Prairie Restoration Policy at Prairie Acre and Neighboring Schools

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1. Introduction

The purpose of this report is to facilitate an academic study of the prairie restoration policy at Prairie Acre and similar sites to better understand how policy affects prairie restoration. Its case study format informs a comparison and analysis that includes each site’s respective policies. The report concludes with policy suggestions, based on the results of the study, that are intended to assist in the restoration effort at Prairie Acre.

Importantly, there are a number of policy factors that this report does not address. Namely, it does not consider any state or federal level policy. Because every case exists within a university setting, the decision was made to exclusively analyze university level policy in an effort to stay topical. The study of state and federal level prairie restoration policy might be an area to consider for future studies. Similar policies across many of the sites we studied include high levels of public access to the site, emphasizing the educational aspect of the site, utilizing similar management strategies and a commitment to the preservation of the native species and ecological processes taking place. However, few of these policies were codified in a document available to the public. The future of Prairie Acre may ultimately be decided as the current restoration effort unfolds. It is our hope that the information contained in this report will aid future discussion as it pertains to prairie restoration policy at the site.

Therefore, we recommend the following policy for Prairie Acre:
1. Tie Prairie Acre to an institution to ensure continuity of management and maintenance
2. Institute regular educational programming
3. Establish a clearly-defined management and maintenance strategy
4. Seek certification as a City Park Green Zone
5. Expand Prairie Acre to the triangle at the intersection of Sunflower Road, Sunnyside Avenue, and Indiana Street
6. Seek registration on the National Register of Historic Places

2. Methods
Site selection for this project was made based upon university locations with prairie restoration projects similar to Prairie Acre. Location was important to ensure continuity with the ecosystem of northeastern Kansas, so we chose to make our location selections based upon geographic distance limited within 300 miles from Lawrence. Ultimately, we decided to study the prairie restoration projects at Bethel College, the University of Nebraska-Lincoln, the University of Nebraska-Omaha and Grinnell College. After the sites were selected, we conducted online research and email interviews with the site managers of each site. The interview questions were designed to address questions outlined in the Prairie Acre Restoration Plan of 2014 and determine the plans, regulations and financial incentives present at each site. The full list of questions asked can be found in the appendix. After completing the online research and individual interviews, we used the information to develope the case studies of each site. We then used the case studies to develop the comparison and analysis section. Both a case and policy comparison matrix can also be found in the appendix. Finally, we formulated policy recommendations for future consideration at Prairie Acre based upon the best practices determined by the case studies.

3. Policy Case Analyses

3.1 University of Kansas
Est. 1865
Lawrence, KS
Number of students:~28,000
Public 4-year University

3.1.1 Project Overview
Established in the spring of 1932, Prairie Acre (Fig 1.1) was dedicated to “Nature’s sweet fashion of making Her own garden” for the purpose of “preserving the significance of the prairie hillside for future generations.” It’s most prosperous years as a remnant came in the decades
following its dedication through the early 1960s. Ultimately, however, Prairie Acre fell into disrepair in the late 1960s. What once was a diverse site of 80-100 native prairie species had deteriorated to merely 28 species by 1992, leading to a call for restoration in the late 1980s (“Prairie Tales”).

Prairie Acre has seen a varying degree of improvement since the first call for restoration. Invasive species of trees were removed to allow sunlight to reach the site in 1992, irregular burnings have taken place and The Prairie Acre Restoration Plan was formulated in the spring of 2014 (“Prairie Tales”). As well, the Environmental Studies Capstone course and other courses administered through the Environmental Studies department are now also facilitating the restoration of the site. Prairie Acre also receives funding through the on-campus Center for Sustainability and through donations to KU Endowment.

3.12 Policy Structure

- **Burning:** Burning the Prairie Acre requires permits from the Lawrence Fire Department. There is no official university policy regulating the administration or facilitation of prescribed fires at the site (Severin). The Prairie Acre Restoration Plan calls for controlled burns in March of 2015 and 2016 and subsequent controlled burns every 3 to 4 years (Brandenburgh, J., et al.).

- **Land use:** Guidance for land use is dictated in the 2014-2024 Campus Master Plan. As part of the plan, Prairie Acre is identified a community outdoor tradition that will be perpetuated and preserved (Severin).

