

Conservation in Middleton



2011 – 2016
City of Middleton

Conservancy Lands Plan

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City of Middleton Conservancy Lands Plan 2010

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1. Introduction

The *City of Middleton Conservancy Lands Plan* identifies all of the lands currently in the conservancy lands program and provides an inventory of each including parcel size, existing facilities and current management efforts. The *Plan* also addresses trail standards, management techniques, recommended policies, staffing issues, identifies needs, and provides implementation strategies over the next five (5) years.

1.1 What are Conservancy Lands?

Conservancy lands are properties zoned CO and owned by the city of Middleton that contain forests, fields, ponds or wetlands as their primary land cover. The lands are managed for passive recreation and conservation purposes pursuant to Wis. Stats. § 28.20, which allows cities to have community forest lands.

There are approximately 820 acres in conservancy land in the city of Middleton, representing 14 percent of the city's total area (city's area estimated at approximately 5,773 acres at the time of this writing). Many of the properties such as Tiedeman Pond, Stricker Pond, Graber Pond and Esser Pond contain wetlands, prairie, oak savanna and kettle ponds. Other parcels contain wooded lowlands and open marsh, such as portions of the Pheasant Branch Conservancy. Conservancy lands may be large parcels such as those listed above, or smaller parcels such as remnant prairies found along railroad tracks or small fragmented forests located between developed areas.

Esser Pond



1.2 Who is Responsible for Conservancy Lands Policy and Management in Middleton?

Policy decisions that affect conservancy lands are generally made by three (3) advisory committees within the city government, subject to the final authority of the Middleton Common Council. It should be stressed that ultimately, the responsible parties for management and policy decisions on conservancy lands are the city and the Public Lands Department. The governing body that reviews and makes management recommendations regarding these lands is the Conservancy Lands Committee (CLC). The Water Resources Management Commission (WRMC) and the Park, Recreation and Forestry Commission (PRFC) are also involved in decisions regarding public lands in Middleton. A description of each city group involved maintaining the quality of public lands is provided below.

Conservancy Lands Committee (CLC) (Chapter 2.16 Middleton Code of Ordinances)

The CLC consists of seven (7) members, as outlined in Chapter 2.16 of the city's Code of Ordinances, which can be found on the city of Middleton's website. Members include the Chair of the PRFC (or someone appointed by the Chair), the Chair of the WRMC (or someone appointed by the Chair), the Chair of the Public Works Committee (or someone appointed by the Chair), one (1) Alderperson, two (2) citizens who are residents of the city of Middleton and one (1) citizen who is not required to be a resident of the city of Middleton. The committee chairs are automatic members on the CLC board, all others are appointed by the Mayor.

The CLC's mission is to further the city's interest in management of its community forests, fields and wetlands for conservation purposes. The CLC also makes policy recommendations and is responsible for studying all land conservation issues affecting city of Middleton lands designated as conservancy. The CLC is charged with planning and implementing programs that are designed to restore and enhance such lands in order to accomplish ecological restoration, improve natural scenic beauty, and provide opportunities for education and recreation for the residents of Middleton.

Water Resources Management Commission (WRMC)
(Chapter 2.05 Middleton Code of Ordinances)

The WRMC consists of seven (7) members, including the Chair of the PRFC (or someone appointed by the Chair), one (1) Alderperson and five (5) citizen members.

The mission of this committee is to study, plan and implement programs involving the management of water resources both within and, where possible, beyond the corporate limits of the city of Middleton. The commission reviews all specific and related storm drainage, flood control, floodplain, stream, lake, shoreline and improvement projects that affect or may affect the city or its residents. This committee's decisions have the potential to impact conservancy lands that contain water features, especially the kettle ponds and detention ponds.

Confluence Pond



Park, Recreation and Forestry Commission (PRFC)
(Chapter 2.10 Middleton Code of Ordinances)

The PRFC consists of seven (7) members, including one (1) Alderperson and six (6) citizens. The PRFC's mission is to govern, control, maintain and improve all public parks, parkways, and boulevards within the city, as well as any that may be owned or acquired outside the corporate limits of the city, except designated conservancy lands.

The PRFC oversees park facilities in Middleton, which totaled approximately 512 acres in 2006 according to the city's Comprehensive Park and Open Space Master Plan (2007). Many of these parks border conservancy lands, and therefore the management of one may affect the other. Also, the PRFC has oversight responsibilities for the Urban Forestry program, which includes over 8,500 street trees (an estimated 25% of which are ash trees) and several urban forest management areas.

