

**HABITAT RESTORATION LANDSCAPE PLAN**  
**FOR THE**  
**MILWAUKEE COUNTY GROUNDS NORTHEAST QUADRANT**

**DECEMBER 2009**

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- 1. Conservation goals for existing significant habitat areas**
- 2. Design Principles and Criteria for habitat preservation, restoration, enhancement, creation and management within the northeast quadrant.**
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### **1. Conservation goals for existing significant habitat areas**

- Protect and enhance the existing Monarch roosting sites and associated habitat and microclimate which supports them
- Preserve other natural features and resources that support desirable wildlife that currently or potentially could inhabit this area
- Preserve, enhance and reestablish native plant communities that increase natural area values and provide greater ecological diversity and stability
- Provide public access to the preserved habitats for passive uses including observation of the Monarch roosting phenomenon, enjoyment of the natural resources and utilizing the site for educational purposes

### **2. Design Principles and Criteria for habitat preservation, restoration, enhancement, creation and management within the northeast quadrant.**

- The groves of Monarch roost trees must be preserved, enhanced and managed and replacement trees should be planted to supplement the aging trees over the long term.
- A habitat protection corridor linking the groves of Monarch roost trees to the County conservation land (Parcel 3) to the east must be preserved and enhanced. Monarch movement is the primary target for this corridor. Any road constructed to provide access to the UWM land from Swan Boulevard should be planned to minimize disruption of this habitat corridor both during construction and upon completion by locating it on the eastern edge of Outlot 1. Building placement should avoid any impacts to these key areas.
- Trails providing public access should link the UWM-owned parcels to the County conservation land to the east as well as to the surrounding natural and cultural resources and public parking.
- Public parking should be available to access the conservation areas.
- A standard for controlling invasive species in the UWM conservation areas must be established. It should include a requirement to fund ongoing maintenance and stewardship activities consistent with that standard.
- The stormwater management plans for development on the UWM lands should preserve or enhance the natural area values of the area and they should be integrated with existing natural resource features and topography.

### **3. Recommendations for integrating these principles and criteria into future development in areas outside of the conservation areas**

- Campus landscaping should emphasize and prominently feature the use of native plant species.
- To the greatest extent possible the UWM development should incorporate "green" design and construction principles to minimize negative impacts on adjacent conservation areas and to provide functional examples of environmentally sound development practices.
- Establish funding for the study of Monarch roosting sites and long term monitoring and maintenance of existing and created wildlife habitat areas.

**6. Recommendations for the creation, enhancement and management of wildlife habitat areas**

**a. Outlot 2 – Reserved for WisDOT Freeway reconstruction**

Outlot 2 contains large areas of habitat currently used by Monarch Butterflies and other wildlife as depicted on the Butterfly Habitat Map. This area has been significantly manipulated over time yet has developed vegetation that helps to create the microclimate needed to provide both nectaring (feeding on plant nectar) and roosting habitat for the Monarchs. These existing areas are shown on the Habitat Map included in this plan. It is anticipated that freeway reconstruction will disturb at least the southern half of this parcel sometime within the next five years. The footprint of freeway related improvements should be designed to minimize the impacts from re-grading and construction activities. Areas disturbed by construction should be restored utilizing native plantings, especially species from the attached Plant List. The habitat establishment and management strategies described for the other areas within this plan should also be implemented. Until construction activities disturb this parcel, these habitat areas should remain protected and be enhanced so that they continue to provide the habitat critical to the Monarch Roosting Phenomenon and other wildlife. The areas within this parcel that are not disturbed should likewise continue to be protected, enhanced and managed to maximize wildlife habitat and provide passive enjoyment of the natural resources and educational opportunities.

**b. Habitat Protection Area – Between the Eschweiler area and Swan Blvd.**

The two most significant areas of the site from the Monarch habitat perspective are the Oak Grove to the northwest and the Sycamore tree grouping to the east of the Eschweiler buildings. Because of their unique location, characteristics, microclimate and nearby nectar sources these areas provide essential roosting habitat for the Monarchs as they migrate through the area in late fall. The delicate balance that sustains these two areas could easily be disturbed by development activities. The Habitat Protection Area was delineated by drawing a 120-foot wide protective buffer around the two tree areas and then connecting those areas with another buffer to define a contiguous habitat area. The portions of this area that are already occupied by buildings or pavement have been removed from the protected area since they no longer contain meaningful habitat qualities. The resulting Habitat Protection area represents that portion of the site, which is to be protected, preserved and environmentally enhanced. No buildings, disruptive site improvements or construction activities are allowed in this area. A long term Management Plan needs to be developed, funded and implemented to help eradicate existing invasive plant species and transform this area into a more sustainable natural area that can provide meaningful habitat for the Monarch Butterflies and the other wildlife that utilize this area. This will also provide improved resources for passive recreation and education opportunities.