- **Management and maintenance:** Management and maintenance is guided by the 2014-2024 Campus Master Plan and is overseen by Operations and Maintenance (Severin).
● **Signage**: All signage on campus is regulated by the Campus Sign Committee. Any new signage at the site will require approval from the committee and should be coordinated with the Office of Design and Construction Management (Severin).

### 3.13 Policy Summary

Policy at Prairie Acre includes plans and regulations. There are no available financial incentives. Funding is not guaranteed and must be raised or budgeted for by the KU Center for Sustainability and/or KU Endowment. Burning Prairie Acre is supported and administered by individuals through the KU Center for Sustainability. New Signage for the site is also supported and has been planned by the Signage group in the Capstone Course. Land use, management and maintenance is guided by the aforementioned 2014-2020 Campus Master Plan. Prairie Acre will be maintained and managed by the campus landscaping staff and “faculty will continue to incorporate monitoring and other functions into their courses” (Severin). As well, the Campus Heritage Plan includes Prairie Acre as a significant landscape to be considered in a potential bid to be included in the National Register of Historic Places (Bruce, Jeffrey L., et al.).

### 3.2 Bethel College, Kansas

**Est. 1887**  
**Newton, KS**  
**Number of students:** ~500  
**Private, 4-year Liberal Arts College**

#### 3.21 Project Overview

Bethel College has several prairie restoration projects, but the subject of this case study is a 10 acre site (“Re-seeding begins”) right on campus (Fig 1.2). Prior to its restoration, the site had been a crop field for about a century. The site was last harvested in 2006, after which the corn stalks were mowed and restoration work begun over the winter of 2007. Funding for the first three years of the project was obtained through a grant from the Kingsbury Family Foundation. Current funding comes from “a combination of alumni donations to a restricted
Biology Department account, intramural grants provided to students for summer research and funds provided to the Biology Department by a natural gas pipeline company in compensation for damages resulting from a pipeline installation at one of the College’s natural areas” (Piper). To keep funding solvent they have kept low operating costs by relying on a volunteer labor, several seasonal student assistants and help from the grounds crew. According to site manager Dr. Jon Piper, “ongoing funding needs have been minimal.”

When Dr. Piper first proposed the restoration project, the site was on the periphery of Bethel’s campus. However, subsequent development near the site has increased foot traffic and drawn more people to the area. The site is now adjacent to a walking trail that was created after the prairie was restored and an informational kiosk provides additional information which draws further attention to the site.

The site is primarily for educational purposes and Dr. Piper allows undergraduate students to utilize the site for research. Funding for research projects at the site has been obtained in the past through undergraduate research programs run through the college.

3.22 Policy Structure

- **Burning:** Burning is regulated by county policy, but is not conducted at the site.

- **Land Use:** No singular document detailing policy for the restoration site exists, although a similar document exists for another prairie restoration site managed by the college.

- **Management and Maintenance:** Dr. Piper hires three to four student assistants every summer to help with the maintenance of the site. However, whenever large machinery is required for maintenance, he utilizes the college’s maintenance department.

- **Signage:** Dr. Piper maintains a banner at the site so as to inform visitors that the site is a restored prairie.
3.23 Policy Summary

The site has little formal policy; most of it is simply a series of decisions made by Dr. Piper as to how to best manage the site. The site lacks a strict maintenance regime, but several different techniques have been employed at the site and their effectiveness has been studied. Dr. Piper’s immediate concern for the restoration project is the maintenance of native species and protecting against the encroachment of invasive, woody species. However, because of a lack of formal policy, he is also concerned with the long-term viability of the project after his retirement. Dr. Piper fears that once he is no longer able to manage and advocate for the site it will simply cease to be maintained and the college will reclaim the land for another purpose.

3.3 University of Nebraska-Lincoln
Est. 1869
Lincoln, NE
Number of students:~25,000
Public 4-year University

3.31 Project Overview
The Cedar Point Biological Station (CPBS) (Fig 1.3) is the focus of this case study. CPBS is located in western Nebraska on the outskirts of the city of Ogallala. It is over 900 acres with a diverse mixture of flora and fauna. The site was once the river bed of the South Platte River and hunting grounds for Native Americans. Later, the site was settled under the Homestead Act in 1912 (Cedar Point). The land was used primarily for grazing livestock during the following years. Utilizing a land easement, the Gainsforth and Goodall families built a campsite for the Girl Scouts in 1949 on the site under the condition that it would continue to see use. However, by 1965 the site was no longer in use and, per the conditions of the easement, the property was returned to the original donating families. The campsite and property sat vacant for over 10 years until 1975 when 33 acres, including the campsite, were first leased by the University of Nebraska-Lincoln (UNL) for academic enrichment and research opportunities. In
1997, a large portion of the CPBS was purchased, bringing its total size to over 600 acres. Today, the CPBS has continued to grow through various organizations and acquisitions with help from the Nebraska Environmental Trust. As well, donations and research grants have been used to expand the facility. Most recently, UNL has committed “$600,000 from the Academic Affairs, Research and Economic Development and the office of the Chancellor for immediate improvements and future projects (Fedderson).”