City Staff

The city of Middleton has one (1) full-time Public Lands Manager who oversees daily operations related to the conservancy lands. Public lands operation and management tasks are performed by one (1) full-time Public Lands Lead Foreman, one (1) full-time CLC Lead Crewman, one (1) LTE crew and five (5) DOC Crew. The LTE and DOC (Dept. of Corrections) crew members are available seasonally. There are also three (3) park crew members, one (1) Parks Lead Crewman, one (1) full-time Forester/Horticulturist, one (1) part-time City Forester and five (5) LTE park staff that may assist with public lands under the direction of the Public Lands Manager. Volunteer labor is also plays a large role in the care and quality of conservancy lands.

1.3 Brief History of Middleton Conservancy Lands

The city of Middleton has a long history of preserving its significant environmental and natural resource areas. In the early 1960's, Walter Bauman, former mayor of Middleton, realized the value of the city's unique resources, especially the Pheasant Branch Watershed. He recognized the importance of this special natural area in the midst of the rapidly urbanizing Madison Metropolitan Area. He and others on the PRFC and WRMC worked hard to provide for the protection and eventual acquisition of the Pheasant Branch Conservancy and the surrounding conservancy lands. A Conservancy Zoning District was created to provide legal protection to sensitive natural areas, such as the Pheasant Branch Conservancy. This zoning designation also helped the city create and protect additional conservancy areas like Tiedeman Pond, Graber Pond, Esser Pond and Stricker Pond.

In 1966, the PRFC created Middleton's first *Park and Open Space Plan*, which identified the need to protect the Pheasant Branch Conservancy. The Lakeshore Problems Committee formed that year to address siltation problems in Lake Mendota. The committee quickly recognized the problems that development and farming practices were causing and created the *Pheasant Branch Rehabilitation Master Plan* in 1967, which included a variety of erosion protection and bank stabilization projects for the Pheasant Branch Creek and Conservancy Area.

The Pheasant Branch Conservancy



In 1968, the Middleton Conservation Committee, a citizen group, also became active in work projects in the area. In 1969, 15 acres of wetlands were purchased for what later became the Pheasant Branch Nature Preserve (synonymous with Pheasant Branch Conservancy). Around this time, the Middleton Park, Recreation and Forestry Commission (PRFC) increased its interest in nature preserves. In 1970, the Pheasant Branch Nature Preserve was created by resolution of the PRFC and the Middleton Common Council. The 1972 *Park and Open Space Plan* described guidelines for Pheasant Branch Conservancy and recommended increasing its boundaries significantly. The PRFC recognized the need to preserve lowlands, natural waterways and wetlands in their natural state to insure their maintenance as wildlife and fish habitats, natural drainage areas, and areas of passive outdoor recreation. The PRFC also recognized that citizens will respect and protect natural areas when they are made aware of their natural values.

The city of Middleton created the Water Resources Management Commission (WRMC) in the early 1970's to oversee the protection of the city's streams, lakefront, ponds and marshes. This committee was instrumental in creating the *Pheasant Branch Marsh Environmental Study and Acquisition Plan* in 1973 (updated in 1982); the *Plan* outlined a strategy for preserving the Pheasant Branch Nature Preserve and with the assistance of local, state and federal funds, the first 100 acres of land in the marsh were acquired in 1975.

The Conservancy Lands Committee (CLC) has also been instrumental in protecting Middleton's important natural resources. The CLC began as an ad hoc committee in May of 1997, and was formally established by the Middleton City Council by ordinance in 1998 to further the city's interests in the management of its community forests, fields and wetlands for conservation purposes under state law. The CLC plans and implements programs designed to restore and develop such land so as to accomplish ecological restoration and natural scenic beauty as well as opportunities for education and recreation for the residents of the city. It also recommends to the Common Council adoption of ordinances to further the above goals, as well

as to further the general health, safety and welfare of the public. Working closely with the city's Public Lands Manager in these efforts and under the general direction of the Middleton Common Council, the CLC advises the Council and city staff concerning environmental policy on conservancy lands in the community.

With the extensive planning and protection work of the 1960's and continuing today, the Pheasant Branch Conservancy Area and Middleton's other conservancy lands have been preserved for the benefit of all people, wildlife and the natural environment.

1.4 Overview of Existing Conservancy Lands

Middleton has 27 conservancy land areas of varying size and habitat type. The following summary provides a general overview of these conservancy parcels. For a complete listing of all the parcels and detailed information on each, please refer to the City of Middleton Conservancy Lands Inventory Table and Chapter Three of this *Plan*.

The largest conservancy land parcel is Pheasant Branch Conservancy which contains 483 acres; 322 acres are owned by the city of Middleton, the remaining acres are owned by Dane County Parks and the Wisconsin Department of Natural Resources (WisDNR).

