CHAPTER 2

2. DESCRIPTION AND COMPARISON OF ALTERNATIVES

2.1. INTRODUCTION

This chapter describes the six alternatives for the Prairie Plan, including the No Action alternative and the Preferred Alternative. Maps of the six alternatives are included to show land use allocations for different Management Areas and to represent the potential distribution of habitat types, recreational uses, and other activities under each alternative. This chapter provides information on:

- How alternatives were developed
- Alternatives considered but eliminated from detailed study
- Management area prescriptions
- Elements common to all alternatives
- Alternatives that were considered in detail
- A summary of environmental consequences by alternative.

The alternatives present a reasonable range of different ways to respond to the issues and opportunities. Each alternative is based on an “integrated management approach” to provide a mix of multiple-uses and provides a different emphasis or orientation toward the issues and opportunities. No resource is emphasized to the total exclusion or violation of the minimum standards for other resources in any of the alternatives. The major reasons for developing the array of alternatives described are:

- To examine the adequacy of different responses to the major issues, concerns and opportunities.
- To examine the implications of continuing the type and intensity of interim management currently at Midewin. This requires that we have a “no action” alternative that would not change the current management trend. The “no action” alternative is Alternative 1.
- To examine the full range of goods, services, and amenities that could be provided. The alternatives provide a full distribution between the lowest and highest outputs of habitat and recreation potential.
- To examine the flexibility to change management direction in response to future conditions and demands.

2.2. DEVELOPMENT OF ALTERNATIVES

The Prairie Plan proposal in the June 1998 Notice of Intent used the Joliet Arsenal Citizen's Planning Commission Concept Map as the basis for proposed management areas and activities on Midewin. The alternatives described here used the Concept Plan and Proposed Action Map as a basic starting point, but the approach to land allocations has changed considerably to meet the challenges of providing for sensitive species, performing ecosystem restoration, and providing opportunities for visitor uses. See "Alternatives Eliminated from Detailed Study" in this chapter.

At an early stage in the planning process, the Midewin planning team determined minimum and maximum levels of different goods and services that could be provided, including different types of habitat and recreational uses. These benchmarks were based on the major issues and defined the range within which management alternatives could be developed. The benchmarks were described in detail in the 1999 Analysis of the Management Situation (AMS) and are summarized in the table below.

The AMS included a set of planning criteria specific to Midewin. These criteria were based on the purposes for which Midewin was established. The planning criteria were used to guide how the alternatives were developed. The criteria specified that alternatives:

- Provide for large, unfragmented grassland habitats with at least, one 2,000-acre area. (Fragmentation refers to habitat loss due to major throughways, trees, parking lots, etc.)
- Provide for a sense of solitude and vastness.
- Provide for Environmental Education/Interpretation opportunities.
- Provide for recreation activities and facilities that foster knowledge, appreciation, and understanding of prairie ecosystems.
- Minimize motorized use on site.
- Maintain or increase existing acres of wetlands.
- Retain and/or expand sensitive species habitats.
- Do not adversely impact identified native vegetation areas.
- Address only Midewin lands. (Midewin lands do not include the industrial parks, National Veterans Cemetery, the County landfill, or contaminated lands still held by the U.S. Army.)
- Utilize Integrated Pest Management techniques for controlling noxious weeds and overpopulated wildlife species.
- Never use Midewin for the sole benefit of a single user group to the exclusion of others.

Table 2.1. - Summary of Benchmarks *

Resource or Opportunity	Minimum Level	Maximum Suitable
Wetland Restoration	1,077 acres	6,968 acres
Grassland Habitat (unfragmented)	2,000 acres	16,000 acres
Trails	12 miles	150 miles
Campsites	0 campsites (none currently)	46 campsites
Public access points	1 gate	27 gates
Auto tour route	0 miles	26 miles
Road system	0 miles	150 miles (currently)

*From the Analysis of the Management Situation, July 1999

Each of the alternatives was developed to meet minimum management requirements outlined in 36 C.F.R. §219.27. These are requirements of law and regulation that must be met while implementing management prescriptions. Under these requirements the soil, water, and air resources are conserved; land productivity is protected; the site is protected from long-term or hazardous pest damage; and plant and animal diversity is provided and maintained.

A minimum management requirement of critical importance for the alternatives was to provide sufficient habitat to maintain viable populations of sensitive wildlife and plant populations, as required by 36 C.F.R. §219.19 and related NFMA regulations. Twenty-six plant and animal species were identified as Regional Forester Sensitive Species for Midewin. Draft conservation assessments for each species were developed by staff biologists, reviewed by a panel of expert scientists, and then revised in light of the expert input and additional knowledge of the species needs.

In order to provide for the sensitive species, potential habitat areas for the different species were identified based upon soils, depth to bedrock, and other landscape features. Areas of potential wetlands were identified based on soil types, watershed areas, and potential impacts to the hydrology of adjacent lands. Potential areas of unfragmented or connected habitat were built around three large areas that could provide the best opportunities and additional areas where unfragmented areas could be created as restoration proceeds. In order to plan for unfragmented areas, we used the following assumptions:

- Fragmentation of large open habitat occurs when scattered, woody vegetation exceeds 5% of the total acreage of an area.
- Savanna and woodland patches fragment the large open areas.
- Prairie Creek on the east side of Illinois Route 53 is fragmenting the

large open areas, due to the density of trees and shrubs along the streambank.
- Multiple-use trails developed with wider tread would be fragmenting to the open areas.
- Any roads are also fragmenting concerns.
- Unfragmented areas should be at least 500 acres in size.

Potential land allocations by habitat type were laid out using the available knowledge of potential habitat areas and their associated species. The interdisciplinary team then used the conservation assessments as a framework within which to develop a reasonable range of alternatives. Six alternatives were crafted showing different amounts of grassland habitat, wetland prairie restoration, upland prairie restoration, and other habitats for sensitive species. Alternatives 2-6 provide similar treatment for woodlands, savannas, and remnant prairie sites, due to their potential small size and importance to provide diversity of habitat.

The alternatives include different sets of potential unfragmented areas that were defined in conjunction with the development of the recreation components of the alternatives. Recreational developments, ranging from high to low investments, were applied to the alternatives and show a range of potential recreation activities and uses that are compatible with proposed habitat restoration.

In order to determine whether the alternatives provide for sufficient habitat to maintain viable populations as required by 36 C.F.R. §219.19 and related NFMA regulations on sensitive species, Midewin organized a review of all the alternatives by a panel of expert scientists to provide an independent assessment of the alternatives. Appendix A provides a detailed explanation of the expert panel process and outcomes, and the results of the panels are used in the discussions of environmental consequences in Chapter 3 of this FEIS. The expert panel was designed to provide information on the relative risk that implementing each alternative would pose to the continued persistence of the sensitive species at Midewin and in the Central Till Plains eco-region. The information gained from the expert panel was used to refine the Standards and Guidelines in the Prairie Plan and to help identify the preferred alternative.

