Land Management Plan
City of Madison Parks
February 2017

The City of Madison's residents and civic leaders have enjoyed and been responsible stewards of their parks and open spaces for well over 100 years, dating back to the Madison Park and Pleasure Drive Association. This plan continues to honor our commitment and tradition by laying a framework by which Madison Parks will manage all general parks and conservation lands, as well as land yet to be developed. To accomplish the land management goals for the areas outlined in this plan, Madison Parks will utilize Integrated Pest Management strategies and a combination of Parks employees, contractors and volunteers. Funding for these efforts will likely come through City budget allocations, grants and both in-kind and cash donations. We recognize that Parks must work within resource restrictions, and this plan allows us to communicate our goals and direct available resources appropriately. Through the adoption of this plan the Parks Commission and its relevant subcommittees are emphasizing their commitment and support for these goals and maintenance standards, as well as the work efforts required to achieve them.

Our attention is increasingly drawn to protecting pollinators through our work of land management. In recent years, for a number of reasons (ie. environmental and climatic changes, overuse of pesticides, habitat reduction, etc.), we have seen drastic declines in our butterfly, bee and other pollinator populations. Publications from University of Wisconsin Extension (Conservation of Native and Domestic Pollinators in Managed Turfgrass Landscapes) and Michigan State University (How to Protect and Increase Pollinators in Your Landscape) outline the seriousness of this issue and how we can correct it. Additionally, the City of Madison formed the Pollinator Protection Taskforce, which studied the issue and made recommendations that can be found in The City of Madison Pollinator Protection Taskforce Plan. Each one of our parks despite its size or classification plays a role in providing habitat and food source for these creatures. This Land Management Plan takes our role into consideration and demonstrates that Madison Parks understands the importance of helping to preserve precious resources.

Lands designated as general parkland and conservation land vary considerably in terms of maintenance requirements, with the understanding that Conservation Parks are typically of larger scale and often require more specialized knowledge and training to carry out maintenance programs. Therefore, we have developed separate sections in this plan for General Parks and Conservation Parks. In order to keep this plan manageable, General Park acreage has been broken into four (4) broad categories, and Conservation Parks have been broken into six (6) different habitats. Each category will consist of defined subsets with specific goals and maintenance practices. In addition, the roles of volunteers and

contractors are outlined to clearly communicate how they can help us reach these goals. Parks staff have worked with volunteers to identify these categories in each of our General Parks. We are now in the process of mapping all Conservation Parks. Having this adopted Land Management Plan, developed through a public process, allows us to clearly communicate our goals with alders, friends groups, neighborhood associations, board and commission members, volunteers and donors when projects and maintenance requests arise. In addition, this Land Management Plan follows solid fundamental principles and should be used as the basis routine and special projects completed on any City of Madison parkland.

General Parks

General Parks are developed spaces for active and passive recreation for visitors spread throughout the City. They range greatly in size, composition and use. Many of our General Parks have some level of capital facilities (ie. playgrounds, shelters, athletic facilities, power, electrical, plumbing, etc.). Our management plan for each park takes into consideration the Park Master Plan, neighborhood desires and use patterns of the park.

Meadows

1) Bluegrass dominated No Mow Meadows:
   Many of these meadows were formerly finish cut sites within the Parks Department. In an effort to be more environmentally sound these areas were transitioned into the newly formed No Mow Meadow designation to allow for increased natural habitat and reduced maintenance inputs until such time, if any, the land is needed for active recreational purposes.

2) Prairie Managed Meadows:
   These meadows have been planted with native wildflowers to provide natural diversity, increase infiltration of rainfall and improve the aesthetics in the parks. In new parklands the areas are established by seeding. In existing parklands native plant plugs are installed into the bluegrass sod.

Management Goals for Bluegrass No Mow Meadows:

1) Control woody plant growth
2) Control noxious /exotic plants
3) Maintain / enhance wildlife habitat
4) Maintain aesthetics of an open grassy landscape

Maintenance Practices/Implementation for Bluegrass No Mow Meadows:

1) Mow brush patches a minimum of 1 time a year if brush control is primary issue in the late fall or early spring. After brush is controlled, complete mowing should occur every 1-3 years. Identifying the location of and the need for mowing can be a joint effort amongst Parks employees and volunteers. Mapping efforts are ongoing.
2) Noxious/ Exotic plant infestations may require several mowings a year to control. Mapping and updating the location of these infestations can be done by Parks staff as well as volunteers.
3) Maintenance staff and volunteers can work to create maps of noxious / exotic plant locations and ideal timeframes for mowing to control / suppress target plants. May consider converting some areas with multiple exotics back to mowed turf until restoration efforts can be completed.
4) Reclaiming formerly open meadows dominated by exotic brush and trees. If only a few are present then flush cutting with herbicide treatment is recommended. This can be performed by Parks employees, contractors or volunteers that are state certified pesticide applicators. Extensive woody cover will require use of heavy duty brush hog or forestry mower followed by herbicide treatment of sprouts after mowing. This removal work can be performed by Parks staff or contractors with follow up applications done by the same as well as volunteers that are state certified pesticide applicators and approved for chainsaw use.
5) In some cases a few native shrubs and trees can be preserved and managed within the meadows for aesthetics and wildlife habitat. Examples include sumac and dogwood. These selective removals can include mechanical harvesting, hand removals combined with herbicide treatment. Work can be performed by Parks staff, volunteers or by contractors.

Management Goals for Prairie Managed Meadows:

1) Control noxious/exotic plants to facilitate growth of native plants
2) Control woody plant growth
3) Enhance wildlife habitat
4) Maintain aesthetics of an open grass landscape

Maintenance Practices/Implementation for Prairie Managed Meadows:

1) Mow brush patches once a year annually or biennially to prevent brush from overtaking the native wildflowers. After brush is well controlled occasional mowing or burning can be used for control. Mowing to be done early Spring or late Fall. This work is to be performed by Parks staff.
2) Spot mow or cut weeds that can be managed with cultural practice (ie. thistles, sweet clover). While mowing is done by staff hand cutting and removals can be done by volunteers.
3) Weeds that are not well controlled with cultural practices (ie. crown vetch, teasel and burdock) will be spot treated with appropriate herbicides. This

can be done by Parks staff, contractors or volunteers who are state certified pesticide applicators working in close conjunction with Parks staff.

4) New prairie plantings require minimum of 2 mowings (at height of 6-8") during the first two growing seasons. This mowing is done by Parks Staff.
5) Controlled burns would also be a desirable maintenance practice as appropriate with strong considerations given for the numerous site issues possible in our general parklands. Chief among them are proximity to homes, businesses, rental facilities and other Park amenities. Detailed burn plans would need to be developed for any site in which controlled burns would be considered. Qualified staff and volunteers may draft burn plans however all plans would need to be approved by the Conservation Section Supervisor. Burns could be conducted by staff, volunteers or contractors; however, any volunteer participating in a controlled burn would need to be approved beforehand by the Conservation Section Supervisor.
6) In some instance a few native shrubs and trees (ie. Sumac and Dogwood) can be preserved and managed within the meadows for aesthetics and wildlife habitat, in which case invasive species should be selectively removed. These selective removals can include mechanical harvesting, hand removals and cut and treat with herbicide actions. Work can be performed by Parks staff, volunteers or by contractors.

<u>Woodlands</u>

1) Woodland Edges:
   These are simply the areas where the woodlot stops and mowed parks, meadows, ponds, property lines and farm fields etc begin and are a haven for a wide variety of invasive species to grab hold. We will be focusing our efforts on controlling burdock, motherwort, garlic mustard, dames rocket, Asian bittersweet, thistles, box elders, buckthorn, and honeysuckle.
2) Woodland Interiors:
   Represent the majority of our woodland acreage. Typically a woodland interior would not be suitable for growing or maintaining turf or managed meadow type plantings and usually begins 20'-25' from the edge or wherever light penetration and density of tree canopy dictates.

Management Goals for <u>Woodland Edges:</u>

1) Improve aesthetics of woodland edges
2) Promote survival of healthy oaks/hickories and native shrubs by reducing shading from competing trees.
3) Maintain and / or increase native plant diversity
4) Reduce / suppress exotic species in targeted areas

Maintenance Practices/Implementation for Woodland Edges:

1) Park staff and volunteers will identify woodland edges where competing trees are shading desirable oaks / hickories / native shrubs and establish a work plan. This work plan will typically include an initial plan for removal of invasive species by machine, hand or herbicide application, as well as annual or biannual work to be performed to keep the woodland edge free of invasive trees or shrubs. Work plan may exclusively use volunteer, contract or Parks staff labor or be a combination of any three.
2) Park staff, contractors and volunteers will clear woodland edges of competing trees and shrubs according to priorities set after condition of areas are assessed and prioritized in the work plan.
3) Assess species type and relative abundance of weeds that appear in woodland edges that are cleared of trees. If weed pressure is significant it may require control measures (mowing, herbicide application) prior to planting native seed. While mowing would be a Parks staff function the chemical application could be done by staff, contractors or volunteers.
4) Seed native wildflowers, grasses and sedges along woodland edges that are enhanced by tree clearing. Mowing and spot herbicide applications may be necessary during establishment period (first 2 years) to control weeds. Sowing seeds and follow up spot herbicide treatments can be done by Parks staff, contractors and volunteers whom are state certified chemical applicators.
5) For low value woodland edges the finish cut mow line may be expanded closer to the woods edge so invasives may be controlled by shade and or regular mowing rather than by time consuming and often expensive restoration efforts.

Management goals for Woodland Interiors:

1) Promote survival of the best existing canopy natives, often healthy oaks, hickories and native shrubs by reducing shading from competing trees.
2) Select future canopy trees from the best available young natives that can grow into the canopy.
3) Reduce the presence of exotic trees and vines in woodland areas containing surviving wildflower communities making a special point to target invasive seed sources.
4) Improve aesthetics / wildlife values.

Maintenance practices/implementation for Woodland Interiors:

1) Volunteers, Parks staff and contractors can control exotic shrubs / trees shading the best available natives using selective thinning, cut stump, kerf and basal bark herbicide applications.

2) Small populations of exotic shrubs and vines will be controlled using herbicide treatments such as cut stump, kerf and basal bark as a management practice. These methods require follow up management

efforts such as mowing and cut and treat herbicide applications to sustain. Volunteers, Parks employees and contractors can do this work. Volunteers may also use manual removal and girdling as an alternative to some herbicide use. The landscape must be suitable for mowing equipment available to staff. Topography and the absence of large boulders or old fence lines are prime issues. Requires a long-term maintenance commitment of resources to be effective.

3) Forestry mowing to control exotic shrubs / small trees is only recommended if there is a commitment and follow-up plan in place to ensure timely mowing, herbicide treatments or full restoration. Work can be done by Parks employees and contractors.
4) Increase plant diversity by seeding native plant mixes. Park employees, volunteers and contractors can do this work.
5) Staff / Volunteers conduct a cursory field review of oak woodland stands in general parks to determine potential for forest stand improvement i.e. enhancing oak, hickory, hackberry health by controlling competing trees. Control measures may include herbicide application as cut stump, saw kerf, or basal bark treatments. Working on larger woodland units requires a commitment of significant resources (staff, volunteers, budget) to improve and maintain the ecological health for the long term.

Wetlands

1) Emergent Marsh/Lagoons
2) Sedge/Reed Canary meadows

Management Goals for Emergent Marsh/Lagoons:

1) Maintain or enhance habitat diversity
2) Reduce shoreline erosion.
3) Monitor /control invasive species (ie. Purple Loosestrife, yellow iris and Japanese knotweed that can be controlled more readily if found when populations are small.
4) Discourage use by resident Canada geese.

Maintenance Practices/Implementation: Emergent Marsh / Lagoons

1) Install native plant shoreline buffers on adjacent upland. Volunteers, Parks employees and contractors can do this work.
2) Experiment with establishing native plants at upland/water interface to reduce shoreline erosion. Possible locations would be Tenney, Vilas and Warner lagoons. Installation can be done by volunteers, Parks employees and contractors.

3) Use cultural controls such as hand pulling and cutting along with herbicide applications to control small invasive species populations. Parks employees, volunteers and contractors can do this work.
4) Annual late season mowing to control woody plant growth and facilitate winter ice operations while maintaining shoreline buffer plantings to discourage resident Canada geese.

Management Goals for Sedge/Reed Canary Meadows:

1) Maintain or enhance habitat diversity
2) Manage woody plant growth (trees and shrubs) to maintain open landscape vistas.
3) Maintain native woody plant growth adjacent to upland woodlands

Maintenance Practices / Implementation for Sedge / Reed Canary Meadows:

1) Limit shrub growth in Sedge / Reed Canary wetlands by mowing in winter when ground is frozen. Work performed by Parks employees and contractors.
2) Where desirable, cut trees in areas where this will create a larger open landscape aesthetic / habitat (ie. removing a narrow tree / shrub band between two open habitat areas). Work performed by Parks employees or contractors.
3) Monitor /control invasive species (ie. Purple Loosestrife, yellow iris and Japanese Knotweed) that can be controlled more readily if found when populations are small. Further, seed sources of common woody invasives like honeysuckle and buckthorn should be controlled. Work performed by volunteers, contractors and Parks employees.

