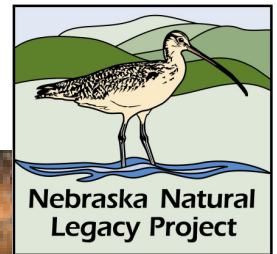


# Sandsage Prairie

landscape is composed of low rolling sand dunes and stream breaks in a four county area in far southwest Nebraska. Loess mixed-grass prairie and western mixed-grass prairie occur on the



breaks and bluffs of the Republican and Frenchman rivers, while sandsage prairie occurs on rolling sand dunes. The mixed-grass prairies are partially fragmented by cropland and degraded in some areas from some livestock grazing practices that reduce plant species diversity. Center pivot development has highly fragmented the sandsage prairies. The landscape is significant because it contains some of the last remnants of sandsage prairie and some of the highest quality loess mixed-grass prairies in the state. Historically, the Sandsage Prairie BUL contained lakes and wetlands, but these have disappeared in recent decades as the groundwater table has lowered, primarily because of center pivot irrigation. If the groundwater were restored, these wetland areas may reappear. Several higher quality small streams flow into the Republican River, including Buffalo Creek and Rock Creek. The stretch of the Republican River above Swanson Reservoir is not as degraded as lower reaches and still contains a braided channel and open sandbars. The largest protected areas in the landscape are Enders Reservoir and Swanson Reservoir Wildlife Management Areas.

## Natural Legacy Demonstration Site

### **Enders Reservoir - Nebraska Game and Parks Commission**

Enders Reservoir includes nearly 4000 acres of woodlands, short-grass, mixed-grass, and sagebrush prairie surrounding a large reservoir. This property has a prairie dog town and is one of the larger public properties with sandsage prairie. Sandsage prairie has proved to be a challenging habitat type to manage on private lands, so Enders Reservoir will be valuable demonstration site for showcasing sandsage prairie management.

## Stresses Affecting Species and Habitats

- ❖ Specific livestock grazing and haying practices that may reduce native plant diversity and promote uniform habitat structure in prairies, which can lead to exotic plant invasion and over-abundance of sandsage brush
- ❖ Spraying of sandsage prairies to reduce sandsage abundance which greatly reduces native plant diversity and degrades wildlife habitat
- ❖ Invasive plant species, primarily smooth brome and cheatgrass, in prairie
- ❖ Conversion of native grasslands to cropland, especially conversion of sandsage prairie to center pivot irrigation
- ❖ Groundwater withdrawal for center pivot irrigation, which affects water levels in wetlands and streams
- ❖ Poorly-sited utility-scale wind turbines

## Conservation Strategies

- ❖ Implement ecologically-sensitive grazing strategies and prescribed fire on native prairies, specifically sandsage prairie. The use of prescribed fire and specific grazing methods in sandsage prairies can likely reduce sandsage brush densities and eliminate the need to spray these sites to reduce brush.
- ❖ Work with landowners and others to restore groundwater levels and potentially restore wetlands in the sandsage prairie
- ❖ Work with the Natural Resource Conservation Service to eliminate the practice of herbicide spraying on private lands as a method of reducing sandsage abundance
- ❖ Implement prescribed burning on private lands as a method of reducing sandsage in sandsage prairies and controlling exotic cool-season grasses in mixed-grass prairies
- ❖ Remove invasive woody species, restore wetlands, and implement ecologically-sensitive grazing within the Republican River valley upstream from Swanson Reservoir
- ❖ Work with wind energy companies to select turbine sites that minimize fragmentation and impacts to native species. Wind farms should not be located within the recommended radius of prairie grouse leks and nesting grounds. Wind turbines should be placed in cropland or old fields where possible. Turbines can be halted temporarily during peak migration periods for bats and birds. Pre- and post-construction monitoring should be implemented. See Nebraska Game and Parks Commission guidelines for wind energy development.

## **Collaborative Conservation Opportunities across State Borders**

Coordinate with Colorado and Kansas conservation agencies and organizations, particularly efforts to benefit shared species of greatest conservation need on NE Sand Sage Prairie BUL/CO Midgrass Prairie, Sand Dune/Shrub Complex and Dry Crop/KS Shortgrass Prairie Conservation Region, especially Sand Sage Shrubland borders (i.e., Yuma County in CO and Cheyenne County in KS). Nebraska Tier I at-risk species identified also in the Colorado wildlife action plan as priority species include ferruginous hawk, Brewer's sparrow, greater prairie chicken, and short-eared owl. And, species identified also in the Kansas wildlife action plan include burrowing owl, ferruginous hawk, and short-eared owl. Species lists may be modified as new information becomes available. Novel methods for sufficient information exchange could aid the collaborative process.

Coordinated wildlife management actions (e.g., minimization of habitat fragmentation, increased plant biodiversity) should mirror priorities identified in Colorado's Comprehensive Wildlife Conservation Strategy and/or strategies identified in Kansas' Comprehensive Wildlife Conservation Plan. Collaborative conservation efforts across state borders should include researchers, federal and non-profit environmental program coordinators, and landowners, particularly those with properties extending over state lines. One such partnership is the Republican River Riparian Project (RRRP): a tri-state conservation initiative; its goal is to enhance the water quality and quantity within the Republican River Basin ([www.swrcd.org/RRRPP.html](http://www.swrcd.org/RRRPP.html)). In order to implement successful conservation actions beyond state boundaries, it will be necessary to identify other potential partners, as well as develop staffing and funding sources.

### **Tier I At-risk Species**

#### **Plants:**

Large-spike Prairie-clover  
Sandhill Goosefoot<sup>1</sup>

#### **Animals:**

Bell's Vireo  
Brewer's Sparrow  
Burrowing Owl  
Ferruginous Hawk  
Greater Prairie Chicken  
Loggerhead Shrike  
Short-eared Owl  
Ghost Tiger Beetle  
Regal Fritillary  
Plains Topminnow

**Aquatic Communities:**

Headwater, Cold Water Stream\*  
Headwater, Warm Water Stream\*  
Mid-order, Warm Water River

**Terrestrial Communities:**

Cottonwood-Peachleaf Willow Riparian Woodland  
Cottonwood Riparian Woodland  
Sandbar Willow Shrubland  
Buckbrush Shrubland  
Chokecherry-Plum Shrub Thicket  
Freshwater Seep  
Western Sedge Wet Meadow  
Cattail Shallow Marsh  
Loess Mixed-grass Prairie\*  
Sandhills Dune Prairie  
Sandsage Prairie\*  
Wheatgrass Western Mixed-grass Prairie  
Perennial Sandbar  
Sandbar/Mudflat  
Rock Outcrop

\* Priority for conservation in this BUL

<sup>1</sup> This is the only BUL where the species is known to occur

<sup>2</sup> Known to occur in only one other BUL

<sup>3</sup> Known to occur in only two other BULs

<sup>4</sup> Known to occur in only three other BULs