The National Forest Management Act (NFMA) requires that “each alternative will present to the extent practicable the most cost efficient combination of management practices that can meet the objectives established in the alternative.” To comply with these regulations, the planning team estimated potential costs and revenues for different management activities. The team used these estimates to calculate the “present net value” of each alternative. Present net value is the difference between discounted value of all priced benefits and the discounted value of costs (see Appendix E “Documentation of Analysis”).

Present net value is one component or partial measure of net public benefits.

The management of Midewin is directed toward providing intangible or non-monetary public benefits that cannot be fully assessed in a financial analysis. These intangibles include habitat, ecosystem restoration, recreation, scenery, education, and research opportunities. Midewin will need major investments in both restoration and recreation if it is to provide multiple-use goods and services. Therefore, the differences of present net value among alternatives will not be a key factor for selecting an alternative.

2.3. ALTERNATIVES ELIMINATED FROM DETAILED STUDY

The 1995 Joliet Arsenal Citizen's Planning Commission created an Arsenal Land Use Concept Map that defined three management areas: Ecosystem based management for grassland and endangered species habitat; Outdoor recreation management; and Riparian management. This alternative was not developed further because more feasible options for Prairie-wide ecosystem habitat management integrated with recreation opportunities were brought forward by the Interdisciplinary Planning Team, and through citizen participation workshops to assist development of a range of reasonable alternatives.

The Prairie Plan Proposal outlined in the June 1998 Notice of Intent (NOI), used the Joliet Arsenal Citizen's Planning Commission Concept Map as the basis for proposed management areas and activities. The Proposal in the NOI outlined five management areas (8.1 to 8.5) that generally matched the Concept Map boundaries and uses.

- Management Areas 8.1, 8.2, and 8.3 emphasized managing the prairie ecosystem, endangered species habitat and riparian areas.
    - Management Area 8.1 featured bison and elk re-introduction, a seed production nursery bed area for prairie restoration, and it restricted public access, but offered a shuttle.
    - Management Area 8.2 featured dispersed (less developed) recreation and a limited trail system.
    - Management Area 8.3 provided for seasonal or limited bison or elk re-introduction, with a shuttle and limited trail system.

- Management Areas 8.4 and 8.5 emphasized managing grassland habitat and riparian areas and providing an extensive trail system.
    - Management Area 8.4 featured dispersed recreation opportunities and no motorized vehicles.
    - Management Area 8.5 proposed a visitor center, parking and public access, camping and picnic areas, along with a short auto tour route.

These basic building blocks were further refined in the Alternatives Considered for Detailed Analysis. When the major issue of providing habitat for sensitive species was added in the summer of 1999, it became clear that alternatives other

than the Prairie Plan proposal listed in the Notice of Intent did a better job of integrating habitat protection and restoration with recreation development.

2.4. ACTIONS NOT READY FOR DECISION

Because Midewin is in an early stage of development, some actions cannot be fully planned or analyzed at this time, but may become important parts of the management program in the future. By not specifically including or excluding the following actions, all alternatives allow for considering them in the future or incorporating them in subsequent plans and analyses.

2.4.1. Introduction of bison and elk

Early versions of Prairie Plan alternatives included land allocations for bison and elk. Some people have expressed great interest in introducing bison or elk to Midewin. Once habitat is restored, nearly all lands at Midewin may be ecologically suitable for bison and elk. This was previously discussed in the Analysis of the Management Situation.

Suitable lands must be restored, stabilized, and enclosed in appropriate fencing before reintroducing bison or elk would be feasible. Croplands, remediation sites, roads, building sites, and drainage sites currently fragment potentially suitable lands. Such tracts of land are not suitable for bison or elk under existing conditions, and the presence of bison or elk would complicate on-going efforts to cleanup, restore the ecosystem, control noxious weeds, or implement the Prairie Plan. Restoration goals could be jeopardized if bison or elk were reintroduced before grazing, burning, mowing, and species management patterns can be established and adjusted to meet management goals. It will be safer and more cost effective to build the special fences needed for bison and elk herd management after habitat has been restored and contaminated sites have been cleaned up.

In the next decade or planning period, plans to re-introduce bison and elk may be properly developed to provide visitor safety, sustainable habitat, and viewing opportunities. The alternatives neither include nor exclude bison or elk and do not limit or allocate particular areas for their future presence. The possible introduction of bison and elk may be considered in future analyses that may evaluate alternatives for herd location, size and management.

2.4.2. Connections to Metra

The possibility of establishing Metra commuter rail service to Midewin and the Abraham Lincoln National Cemetery has raised concerns about the accessibility of Midewin to urban populations, particularly the economically disadvantaged, as well as the potential effects that an active rail line could have on birds and habitat. The alternatives in the FEIS do not allocate any land for Metra connections, and the effects analysis assumes no allocations have occurred. It is not a Forest Service decision on whether Metra will establish rail service to the area. The possible effects of Metra service on recreational opportunities, habitat,

and other resources may be considered in future analyses, when it becomes more likely that Metra may provide a rail link from Manhattan, Illinois.

2.5. ALTERNATIVES CONSIDERED IN DETAIL

The following section describes six alternatives considered in detail. These represent different ways of managing Midewin to provide future outputs, goods and services. Each of the alternatives is a technically and legally feasible strategy for managing the Prairie, with the exception of Alternative 1 where continued agriculture land use for the future does not meet the intent of the enabling legislation. All alternatives include consideration and coordination of the multiple uses that could be provided on Midewin National Tallgrass Prairie.

2.6. Summary of Alternatives

Following is a brief description of the alternatives. They are described in more detail in the next section.

Alternative 1. **(No Action Alternative)** A projection of current interim management into the future. The No Action alternative continues the existing conditions and interim management practices and it provides a baseline for comparison with the other alternatives.

Alternative 2 **provides for maximum expansion of habitat for grassland bird species**, especially upland sandpipers and other birds dependant on grassland habitat.

Alternative 3 **emphasizes developing and maintaining both developed and dispersed recreational opportunities**.

Alternative 4 **emphasizes a balance of habitat for grassland bird species and native prairie restoration with a moderate amount of recreation development.**

Alternative 5 **emphasizes restoring native prairie vegetation and ecological functions.**

Alternative 6 **emphasizes restoring native prairie vegetation and ecological functions and provides only limited recreational uses.**

2.7. DESCRIPTIONS OF ALTERNATIVES 1 through 6

This section describes Alternatives 1 through 6. First, Alternative 1 (the no-action alternative) is described because it represents the current management of Midewin and can serves as a basis to compare the other "action alternatives." Next, the Management Areas, Management Prescriptions, and those elements common to Alternatives 2 through 6 are presented to give the reader a more complete picture and understanding of the components of the alternatives. Then, Alternatives 2 through 6 are described, giving the overall theme of each alternative and the management practices and developments that would occur if the alternative were implemented. Finally, all alternatives are compared in a narrative and tabular summary, so the reader can distinguish the similarities and differences amongst alternatives.

2.7.1. *ALTERNATIVE 1 (NO ACTION)*

NEPA and the National Forest Management Act require that the No Action alternative be considered in the planning process. The No Action alternative represents continuing the existing conditions and interim management practices and it provides a baseline for comparison with the other alternatives. Existing land and resource conditions are described in Chapter 3. Figure 2 is a map of Alternative 1 (the No Action alternative).