**c. Parcels 1 and 2 – UWM Development Land**

These parcels are designated for the development of the UWM Innovation Park. The majority of the site has been disturbed by the placement of soil fill and re-grading and has been revegetated. With the exception of the Habitat Protection Area these parcels currently contain few meaningful natural resources or critical wildlife habitat areas. It is appropriate that the majority of these parcels be utilized for the development of the UWM Innovation Park. In order to protect the integrity of the existing habitat areas at the north end of the parcels, the proposed roadway that intersects with Swan Boulevard should be realigned to the eastern edge of Outlot 1 on the northern end of the site. This will prevent the critical habitat areas at the north end from being bisected by development, preserve the integrity of the larger habitat area being preserved along Swan Boulevard and will help to link this area with the new habitat areas being created on Parcel 3 to the east. New landscaping around buildings should integrate with existing natural areas and be planted primarily with native species to help provide a consistent character throughout the Northeast Quadrant. The open, undeveloped areas should be left in a more natural state and managed to maintain and enhance these areas consistent with the recommendations established for the surrounding parcels. These efforts will help to ensure higher quality, sustainable habitats and improved passive recreation and educational opportunities.

**d. Outlot 1 – Transition between Development Land and Parkland**

The existing characteristics of this parcel are very similar to Parcels 1 and 2. This area has previously been targeted to serve as a buffer with between the development areas and the parkland to the east. The proposed roadway that intersects with Swan Boulevard should be realigned to the eastern edge of this parcel. Development of this area should be consistent with the recommendations for Parcels 1 and 2. Development of storm water management facilities utilizing current best management practices is appropriate in this area. They should be designed to integrate with the surrounding topography, habitat areas and other structures and site improvements. Roadways, walkways, site amenities and buildings are also appropriate on this parcel provided they are consistent with the habitat preservation, enhancement and maintenance goals, principles and criteria outlined in this plan. Designs for this area should focus on integrating the proposed improvements in a manner that not only provides a buffer for the adjacent habitat areas but also serve to integrate the development with the existing and proposed natural and cultural resources in the Northeast Quadrant and greater surrounding area. The vegetation should be designed and maintained to integrate with and enhance the proposed habitat to be created on the parkland to the east and to serve as a transition between developed areas and the surrounding habitat.

**e. Parcel 3 – Parkland**

The majority of this parcel has been disturbed by the placement of soil fill and re-grading and has been revegetated as well. This parcel, greater than 50 acres in size, will provide new habitat areas to replace those lost or impacted by the proposed developments and to help reconnect the previously severed Environmental Corridor that runs through this area along the Menomonee River. The Parks Department will undertake the design, construction and management of this parcel utilizing the goals, principles and criteria recommended in this plan. The land will be managed to remove and help prevent invasive species from dominating the area. Select native trees and new plant species from the Recommended Planting List will be established to create additional meaningful wildlife habitat and a more sustainable environment. Walks, trails or paths will be established in this area to provide critical linkages to the surrounding community and resources. These efforts will begin in the Habitat Priority Creation Area located in the northwest corner of this parcel and progress to the east and south over time. This priority has been established to help integrate the existing significant habitat areas to the west with the new habitat being created in hopes that the Butterflies and other wildlife utilizing these areas will migrate into and flourish in the new habitat. This approach also serves to create a more unified and functional amenity for the public by linking together the many natural and cultural resources present in this section of the community.



Date: December 4, 2009

To: Chairman Toni Clark, Economic and Community Development Committee

From: Sue Black, Director, Department of Parks, Recreation and Culture

**Subject: County Grounds Northeast Quadrant Habitat Restoration Plan Approval.**

**POLICY**

The Parks Director is requesting approval of the Habitat Restoration Plan for the County Grounds Northeast Quadrant, in accordance with County Board Resolution 09-14(a)(g).

