



Verdigris -

Bazile landscape

occupies the watersheds of Verdigris Creek and Bazile Creek in Cedar, Knox, Holt, and Antelope counties. This area in northeast Nebraska consists primarily of a mosaic of cropland, restored native grasslands, native tall-grass and mixed-grass prairie, and exotic cool-



season grasslands. Many of the native prairies are degraded from lack of fire and specific livestock grazing practices that reduce native plant species diversity and promote exotic plants. Many of the streams are spring-fed coldwater streams that have unique fish assemblages. Oak woodlands are common along the streams and in ravines.

The northern portion of the landscape includes the Missouri River bluffs and breaks. These areas support northern loess/shale bluff prairie, tall-grass prairie, and deciduous woodlands. The Santee Sioux Indian Reservation is located within this portion of the landscape. The Verdigris-Bazile watershed is also of cultural significance to the Ponca Tribe. Protected areas within the landscape include Niobrara State Park, Lewis and Clark State Recreation Area, and Bazile Creek, John O. Emerson, Greenvale, Bohemia Prairie, and Grove Lake Wildlife Management Areas.

Natural Legacy Demonstration Site

Niobrara River State Park - Nebraska Game and Parks Commission

Niobrara State Park overlooks the confluence of the Niobrara and Missouri Rivers. It has over 1200 acres that include grasslands, riparian forest, and wetlands. Managers work with local students to combat invasive species such as purple loosestrife. In this location, the Missouri River is un-channelized, so the braided river provides nesting habitat for interior least terns and piping plovers.

Stresses Affecting Species and Habitats

- ❖ Specific livestock grazing and haying practices that may reduce native plant diversity and promote uniform habitat structure

- ❖ Invasive herbaceous plant species in meadows, prairies, and woodlands, primarily reed canary grass, European phragmites, purple loosestrife, smooth brome, Kentucky bluegrass, and potentially garlic mustard
- ❖ Eastern red cedar, Russian olive, and other woody species encroachment of floodplains, woodlands, and prairies
- ❖ High-grade logging, especially harvest of mature cottonwoods
- ❖ Dairy and hog confinement development with potential for waste run-off
- ❖ Drainage and sedimentation of wetlands
- ❖ Conversion of native prairies to cropland
- ❖ Deer over-browsing
- ❖ Poorly-sited utility-scale wind turbines

Conservation Strategies

- ❖ Implement planned grazing strategies on private lands to reduce exotic cool-season grasses and improve native plant diversity and vigor
- ❖ Increase the use of prescribed fire and invasive tree cutting on private lands to reduce cedars, improve native plant diversity and improve grassland wildlife habitat.
- ❖ Implement measures to site dairy and hog confinements away from sensitive habitats and watersheds
- ❖ Protect key stretches of Verdigris Creek and Bazile Creek through conservation easements
- ❖ Restore selected cropland to grassland, including expansion of stream buffer programs
- ❖ Work with wind energy companies to select turbine sites that minimize fragmentation and impacts to native species. Avoid placing wind turbines in native prairies and woodlands, and on bluff tops where they cause higher bird and bat mortality than on open, flat ground. Wind farms should not be located within the recommended radius of prairie grouse leks and nesting grounds. 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 South Dakota conservation agencies and tribes, to improve habitat for at-risk species shared by both states including bald eagle, burrowing owl, greater prairie chicken, interior least tern, piping plover, whooping crane, Ottoe skipper, and regal fritillary, within the NE Verdigris-Bazile and SD Eastern Prairie Ecoregion (i.e., Charles Mix and Bon Homme counties in SD). Species lists may be modified as new information becomes available.

Coordinated habitat management actions (e.g., grazing strategies) should mirror medium to high priority conservation goals identified in the South Dakota 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. It will be necessary to identify and develop staffing and funding sources for implementation of conservation actions beyond state boundaries.

Tier I At-risk Species

Plants:

Prairie Moonwort⁴

Animals:

Bell's Vireo

Buff-breasted Sandpiper²

Burrowing Owl

Greater Prairie Chicken

Interior Least Tern

Piping Plover

Whooping Crane

Wood thrush

American Burying Beetle

Iowa Skipper

Ottoo Skipper

Regal Fritillary

Plains Topminnow

Plains Pocket Mouse⁴

Aquatic Communities:

Headwater, Cold Water Stream*

Headwater, Warm Water Stream*

Terrestrial Communities:

Cottonwood-Peachleaf Willow Riparian Woodland

Dry-Mesic Bur Oak Forest and Woodland*

Dry Upland Bur Oak Woodland*

Sandbar Willow Shrubland

Riparian Dogwood-False Indigobush Shrubland

Buffaloberry Shrubland

Freshwater Seep*

Eastern Cordgrass Wet Prairie

Eastern Sedge Wet Meadow

Cattail Shallow Marsh

Reed Marsh

Upland Tall-grass Prairie*
Lowland Tall-grass Prairie
Northern Loess/Shale Bluff Prairie*
Great Plains Gravel-Cobble Prairie*
Perennial Sandbar
Sandbar/Mudflat
Northern Chalk Bluff and Cliff*

* 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