CPBS is a field research facility with the university having a large presence at the site. Being a part of the School of Biological Sciences at UNL, CPBS is institutionally set up to accommodate a variety of classes, including Environmental Restoration Science and Resource Management, as well as research opportunities for various organizations. Art courses also utilize the site. Student involvement has been a high priority at CPBS and UNL is continuing to support the site with classroom expansions and the development of new courses in the future. There are also many educational opportunities for volunteer groups, including cedar tree removal, trail blazing and mapping and building reconditioning. Citizen research is also active at CPBS, with various species identification programs. CPBS welcomes new ideas toward increasing the sites utilization for education.

Finally, the site has a network of buildings and a variety prairies, aquatic habitats, canyons and terrestrial ecosystems. Its prairies contain shortgrass, mixed-grass, sand-sage and sand hill prairie types. With the exception of about 15 acres, the site has not been cultivated and most is believed to be native prairie. The site has great potential and extensive fauna and flora community, with over 595 different species of plants, 271 unique insect, and over 300 bird species found throughout the site (Species Lists).

3.32 Policy Structure
● **Burning:** CPBS does not conduct scheduled burns and they do not plan to conduct any in the future.

● **Land Use:** The land is used as needed by classes or researchers with no formal policy directing how it will be used.

● **Management and Maintenance:** CPBS currently does not have a formal management policy.

● **Signage:** Signage can be found throughout the buildings and at the core of the compound.

### 3.33 Policy Summary

There is currently little formal policy at CPBS. Burning is not practiced at the site as it could compromise research and jeopardize the site’s structures. There is no formal land use or management plan, but a pilot program is being developed to provide interns the ability to create a management plan for the site. As well, “a formal day-to-day plan does not exist (Garbisch)” - the site managers maintain the prairie as the needs arise. Signage is also not regulated through any formal policy.

### 3.4 University of Nebraska-Omaha, Nebraska

*Est. 1938*

*Where:* Omaha, NE

*Number of students:* ~15,500

*Public 4-year University*

#### 3.41 Project Overview

The University of Nebraska-Omaha manages two restored prairie sites: the Glacier Creek Preserve and the T.L. Davis Preserve (Fig 1.4). The Glacier Creek Preserve was initially a 160 acre farm that was donated to the university. Today, the site has grown to 320 acres in size. The
T.L. Davis Preserve is a 25-acre loess hill prairie and savannah-woodland ecosystem (Glacier Creek Preserve, TL Davis Preserve).

The purpose of these sites is to provide habitat for tallgrass and loess bluff prairie biota to support teaching and research efforts. It is also a place for individuals to enjoy natural ecosystems (Ibid). The Glacier Creek Preserve is home to more than 320 species of woody and herbaceous plants (Glacier Creek Preserve). Over 140 species of birds, amphibians, reptiles and mammals have also been observed at various locations throughout the Glacier Creek Preserve (Ibid). The T.L. Davis Preserve also hosts a variety of habitats supporting a wide array of flora and fauna diversity (TL Davis Preserve). Both sites are partially funded through private monetary donations. They also accept non-monetary donations to help with maintenance (Donations).

There are various roles for students to be involved at the sites, including research opportunities for all disciplines of study (Students and Volunteers). Both students and the public may volunteer to assist with the management of the sites, performing tasks such as collecting seeds, tree and brush cutting, invasive species control and prescribed burning (Ibid). Service learning opportunities are also available for students throughout the year (Ibid). There is a heavy focus for the sites to be used for educational purposes at all levels of study, ranging from grade school classes through university level research (Glacier Creek Preserve). Schools are encouraged to use the sites as outdoor classrooms and for inquiry-based science and research, as long as the use of the sites does not adversely affect the long-term quality of the native habitats (Ibid).

