

Pinus ponderosa / Juniperus communis Woodland

COMMON NAME	Ponderosa Pine / Common Juniper Woodland
SYNONYM	Ponderosa Pine / Common Juniper Woodland
PHYSIOGNOMIC CLASS	Woodland (II)
PHYSIOGNOMIC SUBCLASS	Evergreen woodland (II.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen woodland (II.A.4)
PHYSIOGNOMIC SUBGROUP	Natural/semi-natural (II.A.4.N)
FORMATION	Rounded-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.a.)
ALLIANCE	<i>Pinus ponderosa</i> Woodland Alliance

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is found in eastern Montana, the Bighorn Mountains in northern Wyoming, and the Black Hills of western South Dakota and eastern Wyoming.

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This community is widespread and was found throughout the study area.

ENVIRONMENTAL DESCRIPTION

Globally

This community is most often found on moderate north and west facing slopes (Hansen and Hoffman 1987, Hoffman and Alexander 1987, Hoffman and Alexander 1976). The soils are shallow and loamy.

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This community occurs on moderate to steep slopes (typically between 15 and 30 degrees), and on all aspects but southerly. Sites are underlain with granite and/or schist and rock outcrops are common.

MOST ABUNDANT SPECIES

Globally

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Short shrub	<i>Mahonia repens</i> , <i>Juniperus communis</i>
Herbaceous	<i>Carex inops</i> ssp. <i>heliophila</i> , <i>Lathyrus ochroleucus</i> , <i>Schizachyrium scoparium</i>

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<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Subcanopy	<i>Pinus ponderosa</i>
Short shrub	<i>Juniperus communis</i>

DIAGNOSTIC SPECIES

Globally

Pinus ponderosa, *Juniperus communis*., *Mahonia repens*, *Achillea millefolium*.

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Pinus ponderosa, Juniperus communis

VEGETATION DESCRIPTION

Globally

This community is dominated by *Pinus ponderosa* in the overstory. Other tree species that may be present are *Picea glauca* and *Populus tremuloides*. The canopy is usually moderately closed but can become nearly closed in stands that are not disturbed for long periods. There is a prominent low shrub layer whose most abundant component is *Juniperus communis*. This species covered an average of 25% (range of 4-42%) in 7 stands in the Black Hills of South Dakota and Wyoming (Hoffman and Alexander 1987). Total average cover by the shrub layer was 51% and by the herb layer was 8%. Other shrub species found in this community across its range are *Arctostaphylos uva-ursi*, *Mahonia repens*, *Spiraea betulifolia*, and *Symphoricarpos albus*. Typical herbaceous species are *Achillea millefolium*, *Carex inops* ssp. *heliophila*, *Schizachyrium scoparium*, *Fragaria* spp., and *Lathyrus ochroleucus* (McAdams et al. 1998).

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This vegetation type is dominated by *Pinus ponderosa* in both the canopy and subcanopy. Coverage and structure vary. Canopy cover often is in the 10 to 25% range, with subcanopy cover somewhat greater (25 to 60%). But it is not unusual to have coverages greater than 60% for one or both strata. Doghair patches are common in this type. Typically, the understory is relatively sparse. *Juniperus communis* occurs consistently in the short shrub stratum, but is rarely abundant. Herbaceous cover is often less than 10% and usually less than 25%. Species composition is variable. *Carex rossii* and *Danthonia spicata* frequently were found in this type.

OTHER NOTEWORTHY SPECIES

CONSERVATION RANK G4?

RANK JUSTIFICATION

DATABASE CODE C EGL000859

COMMENTS

Globally

The canopy in this type is usually moderately closed but can become nearly closed in undisturbed stands (i.e., where the natural disturbance regime has been disrupted).

The stands used to document the *Pinus ponderosa / Juniperus communis* Habitat Type described by Hoffman and Alexander (1987) and Hansen and Hoffman (1988) had very high basal area and densities for a woodland, possibly due to their sampling procedure. The dense structure may have affected the floristic makeup of the stands. Additionally, there is some ambiguity between this type as a forest or woodland; in increasingly dense stands, this type has >60% canopy closure.

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This community often occurs in mosaics with other pine communities, especially *Pinus ponderosa / Oryzopsis asperifolia* Woodland.

REFERENCES

Hansen, P. L. and G. R. Hoffman. 1988. The vegetation of the Grand River/ Cedar River, Sioux, and Ashland Districts of the Custer National Forest: A habitat type classification. General Technical Report RM-157. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 68 p.

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McAdams, A. G., D. A. Stutzman, and D. Faber-Langendoen. 1998. Black Hills Community Inventory, unpublished data. The Nature Conservancy, Midwest Regional Office, Minneapolis, MN.

Thilenius, J. F. 1970. An isolated occurrence of limber pine (*Pinus flexilis* James) in the Black Hills of South Dakota. *American Midland Naturalist* 84(2):411-417.