There are five (5) glacial kettle ponds in the city of Middleton: Stricker Pond, Tiedeman Pond, Graber Pond, Esser Pond and Middleton Hills Pond.

The conservancy land system also has large and small areas of prairie, such as the 51-acre prairie at Pleasant View Golf Course, 19-acre Bock Community Forest and other smaller prairies.

Wetlands, lowland forest and oak savannas are just some of the other native communities protected within the city of Middleton's conservancy lands system.

Activities such as biking, hiking, jogging, dog walking, bird watching, and other nature-oriented pursuits are all accommodated in these publicly held and managed areas.

1.5 Goals and Objectives

An important feature of this *Plan* is the creation of goals and objectives to help guide the CLC and staff in maintaining and improving Middleton's conservancy lands in the future. A goal is a long term achievement and something to be worked on over a long period of time; an objective is a milestone or marker that is used to measure whether or not the goal is being achieved.

Goal 1: Protect and restore native landscapes and designated conservancy lands to maintain or improve the natural habitat, scenic beauty, passive recreation and environmental outdoor education.

Objectives:

- a. Identification of natural vegetative communities within the city, including but not limited to uplands, lowland forests, wetland/sedge meadow and oak savanna areas.
- b. Investment in the development of facilities that will maximize the health and appreciate of conservancy lands.
- c. Preserving the role of wetlands and woodlands as essential components of the hydrologic system and valuable wildlife habitat. Protect shoreland and floodplain areas accordingly.

Coneflower at Middleton Hills Outlot 10



- d. Controlling exotic and invasive species.
- e. Establishing development policies and standards related to trails, kiosks, shelters, benches and diverse uses of conservancy lands areas, including such uses as canoe access, sediment basins and others.

Goal 2: Expand partnerships for maintenance of conservancy lands and hands-on restoration and learning opportunities for the residents of Middleton.

Objectives:

- a. Promotion of conservancy lands through multimedia campaigns.
- b. Periodic conservation programming, like ecological tours or hikes, that draw interest and enthusiasm.
- c. Expanding coordination with friends groups and local, county, regional, and state entities.

Goal 3: Improve water quality within the conservancy land properties.

Objectives:

- a. Improved water quality of all lakes, creeks and kettle ponds within Middleton's conservancy lands system by providing a shoreland buffer zone of diverse native vegetation 100' to 300' in width along the edges of streams, wetlands and ponds.
- b. BMPs in place around all kettle ponds and creeks by 2015. Education seminars on BMPs to alert property owners to preferred stormwater management techniques.

Goal 4: Increase connections between Middleton's conservation lands and other adjacent or regional conservation areas including corridors/linkages with other government/municipal lands of similar management.

Objectives:

- a. Full development of the Good Neighbor Trail and increased connections to regional trails such as the Highway 12 Trail.
- b. Provision of barrier-free access to all trail facilities.
- c. Regular consultation with similar agencies from neighboring cities, towns and counties to develop a regional response to issues concerning land conservation.
- d. Maintaining "green space" corridors between the communities of Middleton, Waunakee/Westport and Madison.
- e. Marked conservancy boundaries to inform the public, to delineate management responsibilities and to prevent unintended encroachment.

Goal 5: Provide adequate management and staffing to oversee the maintenance of conservancy lands.

Objectives:

- a. Sufficient staff to execute plan objectives and respond to conservation priorities.
- b. Balanced expenditures commensurate with expected levels of maintenance.
- c. Equitable distribution of funding relative to the scale and importance of conservation lands to quality of life, stormwater management, and property values.
- d. Continued pursuit and award of state and private funding.

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2. Conservancy Lands Operations

2.1 Operation Projects

Conservancy lands operations can be divided into five (5) different project types, listed A-E:

- A) Restoration/management projects;
- B) Capital facility projects;
- C) Capital restoration projects;
- D) Study projects; and,
- E) Acquisition projects.

These operations are ongoing throughout Middleton's conservancy lands.

A. Restoration/Management Projects

Maintenance and/or restoration is conducted in some form on all of the conservancy lands on an on-going basis to help control the invasion of non-native species and to restore the conservancy lands to their native condition. Brush and tree removal is commonly needed. Fire and herbicides are also used on a yearly or bi-yearly basis to control unwanted woody and herbaceous plants. Some of the lands have management plans that guide these efforts; others do not and management of these areas is less certain. Please refer to Chapter Three for a discussion of the status of management plans and management activities for each conservancy area.

The majority of the conservancy lands staff time is spent overseeing and conducting the ongoing maintenance of the conservancy lands. Maintenance activities generally involve small scale restoration activities intended to improve the native plant diversity and overall ecological function of the conservancy land, trail maintenance and development, and water quality improvements.