Mowed Turf

1) General Parks Grass Areas:
   Turf areas that are finish cut mowed multiple times per month during the growing seasons within the majority of our general parks
2) Athletic Fields:
   Ball diamonds, soccer fields, football fields, golf courses and anywhere our Park patrons “pay to play”

Management Goals for General Parks Grass Areas:

1) Establish and maintain turf grass quality sufficient for intended use.
2) Prevent soil erosion by having healthy full stands of turf
3) Favor mowing and cultural practices that discourage weed growth
4) Utilize Integrated Pest Management techniques

Maintenance Practices Implementation for General Parks Grass Areas:

1) Height of cut is set between 3” and 3.5” which is the ideal height for cool season turf grasses. This work is performed by Parks staff in 10-15 day cycles or as the weather dictates
2) Avoid mowing when turf is under extreme heat or drought stress.
3) Never cut off more than 1\3 of the grass blade.
4) Clean and damage check mower decks and blades daily.
5) Allow grass clippings to stay in turf areas.
6) Sharpen mower blades weekly
7) Establish weed infestation thresholds at which point an herbicide treatment would be applied followed by re-establishment of grass turf.

Management Goals for Athletic Fields:

1) Establish and maintain turf suitable for player safety and proper execution of scheduled sports along with level of competition.
2) Set minimum thresholds for turf quality as well as action steps to implement once the threshold is reached. These thresholds and action steps will vary based on numerous factors (ie.location of the athletic field (neighborhood park versus an athletic venue), field requirements of the sport, the athletes playing upon it, fees paid by participants and funds available for actions required.
3) Turf will be maintained such that it can resist wear and recover quickly.

Maintenance Practices / Implementation for Athletic Fields:

1) A field rotation schedule has been developed to allow for wear to be spread across Parks fields and to lower maintenance inputs needed to completely refurbish a badly worn field. Parks staff working with volunteers and user groups can establish funds for improved maintenance and refurbishment as well as a workable field rotation schedule.
2) Fields will close due not only to unsafe conditions but also conditions that will likely cause unacceptable and costly damage such as overly wet, muddy, severe drought and heat stress conditions. Parks staff will make these decisions as conditions warrant and update user groups through the Athletic Field Rainout Line.
3) Integrated Pest Management principles will be applied and will include routine field mowing and trimming, aeration to relieve compaction and promote wear tolerance, fertilization to promote regrowth and wear tolerance and weed control to promote playable and resilient playing surfaces. Parks staff will complete this work.
4) Fields will be seeded in worn areas to prevent injury, weed infestation and unfavorable playing conditions. Parks staff will complete this work.

Conservation Parks

Conservation Parks are designated to protect and preserve examples of Madison's native natural communities and provide valuable habitat for flora and fauna. Many of these parks contain remnant plant communities that currently range in size and quality across the system. Some areas are relatively healthy and undisturbed, while others are severely compromised and degraded. Portions of some Conservation Parks had been previously converted to other land uses such as agriculture, while others were degraded by hydrological management (ie. artificial drainage and lake level manipulation) of the surrounding area.

Ecological quality, which can be measured by several factors, is the guiding principle behind management of Conservation Parks. At the smallest scale, a diverse, native plant population is the basis for a healthy natural community. The quality and biodiversity of each ecosystem will naturally vary, but must be free of large populations of non-native invasive species. In addition, ecosystems with a certain combination of vegetative structure, species composition and natural hydrologic and disturbance regimes tend to be the most stable and sustainable, and provide the best quality habitat for wildlife. The broad management goals for Conservation Parks can be summarized as follows:

1) Maintain higher quality native plant communities, such as remnants and established restorations.
2) Limit the spread of both native and non-native invasive species from lower-quality areas.
3) Restore natural hydrologic and disturbance regimes, such as drainage and fire, to the extent possible.
4) Increase native plant species richness and diversity in degraded natural communities and areas that had been converted for human uses, such as agriculture, roads, and recreation.
5) Maintain and improve medium quality buffer areas that support a lower-diversity mix of native and non-invasive, non-native species.