**BACKGROUND**

County Board Resolution 09-14(a)(g) required that a Habitat Restoration Plan (Plan) be prepared and approved by the County Board as a contingency of the land sale closing. The resolution further specifies that:

1. The plan will be prepared by a Habitat Restoration Team comprised of UWM or its designee, Milwaukee County Parks Staff, a representative of the Milwaukee Public Museum's curatorial staff and a representative of the Friends of the Monarch Trail.
2. The team will participate in the preparation of the restoration plan that protects, creates, enhances and increases meaningful wildlife and butterfly habitat and resources on the Land Area, as well as the County Land abutting and to the east of the Main Parcel ("Open Space").
3. Critical habitat components such as the Oak Grove northwest of the Eschweiler Buildings and the Sycamore tree located to the east of the buildings shall be considered within the development plan and protected during future construction activities.
4. The restoration plan shall incorporate improved and enhanced habitat by replacing and increasing native and butterfly-specific plantings

Since June of 2009 the habitat team has met many times to identify the existing significant natural resources and identify potential areas for establishment of new wildlife habitat in the northeast quadrant. Throughout its deliberations the team has tried to identify ways to reconnect the isolated areas of significance with other surrounding natural and developed areas in an attempt to create a more contiguous, diverse and natural environment while at the same time keeping these areas accessible to the many current and future users of the area. To this end the recommendations include protecting the most important natural areas, creating new habitat to connect them to the surrounding natural resources and establishing a trail network that serves to connect all of these amenities and make the larger geographic area more sustainable, functional, desirable and accessible to the public.

Using the criteria set forth in the resolution, the collective expertise of its members and a variety of information gathered about the site, the team developed the attached Habitat Restoration Plan for this area. The plan consists of the following components:

1. Conservation goals for existing significant habitat areas
2. Design Principles and Criteria for habitat preservation, restoration, enhancement, creation and management within the northeast quadrant.
3. Recommendations for integrating these principles and criteria into future development in areas outside of the conservation areas
4. A map indicating the use and location of existing significant habitat areas
5. A map of the northeast quadrant area showing the location of areas to be preserved, protected and enhanced and their relationship to existing properties, natural areas and proposed development areas
6. Recommendations for the creation, enhancement and management of wildlife habitat areas within Parcels 1, 2 and 3 and Outlots 1 and 2

### **RECOMMENDATION**

The Parks Director respectfully recommends that the attached Habitat Restoration Plan for the County Grounds Northeast Quadrant be approved. As a result of the delineation of the critical habitat for wildlife including the Monarch butterflies in the Eschweiler area, and relocation of the internal roadway to the east to Outlot 1, the economic viability of the commercial and retail use in this area may be diminished. Also, more intense land uses in the vicinity have the potential to negatively affect this critical habitat. Given this potential, UWM is requesting, and the Director of the Department of Parks, Recreation and Culture concurs, that the Development Agreement be amended to permit the following alterations:

- Release of use restrictions on Outlot 1,
- Relocate portions of the internal roadway onto Outlot 1,
- Permit buildable/development area on Outlot 1, and
- Permit residential use within the Eschweiler area (located within Parcel 1) as an Ancillary Support Use

Therefore it is further recommended that the Real Property Purchase Agreement and Development Agreement be amended to make the required alterations to the use restrictions on Outlot 1 and Parcel 1 to accommodate the recommendations of the Restoration Plan.

Prepared by: Kevin Haley, Landscape Architect, Park Planning and Development/DPRC

**Recommended by:**

**Approved by:**

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Chuck Ward, Chief of Administration and  
External Affairs

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Sue Black, Parks Director

Attachment: Habitat Restoration Landscaping Plan for the County Grounds NE Quadrant

cc: County Executive Scott Walker  
Thomas Nardelli, Chief of Staff, County Executive's Office  
Chairman Lee Holloway, County Board of Supervisors  
Chairman Gerry Broderick, Parks, Energy & Environment Committee  
Cynthia Archer, Director, DAS  
Steve Kreklow, Fiscal & Budget Administrator, Admin. & Fiscal Affairs/DAS  
Sarah Jankowski, Fiscal Mgt. Analyst, Administration & Fiscal Affairs Division/DAS  
Julie Esch, Research Analyst, County Board  
Carol Mueller, Parks, Energy & Environment Committee Clerk  
Jack Takerian, Interim Director, Department of Transportation & Public Works  
David Gilbert, The UWM Foundation  
Nancy Welch, City of Wauwatosa Director of Community Development

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WHEREAS, the Milwaukee County Board of Supervisors adopted a resolution (File No. 09-14(a)(g)) that authorized the execution of a Real Property Purchase Agreement and Development Agreement with the University of Wisconsin-Milwaukee for the purchase of a portion of the northeast quadrant of the County Grounds (Parcel 1, Parcel 2, Outlot 1 and Outlot 2) for the development of a new College of Engineering and Applied Sciences to be known as Innovation Park; and

