



**SITE-SPECIFIC MANAGEMENT SHEET
TIER-3 RESOURCE MANAGEMENT PROPERTY**

Property Name: Morgan Coulee Prairie

Property Designation or Type: State Natural Area

SNA Designation Number: 205

Property Location: Pierce County

Real Estate:

Project boundary acreage: 572

Fee acres owned: 58

Dedicated acres: 54 (File #D030 (1988))

Easement acres: 0

Federal aid interest: None

Land use agreements: None

Maps

- A. Project Boundary
- B. Existing Cover Types

Property Manager: **Dean Edlin, West Central Ecologist**
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Prepared By (District Ecologist):

Name: Dean Edlin

Title: Conservation Biologist

Date: 4/28/2016

Reviewed/Approved By: (Bureau)

Name: Erin Crain-Sullivan

Title: Deputy Division Administrator Fish, Wildlife, & Parks

Date: 4/28/2016

Approved by Natural Resources Board: Date: May 25, 2016

A. Regional and Property Assessment

- 1. General Property Description (topography, soils, vegetation, water resources):** The second largest dry prairie in the west central region, Morgan Coulee Prairie extends for over a half-mile along a steep, south-facing bluff in a coulee opening onto the Rush River valley. The large expanse of relatively undisturbed dry prairie is broken up with scattered islands of bur oak savanna dominated by open-grown, gnarly oaks and shallow wooded draws. Limestone outcrops are scattered about the area and support a community of lichens and ferns. Dominant grasses include big and little blue-stem, side-oats and hairy grama, Indian grass, needle grass, prairie dropseed, and several muhly grasses. The forbs are equally diverse, highlighted by showy species such as asters, milkweeds, white and purple prairie-clover, blazing-star, Great Plains lady's-tresses, and prairie larkspur. Wild bergamot, bastard-toadflax, and western sunflower are found under the oaks. Much of the prairie is remarkably free of shrubs; those present include hazelnut, bittersweet, smooth sumac, and dogwoods. The Morgan Coulee project is unique biologically when compared with any other state property. The rapid transition from a thin soiled dry prairie through narrow ecotones to the most plant diverse maple basswood forest is unknown anywhere else in the state. Morgan Coulee probably has more plant species per square mile than any other square mile in the state. In addition, the fractured dolomite over a thick sandstone provides the recharge and filtering of ground water essential for numerous high quality springs that feed the trout-rich Rush River.
- 2. Ecological Landscape:** [Western Coulee and Ridges EL](#) is characterized by its highly eroded, unglaciated topography with steep sided valleys and ridges, high gradient headwaters streams, and large rivers with extensive, complex floodplains and terraces. It offers the best opportunities in the state to maintain many of southern Wisconsin's natural communities. Many rare species have been documented here due to the diversity, scale, types, condition and context of the natural communities present.
- 3. Ownership and Adjacent Land Uses:** Remnant prairie, agriculture, tree farm, residential, and secondary road
- 4. Property Management Issues, Trends and Needs:**

Invasives: Bush honeysuckle, common buckthorn, siberian elm, garlic mustard, sweet clover, and dame's rocket are known to occur on this property. An effort is made to control priority invasive species on an annual basis.

Forestry/Silviculture: No current opportunities exist to use commercial timber harvest to help reach ecological goals for the property. If new parcels are acquired then timber harvest will be evaluated. Fuelwood harvest permits may be used (accessible areas near roads) to reduce heavy fuels that could inhibit fire prescriptions.

Prescribed Burning: An intensive prescribed fire regime will be needed to help reach ecological goals for the property. Burn History: Spring burns were conducted in 1989, 1991, 1992, 1995, 1997, and 2006.

5. **Facility/Amenity development:**
 - a. Existing: None
 - b. Future: None

6. **Endangered, Threatened, Special Concern Species or Habitats, and wildlife Species of Greatest Conservation Need:** The NHI database currently lists 3 state threatened plants, and 4 special concern plants as occurring within the general vicinity of the property. Likely habitat is present on this property for most of these species. For detailed data, see Appendix A.

7. **Conservation Opportunity Area(s):** Rush River Bluffs & Floodplain (11.18).

8. **Easements:** None.

9. **Land use Agreements:** None.

10. **Significant Cultural and Archaeological Features:** State Natural Areas may contain historic Native American or Euro-American sites. Activities with potential to disturb archaeological sites will only be undertaken after consultation with the DNR Archaeologist. Any sites with cultural or historical value will be managed in accordance with guidance and statutory requirements (see ss. 44.40 and DNR Manual Code 1810.10). See Appendix B for detailed information.

11. **Refuges and other Closed Areas:** None.