3.42 Policy Structure
• **Burning:** The burn policy for the Glacier Creek Preserve calls for the site to be divided into three sections burned once every three years. Prescribed burns are conducted in late spring and research plots are burned every spring, summer and fall (Glacier Creek Preserve). Additionally, the burn policy at the T.L. Davis Preserve states that prescribed burns are only to be used to manage the prairie portion of the site. Burns are to occur approximately once every three years with only half of the prairie burned in any given burning year (Ibid).

• **Land Use:** The land use policy at the T.L. Davis Preserve is geared toward prairie restoration (TL Davis Preserve).

• **Management and Maintenance:** The management and maintenance policies for both sites include burning, mechanical and chemical control of invasive species, over-seeding areas to increase plant diversity, restoration of newly acquired or disturbed areas, tree removal and occasional haying (Glacier Creek Preserve).

• **Signage:** Signs are present at both the Glacier Creek Preserve and TL Davis Preserve, but there is no formal signage policy.

3.43 *Policy Summary*

The University of Nebraska-Omaha has numerous formal policies for prairie restoration. Its policies are focused mostly on management and maintenance, but burning and land use policy is also present at both sites (Glacier Creek Preserve, TL Davis Preserve). There is no formal policy for signage.

3.5 **Grinnell College**

*Est. 1850*

*Grinnell, IA*

*Number of students:* ~1600

*Private, 4-year Liberal Arts*

3.51 **Project Overview**
Grinnell College has maintained the Conard Environmental Research Area (CERA) (Fig 1.5) since 1968. The site is a 365-acre tract, 45-acres of which were planted with forbes and native prairie grasses. CERA has undergone several additions since 1968, including the addition of 80 acres that were planted with prairie grasses in 1987. This was then followed the continued planting of prairie grasses on another 30 acres from 1990-1996. CERA’s focus goes beyond preserving prairie grasses, however. Several management schemes are in place to maintain 50 acres of degraded oak savanna and woodland, contributing to the diversity of habitats and native species throughout the site.

CERA was originally purchased with funds from a private foundation. The wages of one full-time employee and one half-time employee for management and maintenance are funded by the college, but private donations have been used for large scale projects such as the development of a 14 acre pond and new building construction.

Classes from every department of the college have used CERA as a locale for field trips, coursework and research. Students conducting independent and mentored research projects use the site regularly. Larger community events take place on site as well, such as parents and alumni weekends, the National Water Dance, the North Mahaska Elementary School science field day and regularly scheduled tours. The CERA director and manager work together with the advisory board to evaluate proposed uses and facilitate any new projects or initiatives.

3.52 Policy Structure

- **Burning:** Prescribed burning programs follow strict and carefully planned schedules and are implemented by volunteers.
- **Land Use:** Land use activities are focused on promoting diversity. This includes seed collecting/cleaning, brush clearing and prescribed burning.
● **Management and Maintenance:** Short-term land management plans were used during the 1970-1990s. As well, the Phase II Expansion Plan was developed in 2000 to guide the development of the Environmental Education Center and Maintenance Shed construction. There is no existing long-term management plan for the site. Currently, all management activities are planned by the manager and maintenance technician and are discussed with the director and advisory board.

● **Signage:** Signage is found at the site, but there is no formal signage policy.

3.53 Policy Summary

Policy at CERA has adapted over its 48 year history. Today, its policy is focused on community inclusion and maintaining the integrity of the site for research - the primary focus of the site. CERA is overseen by a director from the biology faculty and an advisory board of professors, a half-time manager/on-site caretaker who serves as outreach coordinator for Center for Prairie Studies and a full-time maintenance technician who oversees all management and maintenance activities and events. Two paid student workers are hired during the academic year and four full-time interns work during a 10-week Summer Restoration Assistant program. Student workers, summer restoration assistants and student volunteer’s aide in management activities and events in collaboration with the Grinnell Student Environmental Council. Volunteers also frequently assist in management activities and event preparation/management (Hill).

CERA is open to the public. The College supports its use for no-impact activities such as hiking, bird-watching and observation for artistic pursuits. Regulations for individuals on site, in addition to standing policy for Grinnell College grounds, are largely concerned with protecting
the integrity of the habitats and experimental areas, limiting the use of vehicles and protecting populations of species found at CERA.