The enabling legislation for Midewin (Illinois Land Conservation Act) authorizes management activities in advance of a Prairie Plan to fulfill the four purposes for which it was established. Interim management and projects expedite the administration and public use of Midewin. In the interim condition, Midewin would maintain an office, staff, equipment, and operations on site. The Forest Service would continue as the agency responsible for managing the Midewin National Tallgrass Prairie under the No Action alternative. The Prairie Supervisor would maintain an office, and a small staff would respond to day-to-day needs. No long-range plans would be developed and few or no additional programs or facilities would be established.

Midewin would continue to manage existing habitat under the No Action alternative:

- Approximately 185 acres of mesic/dry prairie,
- 40 acres of savanna,
- 190 acres of forest/woodland, and
- 1,240 acres of other woody vegetation.

Approximately 2,800 acres of grassland bird habitat would be maintained through annual mowing and grazing. No large, open (unfragmented) tracts greater than 500 acres in size will be created or maintained in this alternative. Midewin would continue to manage plants listed as noxious weeds by the state of Illinois.

Approximately 3,000 acres of land may be transferred to the Forest Service from the Army when Army CERCLA cleanup is completed, but no restoration activities would be conducted on these lands. No additional land acquisitions or land exchanges would be considered. Obsolete or unnecessary structures would continue to be removed to a limited degree. Affected sites would be planted to cool season grasses and kept free of weeds.

Midewin maintains an existing special use permit system for agricultural uses, utilities, and right-of-ways. Under the No Action alternative, current special use permits would continue. Forest Service special use permits for agriculture would be continued. Permits for grazing would continue on approximately 2,800 acres to maintain habitat for grassland birds. Approximately 3,000 acres would remain under crop production to keep the sites free of weeds.

Under the No Action alternative, the Forest Service would complete interim restoration projects already underway, but would not begin new projects. Streambank stabilization would be completed on three miles of Prairie Creek. Wetland restoration, removal of railroad ballast, and fill with topsoil would occur in designated areas under existing agreements with CenterPoint Properties, developers of the Deer Run Industrial Park. Wetland restoration projects (1,077 acres) proposed at Blodgett Road, South Patrol Road, Mola tract, Doyle Lake, and at the corner of Hoff Road and Illinois Route 53 would be completed.

Under the No Action alternative, we would maintain seed production areas currently established and would harvest prairie seed annually. A proposed wetland seed production area currently being planned would be completed. A shelter would be built for visitors and prairie workers at the River Road seedbed production area as currently planned. Only enough seed and plant material needed for the projects listed above would be harvested, then the seedbed production areas would no longer be managed.

The Forest Service has initiated design and construction of an administrative office. Under the No Action Alternative, the office would be completed, and visitation would be concentrated there. Visitors would receive information at the new headquarters, but no new permanent trails or visitor facilities would be constructed. Only interim trails built in 2001 outside of the security fence would be maintained. Tours would be offered in accordance with existing access policy and the availability of equipment and personnel.

The environmental education program would continue to operate at its current level under the No Action alternative, involving approximately 1,000 students from ten area schools. An interpretive master plan would be completed under an existing contract, but no further interpretive development would be conducted. Deer hunting would continue by the current permit system in the existing designated areas only. No other collection or harvest activities would be permitted. Heritage resources would be protected under the No Action

alternative. Any sites for proposed projects would be surveyed for heritage resources. Access to the five cemeteries within Midewin would be allowed to family members by request.

Research programs would be limited to those currently underway, with no additional research projects permitted. Existing partnerships and agreements would be honored and fulfilled, but no new partnerships or agreements would be developed.

2.7.2. *ALTERNATIVES 2 through 6*

2.7.2.1. MANAGEMENT AREAS AND PRESCRIPTIONS

Forest Service planning regulations require that Plans include management areas and management prescriptions. Management areas are locations where specific conditions are desired. Management prescriptions address resource conditions and visitor experiences, and identify management practices and intensities selected and scheduled to achieve the desired conditions and multiple-use goals and objectives in the management area. Management prescriptions are included in the Proposed Prairie Plan. The types of activities (management prescriptions) are unique to each management area.

Alternatives 2 through 6 designate the same set of two Management Areas on Midewin; the Prairie Ecosystem Restoration Management Area and the Administrative and Developed Recreation Sites Management Area. The alternatives vary by amount and type of recreational opportunities proposed within each Management Area. The alternatives differ slightly by the amount and location of land allocated to each of the two management areas, due to the types and amount of recreation use proposed.

2.7.2.1.1. *Restoration Management Area*

Lands in the Restoration Management Area will be managed principally for ecological restoration and enhancement of habitat. Management prescriptions and site-specific projects will emphasize varied types of habitat in excellent conditions, unfragmented habitat, and other conditions to support populations of native species.

Recreational and other activities will be located, designed, and managed to minimize resource impacts, and activities will occur at lower levels or densities than in the Developed Sites Management Area.

2.7.2.1.2. *Developed Sites Management Area*

The Developed Sites Management Area consists of separate parcels of land that will be intensively managed to meet visitor and administrative needs. The

Management Area includes all current and proposed sites for the visitor center, campground, seedbed production areas, and administrative offices. Developed sites may have parking lots, buildings, sanitary facilities and water supplies, or other structures. Ecological restoration and habitat management may also occur within the Developed Sites Area. Former Army facilities (bunkers, warehouses etc) are not considered developed sites for this Prairie Plan; they are included in the Restoration Management Area.

2.7.2.2. ELEMENTS COMMON TO ACTION ALTERNATIVES 2 THROUGH 6

2.7.2.2.1. *Habitat Management*

The terms “restoration” and “habitat management” are used repeatedly throughout this analysis to refer to similar combinations of actions. “Restoration” generally refers to re-creation of desired ecological conditions from degraded sites such as lands that are tilled, drained, excavated, filled, or covered by undesirable vegetation. Habitat “management”, “enhancement”, “improvement”, “recovery”, and “maintenance” are used to describe similar groups of actions but generally refer to actions on lands where habitat is already established, but in need of improvement. All terms refer to existing and future vegetation communities of native and non-native species, whether wetland, woodland, or grassland, or upland prairie.

Under Alternatives 2-6, much of Midewin will be managed to maintain and enhance the tallgrass prairie ecosystem. Large areas at Midewin will undergo intensive habitat restoration and management to restore native wetland and upland prairie habitat or grasslands of non-native species. Natural resource management will focus on the ecological, educational, and research values of the tallgrass prairie, and on understanding and facilitating the processes that will allow the prairie to become fully restored.

Under Alternatives 2-6, interim restoration projects will be completed and maintained, and additional projects will be undertaken according to priorities outlined in the proposed Plan. These alternatives propose restoring all potential dolomite prairie habitat and woodland habitat and include a minimum proposed condition of:

- 3,440 acres of wetland,
- 2,180 acres of prairie,
- 4,020 acres of grassland bird habitat.

Restoring and managing restored habitat includes, but is not limited to the following activities:

1. Removing drain tiles, filling and re-grading ditches or road beds, excavating other fill material, removing roads or structures, felling or removing fencerows or woody vegetation.
2. Reconstructing channels, drainage routes, or topography.