A variety of habitats are found throughout the conservancy lands system. Generally, all of the lands will be treated with one of the maintenance and/or restoration activities described below; mowing, burning, herbicide treatment and seeding are the most common. Several habitat types require more specialized treatments. For instance, detention ponds require dredging on a 5-10 year interval to maintain the water holding capacity of the pond while kettle ponds may require periodic water level maintenance, including Tiedeman Pond and Stricker Pond, where water levels are pipe controlled.

Mowing: Mowing is a common non-woody weed control maintenance activity conducted on Middleton conservancy lands to improve vegetative health. Mowing is also used along CLC trails to ensure trail safety. Mowing prevents seed production and is a standard method for preventing the spread of invasive species, including reed canary grass, which is a common invasive species that is present in many of the conservancy lands. Other non-woody invasive plants that are controlled through mowing and other management practices described here (burning, herbicide application, and physical removal) are garlic mustard, dame's rocket, phragmites and thistles.

Unfortunately, to be effective, mowing must be conducted during early to mid June, a time that coincides with the nesting period for many birds. Fortunately, the disturbance occurs early enough in the breeding season so that most, if not all, of the birds will re-nest.

Prescribed Burning: Many of the conservancy lands undergo prescribed burns, which helps eliminate invasive species, keeps woody plants at bay and allows for the propagation of native vegetation. Prescribed burning is a time and labor intensive management activity, and while it is used on many lands, if the budget and staff were available, it is likely that more areas would receive this treatment as it is very effective in controlling invasive species and encouraging growth of native vegetation.

Herbicide Application: Because invasive species are a problem in nearly all of the conservancy areas, herbicides may be used to control this invasive vegetation and to prepare sites for restoration to native vegetation. Care should be taken to avoid contamination of adjacent water bodies.

Seeding or Plant Installation: Seeding and/or planting native “plugs”, or plants, helps to increase the variety of native plants in a conservancy area and works best in conjunction with a prescribed burn, mowing for weed control, herbicide treatment, or all of the above.

Brush Removal: Brush removal, or brushing, is generally performed in prairie or forested areas to remove invasive woody vegetation, and may also be used to manage other habitat types within the conservancy land system such as hazard tree removal or removal of trees that are infected with pests or disease. Buckthorn, prickly ash, red osier dogwood and honeysuckle are invasive shrubs that have been aggressively taking over southern Wisconsin forests for years, including forested areas on Middleton’s conservancy lands. Manual cutting and removal combined with herbicide application is the only way to eliminate these shrubs.

Tree Removal: Tree removal is an important tool in restoring degraded habitats within Middleton’s conservancy land system. Hazard trees, or trees that are in danger of losing large limbs or falling over, must be selectively removed in some areas to protect public safety. Common trees found within Middleton’s conservancy areas include cottonwood, box elder, Siberian elm, willow and oak. While box elders, willows and cottonwoods are native to Wisconsin, they can grow so aggressively that they take over an area and shade out the more desirable native plants. In addition, it is necessary to remove that are infected with Dutch elm disease and the emerald ash borer poses a major threat to local ash populations.

Erosion Control: This type of management activity is conducted on nearly all of the Middleton conservancy lands. Examples include erosion control measures on the steep slopes along Pheasant Branch Creek and on the land surrounding the kettle ponds and detention ponds. Several methods are used to control erosion, including special structures such as geo-textiles, bio logs, stream barbs, water vanes, root wads, matting and seeding.

Dredging: The wet detention ponds must be dredged periodically to remove build up of sediments and ensure the ponds have enough water capacity to fulfill their stormwater management functions.

Water Level Management: This is a special treatment that is generally used to manage water levels in Tiedeman and Stricker ponds. Water is pumped and piped from the ponds to Lake Mendota via the stormwater system. This work has been done with guidance from the Wisconsin Department of Natural Resources to control floodwater, primarily, and restore habitat, secondarily. Ongoing facility improvements will continue to improve these conditions.

B. Capital Facility Projects

Capital facility projects are defined as projects that result in a new recreation facility on a conservancy lands parcel. Typical facilities include trails, bridges, overlooks, interpretive signs or kiosks, boundary markers and boardwalks. The projects are usually one time events, the new equipment or facility is installed and the project is complete. Staff performs annual maintenance to such facilities over time.

A significant recent example of a capital facility project is the installation of porous asphalt trails on 1.2 miles of the Pheasant Branch Creek Corridor in 2008-09. The project also included installation of three 60’ long, 12’ wide bridges over the creek replacing the existing stone steps and allowing for ADA compliant access through the corridor.

