

VEGETATION DESCRIPTION FOR FORT LARAMIE NATIONAL HISTORIC SITE

NOTE: "*" Indicates a new formation to the National Vegetation Classification System

Populus deltoides / Symphoricarpos occidentalis Woodland

COMMON NAME	Eastern Cottonwood / Western Snowberry Woodland
SYNONYM	Cottonwood / Wolfberry - Western Rose Floodplain Woodland
PHYSIOGNOMIC CLASS	Woodland (II)
PHYSIOGNOMIC SUBCLASS	Deciduous woodland (II.B)
PHYSIOGNOMIC GROUP	Cold-deciduous woodland (II.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/semi-natural (II.B.2.N)
FORMATION	Temporarily flooded cold-deciduous woodland (II.B.2.N.b.)
ALLIANCE	<i>Populus deltoides</i> Temporarily Flooded Woodland Alliance
CLASSIFICATION CONFIDENCE LEVEL	1

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is found in western North Dakota, western South Dakota, and Wyoming.

Fort Laramie National Historic Site

This community occurs on the lower floodplain along the Platte and Laramie Rivers, with small isolated stands on the upper floodplain, along the highway north of the park, and north of the canal on the south edge of the park.

ENVIRONMENTAL DESCRIPTION

Globally

This community is on medium to coarse textured alluvial soils on the floodplains of major rivers. The floodplains are both seasonally inundated and subirrigated (Thilenius et al. 1995). The meandering erosional and depositional pattern of rivers maintains and influences this community along rivers (Hanson 1990). It is rarely found at higher elevations in the mountains of eastern Wyoming and western South Dakota (Johnston 1987).

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This community occurs on the lower floodplain adjacent to rivers, and occasionally on the upper floodplain as isolated stands. It occurs on level ground on alluvial soils.

MOST ABUNDANT SPECIES

Globally

Statum

Tree canopy

Shrub

Herbaceous

Species

Populus deltoides, Acer negundo, Fraxinus pennsylvanica

Symphoricarpos occidentalis

Elymus trachycaulus, Pascopyrum smithii

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<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Populus deltoides</i> , <i>Salix amygdaloides</i>
Subcanopy	<i>Fraxinus pennsylvanica</i> , <i>Populus deltoides</i> , <i>Acer negundo</i>
Short shrub	<i>Symphoricarpos occidentalis</i>

DIAGNOSTIC SPECIES

Globally

Populus deltoides, *Acer negundo*, *Fraxinus pennsylvanica*, *Symphoricarpos occidentalis*, *Pascopyrum smithii*

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Populus deltoides, *Salix amygdaloides*

VEGETATION DESCRIPTION

Globally

This community is typically dominated by a single deciduous tree species, *Populus deltoides*. In some stands other species, such as *Acer negundo* and *Fraxinus pennsylvanica*, may contribute to the canopy. The tallest trees exceed 15 meters. *Populus deltoides* is a pioneer species that requires moist, sparsely vegetated alluvium to become established from seed, therefore stands of this community are seral. The shrub layer is typically 0.5-1 m tall. It is dominated by *Symphoricarpos occidentalis* and commonly includes *Juniperus scopulorum* and *Rosa* spp. In Wyoming, *Chrysothamnus nauseosus* is present and increases with heavy grazing (Thilenius et al. 1995). The herbaceous layer usually includes *Pascopyrum smithii* and *Elymus trachycaulus*. Weedy species such as *Cirsium arvense*, *Melilotus officinalis*, *Taraxacum officinale*, and *Poa secunda* are very common, especially in the presence of grazing (Jones and Walford 1995, Thilenius et al. 1995). *Maianthemum stellatum* is abundant only where grazing is absent.

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This community typically is dominated by *Populus deltoides* with trees to 20 m or more in height. Large individuals of *Salix amygdaloides* occasionally occur and *Populus angustifolia* and *P. x acuminata* occasionally occur in this community. Canopy coverage can be sparse (5%) or as much as 50%. The subcanopy often contributes substantial cover. In some cases, it is difficult to split canopy from subcanopy due to a continuous range in tree height. *Fraxinus pennsylvanica*, *Populus deltoides*, and *Acer negundo* are the most common subcanopy species. *Symphoricarpos occidentalis* dominates the shrub stratum in some areas, but is often absent or poorly developed. A few small stands of *Prunus virginiana* occur in this community on the east side of the Laramie River west of the Fort Site. Herbaceous stratum composition is quite variable. Most species found in the understory of this community are also typical of *Spartina pectinata*, *Bromus inermis*, or *Pascopyrum smithii* Herbaceous Vegetation, or Upland Sand and Gravel Sparse Vegetation.

OTHER NOTEWORTHY SPECIES Information not available.

CONSERVATION RANK G2G3

RANK JUSTIFICATION

DATABASE CODE CEGL000660

COMMENTS

Globally

In eastern Montana, Hanson et al. (1990) describe a *Populus deltoides/Symphoricarpos occidentalis* type as a grazing-induced stage of the *Populus deltoides/Cornus sericea* type. This contrasts with information from Wyoming, where Thilenius et al. (1995) found that *Symphoricarpos occidentalis* decreases with grazing and *Chrysothamnus nauseosus* increases.

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Symphoricarpos occidentalis is often absent or poorly developed in this community. Stands of *S. occidentalis* without tree cover are treated as extensions of the nearby stands of *Populus deltoides*. In some stands, *P. deltoides* is absent, and *Salix amygdaloides* dominates the canopy.

REFERENCES

Hansen, P., K. Boggs, R. Pfister, and J. Joy. 1990. Classification and management of riparian and wetland sites in central and eastern Montana. Draft version 2. Montana Riparian Association, Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana, Missoula.

Johnston, B. C. 1987. Plant associations of region two. R2-ECOL-87-2. USDA Forest Service, Rocky Mountain Region, Lakewood, CO. 429 p.

Jones, G. P. and G. M. Walford. 1995. Major riparian vegetation types of eastern Wyoming. Grant Number 9-01136. Report Submitted to the Wyoming Department of Environmental Quality, Water Quality Division. Laramie, WY. 245 p.

Thilenius, J. F., G. R. Brown, and A. L. Medina. 1995. Vegetation on semi-arid rangelands, Cheyenne River Basin, Wyoming. General Technical Report RM-GTR-263. USDA Forest Service, Rocky Mountain Range and Forest Experiment Station, Fort Collins, CO. 60 p.