for big game is moderate and cover is low to moderate. This type's moderate forage productivity and proximity to streams results in moderately heavy use by moose.

Soil Management and Rehabilitation Opportunities

In spring, when water tables are highest, soils in this habitat type are most susceptible to compaction; developmental activities should be planned with this problem in mind.

Recreational Uses and Considerations

Old growth stands with large diameter trees have high recreational and aesthetic values, but site development should take into account the difficulty of managing sites with high water tables.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

One additional classification system that is being used to describe/define riparian and wetland ecosystems is listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = forested wetland; Subclass = needle-leaved evergreen; Water Regime (nontidal) = temporarily flooded to intermittently flooded.

OTHER STUDIES

The *Abies lasiocarpa/Actaea rubra* (subalpine fir/baneberry) habitat type represents the wet end of the *Abies lasiocarpa/Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type described by Pfister and others (1977) for Montana and Steele and others (1983) for eastern Idaho and western Wyoming. Stands from the wet end of the *Abies lasiocarpa/Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type described by Pfister and others (1977) were used in defining the *Abies lasiocarpa/Actaea rubra* (subalpine fir/baneberry) habitat type.

***Abies lasiocarpa/Galium triflorum* Habitat Type (Subalpine Fir/Sweetscented Bedstraw Habitat Type)**

ABILAS/GALTRI (ABLA/GATR3)

Number Of Stands Sampled in Montana= 10

NOTE: The *Abies lasiocarpa/Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type is suspected to occur in Idaho, although no stands were observed during the 1994 and 1995 field seasons. This description was

taken from the Classification and Management of Montana's Riparian and Wetland Sites (Hansen and others 1995).

LOCATION AND ASSOCIATED LANDFORMS

The *Abies lasiocarpa*/*Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type is a minor type in the mountains of central and eastern Montana. Sites are located on moist valley bottoms and occasionally near seeps. In dry mountain areas, sites are confined to stream bottoms. It occurs at middle elevations from approximately 1,439 to 2,440 m (4,720 to 8,000 ft).

VEGETATION

Picea (spruce) rather than *Abies lasiocarpa* (subalpine fir) is usually the overstory dominant in all but the oldest stands of this habitat type. In those stands with large amounts of *Picea* (spruce), the stand structure data indicates that *Abies lasiocarpa* (subalpine fir) is potentially the climax dominant. *Pseudotsuga menziesii* (Douglas fir) and *Pinus contorta* (lodgepole pine) are present in seral stands. Characteristic undergrowth species are *Galium triflorum* (sweetscented bedstraw), *Osmorhiza chilensis* (mountain sweet-cicely), *Angelica arguta* (sharptooth angelica), *Pyrola secunda* (one-sided wintergreen), and *Smilacina stellata* (starry Solomon-plume) (Table 2).

Table 2. Average canopy cover, range of canopy cover, and constancy for species recorded in late seral to climax stands of the *Abies lasiocarpa*/*Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type (number = 5 stands)

Species	% Canopy Cover		
	Average	Range	Constancy
Trees			
<i>Abies lasiocarpa</i> (subalpine fir)	25	3-60	100
<i>Picea</i> spp. (spruce)	66	60-80	100
<i>Pinus contorta</i> (lodgepole pine)	12	0-20	40
<i>Populus tremuloides</i> (quaking aspen)	3	0-3	20
<i>Pseudotsuga menziesii</i> (Douglas fir)	20	0-20	20
Shrubs			
<i>Acer glabrum</i> (Rocky Mountain maple)	40	0-40	20
<i>Amelanchier alnifolia</i> (western serviceberry)	1	0-3	60
<i>Arctostaphylos uva-ursi</i> (kinnikinnick)	1	0-1	20
<i>Berberis repens</i> (creeping oregonrape)	2	0-3	80
<i>Chimaphila umbellata</i> (common Prince's pine)	1	0-1	20
<i>Clematis occidentalis</i> (Columbia clematis)	1	0-1	20
<i>Cornus canadensis</i> (bunchberry)	10	0-10	20
<i>Cornus stolonifera</i> (red-osier dogwood)	2	0-3	40
<i>Crataegus douglasii</i> (black hawthorn)	1	0-1	20
<i>Juniperus communis</i> (common juniper)	1	0-1	20