WHEREAS, the resolution required the development of a restoration landscaping plan by UWM or its designee, Milwaukee County Parks staff, a representative of the Milwaukee Pubic Museum’s curatorial staff and a representative of the Friends of the Monarch Trail and approval of the plan by the County Board (as a contingency of closing); and

WHEREAS, during the process of analyzing existing critical habitat areas and delineating future areas considered paramount to providing meaningful wildlife and butterfly habitat, the restoration landscaping plan team determined that approximately 16-acres of the site adjacent to the Eschweiler Buildings (“Eschweiler area”) is of most importance environmentally; and

WHEREAS, the Real Property Purchase Agreement delineates a 13.30-acre parcel of the property as conservancy (“Outlot 1”), which limits permitted land uses to stormwater management facilities and surface related uses as cited in Section 2.2 of the Development Agreement; and

WHEREAS, the habitat restoration landscaping plan recognizes protection of the Eschweiler area, requires realignment and relocation of the internal roadway to the east of the development site in order to intersect with Swan Boulevard from Outlot 1, and recommends reallocation of the buildable/development area to a portion of Outlot 1 to offset the Eschweiler area use restrictions; and

WHEREAS, the City of Wauwatosa has also indicated its preference for a more easterly relocation of the internal roadway in order to provide safer vehicular and pedestrian travel across and along Swan Boulevard; and

WHEREAS, Section 2.2 of the Development Agreement states that any use of Outlot 1 inconsistent with the permitted uses set forth, shall require Milwaukee County’s written consent; and

WHEREAS, pursuant to the Development Agreement (Section 1(e)), Ancillary Support Uses to serve the tenants of the Milwaukee County Grounds is geographically limited to the immediate vicinity of the Eschweiler Buildings, which may involve the redevelopment of the Eschweiler Buildings and/or construction of new buildings with a

46 mix of primarily commercial uses in order to provide viability, given the challenge of  
47 the historic buildings' use (configuration) and current condition; and  
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49 WHEREAS, as a result of the delineation of the critical habitat for wildlife  
50 and Monarch butterflies in the Eschweiler area and relocation of the internal roadway  
51 to the east to Outlot 1, the economic viability of the commercial and retail use in this  
52 area may be diminished; and  
53

54 WHEREAS, given this potential, UWM is requesting, and the Director of the  
55 Department of Parks, Recreation and Culture concurs, that the Development  
56 Agreement be amended to permit the following alterations:

- 57 • Release of use restrictions on Outlot 1,
- 58 • Relocate portions of the internal roadway onto Outlot 1,
- 59 • Permit buildable/development area on Outlot 1, and
- 60 • Permit residential use within the Eschweiler area (located within  
61 Parcel 1) as an Ancillary Support Use  
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63 ; now, therefore,  
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65 BE IT RESOLVED, that the Milwaukee County Board of Supervisors hereby  
66 approves the habitat restoration landscaping plan as developed by the restoration  
67 landscaping plan team; and  
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69 BE IT FURTHER RESOLVED, the County Board further authorizes and directs  
70 the Interim Director of Transportation and Public Works Department to execute an  
71 amendment to the Real Property Purchase and Development Agreements, contingent  
72 upon Corporation Counsel approval, to permit the aforementioned alterations; and  
73