3. Tilling, seeding, and mowing with agricultural equipment.
4. Planting a mixture of seed or “plugs” of native plants by hand,
5. Planting a mixture of non-native grasses in tracts designated for “grassland habitat”.
6. Controlling noxious weeds, invasive plants by hand, machinery, herbicides, other integrated pest management techniques,
7. Monitoring soil, water, vegetation, and wildlife,
8. Grazing, prescribed fire, pest management, and other management activities

Prescribed fire applications will create a mosaic of vegetation on the landscape to help maintain and enhance the tallgrass prairie ecosystem, promote the diversity and integrity of native vegetation communities, and provide habitat for grassland birds and other prairie animal life. Restrictions on the use of prescribed fire may be required during portions of the year to protect habitat and mitigate effects to air quality.

Cattle will be grazed in allotted grasslands under authorized grazing permits to maintain habitat for the grassland bird species. The grazing program will include building wells, fences, gates, holding areas, salt licks, or other sites for grazing purposes. The locations, stocking rates, and movements of grazing herds will be managed to achieve grassland habitat management goals.

The Forest Service will honor valid existing agricultural leases, but will not extend any permit beyond the year 2016, except for purposes primarily related to habitat restoration and management. Crop production will diminish over the next 10 years as croplands are converted to cool season grasses or native vegetation.

2.7.2.2.2. *Recreation and Interpretation*

Alternatives 2 - 6 include a variety of facilities and opportunities for recreational activities that are compatible with the four purposes of Midewin. On-site interpretation and environmental education programs will be provided in these alternatives. Recreation and Interpretation programs may include the following actions:

1. Trail construction, and development of campgrounds, dispersed or primitive campsites, parking lots, access points, water or sanitary facilities, or other facilities. Quantities, uses, and locations of trails, campsites, and other facilities vary by alternative.
2. Provide visitors with information on opportunities, safety hazards, or other important aspects of visitation at Midewin.
3. Provide visitors information on the background, purposes, or conditions at Midewin.
4. Provide interpretive programs.
5. Monitor and control visitor use or access to provide for safety, to protect habitat, or for other reasons.

Interpretive programs will focus on the natural history of the tallgrass prairie, ecosystem restoration, American Indian history and culture, the early settler period, and the 50 years of Army use, including arsenal production.

Alternatives 2 - 6 plan for a minimum of approximately 27 total miles of trails for hiking and bicycling, and a minimum of 4 parking areas and access points. Estimated trail miles per type of use vary by each action alternative. Off-trail use would be restricted to foot travel only, with seasonal and area restrictions applied as necessary. Trail connections to adjacent public lands (Wauponsee Glacial Trail and Des Plaines Conservation Area) are proposed. The proposed trail location maps display a network of trails that does not reflect actual site-specific locations; rather it gives a picture of what the trail network might look like when trail construction is complete. The actual locations may change when the trail system is developed at the site-specific level, but the total mileage and proposed uses of the trail system will be as described for Alternatives 2 - 6).

Trail development includes building bike, hiking, and equestrian trails, trail shelters, and information kiosks. These activities will include clearing vegetation and obstructions, creating trail surface of varying widths for different uses, constructing bridges, culverts, dips, and waterbars to control water and runoff near the trails, installing tread surfacing such as rocks, gravel or asphalt to protect the tread surface, restoring and re-vegetating areas cleared for trail construction, constructing trailhead parking lots, toilets, signs and associated facilities.

Recreation development will be designed, located, and managed to minimize impacts to natural and cultural resources. Access to all areas may be restricted during periods of extremely high fire danger. Visitor movement and access will be controlled to ensure resource protection in areas of higher density use; these controls may include walkways, barriers, fences, benches, and interpretive and informational signs. Motorized use by the public will be limited to parking areas and to restricted travel routes that differ by alternative. Any other motorized use on site would be solely for administrative purposes.

Deer hunting will continue under cooperative agreement with Illinois DNR. Small game hunting, fishing and trapping may be allowed, pending further study and management plans developed in cooperation with IDNR.

2.7.2.2.3. *Roads and Facilities*

New facilities will be designed to ensure that the built environment complements the natural prairie landscape, and create a sense of place. Development of support facilities will be sufficient to meet visitor experience goals, and health and safety requirements. Visitor facilities will provide for orientation, information, and education about the tallgrass prairie.

To achieve habitat restoration goals, the Forest Service will pursue removal of former Army structures on all lands that have transferred to Forest Service control. This includes removing existing roads, bridges, utility poles, or other structures unless a structure can meet the needs for roads, trails, or other uses in accordance with the Prairie Plan. Some structures may be retained on the landscape for interpretive uses, and perimeter fences may be retained for resource protection and security.

Travel and access management will include decommissioning roads, constructing new travel routes, and maintaining existing roads needed for recreation or administrative uses. Activities include placing or removing surface materials, reconstructing existing roads, grading, installing removing or cleaning culverts, mowing, brushing, controlling erosion, and managing traffic by posting regulatory, warning, and guiding signs, imposing travel restrictions or load limits, and installing and maintaining gates or other road closure devices.

2.7.2.2.4. *Other Elements Common to Alternatives 2 - 6*

Land acquisitions will be pursued through willing-seller purchases or donations of property that is contiguous to Midewin boundary or that protects or provides a buffer to important resources. Land exchanges will be pursued when there would be a net benefit to the public, i.e., a net gain of sensitive species habitat, recreational opportunities or management efficiency. Approximately 3,000 acres of land may be transferred to the Forest Service from the Army when cleanup is completed.

The Forest Service will actively seek partnerships and opportunities to cooperate with local communities, government agencies, non-profit organizations, and other organizations interested in assisting the Forest Service achieve the desired future conditions for Midewin. The Forest Service will maintain and expand research and education programs through partnerships and agreements.

Heritage resources will be protected under all action alternatives. Sites where projects are proposed would be surveyed for heritage resources. Access to the five cemeteries within Midewin would be allowed to family members by request.

Management activities related to noxious weeds, pesticide use, animal health, maintenance and installation of fences, water and waste disposal will be consistent with applicable Forest Service policy and state laws under alternatives 2-6. The Forest Service will continue to share responsibility with the Army to control public access, according to the ILCA section 2911(d).

2.7.2.3. ADAPTIVE MANAGEMENT

Alternatives 2 - 6 rely on an adaptive management approach so that the Prairie Plan is flexible enough to allow management to shift direction as changing needs, resources, or knowledge require. The Prairie Plan identifies long-term

desired conditions that are very different from the existing conditions. The ecological environment, landscape, and recreational opportunities will undergo important changes during the next decade. As we implement the Prairie Plan, it may be necessary to make adjustments to land management.

As Army properties are cleaned up it is likely that management issues and opportunities will change. Army remediation on nearby sites may limit the use of grazing, prescribed fire, drainage restoration, public access, or scenery improvements around Army properties. Some roads will only be needed for short-term use, and as these roads and facilities are removed, opportunities to provide unfragmented and restored habitat will increase.