4. Case Comparison and Analysis

<table>
<thead>
<tr>
<th></th>
<th>Bethel</th>
<th>UN-Lincoln</th>
<th>UN-Omaha</th>
<th>Grinnell</th>
<th>KU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of the site</strong></td>
<td>~10 acres</td>
<td>Originally 33 acres, today over 900 acres</td>
<td>320 acres and 25 acres</td>
<td>365 acres</td>
<td>.35 acres</td>
</tr>
<tr>
<td><strong>Funding source</strong></td>
<td>Initially from a grant, further funding for maintenance from the College &amp; from a lawsuit settlement</td>
<td>Land grant, charitable donations, Fee driven by individuals wishing to do research at the facility, Academic Affairs, R&amp;E development.</td>
<td>Donations to the University of Nebraska Foundation</td>
<td>Operational funding from the College, additional project funding from private donors</td>
<td>Center for Sustainability budget and donations to KU Endowment</td>
</tr>
<tr>
<td><strong>Who manages the site? Individual or institution?</strong></td>
<td>Dr. Jon Piper; individual</td>
<td>Dr. Johannes Knops and Jon Garbisch, School of Biological Science; institution</td>
<td>Dr. Tom Bragg and the Department of Biology; institution</td>
<td>Elizabeth Hill; institution</td>
<td>Laurel Sears, Kelly Kindscher, Jeff Severin</td>
</tr>
<tr>
<td><strong>Is the site part of a broader campus plan?</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Site access restricted?</strong></td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>What is the role of students?</td>
<td>Student assistants hired during the summer, open for research projects</td>
<td>Students can take several field biology courses, photography classes, and art classes. Open for research and projects. Extensive community outreach programs.</td>
<td>Students contribute to the site through volunteer work and actively taking part in research.</td>
<td>The site liases with the Student Environmental Council; Multiple paid student positions; performing research assistance; Special programs.</td>
<td>Students contribute to its restoration in a variety of classes. Future educational focus planned.</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>How is the site marked?</td>
<td>Banner, informational kiosk</td>
<td>Site is a compound with buildings, research labs, and signage.</td>
<td>Signs at the entrances of the Glacier Creek Preserve and T.L. Davis Preserve</td>
<td>Signs at entrance, demarcation of research station.</td>
<td>Limestone border and dedicated plaque</td>
</tr>
<tr>
<td>Challenges going into the future?</td>
<td>Continued commitment to maintain the site</td>
<td>Location access, 275 miles West of UNL campus making access limited. Upkeep of the aging facilities.</td>
<td>No response</td>
<td>Building involvement with other Grinnell academic departments</td>
<td>Funding and commitment via institutional turnover and change</td>
</tr>
</tbody>
</table>

Table 2 - Policy Comparison

<table>
<thead>
<tr>
<th>Is there a Policy for...</th>
<th>Bethel</th>
<th>UN-Lincoln</th>
<th>UN-Omaha</th>
<th>Grinnell</th>
<th>KU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burning</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Signage</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Land use</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Management and maintenance</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
The tables give us a good at-a-glance reference when considering how policy decisions contribute to the effectiveness of these institutions’ respective management schemes. By comparing these decisions and analyzing the success these projects, we can generate more informed, empirical policy recommendations for Prairie Acre. As there are no formal metrics to measure the success of policy at each site in this study, this analysis is concerned with the capacity of each project and the steps the managing institutions have taken to achieve goals similar to Prairie Acre’s.

It is important to preface any comparison of these cases with consideration of their sponsoring organization’s relative size. The University of Kansas, UNL and UNO are public universities of significantly greater scale and resources than the private colleges Bethel and Grinnell. Larger size does not directly translate to greater financial and logistical support, but it does bear consideration. For example, CPBS at UNL enjoys the benefit of large research participation as part of the School of Biological Sciences. A greater capacity for public awareness of the sites also benefits these larger institutions. Keeping this in mind, the smaller schools have their own advantages. Large universities have a plethora of projects and studies among which faculty has to divide their time. The University of Kansas, for example, works on many prairie restoration projects outside of Prairie Acre, notably the Field Station. Whereas at Grinnell, there is much greater proportional institutional involvement with multiple professors and faculty involved through its advisory board and Center for Prairie Studies.