12. **Primary Public Use:** Recreational uses such as hiking, fishing, skiing, hunting, trapping, scientific research, wild edibles collection, and wildlife viewing are allowed. Reference the State Natural Areas [Visitation](#)

[Guidelines](#) and the [property's specific webpage](#) for more information.

13. **Biotic Inventory Needs:** New and updated records for flora and fauna tracked in the Natural Heritage Inventory are routinely submitted by DNR staff, volunteers, partners, and the general public. Currently no additional plant or vertebrate inventory needs have been identified beyond normal monitoring including the established SNA Site Inspection protocol. There is however a lack of knowledge regarding prairie dependent invertebrate diversity and potential impacts to these species through management techniques such as prescribed fire, mowing, and grazing. Research is needed to help determine both the diversity of invertebrates at these remnant sites and especially the impacts of management techniques. The Department acknowledges this and is moving forward with research to address this to help improve management outcomes for these species.

B. Property Purpose and Goals/ Management Objectives and Prescriptions

1. **Property Purpose and Goals:**
 - a. **Purpose:** The purpose of the State Natural Areas (SNA) Program is to protect outstanding examples of Wisconsin's native landscape of natural communities, significant geological formations and archeological sites. Natural areas are valuable for research and educational use, the preservation of genetic and biological diversity, and for providing ecological benchmarks for determining the impact of use on managed lands. They also provide habitat for numerous rare plants and animals.
 - b. **Goal:** Manage the site as a reserve for dry prairie and oak opening, and as an ecological reference area.
2. **Management Objectives by Natural Community Type:**
 - a. Restore approximately 24 acres of oak woodland, 20 acres of oak opening, and 14 acres of dry prairie.
 - b. Maintain a continuum of fire-dependent native communities from dry prairie and oak opening to oak woodland.
 - c. Create overstory conditions that allow enough light to penetrate the canopy and reach the forest floor to stimulate light-dependent understory oak opening and oak woodland species that are currently suppressed from inadequate light.
 - d. Expand the size of remnant dry prairie openings to maintain conditions favorable to native prairie vegetation.

- e. Develop and maintain natural transitions between different plant communities. Reduce hard edges between different cover types.
- f. Increase the diversity and abundance of native dry prairie, oak opening, and open woodland vegetation and associated animal species with emphasis on rare species.
- g. Maintain or increase existing populations of Species of Greatest Conservation Need.
- h. Restore and maintain oak opening and oak woodland to provide long term hard mast food sources and habitat for wildlife and game species such as white-tailed deer and wild turkeys.
- i. Expand the size of remnant dry prairie openings to provide thermal cover and an important late winter food source for white-tailed deer, wild turkeys, and other wildlife.
- j. Prevent introduction of new invasive species, and ensure long-term limitation of the spread, reproduction and impact of existing invasive species.
- k. Restore and maintain open areas around appropriate rock structures as an important habitat component for herptiles.
- l. Retain ground juniper as an important habitat component for herptiles.
- m. Retain snags as important habitat features, unless they conflict with other objectives (such as hazard trees near roads, or prescribed fire hazards).

3. Management Prescriptions by Natural Community Type

- a. The ecological characteristics of the site will be primarily shaped by an intensive fire management program. Prescribed fire will be used to restore and maintain a continuum of fire-dependent native communities from dry prairie and oak opening to oak woodland.
- b. In the oak openings and oak woodlands the native dominant tree species (primarily oaks) are managed passively. However, some thinning of the canopy, understory manipulation, and shrub control may be needed to mimic natural disturbance patterns.
- c. In the dry prairies, the native species are managed actively through tree/shrub control using cutting, brushing, and especially fire to mimic natural disturbance patterns. Occasional fire-tolerant oaks, hickories, and native shrubs such as hazelnut may be retained at low densities.
- d. Contain or eradicate invasive species through the use of department approved manual, chemical, biological, and mechanical practices, as well as prescribed fire.

- e. Leave appropriate unburned refugia for remnant prairie dependent invertebrates within prescribed burn units.
- f. Girdle aspen that are on, and adjacent to, dry prairie or oak openings.
- g. Follow Incidental Take Protocols for listed species.
- h. Consider impacts to both reptiles and prairie invertebrates regarding both timing and ignition techniques of prescribed burns.
- i. Increase access to the site for management purposes through access easements or land purchases.
- j. Continue outreach to secure volunteer site stewards to help reach management objectives and strengthen the joint public/private partnership.
- k. For additional guidance, see the Xeric Prairie, and Oak Savanna, State Natural Areas Management Guides (WDNR, 2010).