We intend to continuously learn and apply new approaches and techniques for restoring and managing habitat, using current science and knowledge of ecological processes. For example, areas allocated by habitat type (Figures 3,5,7,9, and 11) are not categorized into distinct or separate management areas, maintaining flexibility to meet site-specific limitations or changing habitat needs. In addition:

1. Some areas of cropland or disturbed sites may be converted to pasture grasses on a temporary basis and later restored to native prairie and wetlands.
2. Areas currently allocated for grassland habitat (non-native grasses) may be converted to prairie habitat (native), if it is determined that the grassland dependent bird species successfully adjust to restored prairie habitat.
3. Allocations for habitat may be need to be changed to meet site-specific limitations or opportunities presented by the altered landscape. Site-specific conditions of soils and hydrology may require flexible approaches to wetland restoration.
4. Additional sensitive species may become established or the status of existing species may change.

Recreation and interpretive programs must also be flexible as the landscape changes, Army cleanup proceeds, visitor facilities are developed, and visitor use patterns become more clearly defined. Interim and temporary trails may be established where appropriate and later eliminated. Monitoring of visitor use during developmental stages will provide crucial information to modify the types, quantities, or locations of recreational opportunities and guide further implementation of the Plan. An adaptive management approach will be applied to Midewin to minimize conflicts between visitor uses or conflicts with ecological goals.

2.7.3. *ALTERNATIVE 2*

2.7.3.1. Alternative 2 provides for maximum expansion of habitat for grassland bird species, especially upland sandpipers and other birds dependent on grassland habitat. Most of the area east of Illinois Route 53 will be converted to non-native grasses to provide the grassland habitat. (See Figure 3).

Natural prairie communities are restored, but not to the level of other action alternatives. Most of the outwash plain west of Illinois Route 53 will be restored to native vegetation.

Recreational opportunities emphasize developed facilities, roads and trails, including a visitor center, developed campground, picnic area, 9-mile shuttle tour, 5-mile auto tour, and biking and/or hiking opportunities on 72 miles of trails. (See Figure 4).

2.7.3.2. *Restoration Management Area – management practices and developments*

Most of the ground moraine (east of Illinois Route 53) will be converted to non-native grasses, with inclusions of wetlands and native communities, and managed to provide habitat for grassland birds. Most of the outwash plain (west of Illinois Route 53) will be restored to native vegetation, including all potential dolomite prairie, to provide habitat for sensitive species. A large tract on the ground moraine east of Illinois Route 53 will be restored to native vegetation, including areas of dry, mesic, and wet prairie, sedge meadow, shallow marsh, and savanna or woodland.

Restoration would include approximately:

- 2,120 acres of mesic/dry prairie
- 3,030 acres of wet prairie/sedge meadow
- 10,110 acres of grassland bird habitat
- 490 acres of savanna
- 420 acres of woodland.

About 9,610 acres of the total restored habitat would be maintained in six large open tracts or "unfragmented" condition, ranging from 500 to 3,000 acres in size, mostly on the east side.

Recreation opportunities in Management Area 1 include:

- A shuttle system, to provide transportation for interpretive tours and access to the prairie, on approximately 9 miles using existing roads and rail beds where feasible.
- A self-guided auto tour route, approximately 5 miles in length in connection with the campground area, to provide visitors with opportunities to view the prairie from private vehicles.

- Approximately 35 miles of bicycle and hiking trails.
- 37 miles of hiking-only trails would be developed on the east and west sides.
- This alternative would not provide dispersed camping opportunities or equestrian use.

2.7.3.3. *Developed Sites Management Area – management practices and developments*

A moderate amount of recreational development would be provided in Alternative 2.

- A visitor center would be located near Illinois Route 53;
- A campground and picnic area would be located south of Hoff Road on the east side.
- An environmental learning center would be located near Jackson Creek.
- Up to eight public access points and seven parking areas would be developed.

Administrative facilities include the headquarters office and seed bed production sites.

2.7.4. *ALTERNATIVE 3*

2.7.4.1. Alternative 3 emphasizes developing and maintaining both developed and dispersed recreational opportunities, including a visitor center/environmental learning center, developed campground, picnic area, and a 5-mile auto tour route. An extensive trails system would be developed with biking, hiking, and/or horseback riding opportunities on 90 miles of trails. Camping at dispersed campsites (low density, semi-primitive sites) would be allowed in Management Area 1.

Habitat for grassland bird species is also emphasized with most of the area east of Illinois Route 53 being converted to non-native grasses, although not to the level of Alternative 2. (See Figure 5).

Natural prairie communities are restored, but not to the level of Alternatives 4, 5 or 6, because non-native grassland habitat has a higher emphasis in this alternative. Most of the outwash plain west of Illinois Route 53 will be restored to native vegetation. (See Figure 6).

2.7.4.2. *Restoration Management Area –management practices and developments*

Most of the ground moraine (east of Illinois Route 53) will be converted to non-native grasses and managed to provide habitat for grassland birds. All of the outwash plain (west of Illinois Route 53) will be restored to native vegetation, including all potential dolomite prairie habitat. A large tract on the ground moraine east of Illinois Route 53 (equivalent to that in Alternative 2) will be restored to native vegetation, including areas of dry, mesic, and wet prairie, sedge meadow, shallow marsh, and savanna or woodland.

Restoration would include approximately:

- 2,670 acres of mesic/dry prairie
- 3,54 acres of wet prairie/sedge meadow
- 9,150 acres of grassland bird habitat
- 490 acres of savanna
- 420 acres of woodland.

Approximately 9,840 acres of restored habitat would be maintained in seven large open tracts or "unfragmented" condition, ranging from 500 acres to 3,000 acres in size, mostly on the east side.

Recreation in Management Area 1 includes:

- Dispersed camping sites would be provided for visitor opportunities to experience solitude.
- Approximately 90 miles of trails total,

- 19 miles for bicycle and hiking use,
- 40 miles of trail for hiking only,
- 11 miles for equestrian and hiking, and
- 19 miles of multi-use trails (hike, bike, and equestrian uses).

2.7.4.3. *Developed Sites Management Area –management practices and developments*

Alternative 3 offers the greatest amount of recreational development. A visitor/environmental learning center would be developed east of Illinois Route 53. A campground and a picnic area would be located south of Hoff Road. Seven parking areas and 10 public access points would be provided for visitor use. Using existing roads where feasible, a five-mile self-guided motorized tour route would be developed. The developed recreation areas would be designed to provide convenient and easy access to Midewin. No public transportation system, such as a shuttle, is proposed in this alternative.

Administrative facilities include the headquarters office and seed production sites.

2.7.5. *ALTERNATIVE 4 (Preferred Alternative)*

2.7.5.1. Alternative 4 emphasizes a balance of habitat for grassland bird species and native prairie restoration. Approximately one-half of the area east of Illinois Route 53 would be restored to native vegetation and the other half would be managed to enhance habitat for grassland bird species. All of the outwash plain west of Illinois Route 53 would be restored to native vegetation. (See Figure 7).

Both developed and dispersed recreational opportunities are emphasized, including a visitor center/environmental learning center, campground, 12-mile shuttle tour, and 48 miles of trails with biking, hiking, and/or horseback riding opportunities. (See Figure 8). Camping at dispersed sites would be allowed in Management Area 1.

