

Artemisia longifolia Badlands Sparse Vegetation

COMMON NAME	Longleaf Sage Badlands Sparse Vegetation
SYNONYM	Badlands Longleaf Sage Steppe
PHYSIOGNOMIC CLASS	Sparse Vegetation (VII)
PHYSIOGNOMIC SUBCLASS	Unconsolidated material sparse vegetation (VII.C)
PHYSIOGNOMIC GROUP	Sparsely vegetated soil slopes (VII.C.3)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (VII.C.3.N)
FORMATION	Dry slopes (VII.C.3.N.b)
ALLIANCE	ARTEMISIA LONGIFOLIA SPARSELY VEGETATED ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 3

USFWS WETLAND SYSTEM

RANGE

Theodore Roosevelt National Park

The *Artemisia longifolia* Badlands Sparse Vegetation is relatively rare in Theodore Roosevelt National Park. It appears to be more common in the North Unit where occupies the dark gray, bentonite outcrops among rapidly eroding badlands formations.

Globally

This type is found in the Badlands regions of the northern Great Plains.

ENVIRONMENTAL DESCRIPTION

Theodore Roosevelt National Park

Stands appear to be restricted to the level and nearly level bentonite clay ridges associated with the rapidly eroding badlands formations. Soil development is nonexistent. During rainfall events, the clay typically swells which substantially reduces water infiltration and increases runoff. Consequently, these sites tend to be more xeric than the surrounding badland slopes.

Globally

Stands, which may be less than 0.1 ha in size (at least in Badlands National Park, South Dakota, are found on sparsely vegetated eroding slopes or flat clay ridges. Some slopes may be acidic, others more alkaline. Soils are poorly consolidated clays and silts. Stands may be particularly common on bentonite clay bands found on the ridges and slopes of the badlands (Von Loh et al. 1999).

MOST ABUNDANT SPECIES

Theodore Roosevelt National Park

<u>Stratum</u>	<u>Species</u>
Short Shrub	<i>Artemisia longifolia</i>

Globally

<u>Stratum</u>	<u>Species</u>
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CHARACTERISTIC SPECIES

Theodore Roosevelt National Park

Artemisia longifolia

Globally

Artemisia longifolia, *Eriogonum pauciflorum*, *Gutierrezia sarothrae*

VEGETATION DESCRIPTION

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This is an extremely sparsely vegetated community type. *Artemisia longifolia* is often the only species present. Foliar cover is typically less than 5% and the shrubs are less than 0.25 m in height. The only other species found on these sites were *Chrysothamnus nauseosus* and *Pascopyrum smithii*.

Globally

The vegetation is sparse, often much less than 10% cover, and species richness is very low. Short shrubs are the most conspicuous. *Artemisia longifolia* is the most frequent, and it may be associated with *Atriplex nuttallii*, *Eriogonum pauciflorum*, or *Gutierrezia sarothrae*.

CONSERVATION RANK G?.

USGS-NPS Vegetation Mapping Program
Theodore Roosevelt National Park

DATABASE CODE CEGL002195

SIMILAR ASSOCIATIONS

Badlands Sparse Vegetation Complex (This badlands complex includes this association.)

Eroding Great Plains Badlands Sparse Vegetation (This type contains virtually no vegetation.)

COMMENTS

In Badlands National Park, South Dakota, a two hectare stand of *Atriplex canescens* is included in this type. It occupies a large badlands flat and erosion fan, consisting of hardpacked silty clay. This area collects and holds run-off water for a period

REFERENCES

Von Loh, J., D. Cogan, D. Faber-Langendoen, D. Crawford, and M. Pucherelli. 1999. USGS-NPS Vegetation Mapping Program, Badlands National Park, South Dakota (Final Report). Technical Memorandum No. 8260-99-02. U.S. Bureau of Reclamation Technical Service Center. Denver CO.