74 BE IT FURTHER RESOLVED, that the Director of the Department of Parks,  
75 Recreation and Culture, the Interim Director of the Department of Public Works, Risk  
76 Manager, Corporation Counsel and Register of Deeds are authorized and directed to  
77 prepare, review, approve, record all documents and perform all actions required to  
78 implement the habitat restoration landscaping plan and the amendment to the Real  
79 Property Purchase and Development Agreements.  
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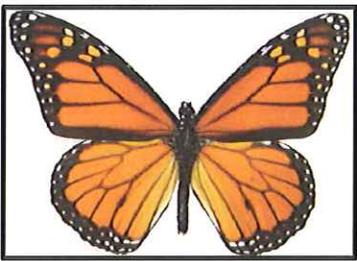
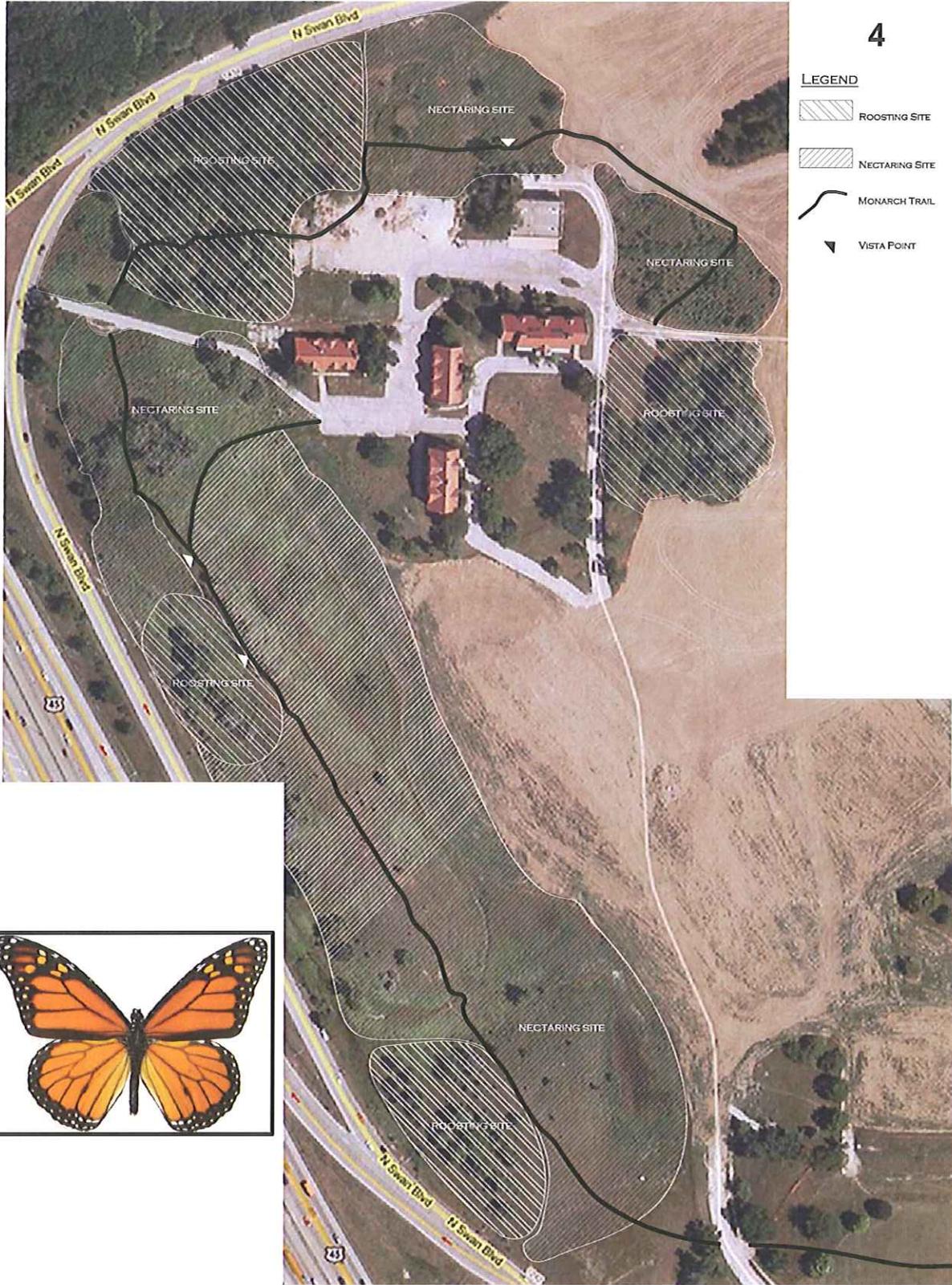
HABITAT RESTORATION PLAN FOR THE MILWAUKEE COUNTY GROUNDS NORTHEAST QUADRANT

340 170 0 340 Feet



**Legend**

- Parcel Boundaries
- Habitat Creation Priority Area
- Environmental Corridor
- Wetland
- Habitat Protection Area
- Parks
- Butler's Gartersnake Habitat
- Potential Trails



WILDLIFE USES AND LOCATIONS OF EXISTING SIGNIFICANT HABITAT AREAS IN THE NE QUADRANT

**MONARCH TRAIL BUTTERFLY HABITAT**  
 MILWAUKEE COUNTY, WI  
 SURVEY BY: RON LENCZAR  
 8.10.2009  
 DRAWN BY: STEVE KOHL  
 8.31.2009

SCALE: 1"=150'



**MAREK LANDSCAPING, LLC.**  
 STEWARDSHIP, DESIGN, CONTRACTING

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 MILWAUKEE, WI 53202  
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## MILWAUKEE COUNTY FISCAL NOTE FORM