2.7.5.2. *Restoration Management Area –management practices and developments*

All of the outwash plain (west of Illinois Route 53) will be restored to native vegetation, including all potential dolomite prairie habitat. Approximately one-half of the ground moraine east of Illinois Route 53 will be restored to native vegetation, including areas of dry, mesic, and wet prairie, sedge meadow, shallow marsh, and savanna or woodland. The restored area east of Illinois Route 53 is larger in Alternative 4 than in Alternatives 2 and 3. Approximately one-half of the ground moraine (east of Illinois Route 53) will be converted to non-native grasses, with inclusions of wetlands, and managed to provide habitat for grassland birds. The restored area on the ground moraine in Alternative 4 is configured to provide connectivity between Grant Creek, Prairie Creek, and Jordan Creek watersheds, and to reflect the distribution of drainage sites within the watersheds.

Restoration would include approximately:

- 4,020 acres of mesic/dry prairie
- 4,640 acres of wet prairie/sedge meadow
- 6,690 acres of grassland habitat
- 490 acres of savanna
- 430 acres of forest/woodland.

Approximately 10,260 acres of restored habitat would be maintained in five large open tracts or "unfragmented" condition, ranging from 500 acres to 3,000 acres in size.

Recreation opportunities in Management Area 1

- Dispersed camping sites are provided for visitor opportunities to experience solitude.
- Approximately 48 miles of trails total,

- 5 miles bicycle and hiking trails,
- 20 miles for hiking-only,
- 5 miles for equestrian and hiking, and
- 18 miles of multi-uses (hike, bike, and equestrian uses)

Using existing roads and rail beds where feasible, a public transportation system such as a shuttle, would provide transportation to various points within Midewin, and for interpretive tours and access to the prairie, on approximately 12 miles located on both the east and west sides. No self-guided auto tour loop is proposed in this alternative.

2.7.5.3. *Developed Sites Management Area – management practices and developments*

A developed recreation area with a consolidated visitor complex would be located away from sensitive natural and cultural resources.

Recreational development include:

- A visitor center/environmental learning center just east of Illinois Route 53,
- A group campground located south of Hoff Road.
- Seven parking areas and eight public access points and a picnic area would be provided for visitor use.

Administrative facilities include:
Headquarters office, seed bed production areas, fire crew facilities and office.

2.7.6. *ALTERNATIVE 5*

2.7.6.1. Alternative 5 emphasizes restoring native prairie vegetation and ecological functions. Approximately two-thirds of the area east of Illinois Route 53, and all of the outwash plain west of Illinois Route 53 will be restored to native vegetation.

Habitat for grassland birds is provided through conversion to non-native grasses on approximately one-third of the area east of Illinois Route 53. (See Figure 9).

A visitor center/environmental learning center, picnic area and a 9-mile shuttle tour would be built. No developed campground would be built, but dispersed camping would be allowed in Management Area 1. Approximately 53 miles of trails would provide opportunities for biking, hiking, and/or horseback riding. (See Figure 10).

2.7.6.2. *Restoration Management Area –management practices and developments*

All of the outwash plain (west of Illinois Route 53) will be restored to native vegetation, including all potential dolomite prairie habitat. Most of the ground moraine east of Illinois Route 53 will be restored to native vegetation, including areas of upland, mesic, and wet prairie, sedge meadow, shallow marsh, and savanna or woodland. Approximately one-third of the ground moraine (east of Illinois Route 53) will be converted to non-native grasses, with inclusions of wetlands and native communities, and managed to provide habitat for grassland birds.

Restoration would include approximately:

- 6,130 acres of mesic/dry prairie
- 5,460 acres of wet prairie/sedge meadow
- 3,810 acres of grassland bird habitat
- 490 acres of savanna
- 430 acres of woodland.

Approximately 9,590 acres of restored habitat would be maintained in six large open tracts or "unfragmented" condition, ranging from 500 acres to 3,000 acres in size.

Recreation Opportunities in Management Area 1

- Using existing roads and rail beds where feasible, a public transportation system such as a shuttle, would provide transportation to various points within Midewin, for interpretive tours, and access to the prairie, on approximately 9 miles on the east side of Midewin.
- Approximately 23 miles of trails for multi-use (bike, hike, and equestrian use) and,

- 29 miles of trail for hiking only.
- Dispersed camping sites would be provided.
- No self-guided auto tour route is proposed in this alternative.

2.7.6.3. *Developed Sites Management Area*

Developed recreation facilities would be provided, and include:

- A visitor/environmental learning center located south of Hoff Road.
- A picnic area would be developed.
- Six parking areas and
- 9 public access points would be provided for visitor use.
- No developed campground is proposed.

Administrative facilities include the headquarters office and seed production sites.

2.7.7. *ALTERNATIVE 6*

2.7.7.1. Alternative 6 emphasizes restoring native prairie vegetation and ecological functions and provides only limited recreational uses.
Approximately two-thirds of the area east of Illinois Route 53, and all of the outwash plain west of Illinois Route 53 will be restored to native vegetation. Habitat for grassland birds is provided through conversion to non-native grasses on approximately one-third of the area east of Illinois Route 53. (See Figure 11). Recreational opportunities are limited. Approximately 27 miles of trails (all on the east side of Illinois Route 53) provide opportunities for biking, hiking and horseback riding (See Figure 12). No visitor center, developed campground, picnic area, shuttle, or auto tours would be developed. Dispersed camping is not provided.

2.7.7.2. *Restoration Management Area – management practices and developments*

All of the outwash plain (west of Illinois Route 53) will be restored to native vegetation, including all potential dolomite prairie habitat, and most of the ground moraine east of Illinois Route 53. Restored native communities will include areas of upland, mesic, and wet prairie, sedge meadow, shallow marsh, and savanna or woodland. Approximately one-third of the ground moraine (east of Illinois Route 53) will be converted to non-native grasses, with inclusions of wetlands and native communities, and managed to provide habitat for grassland birds.

Restoration would include approximately:

- 6,200 acres of mesic/dry prairie
- 5,470 acres of wet prairie/sedge meadow
- 3,920 acres of grassland bird habitat
- 490 acres of savanna
- 430 acres of woodland.

Approximately 11,690 acres of restored habitat would be maintained in six large open tracts or "unfragmented" condition, ranging from 500 acres to 3,000 acres in size, with two tracts greater than 3,000 acres.

Recreational Opportunities in Management Area 1

- Approximately 27 miles of trails (15 miles for multi-use including bike, hike, and equestrian use as 12 miles for hiking only) are proposed.
- Multi-use trails would only be constructed on the east side.
- No motorized tour routes or other public transportation routes would be developed.

