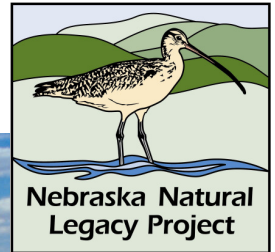


Saline Wetlands

landscape includes the saline wetlands that occur in the floodplains of Salt Creek, Little Salt Creek and Rock Creek and surrounding uplands. The wetlands' salinity is



derived from deeply buried salts brought to the soil surface through artesian groundwater flow. The marshes' vegetation is dominated by salt-tolerant species such as saltgrass, seablite, and saltwort. The majority of the uplands surrounding the marshes are in cropland, though there are a few tall-grass prairie remnants. Commercial and residential development is common in the landscape.

This landscape is significant in that it includes Nebraska's only saline wetland complex. Over 90 percent of the original saline wetlands within this landscape have been lost or highly degraded. The most viable remaining marshes occur in the two core areas in the upper reaches of the Little Salt Creek valley near Raymond and the Rock Creek valley near Ceresco. The Little Salt Creek wetlands contain the world's only known populations of the Salt Creek tiger beetle. This species is listed as state and federally endangered. The saline wetlands also contain the state's only known populations of the state-listed saltwort. Several protected areas occur within this landscape including Arbor Lake, Little Salt Creek, and Jack Sinn Wildlife Management Areas, the City of Lincoln's Shoemaker Marsh, Anderson Tract, and King Tract, the Lower Platte South NRD's Lincoln Saline Wetland Nature Center and Warner Wetland, and The Nature Conservancy's Little Salt Fork Marsh.

The Saline Wetlands Conservation Partnership has developed the *Implementation Plan for the Conservation of Nebraska's Eastern Wetlands*. The plan's goal is "no net loss of saline wetlands and their associated functions with a long-term gain in sustaining wetland functions through the restoration of hydrology, prescribed wetland management, and watershed protection." The plan has identified three categories of saline wetlands with Category 1 wetlands being of the highest quality.

Natural Legacy Demonstration Site

Saline Wetland Complex

The Saline Wetland Complex includes Jack Sinn WMA (NGPC), Arbor Lake (City of Lincoln), Whitehead Saline Wetlands (Lower Platte South NRD) and Frank Shoemaker Marsh (City of Lincoln). Eastern saline wetlands are considered critically imperiled. These locations have restored wetlands and habitat for listed species. Natural communities at this location include Eastern saline meadow and Eastern saline marsh. The Saline Wetland Conservation Partnership has been fundamental in facilitating collaboration between local entities to restore the few remaining saline wetlands.

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 reed canary grass and narrow-leaf cattail, with some European phragmites and salt cedar
- ❖ Urban and residential development
- ❖ Light pollution which may adversely impact Salt Creek tiger beetles
- ❖ Down-cutting of streams leading to decline in groundwater levels, loss of salts from the wetlands, and general alteration of wetland hydrology
- ❖ Wetland drainage and sedimentation
- ❖ Conversion of saline wetlands to freshwater wetlands
- ❖ Poorly-sited utility-scale wind turbines

Conservation Strategies

- ❖ Protect high-quality wetlands through use of conservation easements or voluntary fee title acquisition. The wetlands in need of protection have been prioritized by the Saline Wetland Conservation Partnership, along with identifying strategies for their protection. Priority should be given to the saline wetland complexes in the upper reaches of Little Salt Creek near TNC's Little Salt Fork Marsh and those on Rock Creek near Jack Sinn WMA where stream down-cutting is still manageable.
- ❖ Protect uplands in the watersheds surrounding these wetlands from development through use of conservation easements or other protection measures
- ❖ Use in-channel structures and restore natural meanders, where feasible, to stop stream down-cutting and subsequent head-cutting into wetlands
- ❖ Channel storm-water away from saline wetlands in urban areas.
- ❖ Reduce and prevent the number of wells that lower hydrologic pressure or interrupt the hydrologic system needed for saline ecology
- ❖ Continue stream and wetland water-quality monitoring programs

- ❖ Develop and implement plans to control reed canary grass and narrow-leaf cattail in saline wetlands, especially on conservation lands
- ❖ Intensify management (e.g., prescribed fire and planned grazing) on conservation lands and private lands to improve the quality of saline wetlands
- ❖ Remap saline plant communities within the BUL and conduct studies to investigate saline soil properties
- ❖ Work with developers to increase use of cluster development in areas surrounding saline wetlands, protecting even very small saline habitats
- ❖ Develop and implement methods to restore the hydrology of saline wetlands
- ❖ Evaluate and possibly implement stream-bank pull-backs to improve Salt Creek tiger beetle habitat
- ❖ Work with the City of Lincoln and developers to reduce light pollution near saline wetlands (monitor and review city lighting ordinance)
- ❖ This landscape should be restricted from wind turbine development as it has been recognized as critical habitat to the federally endangered Salt Creek tiger beetle. The effects of development and run-off from site construction could be a threat to the beetle.

Tier I At-risk Species

Plants:

Saltwort¹

Animals:

Bell's Vireo

Regal Fritillary

Salt Creek Tiger Beetle¹

Plains Harvest Mouse

Pimpleback

Aquatic Communities:

Headwater, Warm Water Stream

Terrestrial Communities

Sandbar Willow Shrubland

Freshwater Seep

Eastern Saline Meadow*

Cattail Shallow Marsh

Eastern Saline Marsh*

Saline/Alkaline Aquatic Wetland*

Upland Tall-grass Prairie

* Priority for conservation in this BUL

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