**DATE:** December 2, 2009

Original Fiscal Note

Substitute Fiscal Note

**SUBJECT:** Habitat Restoration Plan for County Grounds NE Quadrant

**FISCAL EFFECT:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> No Direct County Fiscal Impact<br><input checked="" type="checkbox"/> Existing Staff Time Required<br><input type="checkbox"/> Increase Operating Expenditures<br>(If checked, check one of two boxes below)<br><input type="checkbox"/> Absorbed Within Agency's Budget<br><input type="checkbox"/> Not Absorbed Within Agency's Budget<br><input type="checkbox"/> Decrease Operating Expenditures<br><input type="checkbox"/> Increase Operating Revenues<br><input type="checkbox"/> Decrease Operating Revenues | <input type="checkbox"/> Increase Capital Expenditures<br><input type="checkbox"/> Decrease Capital Expenditures<br><input type="checkbox"/> Increase Capital Revenues<br><input type="checkbox"/> Decrease Capital Revenues<br><input type="checkbox"/> Use of contingent funds |
|--|--|

*Indicate below the dollar change from budget for any submission that is projected to result in increased/decreased expenditures or revenues in the current year.*

	Expenditure or Revenue Category	Current Year	Subsequent Year
<b>Operating Budget</b>	Expenditure	0	0
	Revenue	0	0
	Net Cost	0	0
<b>Capital Improvement Budget</b>	Expenditure	0	0
	Revenue	0	0
	Net Cost	0	0

## DESCRIPTION OF FISCAL EFFECT

In the space below, you must provide the following information. Attach additional pages if necessary.

- A. Briefly describe the nature of the action that is being requested or proposed, and the new or changed conditions that would occur if the request or proposal were adopted.
- B. State the direct costs, savings or anticipated revenues associated with the requested or proposed action in the current budget year and how those were calculated.<sup>1</sup> If annualized or subsequent year fiscal impacts are substantially different from current year impacts, then those shall be stated as well. In addition, cite any one-time costs associated with the action, the source of any new or additional revenues (e.g. State, Federal, user fee or private donation), the use of contingent funds, and/or the use of budgeted appropriations due to surpluses or change in purpose required to fund the requested action.
- C. Discuss the budgetary impacts associated with the proposed action in the current year. A statement that sufficient funds are budgeted should be justified with information regarding the amount of budgeted appropriations in the relevant account and whether that amount is sufficient to offset the cost of the requested action. If relevant, discussion of budgetary impacts in subsequent years also shall be discussed. Subsequent year fiscal impacts shall be noted for the entire period in which the requested or proposed action would be implemented when it is reasonable to do so (i.e. a five-year lease agreement shall specify the costs/savings for each of the five years in question). Otherwise, impacts associated with the existing and subsequent budget years should be cited.
- D. Describe any assumptions or interpretations that were utilized to provide the information on this form.

Development of this Habitat Restoration Plan was a requirement of Resolution No. 09-14(a)(g). The plan has been prepared as directed and its approval by Milwaukee County will fulfill one of the contingencies of closing specified in the Real Property Purchase Agreement and Development Agreement previously authorized. Adoption of this resolution will result in no changes to the fiscal effects established in the original Resolution which authorized the preparation of this Plan.

Department/Prepared By DPRC/Kevin Haley

Authorized Signature \_\_\_\_\_

Did DAS-Fiscal Staff Review?  Yes  No

<sup>1</sup> If it is assumed that there is no fiscal impact associated with the requested action, then an explanatory statement that justifies that conclusion shall be provided. If precise impacts cannot be calculated, then an estimate or range should be provided.

## 7. RECOMMENDED PLANTING LIST FOR HABITAT CREATION AND ENHANCEMENT

Recommended for inclusion at UWWM & Milwaukee County Grounds - wildlife habitat restoration areas (depending on habitat types) - 8/20/2009 (Borkin & Agnew)

### Lepidopteran larval host plants and adult nectar plants

#### Habitats

- E Forest Edge & adjacent habitats
- F Forest & forest openings
- O Old field, disturbed - open grassland/forb
- P Prairie or grassland restoration planting
- W Wetlands - moist swales, pond edge, sedge meadow

#### Categories

- I widespread species that occur in open, old field to native prairie grassland habitats - expected to breed at the site (includes resident and migrant spp.)
- II less common or migrant species - may occur if areas of sufficient moisture and/or required plants are available
- III common woodland or forest edge species that may be attracted to nectar plants at the site - but host plants may/may not be present
- IV widespread and likely to occur at the site but non-native or primary host non-native (host plants are not being recommended)