<i>Ledum glandulosum</i> (Labrador-tea)	3	0-3	20
<i>Linnaea borealis</i> (twinflower)	22	0-40	40
<i>Lonicera involucrata</i> (twin-berry)	2	0-3	60
<i>Lonicera utahensis</i> (Utah honeysuckle)	1	0-1	40
<i>Menziesia ferruginea</i> (fool's huckleberry)	3	0-3	20
<i>Prunus virginiana</i> (common chokecherry)	3	0-3	20
<i>Rhamnus alnifolia</i> (alder buckthorn)	3	0-3	20
<i>Ribes lacustre</i> (swamp currant)	1	0-1	80
<i>Rosa acicularis</i> (prickly rose)	1	0-1	60
<i>Rubus parviflorus</i> (thimbleberry)	3	0-3	20
<i>Shepherdia canadensis</i> (Canada buffaloberry)	3	0-3	20
<i>Spiraea betulifolia</i> (shiny-leaf spiraea)	8	0-20	60
<i>Symphoricarpos albus</i> (common snowberry)	8	0-20	60
<i>Vaccinium globulare</i> (globe huckleberry)	20	0-20	20
<i>Vaccinium myrtillus</i> (dwarf bilberry)	3	0-3	20
<i>Vaccinium scoparium</i> (whortleberry)	12	0-20	40

Graminoids

<i>Bromus carinatus</i> (mountain brome)	2	0-3	40
<i>Bromus ciliatus</i> (fringed brome)	1	0-1	20
<i>Bromus inermis</i> (smooth brome)	1	0-1	20
<i>Bromus vulgaris</i> (columbia brome)	1	0-3	60
<i>Calamagrostis canadensis</i> (bluejoint reedgrass)	1	0-1	20
<i>Calamagrostis rubescens</i> (pinegrass)	8	0-20	60
<i>Carex concinnoides</i> (northwestern sedge)	1	0-1	20
<i>Carex geyeri</i> (elk sedge)	1	0-1	40
<i>Carex leptalea</i> (bristle-stalked sedge)	1	0-1	20
<i>Elymus glaucus</i> (blue wildrye)	1	0-1	80
<i>Festuca occidentalis</i> (western fescue)	1	0-1	20
<i>Glyceria borealis</i> (northern mannagrass)	1	0-1	20
<i>Oryzopsis asperifolia</i> (roughleaf ricegrass)	3	0-3	20

Forbs

<i>Actaea rubra</i> (baneberry)	1	0-1	80
<i>Allium cernuum</i> (nodding onion)	1	0-1	20
<i>Angelica arguta</i> (sharptooth angelica)	1	1-3	100
<i>Aquilegia flavescens</i> (yellow columbine)	1	0-1	40
<i>Arnica cordifolia</i> (heart-leaf arnica)	3	0-3	60
<i>Arnica latifolia</i> (broadleaf arnica)	25	0-40	40
<i>Aster conspicuus</i> (showy aster)	14	0-40	60
<i>Aster engelmannii</i> (Engelmann's aster)	1	0-1	20
<i>Aster foliaceus</i> (leafy aster)	1	0-1	20
<i>Aster laevis</i> (smooth aster)	1	0-1	20