The general management practices used on Conservation Parks are similar to those identified above for the general parkland vegetation categories. However, on Conservation Parks, timing and results of management work will be held to stricter standards due to the more limited tolerances of the higher quality plant communities found there. Each individual Conservation Park will have a site-specific management plan that identifies the habitats that occur there, and lists detailed prescriptions and timelines for delineated management units. Broadly, management practices for Conservation Parks will include:

1) Prescribed burning: Park staff and volunteers will plan and conduct prescribed burns on fire-dependant habitats such as oak

woodland/savanna and tallgrass prairie, as well as sedge meadow and some areas within deciduous forest.

2) Invasive plant management: Park staff, contractors and volunteers will identify, prioritize and treat populations of non-native invasive species. Treatment methods will be selected by considering their impact to the surrounding plant community, effectiveness, and cost. Efforts will be made to minimize the amount of herbicide used and to favor mechanical methods, if appropriate for a particular target species.
3) Native plant establishment: Excluding fire, large disturbances to the vegetative structure of an area will always be coupled with intentional establishment of desirable native vegetation. This may consist of allowing the growth of an existing plant community which has been released, monitoring recruitment from the existing seed bank, or introducing a new plant population via seeding and planting.
4) Vegetative structure management: Park staff and contractors will re-set fire suppressed habitats to earlier successional stages in order to re-create the light, moisture and disturbance regimes appropriate to different habitats.

The main habitat types represented in Madison's Conservation Parks include:

1) Oak savanna / Oak woodland
   The majority of upland conservation park acreage is occupied by oak woodland and oak savanna in varying stages of succession from very open oak savanna to dense oak woodland being invaded by fire-intolerant tree and shrub species.
2) Tallgrass prairie
   Herbaceous-dominated plant community with very few woody species (trees and shrubs) that is dependent on regular occurrence of fire to maintain vegetative structure and species composition. Species composition varies based on site hydrology (dry, mesic, wet).
3) Sedge meadow
   Higher quality wetland with saturated soils and some standing water, dominated by graminoid species, mostly sedges.
4) Emergent marsh
   Shallow water areas on edges of lakes, ponds (including storm water ponds located on Conservation Parks), and rivers that support emergent aquatic vegetation.
5) Deciduous forest
   This includes red oak and white oak dominated stands, oak hickory forest, and mesic forest dominated by sugar maple, basswood and white oak.
6) Old field
   Former agricultural land undergoing natural succession.

Management Goals for Oak savanna / Oak woodland:

1) Re-establish and maintain an oak-dominated overstory canopy density suitable to each particular location
2) Re-establish and maintain understory densities suitable to each particular location
3) Eliminate non-native trees, shrubs and vines.
4) Re-establish and maintain diverse native herbaceous plant community.

Maintenance Practices / Implementation for Oak savanna / Oak woodland:

1) Staff or contractors will use forestry mowing or hand cutting to remove excess and non-native woody stems from the understory. Work will be done primarily during the dormant season. Forestry mowing will occur only when soil is dry or frozen. Hand cutting will occur in late summer through winter until trees begin to break dormancy.
2) Staff will use chainsaws to selectively fell or girdle fire-intolerant tree species to achieve desired canopy density.
3) Hand-cut and girdled stems will be immediately treated with herbicide. Forestry mowing will be followed by foliar herbicide applications to re-sprouts during the following growing season. Work will be performed by staff, volunteers or contractors, depending on density and workload.
4) Invasive herbaceous plants will be controlled by mowing, pulling or herbicide treatments, as appropriate. Work will be performed by staff, volunteers or contractors, depending on density and workload.
5) Weed pressure and native plant establishment will be evaluated by staff. Native seed mixes will be selected by staff and installed by staff, volunteers or contractors when they are most likely to succeed.
6) Staff and volunteers will maintain oak savannas and oak woodlands with regular prescribed burns, on a 5-year (maximum) return interval as resources allow

Management Goals for Tallgrass prairie:

1) Re-establish and maintain a native, herbaceous-dominated grassland community with minimal cover of native shrub species scattered throughout the unit.
2) Increase diversity in older prairie plantings dominated by warm season grasses.
3) Minimize non-native cool-season grass cover.
4) Limit the spread and reduce populations of invasive herbaceous plants (ie. reed canary grass, wild parsnip, teasel, sweet clover, non-native thistles, etc.) to avoid rapid invasion of prairie habitat.