Involvement of the student body at Prairie Acre is one of its primary focuses. A very common and attainable means of that found in many cases is the employment of students in paid/volunteer part-time capacities to assist in maintenance of the site. While this does bring in student involvement, this alone is limited. Maintenance and land management tasks on their own
only attract the involvement of students already focused on prairie restoration. The sites at UNL and Grinnell have made it a great priority to diversify this experience. These projects host multiple field days and special events that involve groups such as naturalists, elementary students and alumni. At these same sites, there are also initiatives for art students to use the sites as subject matter. The expansion of the sites’ activities predicates the involvement of students outside of environmental/biology studies, greatly boosting the sites’ profiles and educational value.

The maintenance of a restored native prairie setting with the intent of furthering understanding of its ecological processes is the bedrock goal of all these projects. This effort is most successful at sites that have established plans for tasks such as burning, cleanup and site documentation (photo documentation and biological data entry). The performance of these tasks relates directly to a sites’ value for research. Bethel has noted problems with this, causing some concerns as to the long-term viability of the site. Whereas at Grinnell, UNL and UNO, there are clearly defined management strategies that follow mandated schedules and possess the staff support to ensure the completion of management and maintenance tasks.

5. Policy Recommendations for Prairie Acre

_Tie Prairie Acre to an institution to ensure continuity of management and maintenance_

This recommendation is to ensure that the Prairie Acre has a document clearly delineating responsibilities for the site and to specify a method of the transfer of authority over the site. A major concern voiced by Dr. Piper of Bethel College is the uncertainty of the site after his retirement. Given the multitude of roles that he plays for the prairie restoration project on Bethel’s campus, Dr. Piper is worried that the project will fall into disrepair. Thus, we recommend a document with site policies, roles and a commitment from the University of
Kansas to maintain Prairie Acre as a restored prairie. Furthermore, we recommend establishing ties with an institution on campus to maintain the site, such as the Center for Sustainability or the Environmental Studies program. With an institution responsible for the maintenance of the site, the site will gain a long-term advocate and a mechanism for accountability in the event the site should fall behind in its upkeep.

_Institute regular educational programming_

In tandem to growing KU’s own institutional involvement, Prairie Acre needs to seek to incorporate more projects involving institutions and groups from the community at-large. Other sites such as CERA and the CPBS involve outside conservation groups and schools for a variety of events. These prairie sites benefit greatly from this by bolstering their profile in their communities and providing a wider range for student involvement beyond maintenance of the site. An educational event like a planting with grade school students, who could then track the growth of their plant over time, could fit this well. Here at KU, Dr. Bob Hagen already has activities at Potter Lake every year involving his field ecology class working with elementary school students. A similar day of programming involving Prairie Acre could help work towards the goal of having a greater community presence as well as diversifying the tasks KU students can participate and assist planning.

_Establish a clearly-defined management and maintenance strategy_

Prairie Acre should have a clearly defined management strategy; one that identifies the person and/or institution responsible for managing the site and the types of management practices to be performed on the site. Developing a “Management Practices” section on the Prairie Acre website would accomplish this. A management calendar should be created and published on the website. Ensuring proper management at the site is especially important if there
are any management practices that are allowed by the university but would be detrimental to Prairie Acre, such as the use of herbicides and pesticides. Defining a person/institution responsible for the site would establish a clear contact for anyone with questions, comments or concerns about the site.

Seek certification as a City Park Green Zone

For continued protection of Prairie Acre from the use of herbicides and pesticides, petitioning the City of Lawrence to designate and certify Prairie Acre as a City Park Green Zone is highly recommended. With the designation as a park, Prairie Acre can be added to the reduction of pesticide use and integrated as an active Integrated Pest Management (IPM) location (IPM Policy Manual, 3). These sites must be designated as green zones, which includes the goal of no pesticide use at the site (IPM Policy Manual, 4). We would also recommend exploring the possibility of rezoning future site development into a Tier 1 (Low Intensity) agritourism site, according to County Zone Regulation 12-319-7.03 a.7. Historical, Cultural, or Agriculturally related educational and learning experiences, including volunteer workers (Douglas County Zone Regulations, 77). A designation of this level would force any changes to Prairie Acre to go before a planning committee hearing with the city. This would allow time for involved parties to present their cases and delay any hasty changes to the site.

Expand Prairie Acre to the triangle at the intersection of Sunflower Road, Sunnyside Avenue, and Indiana Street

Bill Whitney stated in his presentation to the course that “Proximity to roadside is a vulnerability(Whitney).” The expansion of the prairie into the triangle section at the intersections of Sunflower Road, Sunnyside Avenue and Indiana Street would drastically enhance the likelihood of species succession and provide pollinating insects a greater diversification of plants
for gene pool expansion. In addition, the expansion would add historical value to the university while providing an aesthetically pleasing remnant for the community to enjoy.