C. Capital Restoration Projects

Capital restoration projects are major restoration efforts that result in significant changes to the landscape. These usually involve several acres and significant invasive and exotic species removal to be replaced by natives. There are usually several of these project types within the conservancy lands system each year based on grant assistance received. Restoration projects may involve tree/brush removal, weed removal, prescribed burning, weed mowing, native seeding/plantings, and stormwater management.

An example of a recent capital restoration project is the removal of invasive species and hazard trees from the John C. Bock Community Forest. This work began in 2009 and included the installation of a one-acre community garden with a native plant nursery. Plants from this nursery, which are maintained by volunteer gardeners, will be used for the restoration.

D. Study Projects

Study projects can be system-wide reports or plans, like this one, or management plans for individual conservancy parcels, like the Middleton Hills Oak Savanna Conservancy Park Ecological Assessment and Restoration Plan, the Lakeview Park Conservancy Areas Ecological Assessment and Restoration Plan, the Stricker Pond Master Plan, or the Pheasant Branch Creek Corridor North Fork Confluence Pond Management Plan. These projects are usually completed by consultants and result in recommendations for improvements to the parcel in the form of either capital facility projects or capital restoration projects.

An example of a recent study project is the Middleton Hills Outlot 63 & 64 Ecological Assessment and Management Plan completed in 2009 by BioLogic Environmental Consulting, LLC. The plan includes an assessment of hazard trees and identification of invasive species. The plan also includes a series of recommendations and an implementation schedule for 2009 – 2013 (a long-term schedule is also provided for 2014 – 2018). Restoration efforts began in 2009.

E. Acquisition Projects

This project type results in the acquisition of property for the conservancy land system. The property can be acquired by outright purchase, donation, or the purchase of easements. A joint effort between city, Dane County Conservation Fund, the Wisconsin Stewardship Fund, Friends of Pheasant Branch, and other foundations resulted in the acquisition of 19.7 acres of land adjacent to the Pheasant Branch Conservancy.

It is important for the CLC, in conjunction with staff, to identify future areas that should be protected and begin to identify means of acquiring these areas. Landscape types that should be considered for acquisition or protection include wetlands and ponds, their shorelines and immediate uplands, greenway corridors such as streams or utility rights of ways, steep slopes and bluff tops, and areas that have existing native plant communities such as oak savanna, which according to the DNR is the most endangered habitat in Wisconsin.

2.2 Existing Staffing Levels

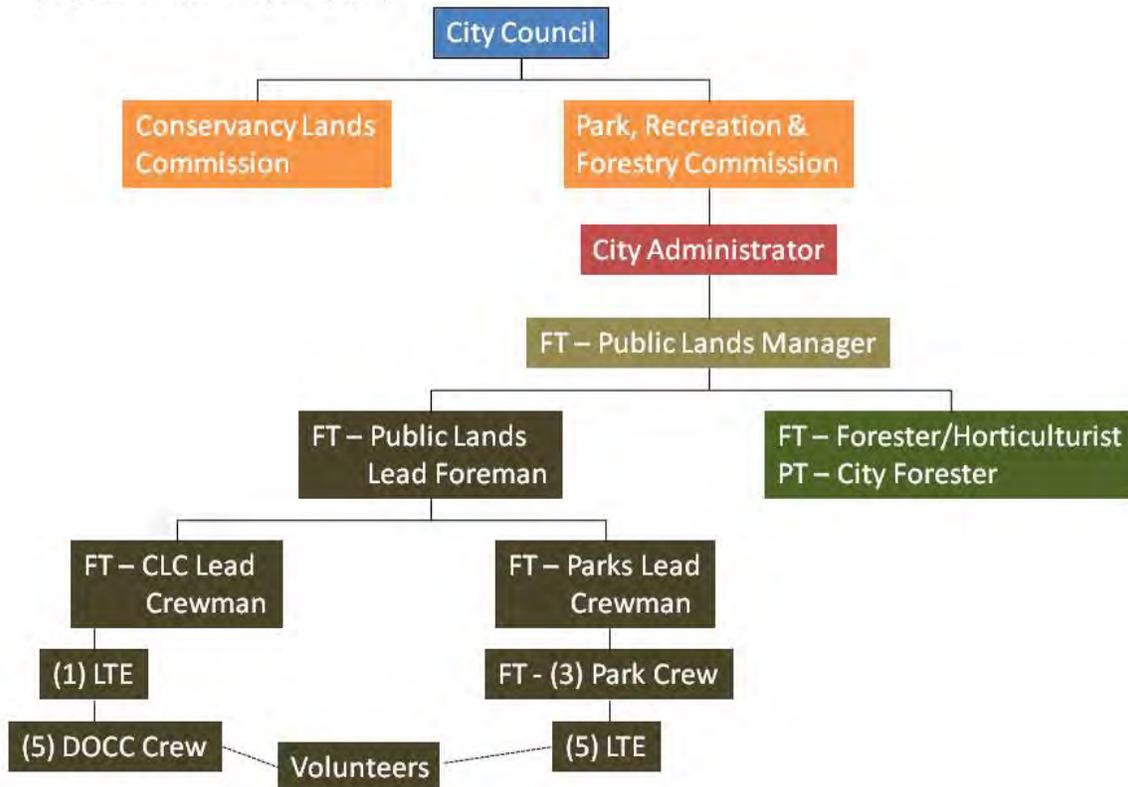
As stated earlier in this *Plan*, Public Lands' staff is responsible for both conservancy lands and active park lands in Middleton. The PRFC has five (5) LTE's that help to maintain the city's ball diamonds and active use parks. The CLC has just one (1) LTE allowed to work 600 hours annually on operations and maintenance of conservancy lands, including burning, planting, brushing, mowing, trail maintenance and other management efforts. The CLC is helped out by five (5) Department of Corrections workers. The CLC also has a full-time Lead Foreman (see Figure 2.1).

