



Prairie Monitoring at Pipestone National Monument

Importance: *Remnant prairie, Sioux quartzite prairie and restored prairie managed since 1937*

The tallgrass prairie community embodies a culturally significant historic background to the Pipestone quarries. Today, 160 acres of virgin tallgrass prairie remain in the monument with an additional 80 acres of restored prairie. Sioux quartzite prairie at Pipestone NM represents one of the few intact examples of a globally rare plant community.

Long Term Monitoring: *Achieving goals in three prairie types¹*

Plant community monitoring detects and quantifies change in species diversity, composition and structure in each community. The Heartland Inventory and Monitoring Network sampled paired transects within three distinct prairie community types. Scientists assess species frequency and foliar cover (area within the shadow of a plant) to inform monument managers of changes in the communities.



Figure 1: Pipestone NM prairies represent healthy native communities.

Status and Trends: *Functioning native plant communities*

The restored prairie is beginning to approximate the native prairie in terms of species richness. The Sioux quartzite prairie continues to persist and benefit from active management addressing invasive species. Additionally, scientists found that:

1. Native plants dominate the prairies, but nonnative grasses still threaten the native community.
2. Park managers have effectively removed common buckthorn (*Rhamnus cathartica*) from the prairies, during the last decade.
3. The quality of management in the three prairie communities has contributed to the effective interpretation of the monument's rich history.

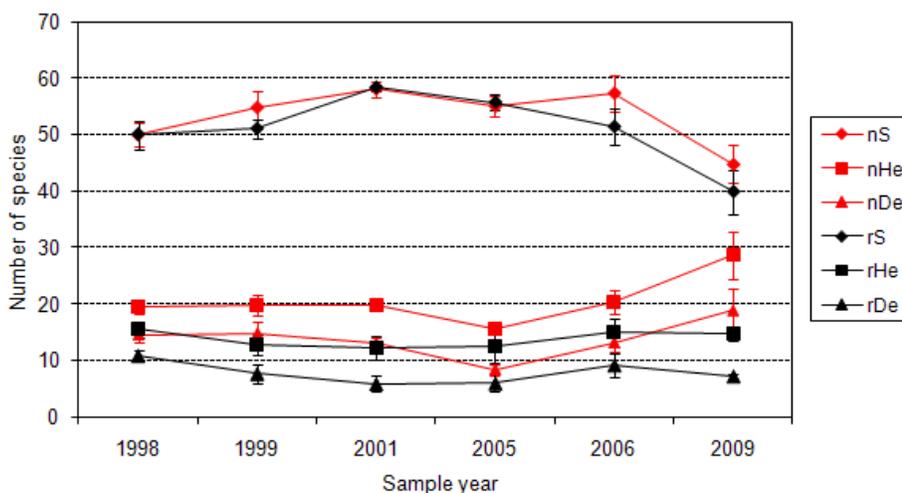


Figure 2: Comparison of restored (black) and native (red) tallgrass prairie site species richness (S) and two measures of species diversity (square and triangle) show that restored prairie began to approximate the native prairie in richness and diversity.

Heartland Inventory and Monitoring Network
National Park Service. Visit
www.nps.gov/im/units/htln/index

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¹ James, K. M.. 2011. Vegetation community monitoring at Pipestone National Monument, Minnesota: 1997-2009. Natural Resource Data Series NPS/HTLN/NRDS—2011/145. National Park Service, Fort Collins, Colorado.