2.7.7.3. *Developed Sites Management Area – management practices and developments*

Six public access points and four parking areas would be provided for day

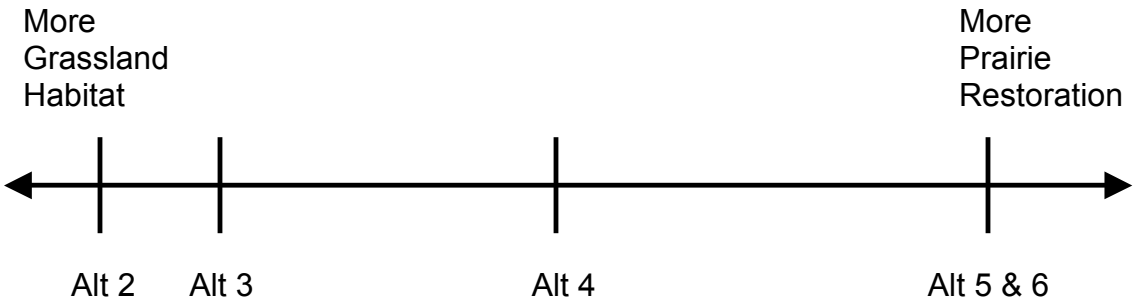
visitors and trail users. No other recreational facilities would be built. Administrative facilities include the headquarters office and seed production sites.

2.7.8. Summary Comparison of Alternatives

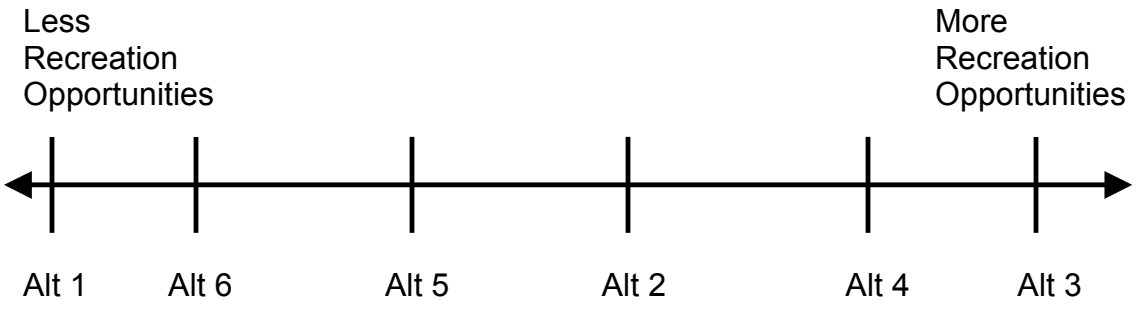
2.7.8.1. Introduction

Chapter 1 described significant issues, concerns, and opportunities for Midewin and identified indicators for each issue. Those indicators are used here to compare how each of the six alternatives address or respond to the significant issues. The indicators provide some measure of the effects of each alternative, but are not intended to serve as an analysis of effects.

2.7.8.2. RELATIVE COMPARISON OF RESTORATION ACTIVITIES



2.7.8.3. RELATIVE COMPARISON OF RECREATION ACTIVITIES



2.7.8.4. *Issue: Providing for Human Health and Safety*

Midewin will proceed with ecosystem restoration and development of recreation opportunities with safety as the top priority. This issue is treated the same for each alternative.

2.7.8.5. *Issue: Managing Habitat for Sensitive Species*

Alternatives 2-6 are designed to provide adequate habitat for populations of 26 Regional Forester's Sensitive Species and three species on the federal list of threatened and endangered species. Effects on each species are considered in detail in Chapter 3. The acres of proposed habitat for each species are indicators of how the alternatives provide for sensitive species (See Table 2.2 below). The alternatives reflect a range of options by proposing different relative amounts (balances) of grassland bird habitat under non-native grasses versus restored native vegetation. Allocations for non-native grassland habitat will benefit some sensitive bird species, but will reduce habitat for other sensitive species, particularly native plants and insects. Conversely, increased allocations of restored prairie habitat will benefit a group of native plants and insects, while reducing available habitat for sensitive grassland birds. Most of Midewin would be managed under non-native grass cover under Alternatives 2 and 3; the alternatives only differ slightly in the amount of restored native habitat. Alternatives 5 and 6 provide a similar emphasis on restoration of native habitat. Alternative 4 proposes an intermediate balance between grassland bird habitat and restored native prairie. Alternative 1 proposes minimal habitat restoration.

Habitat potential for the *Eryngium* Root Borer Moth, Blazing Star Stem Borer, Red-veined Leaf Hopper, Hairy Valerian, Earleaf Foxglove, Hill's Thistle, Prairie White Fringed Orchid, Sullivant's Coneflower, Glade Mallow, Blanding's Turtle, King Rail, Least Bittern, Plains Leopard Frog increases from Alternative 1 through Alternative 6, as acres of restored mesic prairie and wetland increase.

Alternatives 2-6 provide equally for restoration of all potential habitat for the Leafy Prairie Clover, Butler's Quillwort, False Mallow, Pitcher's Stitchwort, Crawe's Sedge, Goldenseal, American Ginseng, Cerulean Warbler, and Ellipse. (As described under "Elements Common to All Action Alternatives", these alternatives include restoration of all potential dolomite prairie habitat, all forest/woodland habitat, and prescriptions for improving stream habitat). Proposed foraging habitat for the Northern Harrier and Short-eared Owl is also the same under Alternatives 2-6, because both bird species will forage in native and non-native grasslands. However, their nesting habitats vary by alternative.

Table 2.2 - Acres of proposed habitat for Regional Forester's Sensitive Species

Indicator: Habitat for Regional Forester Sensitive Species (acres)	Alternative				
	1 (existing)	2	3	4	5, 6
Upland Sandpiper	2396	8330	7280	4720	1920
Henslow's Sparrow	6067	7660	8373	10,120	12,100
Short-eared Owl breeding	6067	7660	8373	10,120	12,100
Northern Harrier breeding	3380	5250	6210	8560	11,050
Short-eared Owl foraging	10,770	16,500	16,500	16,500	16,500
Northern Harrier foraging	10,770	16,500	16,500	16,500	16,500
Eryngium Borer Moth	14	3620	4330	6110	8150
Blazing Star Stem Borer	161	3620	4330	6110	8150
Red-veined Leaf Hopper	10	2230	2780	4210	6240
Hairy Valerian	17	2560	2920	5390	7890
Earleaf Foxglove	22	2730	3280	4710	6740
Hill's Thistle	3	2730	3280	4710	6740
Prairie White-Fringed Orchid	17	4740	5640	7810	10190
Sullivant's Coneflower	494	3840	4720	4730	4800
Glade Mallow	1100	900	1290	1320	1500
Blanding's Turtle, King Rail	910	3350	3850	4980	5750
Least Bittern, Plains Leopard Frog	910	3350	3850	4980	5750
Ellipse (miles of stream)	3.5	10	10	10	10
Leafy Prairie Clover	6	1380	1380	1380	1380
Butler's Quillwort	5	1380	1380	1380	1380
False Mallow	24	1380	1380	1380	1380
Pitcher's Stitchwort	14	1380	1380	1380	1380
Crawe's Sedge	12	1850	2090	2090	2090
Cerulean Warbler	74	430	430	430	430
American Ginseng	17	430	430	430	430
Goldenseal	17	430	430	430	430

2.7.8.6. *Issue: Grassland Bird Habitat Requirements*

Different bird species use different structure or grass height and depend on large expanses of grasslands. Three groups of grassland birds have different habitat requirements; Loggerhead shrike and upland sandpiper prefer short grasses (4 – 12 inches) found on pastures grazed by cattle. The Bobolink prefers nesting cover of 8-14 inches in height (found in pastures and hay fields), while the Henslow's Sparrow, Northern Harrier and Short-eared Owl nest in taller grassy areas (restored tallgrass prairie) between 12-32 inches in height. The upland sandpiper, loggerhead shrike and bobolink populations are determined to be in greater jeopardy as habitat losses increase yearly in the region.