*Seek registration on the National Register of Historic Places*

Prairie Acre already abuts an existing historic district on the National Register of Historic Places, which includes the Outlook (the university chancellor’s house), the University Guest House, and several scholarship halls nearby (Shepherd 2014). Expanding the East Historic District to include Prairie Acre would make the site eligible for additional funding and grant resources.

6. Conclusion

This report initially intended to study policy at the local, state and national scale. It soon became apparent, however, that policy for prairie restoration is almost non-existent and what policy does exist is usually determined by the entities involved with the project. Finding policy for the sites proved to be difficult since the majority of the information was not published. The lack of transparency made the site managers an invaluable resource for our study. While we attempted to find similar sites to Prairie Acre, a few were at the extremes of our search criteria. As well, many of the sites are located far away from Prairie Acre. This made accessing the sites challenging, provoking the use of online research and email interviews. Overall, our group found that policy does not have clear and defined parameters, making the investigation process difficult. Prairie restoration policy development would benefit with greater clarity and transparency from those that have successfully completed restoration projects.

Finally, Prairie Acre has a good policy foundation, but would benefit tremendously from clearly defined and formalized policy. The 2014-2020 Campus Master Plan is currently serving as a guide at the site, but addressing future needs with site-specific policy will help assure the
viability of Prairie Acre. Incorporating student involvement will be essential and future Capstone classes should play a vital role in prairie restoration policy development at Prairie Acre.

7. Figures

Fig 1.1 Kansas University Prairie Acre

Fig 1.2 Bethel College Tallgrass Prairie
Fig 1.3 University Nebraska-Lincoln CPBS

Fig 1.4 University of Nebraska-Omaha Glacier Creek Preserve
Fig 1.5 Grinnell College Conard Environmental Research Area
Fig 1.6 Prairie Acre Management Calendar (Brandenburgh, 10)

<table>
<thead>
<tr>
<th>Prairie Acre Management Calendar</th>
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<tbody>
<tr>
<td><strong>January- March</strong></td>
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<tr>
<td>Burn Prairie (last burned on 4/12/16)</td>
</tr>
<tr>
<td><strong>April- May</strong></td>
</tr>
<tr>
<td>Seeding/ Seedling Planting</td>
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<tr>
<td><strong>June- August</strong></td>
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<tr>
<td>Weeding/ Removal of Invasive Species</td>
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<tr>
<td><strong>September- October</strong></td>
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<tr>
<td>Weeding/ Removal of Invasive Species</td>
</tr>
<tr>
<td>Mowing (after burning, if needed)</td>
</tr>
<tr>
<td>Watering</td>
</tr>
<tr>
<td><strong>June- August</strong></td>
</tr>
<tr>
<td>Watering</td>
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<tr>
<td><strong>September- October</strong></td>
</tr>
<tr>
<td>Watering</td>
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8. Bibliography


Garbisch, Jon. Phone interview. 28 Apr. 2016


Hill, Elizabeth. Email interview. 18 Apr. 2016

Piper, Jon. E-mail interview. 5 Apr. 2016.


Severin, Jeff. E-mail interview. 4 Apr. 2016.


9. Appendix

Interview questionnaire:
- Where did you obtain funding for the initial restoration, and for the continual maintenance of the project? Are/were there any financial incentives, university or otherwise, that were available to assist in the development of the site? Or, were there financial incentives that made it difficult to develop the site?
- How long did the project take to complete and what are the recurring issues for maintenance?
- Who oversees the project? Is it managed by a subset of an academic department, by grounds maintenance, etc.?
- How is access to the site managed? In what instances is ingress by person(s) permissible?
● What is/was the role of the students in the development/maintenance of the site and is there an academic component associated with the site?

● How are new initiatives suggested/planned by incoming students/faculty incorporated into the project?

● Are/were there any plans, university or otherwise, that guided the development of the site? (include link to KU master plan)

● Are/were there any regulations, university or otherwise, that affected the development of the site? Specifically are there policies regulating:
  ○ Burning
  ○ Pollination
  ○ Signage
  ○ Land use
  ○ Management/maintenance
  ○ Types of species/biological diversity requirements
  ○ Others?

● What are challenges facing (location) going into the future? (i.e., funding/development/use)