<i>Aster modestus</i> (few-flowered aster)	1	0-1	20
<i>Campanula parryi</i> (Parry's bellflower)	1	0-1	20
<i>Campanula rotundifolia</i> (lady's-thimble)	1	0-1	40
<i>Castilleja miniata</i> (scarlet paintbrush)	1	0-1	20
<i>Cerastium arvense</i> (field chickweed)	1	0-1	20
<i>Disporum trachycarpum</i> (wartberry fairy-bell)	1	0-1	60
<i>Epilobium angustifolium</i> (fireweed)	1	0-1	60
<i>Fragaria vesca</i> (woods strawberry)	1	0-1	20
<i>Fragaria virginiana</i> (Virginia strawberry)	1	0-1	80
<i>Galium boreale</i> (northern bedstraw)	1	0-1	60
<i>Galium triflorum</i> (sweetscented bedstraw)	1	1-3	100
<i>Geranium richardsonii</i> (white geranium)	1	0-1	60
<i>Geranium viscosissimum</i> (sticky geranium)	1	0-1	20
<i>Geum macrophyllum</i> (large-leaved avens)	1	0-1	20
<i>Goodyera oblongifolia</i> (western rattlesnake-plantain)	1	0-1	60
<i>Habernaria saccata</i> (slender bog-orchid)	1	0-1	20
<i>Hedysarum sulphurescens</i> (yellow hedysarum)	1	0-1	20
<i>Heracleum lanatum</i> (cow-parsnip)	1	0-1	40
<i>Hieracium albiflorum</i> (white-flowered hawkweed)	1	0-1	40
<i>Mitella nuda</i> (bare-stemmed mitrewort)	10	0-10	20
<i>Mitella stauropetala</i> (side-flowered mitrewort)	1	0-1	20
<i>Osmorhiza chilensis</i> (mountain sweet-cicely)	1	1-3	100
<i>Osmorhiza occidentalis</i> (western sweet-cicely)	1	0-1	20
<i>Pedicularis bracteosa</i> (bracted lousewort)	1	0-1	20
<i>Potentilla richardsonii</i> (Richardson's pondweed)	20	0-20	20
<i>Pyrola asarifolia</i> (pink wintergreen)	1	0-1	60
<i>Pyrola chlorantha</i> (green wintergreen)	1	0-1	60
<i>Pyrola secunda</i> (one-sided wintergreen)	1	1-3	100
<i>Pyrola uniflora</i> (woodnymph)	1	0-1	40
<i>Senecio pseud aureus</i> (streambank groundsel)	1	0-1	20
<i>Senecio triangularis</i> (arrowleaf groundsel)	1	0-1	40
<i>Smilacina racemosa</i> (false spikenard)	1	0-1	40
<i>Smilacina stellata</i> (starry Solomon-plume)	1	1-1	100
<i>Streptopus amplexifolius</i> (clasping-leaved twisted-stalk)	1	0-1	40
<i>Taraxacum officinale</i> (common dandelion)	1	0-1	40
<i>Thalictrum occidentale</i> (western meadowrue)	10	0-20	80
<i>Thalictrum venulosum</i> (veiny meadowrue)	1	0-1	20
<i>Trillium ovatum</i> (white trillium)	1	0-1	20
<i>Valeriana sitchensis</i> (Sitka valerian)	1	0-1	20
<i>Viola adunca</i> (Hook violet)	1	0-1	20
<i>Viola canadensis</i> (Canada violet)	1	0-1	40

<i>Viola orbiculata</i> (round-leaved violet)	1	0-1	60
<i>Xerophyllum tenax</i> (beargrass)	1	0-1	20
<i>Zigadenus elegans</i> (glaucous zigadenus)	1	0-1	20

Ferns and Allies

<i>Botrychium virginianum</i> (Virginia grape-fern)	1	0-1	40
<i>Equisetum arvense</i> (field horsetail)	25	0-80	80
<i>Equisetum hyemale</i> (common scouring-rush)	1	0-1	20

SUCCESSIONAL INFORMATION

Picea (spruce), *Pseudotsuga menziesii* (Douglas fir), and *Pinus contorta* (lodgepole pine) are usually present in seral stands.