The LTE's generally work full-time during the summer months from July to August and work part-time during the off-season and shoulder seasons (spring and fall) if they are local residents. However, most of the intensive conservancy land management activity occurs during the shoulder seasons, and the LTE employment dates generally do not coincide with these times of intensive management activity. The full-time Conservancy Lead Foreman oversees management of the LTE's and assists in conservancy land

management efforts during the shoulder seasons, however, due to limited staff hours it is difficult to manage all of Middleton’s conservancy lands during these crucial seasons. The addition of LTE’s would have a direct benefit on the quality of conservancy lands in Middleton. Similarly, adding a full-time park planner/landscape architect to manage grants, perform studies and plans, and provide construction documentation for new capital projects may offset the costs of hiring consultants to perform these tasks.

Figure 2.1: Public Lands Organization Chart

FT = Full Time Employee
 PT = Part Time Employee
 LTE = Limited Term Employee
 (no greater than 600 hours per employee)



Source: City of Middleton, 2010

2.3 CLC Budget

The CLC has an annual operating budget that it uses, in conjunction with its capital projects budget, to maintain and manage the conservancy lands. Following 2009, the operations budget was reduced as part of a citywide effort to reduce costs. The operating expenses in 2009 were \$88,575 while in 2010 operating expenses were reduced to \$68,100. This represents a significant reduction in labor hours available for restoration, maintenance, and protection of public lands.

Table 2.2 shows the limited-term employee (LTE) and operating budget expenditures for Middleton Conservancy Lands for 2009 (actual), 2010 (budgeted), and 2011 (estimated budget). A description of each operating expense is detailed below the table (listed a-i).

Table 2.2: Middleton Conservancy Lands Personnel and Operating Budget Expenditures

	2009 actual	2010 Budget	2011 estimate
Personnel			
a. LTE's	\$2,200	\$6,200	\$6,200
Operating Expenses			
b. Pond Restorations	11,945	9,000	9,000
c. PB Creek Maintenance	11,395	10,500	10,500
d. Streambank Protection	11,547	0.00	0.00
e. Trail Maintenance	9,706	17,000	17,000
f. Grants and Assistance	9,228	7,000	7,000
g. Other Operating Expenses	19,425	13,000	13,000
h. WCC Vehicle/Fire Truck	400	400	400
i. Deer Management	12,729	5,000	5,000
Total			
	\$88,575	\$68,100	\$68,100

Source: City of Middleton, 2010

- a. *Labor*: Limited Term Employee (LTE) assigned to perform general unskilled labor for conservancy lands areas under direction of the Public Lands Manager on a seasonal basis.
- b. *Pond Restorations*: Represents land management activities surrounding the glacial kettle ponds, including but not limited to restoration planning, restoration mowing and weed control, seeding and aquatic planting, prescribed burning, interpretive signage, trail development, and maintenance and dissemination of public information materials.
- c. *Pheasant Branch Creek Maintenance*: Includes tree and debris removal from creek corridor areas, installation of erosion control features and restoration by staff and/or contractual services.
- d. *Trail Maintenance*: Includes all supplies and services related to performing general trail maintenance, including purchased surface materials, trail markers, herbicide, geo-synthetic materials, grading and compacting of trail surfaces, maintenance and installation of trail surface materials, access gate materials and interpretive materials.
- e. *Streambank Protection*: Includes supplies and services related to performance of streambank protection measures including herbicide, geo-synthetic materials, seeding and planting materials, site restorations and contractual services for installation of protection measures.
- f. *Grants Assistance*: Represents match monies set aside for any/all conservancy lands grant application funds for operating type materials including trees, shrubs, plant materials, trail surface materials, signage and/or professional services for grant applications or provisions.
- g. *Other Operating Expenses*: Represents a general fund for any/all unforeseen operating expenditures not covered by other operating items.
- h. *WCC Crew Vehicle*: Represents funds allocated specifically for the WCC Crew Vehicle fuel, oil and other routine vehicle service needs. The vehicle is maintained for seasonal fire control activities and is utilized by CLC LTE staff for watering any and all of the planted restoration sites.
- i. *Deer Management*: Represents funds allocated specifically for the DNR Urban Wildlife Abatement Grant Funds, a 50/50-match program to assist communities with urban deer management goals and objectives.