4. Special Management Issues and/or constraints

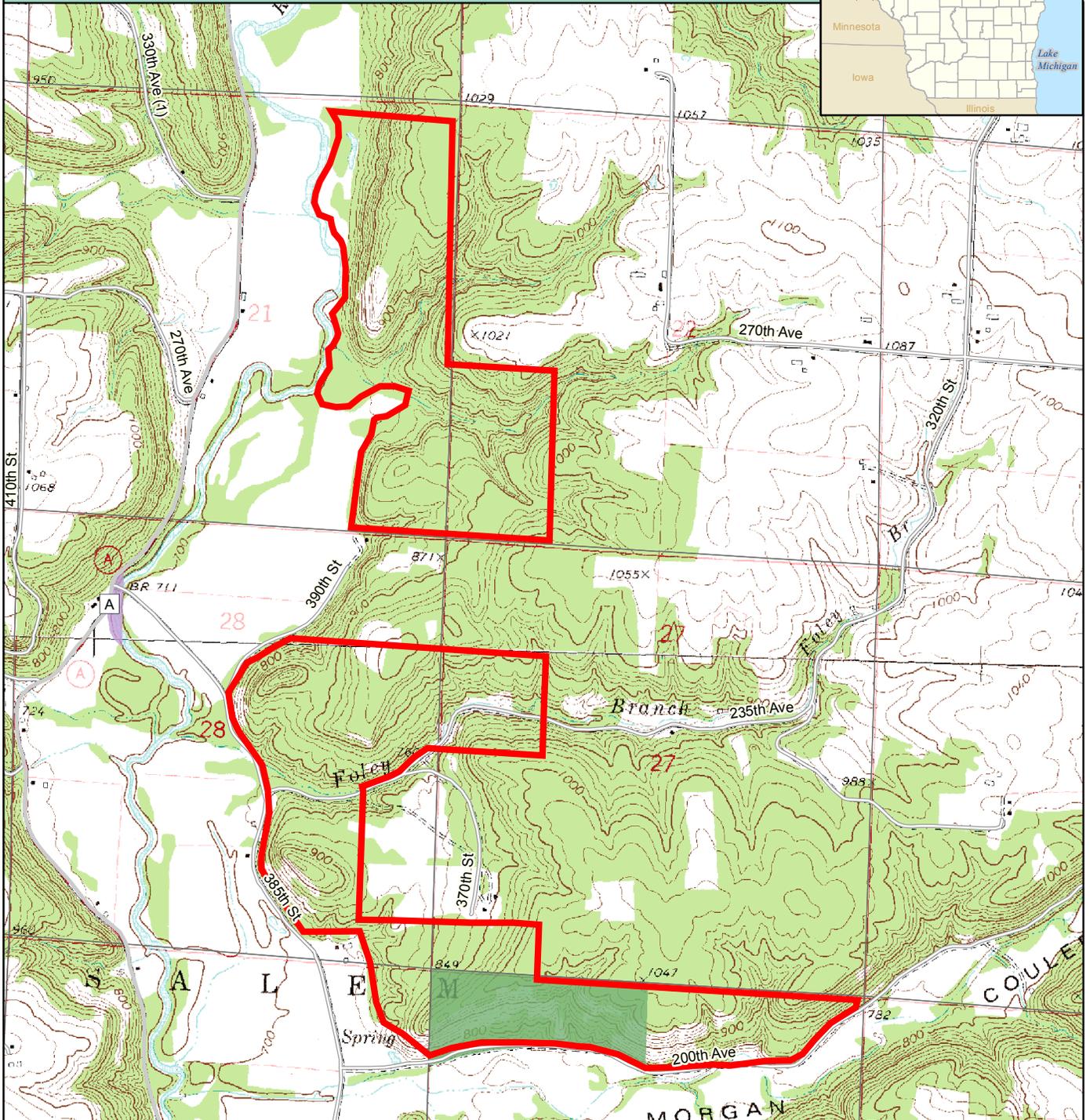
- a. Access to suppress wildfires is allowed
- b. Salvage of trees after a major wind event can occur if the volume of woody material inhibits fire prescriptions.
- c. Roadside easement area may be managed sporadically by township.
- d. Augmentation of the ground layer after careful review and documentation would only add species that historically would have been found on the site, using seeds or plugs from local genetic material. Follow the steps below based on seed availability:
 - 1. Collect seed on-site, distribute to depauperate areas.
 - 2. Collect seed from remnant sites within 50 miles east/west and 25 miles north/ south.
 - 3. Purchase seed from local nurseries who can identify source location that meets the about criteria. Consult with NHC Botanist to ensure appropriateness of any nursery introductions.

