

Fraxinus pennsylvanica - Ulmus americana / Symphoricarpos occidentalis Forest

COMMON NAME	Green Ash - American Elm / Wolfberry Forest
SYNONYM	Ash - Elm / Wolfberry Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Deciduous forest (I.B)
PHYSIOGNOMIC GROUP	Cold-deciduous forest (I.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/semi-natural (I.B.2.N)
FORMATION	Lowland or submontane cold-deciduous forest (I.B.2.N.a.)
ALLIANCE	<i>Fraxinus pennsylvanica</i> - (<i>Ulmus americana</i>) Forest Alliance

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is found in southern Manitoba, North Dakota and South Dakota. Its range within these states and province is not known.

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This community occurs on the floodplain of the Belle Fourche River (see Comments below).

ENVIRONMENTAL DESCRIPTION

Globally

This community occurs on upland sites along steep north-facing slopes and, occasionally, along drainages or near the bases of north-facing slopes of upland sites. Soils are moist to dry and poorly drained. Girard et al. (1989) found this community on silty clay and clay soils.

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This community occurs on level sites on alluvial soils of the Belle Fourche River floodplain (see Comments below).

MOST ABUNDANT SPECIES

Globally

<u>Strata</u>	<u>Species</u>
Tree canopy	<i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i>
Short shrub	<i>Symphoricarpos occidentalis</i>
Herbaceous	<i>Andropogon gerardii</i> , <i>Carex spp.</i> , <i>Pascopyrum smithii</i>

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<u>Strata</u>	<u>Species</u>
Tree canopy	<i>Quercus macrocarpa</i> , <i>Fraxinus pennsylvanica</i>
Subcanopy	<i>Acer negundo</i> , <i>Prunus virginiana</i>

DIAGNOSTIC SPECIES

Globally

Fraxinus pennsylvanica, *Juniperus virginiana*, *Ulmus americana*, *Celtis occidentalis*, *Symphoricarpos occidentalis*, *Ribes americanum*, *Prunus virginiana*, *Elymus canadensis*

USGS-NPS Vegetation Mapping Program
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Quercus macrocarpa, *Fraxinus pennsylvanica* without *Pinus ponderosa*

VEGETATION DESCRIPTION

Globally

This community is a moderately to densely vegetated forest with an open to dense shrub understory. The average height of the tree layer was 4.7 to 6.7 meters in southcentral South Dakota (US Army Corps of Engineers 1979) and 8 meters in southwestern North Dakota (Girard et al. 1989). There is 25-30% bare soil and litter is present as trace amounts of the previous year's vegetation. The tree layer is dominated by *Fraxinus pennsylvanica* and *Ulmus americana*. Widely scattered old *Populus deltoides* occur as remnants of previous vegetation types. The shrub layer is dominated by *Symphoricarpos occidentalis*. Other shrubs that can be found with it are *Rosa woodsii*, *Juniperus scopulorum* (which can also be in the canopy or subcanopy), and *Prunus virginiana*. *S. occidentalis* tends to increase under grazing pressure and it may be almost the only shrub where grazing has been intense. Herbaceous species that may be found in this community are *Pascopyrum smithii*, *Andropogon gerardii*, *Poa* spp., *Carex* spp. (wide leaf), *Rumex* spp., *Carex filifolia*, *Anemone cylindrica*, *Oryzopsis micrantha*, *Galium* spp., *Anemone canadensis*, *Taraxacum* spp., *Lappula* spp., *Conyza canadensis*, and *Cirsium* spp.

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This vegetation type is dominated by deciduous trees, usually *Quercus macrocarpa* and *Fraxinus pennsylvanica*. *Acer negundo* occasionally is dominant. Canopy cover ranges from 10 to 50%. *Prunus virginiana* and *A. negundo* are common subcanopy species. The herbaceous stratum is often weedy. *Carex sprengelii* appears to be the most common native herbaceous species.

OTHER NOTEWORTHY SPECIES Information not available.

CONSERVATION RANK G?

RANK JUSTIFICATION

DATABASE CODE C EGL002082

COMMENTS

Globally

These description are taken, in part, from Steve Archer and Larry L. Tieszen, who in 1979 studied patterns and distributions of upland plant communities along the east bank of the Lake Francis Case Reservoir on the Missouri River in southcentral South Dakota (U.S. Army Corp of Engineers 1979). They recognized four types that are treated together here: 1. *Juniperus virginiana*-*Fraxinus pennsylvanica*-*Ulmus americana*, 2. *Fraxinus pennsylvanica*-*Juniperus virginiana*-*Symphoricarpos occidentalis*, 3. *Juniperus virginiana*-*Fraxinus pennsylvanica*-*Prunus virginiana*, 4. *Fraxinus pennsylvanica*-*Juniperus virginiana*-*Celtis occidentalis*. Species composition for this type may reflect a C-quality condition caused by grazing. Characteristic species are those given a dominance ranking in Archer's and Tieszen's plant community classification and gradient analysis. Dominance appears to be based on percent cover and frequency of occurrence.

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Quercus macrocarpa and *Fraxinus pennsylvanica* also occur together in the bottoms of upland draws. In these situations, however, hardwoods form the subcanopy with scattered trees of *Pinus ponderosa* making up the canopy (see *Pinus ponderosa* / *Quercus macrocarpa* Woodland).

REFERENCES

Girard, M. M., H. Goetz, and A. J. Bjugstad. 1989. Native woodland habitat types of southwestern North Dakota. Research Paper RM-281. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 36 p.

U.S. Army Corps of Engineers. 1979. A cultural resources reconnaissance of the federal lands on the east bank of Lake Francis Case, South Dakota. U.S. Army Engineer District, Corps of Engineers, Omaha, NE.