2.4 CLC Grants and Donations

Middleton would not be able to protect its conservancy lands without the assistance of grants and other donations. Over the years, the city has been very successful at pursuing and acquiring grant funding for a variety of projects ranging from habitat restoration to trail and bridge design and construction. Table 2.3 itemizes the grants and donations the city has received for conservancy lands from 2002-2010.

Table 2.3: 2002-2010 City of Middleton Public Lands Grants, Donations, and Dog Park Revenue

G = Grant

D = Donation

Year	Grant/Organization	Total Amount	Donation/ Grant Share	City Share
2002				
D	Middleton Kiwanis	\$900	\$900	\$0
G	FEMA Public Lands Restoration	\$187,500	\$140,625	\$46,875
D	Dane County Conservation League	\$575	\$575	\$0
G	DNR CD Besandy	\$1,000	\$500	\$500
G	DNR Wetlands Initiative - Tiedeman, Esser, Stricker	\$30,000	\$30,000	\$0
G	DNR Urban Rivers	\$10,000	\$7,500	\$2,500
G	DNR Deer Management	\$3,500	\$1,775	\$1,725
G	DNR Lake Planning	\$3,500	\$1,775	\$1,725
G	Dane County Lands Department MRD, Golf Course, PB Ridge	\$2,300	\$2,300	\$0
G	USFWS - Golf Course	\$5,975	\$5,975	\$0
G	Dane County Conservation Fund - Seiger Property	\$410,000	\$369,000	\$41,000
D	WCC Crew	\$167,000	\$167,000	\$0
2002 TOTAL		\$822,250	\$727,925	\$94,325
2003				
G	DNR Deer Grant	\$7,000	\$3,500	\$3,500
G	DNR Urban Forestry Grant	\$20,600	\$10,300	\$10,300
G	DNR Tiedemans, Esser, Stricker	\$29,475	\$29,475	\$0
G	DNR Urban Rivers - Parisi Park	\$15,025	\$7,428	\$7,597
G	DNR Boardwalk - Tiedemans Pond	\$27,632	\$13,816	\$13,816
G	DNR Stewardship Esser Acquisition	\$50,000	\$40,000	\$10,000
G	NACO - Elm Lawn	\$32,530	\$24,398	\$8,132
G	DNR Small Lake Ed	\$3,000	\$1,500	\$1,500
G	DNR Urban Forestry - Middleton Hills	\$12,450	\$6,225	\$6,225
G	USFWS - Golf Course	\$7,000	\$3,500	\$3,500
D	Dane County Lands	\$1,600	\$1,600	\$0
G	CD Besadny Natural Resources Foundation	\$800	\$800	\$0
D	WCC Crew	\$187,000	\$187,000	\$0
2003 TOTAL		\$394,112	\$329,542	\$64,570
2004				
G	DNR Urban Deer Management	\$4,000	\$2,000	\$2,000
G	Federal/DNR Restoration Fishing/Boating (piers)	\$50,000	\$25,000	\$25,000