Host Plant List	Common	type	habitat	category	Assoc. Scientific	Common	No.	Comments
<i>Asclepias syriaca</i>	common milkweed	forb	open, old field-disturbed	I	<i>Danaus plexippus</i>	monarch	1	
<i>Asclepias incarnata</i>	swamp milkweed	forb	open, moist	I	<i>Danaus plexippus</i>	monarch	1	
<i>Asclepias verticillata</i>	whorled milkweed	forb	open, drier slopes, sandy	I	<i>Danaus plexippus</i>	monarch	1	
<i>Asclepias tuberosa</i>	butterfly weed	forb	prairie, well-drained soil	I	<i>Danaus plexippus</i>	monarch	1	
<i>Asclepias</i> spp. - others	milkweeds	forb	open, varies with species	I	<i>Danaus plexippus</i>	monarch	1	
<i>Antennaria</i> spp.	pussy-toes	forb	open, disturbed	I	<i>Vanessa virginensis</i>	American painted lady	2	
<i>Alfalfa</i>	alexanders, parsleys, parsnips	forb	open field species	I	<i>Papilio polyxenes</i>	black swallowtail	3	uses wild carrot as well as natives
<i>Aster</i> spp.	asters	forb	open	I	<i>Phyciodes tharos</i>	pearl crescent	4	
<i>Boehmeria cylindrica</i>	false nettle & other nettles	forb	moist	II	<i>Aglais milberti</i>	Milbert's tortoiseshell	5	
<i>Desmodium, Lespedeza</i> spp. +	tick-trefoils, bush clover, etc.	forb	disturbed & prairie	I	<i>Everes comyntas</i>	Eastern-tailed blue	6	various Fabaceae in bloom (larvae feed on buds & flowers)
<i>Helianthus, Helipopsis</i> spp.	sunflowers	forb	various	I	<i>Vanessa cardui</i>	painted lady	7	utilizes more than 100 plant species as hosts including many weedy
<i>Rumex altissimus, R. mexicanus</i>	native dock species	forb	disturbed, moist	II	<i>Lycæna diane</i>	gray copper	8	occurred along creeks in 1970s, but may require disturbance
<i>Rumex obtusifolius, R. mexicanus</i>	docks	forb	disturbed, moist	II	<i>Lycæna hyllus</i>	bronze copper	9	also uses curly dock (non-native)
<i>Triosteum perfoliatum</i>	feverwort	forb	disturbed, moist	II	<i>Hemaris thysbe</i>	hummingbird moth	10	day-flying moth
<i>Urtica</i> spp.	nettles	forb	disturbed, moist	II	<i>Vanessa atalanta</i>	red admiral	11	emigrates from the south, occasionally overwinters
<i>Viola</i> spp.	violets	forb	open, moist & forest edge	II	<i>Speyeria cybele</i>	great spangled fritillary	12	
<i>Viola, Desmodium</i> spp. +	violets, tick-trefoils, etc.	forb	open fields, prairie	III	<i>Eupetiole claudia</i>	variegated fritillary	13	so. species, occ. immigrant (many unrelated hosts reported)
<i>Panicum</i> spp.	panic grasses	grass	unmowed grassy fields	II	<i>Polites themistocles</i>	tawny-edged skipper	14	
<i>Panicum, Poa</i> spp. +	panic, bluegrasses & others	grass	unmowed grassy fields	I	<i>Polites peckius</i>	Peck's skipper	15	
<i>Poa</i> spp.	bluegrasses	grass	moist, open areas	II	<i>Polites mystic</i>	long dash	16	
<i>Poaceae</i> incl. <i>Tridens flavus</i>	grasses incl. purpletop	grass	unmowed grassy fields	II	<i>Cercyonis pegala</i>	large wood nymph	17	
<i>Zanthoxylum americanum</i>	prickly ash	shrub	moist	III	<i>Papilio cressphontes</i>	giant swallowtail	18	(may be sufficient host plants across Swan Blvd.)
<i>Cornus, Prunus</i> spp. +	dogwood, cherry, viburnum +	shrub	moist	III	<i>Celastrina</i> spp.	spring & summer azure	19	uses flower buds of various shrubs or trees as available
<i>Salix</i> spp.	shrub willows	shrub	moist	II	<i>Limenitis archippus</i>	viceroxy	20	
<i>Salix</i> spp.	shrub willows	shrub	moist	II	<i>Satyrium acadiana</i>	Acadian hairstreak	21	
<i>Salix, Ulmus, Populus, Celtis</i> spp.	willow, elm, aspen, hackberry	shrub-tree	OPFE	II	<i>Nymphalis antiopa</i>	mourning cloak	22	
<i>Celtis</i> spp.	hackberry trees	tree	FE	II	<i>Libytheana bachmani</i>	Eastern snout butterfly	23	southern species, occasional immigrant
<i>Ulmus</i> spp. + others	elm, nettles	tree-forb	forest openings & edge	III	<i>Polygonia comma</i>	comma butterfly	24	
<i>Ulmus, Celtis</i> spp. + others	elm, hackberry, nettles	tree-forb	forest openings & edge	III	<i>Polygonia interortensis</i>	questionmark butterfly	25	
<i>Leguminosae</i>	locusts, peas, tick-trefoils, etc.	tree-forb	forest openings & edge	II	<i>Epargyreus clarus</i>	silver-spotted skipper	26	
<i>Fraxinus, Prunus, Populus</i> spp. +	ash, black cherry, aspen, etc.	tree	OPFE	III	<i>Papilio glaucus</i>	tiger swallowtail	27	uses various trees including along city streets
				IV	<i>Pieris rapae</i>	cabbage white	28	hosts: various cruciferous plants
				IV	<i>Colias philodice</i>	clouded sulphur	29	primary host: white clover
				IV	<i>Colias eurytheme</i>	orange sulphur	30	various Fabaceae but esp. alfalfa, white sweet clover, vetches
				IV	<i>Junonia coenia</i>	common buckeye	31	plantain & other

