



Pine Ridge

landscape is a rocky escarpment that rises several hundred feet from the surrounding plains in Sioux, Dawes, and Sheridan counties in northwest Nebraska. The escarpment is



composed of sandstone, siltstones, and volcanic ash. Ponderosa pine woodlands and forest occupy many of the north- and east-facing slopes, and bottoms. Pine woodlands and mixed-grass prairie occupy the south- and west-facing slopes. Several streams, including the White River, Hat Creek, and Soldier Creek, originate in the Pine Ridge. The valleys of these northward flowing streams support deciduous woodlands and meadows in their floodplains.

Being a pine-dominated escarpment within the Great Plain's grassland, the Pine Ridge supports many at-risk species at the edge of their range, including two of the state's three populations of the Rocky Mountain bighorn sheep. There are several large protected areas within this landscape, including the Nebraska National Forest (Pine Ridge District), Fort Robinson State Park and several wildlife management areas.

Natural Legacy Demonstration Sites

Fort Robinson State Park - Nebraska Game and Parks Commission

The majority of Fort Robinson is rolling prairie uplands, but this large park has riparian areas and towering buttes and rock outcrops. Pine woodlands characteristic of the Pine Ridge provide habitat for the bighorn sheep and other at-risk species. A large part of the park was burned in 1989. Areas of the Pine Ridge have western mixed-grass prairie, ponderosa pine forest, dry-mesic ponderosa pine woodland, dry ponderosa pine open woodland and savanna. There is much potential for a variety of management types at the park.

Ponderosa Pine Wildlife Management Area - Nebraska Game and Parks Commission

The Ponderosa WMA is adjacent to U.S. Forest Service Property. There is potential for demonstration sites at a variety of state and federal properties in the Pine Ridge. Ponderosa has primarily coniferous forest cover with Squaw

Creek running through it with associated deciduous forest. Western mixed-grass prairie, ponderosa pine forest, dry-mesic ponderosa pine woodland, dry ponderosa pine open woodland, and savanna can be found in the area. Prescribed fire and other management techniques are conducted on Ponderosa Pine WMA and other nearby properties.

Stresses Affecting Species and Habitats

- ❖ Specific livestock grazing and haying practices that may reduce native plant diversity and promote uniform habitat structure.
- ❖ Invasive plant species, including cheatgrass, smooth brome, Kentucky bluegrass, eastern red cedar, leafy spurge, and Canada thistle
- ❖ Lack of grazing and prescribed fire on many public lands
- ❖ Increased densities of ponderosa pine and to a lesser extent eastern red cedar, because of a lack of fire.
- ❖ Housing and ranchette development
- ❖ Commercial logging practices that take old-growth trees, disturb groundcover, and create logging roads
- ❖ Catastrophic crown fires resulting from excess fuel accumulation.
- ❖ Pine bark beetle infestations
- ❖ Transmission of diseases between domestic sheep, goats, and Rocky Mountain bighorn sheep
- ❖ Poorly-sited utility-scale wind turbines

Conservation Strategies

- ❖ Implement planned grazing strategies on public and private lands to improve native plant diversity and vigor.
- ❖ Coordinate with landowners interested in using conservation easements to protect key areas for conservation
- ❖ Work with public and private landowners to implement prescribed, low-intensity surface fires to control exotic plants, reduce ponderosa pine and eastern red cedar densities, and reduce threat of crown fires. Dense stands of trees may require mechanical thinning prior to burning to reduce fuel loads.
- ❖ Conduct ecologically-sensitive tree thinning on private and public land
- ❖ Implement biodiversity management on public lands, including increased use of prescribed, low-intensity surface fire and planned grazing systems. A fire return interval of 5-10 years should be appropriate for public lands within the Pine Ridge.
- ❖ Treat pine infestations of pine bark beetles
- ❖ Support the development of local industries for pine wood products
- ❖ To avoid disease transmission, work with private landowners to limit domestic sheep and goats in areas used by bighorn sheep

- ❖ Work with wind energy companies to select turbine sites that minimize fragmentation and impacts to species. See Nebraska Game and Parks Commission guidelines for wind energy development.

Tier I At-risk Species

Plants:

Dog-parsley³

Animals:

Rocky Mountain Bighorn Sheep²

Swift Fox

Fringe-tailed Myotis²

Pierre Northern Pocket Gopher²

Bell's Vireo

Brewer's Sparrow

Ferruginous Hawk

Pinyon Jay²

Mottled Duskywing⁴

Regal Fritillary

Tawny Crescent¹

Aquatic Communities:

Headwater, Coldwater Stream*

Headwater, Warmwater Stream*

Terrestrial Communities:

Cottonwood-Peachleaf Willow Riparian Woodland

Cottonwood Riparian Woodland

Peachleaf Willow Woodland

Green Ash-Elm-Hackberry Canyon Bottom Woodland*

Ponderosa Pine Forest*

Dry-Mesic Ponderosa Pine Woodland*

Dry Ponderosa Pine Open Woodland and Savanna*

Pine-Juniper Scarp Woodland*

Buckbrush Shrubland

Buffaloberry Shrubland

Skunkbrush Sumac Shrubland

Chokecherry-Plum Shrub Thicket

Mountain Mahogany Shrubland

Freshwater Seep*

Western Sedge Wet Meadow*

Cattail Shallow Marsh

Western Sand Prairie*

Threadleaf Sedge Western Mixed-grass Prairie*

Northwestern Mixed-grass Prairie
Wheatgrass Western Mixed-grass Prairie
Western Floodplain Terrace Grassland
Northern Chalk Bluff and Cliff*
Western Sandstone Cliff*
Rock Outcrop*

* Priority for conservation in this BUL

¹ This is the only BUL where the species is known to occur

² Known to occur in only one other BUL

³ Known to occur in only two other BULs

⁴ Known to occur in only three other BULs