Based on the potential acres that could be provided over the 10-year planning period, Alternatives 2 and 3 have a greater potential for sustaining populations of the loggerhead shrike and upland sandpiper, followed by Alternatives 4. Alternatives 5 and 6 would not have enough acreage of prime habitat to maintain species viability over the long term. Alternative 1 was determined least likely to sustain the populations of these birds with the least acres of habitat.

For the Bobolink, Alternatives 2 and 3 provided the most habitat and a greater likelihood of sustaining the population at Midewin; with Alternatives 4, 1, 5 and 6 providing even less suitable habitat and less favorable conditions, respectively.

For birds requiring the taller grasses found in restored native prairie, Alternatives 5 and 6 provide the largest area and were determined to have a greater potential for sustaining the populations on the Prairie, and with less potential habitat Alternatives 4, 3, 2, and 1, respectively.

In summary, Alternatives 5 and 6 have the highest likelihood of sustaining birds requiring taller grasses, and Alternatives 2 and 3 have the highest likelihood of sustaining birds preferring short and medium height grasses. While several alternatives optimize habitat for one or two groups of species, no alternative optimizes habitat conditions for all three groups of grassland birds.

With a balanced mix of habitat types, Alternative 4 could provide adequate suitable habitat and sustain populations of upland sandpiper and bobolink, while simultaneously providing Henslow's sparrow and Northern Harrier with adequate habitat to sustain their populations at Midewin National Tallgrass Prairie.

2.7.8.7. *Issue: Contributions to Biodiversity in the Region*

Midewin will make greater contributions to regional biodiversity under all action Alternatives (2-6), than under Alternative 1. This increased habitat will provide for greater biotic interactions within the immediate vicinity (e.g. Prairie Parklands). However, these alternatives do differ in the amount of contributions concerning two specific elements, prairie and wetland habitats, and grassland bird habitats. Alternatives 5 and 6 provide the greatest benefits for prairie organisms that are highly dependent on native prairie and wetlands. Midewin will provide a larger area than any existing or proposed contiguous prairie habitat within the Central Till Plains Section. There will be increased interactions with other prairie sites. However, because Alternatives 5 and 6 provide relatively small amounts of grassland bird habitat, these species are likely to disappear at Midewin; there may also be concurrent extirpation of this component of the prairie ecosystem from the region.

Table 2.3- Proposed Habitat Restoration in Percentage

Indicator (unit of measure)	Alternative 1	Alternative 2	Alternative 3	Alternative 4 [1.]	Alternative 5	Alternative 6
Wet Prairie/Sedge Meadow	10	20	23	30	34	34
Upland Prairie [2.]	3	13	17	25	37	37
Savanna	1	3	3	3	3	3
Woodland	1	3	3	3	3	3
Grassland [3.]	17	61	54	39	23	23
Cropland/Other	69	0	0	0	0	0

Note 1: Alternative 4 is the selected alternative.
Note 2: Sensitive plants species Hill's Thistle and earleaf foxglove use the upland prairie habitat.
Note 3: Sensitive bird species loggerhead shrike, bobolink, and upland sandpiper use the grassland habitat.

Alternative 2 provides the least benefits for prairie organisms of the five action alternatives. Alternative 2 provides the greatest amount of habitat for grassland birds of all action alternatives, and these species will maintain viable populations and remain at Midewin and in the CTPS. Alternative 3 provides a greater amount of restored prairie and wetlands, with increased connectivity; there are also sufficient amounts of grassland habitat to maintain viable populations of sensitive grassland birds. However, Alternative 3 also contains the greatest potential for disturbance and fragmentation from the placement and use of facilities and trails.

Alternative 4 also provides a greater amount of restored prairie and wetlands, than Alternatives 2 and 3, but this is balanced with sufficient grassland habitat to maintain viable populations of grassland birds. This alternative will provide for viable populations of all elements of the prairie ecosystem, and contribute towards maintaining species diversity, viable populations and the associated interactions of the prairie ecosystem within the CTPS.

Table 2.4 – Unfragmented Areas by Alternative (Acres are rounded to nearest 10)

	Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**	**Alternative 6**
Total Acres	0	9610	9840	10260	9590	11690
>3000 acres	0	1	1	2	1	1
2001-3000 acres	0	1	0	0	1	1
1001-2000 acres	0	2	3	2	2	3
501-1000 acres	0	2	3	1	2	1

2.7.8.8. *Issue: Recreation Opportunities*

Midewin may face a large demand for recreational and other visitor opportunities to experience the prairie environment and enjoy available public lands. The public has expressed interest in a variety of recreational opportunities. The table below provides comparative measures of the types and quantities of recreational facilities.

Table 2.5– Diversity of Recreational Activities

Indicator: Recreation Activities Available	Alt. 1	Alt. 2	Alt. 3	Alt. 4 [1.]	Alt. 5	Alt. 6
Visitor Center/ Environmental Learning Center [3.]	no	yes	yes	yes	yes	no
Hiking only (miles) [3.]	3	37	40	20	30	12
Multi-use trail - bicycle, equestrian and hiking (miles) [3.]	0	0	18	17	23	15
Bicycling and Hiking (miles) [3.]	0	35	20	6	# [4.]	# [4.]
Horse back riding and Hiking (miles) [3.]	0	0	11	5	# [4.]	# [4.]
Shuttle (guided tour)	no	yes	no	yes	yes	no
Auto Loop (self guided tour) [2.]	no	yes	yes	no	no	no
Developed Camping (family) [2.]	no	yes	yes	no	no	no
Group Camping [3.]	no	yes	yes	yes	no	no
Dispersed Camping [3.]	no	no	yes	yes	yes	no
Picnic Area	no	yes	yes	yes	yes	no
Wildlife/ Nature Viewing	no	yes	yes	yes	yes	yes
Hunting (seasonal)	yes	yes	yes	yes	yes	yes
Total types of activities	2	10	12	11	8	4
Compatibility of activities	2	8	10	11	8	4

Note 1: Alternative 4 is the selected alternative.

Note 2: The following recreational activities are considered not compatible with the ecological goals of Midewin: Auto Loop (self tour) and Developed Camping (family).

Note 3: The following recreational activities fill Midewin's niche by providing opportunities for interpretive and educational programs and backcountry experiences in a restored prairie setting: visitor center/environmental learning center, trail system, group camping site, and dispersed camping sites.

Note 4: Available on shared multi-use trails, but not included in diversity calculation.

2.7.8.9. *Issue: Bison and Elk introduction*

Because the time is not right for a decision to introduce bison or elk, no action is proposed for any alternative.

2.7.8.10. *Issue: Environmental Education and Research*

All alternatives provide equally for education and research opportunities.