Maintenance Practices / Implementation for Tallgrass prairie:

1) Old-field and areas dominated by non-native cool-season grasses will be inter-seeded with diverse native prairie seed mixes. In some cases, the

existing non-native plant community will be treated with herbicide first. Work may be performed by staff, volunteers or contractors.
2) Seed installations will be followed by establishment mowing. Following seed installation, staff will mow prairies with a rotary mower 2-3 times during the first two growing seasons to control weeds and reduce competition for native seedlings.
3) Staff will use mowing and limited herbicide treatments to help control woody and herbaceous weed species. Mowing will be carefully timed to ensure effectiveness when targeting individual weed species. Attention will be paid to reducing seed production, preventing further growth and avoiding seed dispersal.
4) Staff and volunteers will maintain tallgrass prairies with regular prescribed burns, on a 3-year (maximum) return interval. Efforts will be made to avoid burning particular burn units repeatedly during the same time of year, in order to minimize negative effects on different suites of species (i.e. warm-season grasses or forbs).

Management Goals for Sedge Meadow:

1) Re-establish and maintain a native, sedge-dominated herbaceous plant community with minimal cover of native shrub species scattered throughout the unit.
2) Limit and mitigate hydrological disturbances as much as possible.
3) Limit the spread and reduce populations of invasive herbaceous plants (ie. Phragmities, Japanese knot weed, etc.)

Maintenance Practices / Implementation for Sedge Meadow:

1) Staff, volunteers and contractors will use cutting and limited herbicide treatments to help control woody and herbaceous weed species. Spot-mowing with hand-held brush cutters will be carefully timed to ensure effectiveness when targeting individual weed species. Attention will be paid to reducing seed production, preventing further growth and avoiding seed dispersal.
2) Staff, volunteers and contractors may install native seed mixes and native plant plugs in areas that have been recently been cleared of invasive species or brush.
3) Staff and volunteers will maintain sedge meadows with regular prescribed burns, on a 3-year (maximum) return interval.
4) Where possible, hydrology will be restored by de-activating artificial drainage systems such as ditches. Work will be performed by contractors.

Management Goals for Emergent marsh:

1) Re-establish and maintain a diverse native plant community characterized by structural diversity and a rich species composition.

2) Limit the spread and reduce populations of invasive herbaceous plants (ie. purple loosestrife, narrow-leaf cattail, hybrid cattail and common reed etc.)

Maintenance Practices / Implementation for Emergent marsh:

1) Staff, volunteers and contractors will install native emergent plant species on the edges of newly constructed ponds.
2) Invasive species will be detected and removed as soon as possible to prevent invasion. Staff, volunteers and contractors will control populations with cutting or herbicide treatments as appropriate.
3) Where it is an option, Parks staff will attempt to conduct larger scale reduction of invasive plant populations through manipulation of water levels (ie. draw-down and cutting, or temporary flooding).
4) Monocultures of native species such as American lotus will be evaluated for habitat quality and may be enhanced by establishing additional native emergent species in these areas. Work would be performed by staff, volunteers or contractors.

Management Goals for Deciduous Forest:

1) Ensure regeneration of native tree species.
2) Promote diverse native herbaceous plant community.
3) Control invasive/non native species

Maintenance Practices / Implementation for Deciduous Forest:

1) Staff will manage tree species composition by removing non-native species such as Norway maple and planted spruces. Parks staff or contractors will fell trees, and staff, volunteers and contractors will girdle, saw kerf and treat stumps with herbicide.
2) Staff will monitor tree regeneration and assess whether control of vines or groundcover is necessary to ensure native tree recruitment into the canopy.
3) Dense infestations of invasive shrubs such as buckthorn and honeysuckle will be controlled by cutting and treating the stump with herbicide or by using a basal bark application of herbicide. Work will be performed by staff, contractors, or volunteers.
4) In areas with an intact native herbaceous community, staff and volunteers will prevent the establishment and spread of invasive species (ie. garlic mustard, dame's rocket, and hedge parsley). Plants will be hand-pulled or cut if possible, limiting the use of foliar herbicide treatments. Work will be performed by staff, contractors or volunteers.
5) Staff may use occasional prescribed burns in fire-adapted forest communities such as oak-hickory.

Management Goals for Old Field:

1) Provide low-quality buffer habitat that does not pose a threat to adjacent, higher-quality natural communities.
2) Provide pollinator habitat.
3) Control invasive/non native species

Maintenance Practices / Implementation for Old Field:

1) Depending on what managed habitat is adjacent, staff may or may not maintain the vegetative structure. Forest buffer will be allowed to succeed into forest. Grassland buffer will be maintained as grassland with mowing or burning.
2) Staff will perform limited invasive plant control with mowing or cutting. Herbicide may be used in specific instances to control new or particularly difficult populations.