Recommended Nectar Plants

Scientific	Common	Type	Habitat
<i>Achillea millefolium</i>	yarrow	OP	open disturbed, prairie
<i>Apocynum</i> spp.	dogbane, Indian hemp	forb	open disturbed, prairie
<i>Asclepias</i> spp.	milkweeds	forb	open disturbed, prairie
<i>Aster</i> spp.	New England & others	forb	open disturbed, prairie
<i>Bidens</i>	beggar-ticks	forb	open disturbed, prairie
<i>Echinacea, Rudbeckia</i> spp.	coneflowers	forb	open disturbed, prairie
<i>Eupatorium</i> spp.	Joe-pye-weed, boneset	forb	open disturbed, prairie
<i>Helianthus</i> spp.	sunflowers	forb	open disturbed, prairie
<i>Liatris</i> spp.	gayfeather, blazing stars	forb	open disturbed, prairie
<i>Monarda fistulosa</i>	bergamot	forb	open disturbed, prairie
<i>Pycnanthemum virginianum</i>	mountain mint	forb	open disturbed, prairie
<i>Solidago</i> spp.	(narrow-leaved+) goldenrods	forb	open disturbed, prairie
<i>Spiraea alba</i>	meadowsweet	shrub	open disturbed, prairie
<i>Ceanothus americanus</i>	New Jersey tea	shrub	open disturbed, prairie
<i>Cirsium</i> spp.	native thistles	OP	open disturbed, prairie

Note: Butterflies are generalist-feeders on nectar, utilizing a wide range of flowers: both native & non-native (limited by length of proboscis, nectar availability, & influenced by most attractive/abundant)

many butterfly spp. feed at thistle flowers (native & non-natives) and red clover

(monarch butterfly host plants & excellent nectar plants) (host & nectar plants) (plant) used to be in some of the wetter areas, now regraded

(excellent nectar plants) always a good fit for skippers and satyrs etc

Recommendations and notes on plants that previously had been present at the site from Barb, () notes added by sb:

<i>Asclepias</i>	common, whorled, and swamp		
<i>Aster</i>	New England, small blue and others, including forked		
<i>Chelone glabra</i>	turtlehead		baltimore
<i>Crataegus</i>			<i>Euphydryas phaeton</i>
<i>Eupatorium</i>	Joe pye, boneset, (white) snake root		
grasses	big and small bluestem		the gardens that were planted often had liatris but it would be very beneficial to naturalize some blazing star for nectar
<i>Liatris</i>			
<i>Populus</i>			
<i>Quercus</i>			
<i>Rumex</i>	curley always, also was smooth dock and long ago sheep sorrel		
<i>Salix</i>			
<i>Solidago</i>	many types		
<i>Urtica</i>	2 types, stinging and another small and low?		
<i>Vernain</i>			
<i>Viola</i>			
<i>Zanthoxylum</i>			

(good nectar plants)

there were Great spangled Fritillaries until 2 years ago—due for a comeback!  
giant swallowtail

*Speyeria cybele*

*Papilio cresphontes*

There is some across the road in the woods and a few in the Oak Grove. Have always seen a few giant swallowtails each year.

\* List does not include recommendations regarding modifications or replacements for grove of roosting trees.