Table 1: Current Facilities or Infrastructure

Type of Facility	Total (number/length)	Management Activities	Management Issues and Constraints
Roads – public	None		
Roads – maintenance/service	None		
Parking lots	None		
Boat landings	None		
Designated trails	None		
Dikes, ditches	None		
Dams	None		
Other			

C. Additional Comments:

Morgan Coulee Prairie State Natural Area PROJECT BOUNDARY



-  Project Boundary
-  DNR Owned
-  DNR Easement



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Bureau of Natural
Heritage Conservation

Jun 08, 2016

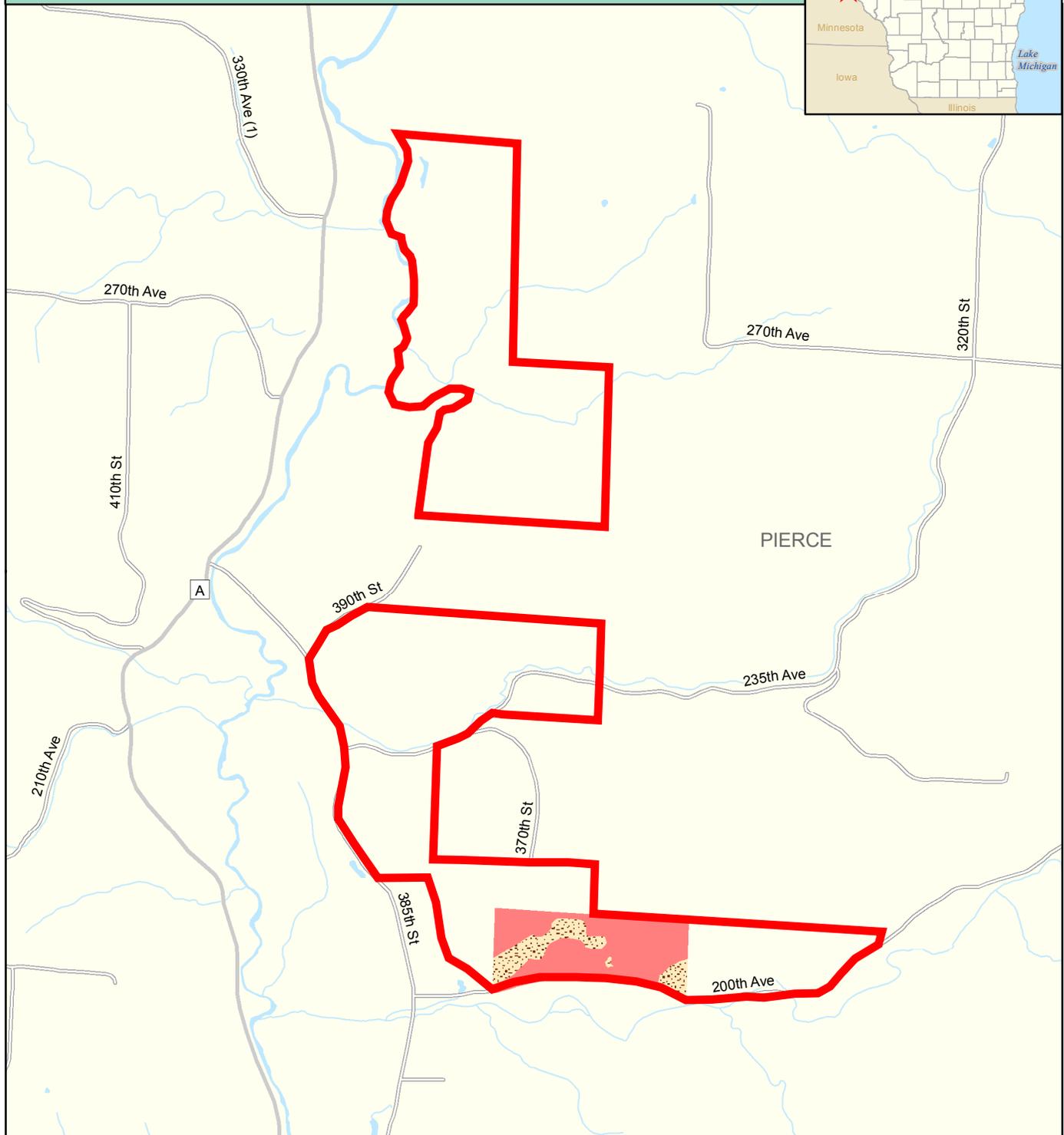
SNA Tier 3 dmh

MAP A

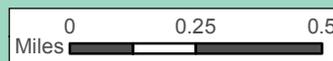
The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.

Morgan Coulee Prairie State Natural Area

EXISTING COVERTYPES



-  Project Boundary
-  Dry Prairie
-  Oak



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Bureau of Natural Heritage Conservation
May 26, 2016

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MAP B

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