The Nebraska Sandhills

The Nebraska Sandhills, which encompass approximately 19,300 square miles of sand dunes stretching 265 miles across Nebraska, contain about 95% or 12.75 million acres of rangeland.

With dunes that are as high as 400 feet, as long as 20 miles, and slopes as steep as 25 percent, the Sandhills are the largest sand dune formations in the Western Hemisphere plus one of the largest grass-stabilized dune regions in the world. The large sand masses that were formed by blowing sand are now held in place and stabilized by vegetation that consists mainly of grasses.

Gudmundsen Sandhills Laboratory

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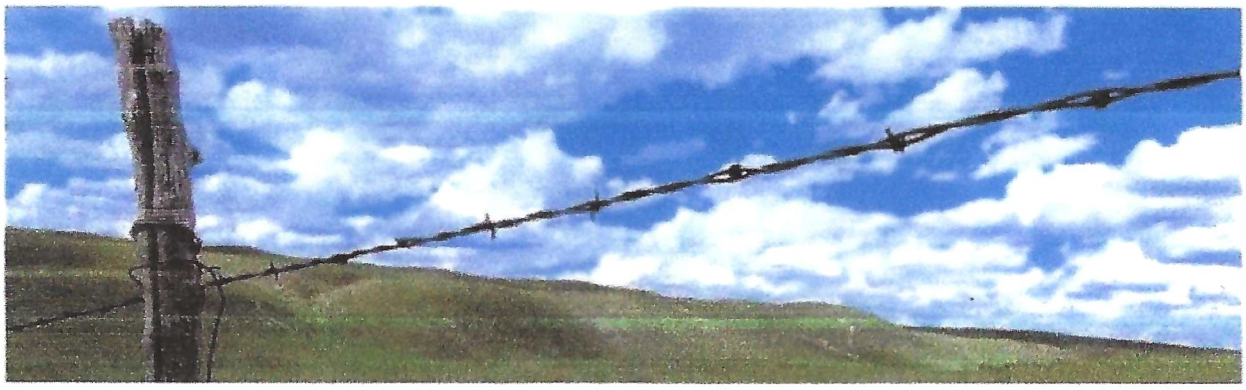

Precipitation in the Sandhills ranges from a yearly total of 23 inches in the east to slightly less than 17 inches in the west. The Sandhills are generally viewed as a semiarid region where sandy soils, low precipitation, and high evaporation rates support primarily dry grassland. However, the Sandhills also have numerous lakes and wetlands. Many of the valleys contain lakes and/or wet meadows that are supplied water by a groundwater reservoir (aquifer) that holds an estimated 700-800 million acre -feet of water. About 2.4 million acre-feet of spring-fed streamflow is discharged annually.

Approximately 720 species of plants are estimated to be growing without cultivation in the Sandhills with 670 of them identified as native species while approximately 50 were introduced from elsewhere (mainly Europe and Asia). The vegetation in the Sandhills is unique, not because it consists of many unusual species, but because it is a mixture of so many different types of vegetation. Because of the unique association of plants, it is better simply to recognize and call the region's vegetation a Sandhills type rather than calling it a western extension of the tallgrass prairie.

Although most of the vegetation in the Sandhills is considered native, most plants probably moved into the area during and after the retreat of the glaciers. Thus, many species that are abundant in the Sandhills are also common outside the area.

In recent years, increased cultivation has occurred primarily due in part to the introduction of center pivot irrigation. However, livestock grazing still dominates land use with over 535,500 head of beef cows calling the Nebraska Sandhills home.