On some sites where big game browse is fairly prevalent, big game have had a significant impact on secondary succession (Steele and others 1983). In some stands, overwintering moose may browse young *Abies lasiocarpa* (subalpine fir) to the point that succession is slowed dramatically. In these instances, the stands may superficially appear as *Pseudotsuga menziesii* (Douglas fir) or *Picea* (spruce) climax. Only close observation of these stands will reveal the remnants of *Abies lasiocarpa* (subalpine fir) as the indicated climax species. In other stands the greatest impacts may be on the major seral shrub species and *Populus tremuloides* (quaking aspen).

SOILS

Soils textures range from loams to silts. Gravels are largely absent from surface horizons. Sites may have surface water in early spring and generally remain moist throughout the summer. Duff layers averaged 6 cm (2.4 in) in depth. Soil reactions ranged from strongly acid to neutral.

ADJACENT COMMUNITIES

Wetter extremes of this habitat type are transitional to the *Abies lasiocarpa*/*Streptopus amplexifolius* (subalpine fir/clasping-leaved twisted stalk) habitat type, the *Abies lasiocarpa*/*Actaea rubra* (subalpine fir/baneberry) habitat type, or the *Abies lasiocarpa*/*Calamagrostis canadensis* (subalpine fir/bluejoint reedgrass) habitat type. Adjacent drier sites support a range of habitat types in the *Pseudotsuga menziesii* (Douglas fir), *Abies lasiocarpa* (subalpine fir), and *Picea engelmannii* (Engelmann spruce) series.

MANAGEMENT INFORMATION

Additional management information can be found in Appendix A.

Livestock

Forage value is moderate to high. Livestock may use this type for shade and bedding, especially where stands are near meadows and water. Grazing during wet periods, however, can churn the wet soil and destroy plant cover as well as limit conifer establishment.

Timber

Timber productivity is moderate. High water tables in spring may preclude logging activities at this time. Partial cutting generally favors *Abies lasiocarpa* (subalpine fir). *Picea* (spruce), *Pseudotsuga menziesii* (Douglas fir), and *Pinus contorta* (lodgepole pine) will be favored by complete stand removal, and may result in mixed stands depending upon the site and existing coniferous species.

Wildlife

Browse production and cover levels are good to excellent for elk, deer, bear, and moose. Good cover is also provided for upland game and small mammals. Overwintering moose can have a tremendous impact on seedlings of *Abies lasiocarpa* (subalpine fir) (see the discussion in the seral stages section of this habitat type). Reduction or elimination of the seral shrub species tends to hasten succession toward climax with less suitable food being available for big game (Steele and others 1983). In this case, logging or burning the stand may renew production of the browse species.

Soil Management and Rehabilitation Opportunities

Moist, fine textured soils are subject to early season compaction. Equipment should not be used on this type in spring or early summer when the soil is moist due to high water tables.

RELATIONSHIP TO OTHER CLASSIFICATION SYSTEMS

One additional classification system that is being used to describe/define riparian and wetland ecosystems is listed below along with the appropriate "type(s)" that best describes this particular habitat type or community type.

USDI Fish and Wildlife Service Wetland Classification (Cowardin and others 1979)

System = palustrine; Class = forested wetland; Subclass = needle-leaved evergreen; Water Regime (nontidal) = temporarily flooded.

OTHER STUDIES

This habitat type represents a finer subdivision of the *Abies lasiocarpa*/*Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type described by Pfister and others (1977) for Montana. The *Abies lasiocarpa*/*Galium triflorum* (subalpine fir/sweetscented bedstraw) habitat type from the 1977 document *Forest Habitat Types of Montana* by Pfister and others was redefined with some stands becoming part of either the *Abies lasiocarpa*/*Actaea rubra* (subalpine fir/baneberry) habitat type or the *Abies lasiocarpa*/*Streptopus amplexifolius* (subalpine fir/twisted stalk) habitat type described in this document.

Abies lasiocarpa/*Streptopus amplexifolius* Habitat Type (Subalpine Fir/Twisted Stalk Habitat Type)

ABILAS/STRAMP (ABLA/STAM2)

Number Of Stands Sampled = 4