G	DNR Urban Rivers - Parisi Park	\$15,025	\$7,525	\$7,500
G	DNR ADLP Lifecourse Trail	\$46,375	\$23,188	\$23,187
G	DNR ADLP PBS West Trail/North Trail	\$106,542	\$53,271	\$53,271
G	DNR ADLP Quilting North Pathways/Bridge	\$135,045	\$67,523	\$67,522
G	DNR ADLP Kiosks	\$38,000	\$19,000	\$19,000
G	DNR Wetlands Incentive (Middleton Hills)	\$12,450	\$12,450	\$0
G	DNR Wetlands Incentive (Esser Pond)	\$10,825	\$10,825	\$0
G	DNR Wetlands Incentive (Stricker Pond)	\$19,100	\$19,100	\$0
G	DNR Wetlands Incentive (Tiedemans Pond)	\$19,100	\$19,100	\$0
G	DNR Wetlands Incentive (Lakview/MBR Area G)	\$15,195	\$15,195	\$0
2004 TOTAL		\$471,657	\$274,177	\$197,480
2005				
G	DNR Deer Grant	\$5,100	\$2,600	\$2,500
G	DNR Wetlands Incentive (Stricker Pond)	\$19,100	\$19,100	\$0
G	DNR Esser Pond	\$9,475	\$9,475	\$0
G	DNR ADLP - PBC ROW	\$49,047	\$24,524	\$24,523
G	DNR Urban Forestry - Stricker Pond Oak Savanna	\$15,000	\$7,500	\$7,500
G	Dane County Lands	\$7,500	\$7,500	\$0
G	FEMA Stormwater Management/WQ Initiative	\$17,000	\$12,750	\$4,250
G	DNR Dredging Feasibility	\$14,100	\$7,050	\$7,050
G	Federal 5 Star Elm Lawn	\$32,350	\$24,218	\$8,132
2005 TOTAL		\$168,672	\$114,717	\$53,955
2006				
Unavailable				
TOTAL				
2007				
G	Dane County Bike Program Grant	\$10,000	\$7,500	\$2,500
G	DNR Dredging Feasibility	\$13,333	\$10,000	\$3,333
G	DNR Sports Fishing Restoration	\$78,900	\$39,600	\$39,300
G	DNR Recreation Boating	\$78,900	\$39,600	\$39,300
G	Dane County Conservation Aid	\$15,000	\$15,000	\$0
G	Madison Fishing Expo	\$14,000	\$14,000	\$0
G	Dane County Conservation League	\$3,500	\$3,500	\$0
G	CD Besadny Natural Resources Foundation	\$1,500	\$750	\$750
G	DNR/County/City Hinrichs Farm Purchase	\$420,000	\$380,000	\$40,000
G	Lakeview Park Shelter Police Department Grant		\$0	
G	DNR Urban Forestry Grant	\$20,000	\$10,000	\$10,000
2007 TOTAL		\$655,133	\$519,950	\$135,183
2008				
G	DNR Stewardship - PDQ Parcel	\$340,000	\$299,200	\$40,800
G	DNR Urban Non Point Source Pollution	\$118,000	\$59,550	\$58,450
G	DNR/County/City of Madison/City/Donation	\$2,493,000	\$2,193,000	\$300,000

G	FEMA (2008 Flood)	\$107,473	\$94,039	\$13,434
G	DNR Stormwater Grant	\$10,000	\$5,000	\$5,000
G	Madison Community Foundation - Middleton Depot	\$25,000	\$25,000	\$0
G	Madison Community Foundation & American Girl - Splash Park	\$150,000	\$150,000	\$0
G	DNR Urban Forestry	\$20,000	\$10,000	\$10,000
G	Dane County Bike Program Grant	\$1,333	\$1,000	\$333
2008 TOTAL		\$3,264,806	\$2,851,034	\$428,017
2009				
G	DOT Transportation Enhancement Grant	\$305,390	\$167,971	\$137,419
G	DNR CLWF Grant	\$250,000	\$125,000	\$125,000
G	DNR Urban Forestry Grant	\$10,000	\$6,500	\$3,500
G	DNR Wildlife Abatement	\$10,000	\$5,000	\$5,000
G	Wisconsin State Horse Council	\$2,500	\$1,500	\$1,000
G	Dane County Bicycle Program Grant	\$1,333	\$1,000	\$333
G	FEMA Gabion Project	\$35,000	\$26,250	\$8,750
2009 TOTAL		\$614,223	\$344,418	\$281,002
2010				
G	Dane County Urban Water Quality - Lakeview Park	\$150,000	\$100,000	\$50,000
G	DNR Urban Forestry Grant Gypsy Moth	\$20,000	\$10,000	\$10,000
G	DNR Urban Forestry EAB	\$20,000	\$10,000	\$10,000
G	DNR Deer Management	\$5,000	\$2,500	\$2,500
G	DNR Blandings Survey	\$15,000	\$10,000	\$5,000
G	Lakeview Park - DNR NPS - streambank	\$138,000	\$41,500	\$96,500
G	DNR Weed Grant - water lettuce/hyacinth	\$7,500	\$5,000	\$2,500
G	DNR RTP Trails Grant - Graber Pond	\$132,600	\$63,800	\$63,800
G	MCF Grant	\$40,000	\$20,000	\$20,000
G	Bikes Belong Grant - pump track	\$10,000	\$5,000	\$5,000
G	Fireman's Park Shelter Lighting Upgrades	\$15,000	\$15,000	\$0
D	Middleton Ridge playground	\$50,000	\$50,000	\$0
D	Hidden Oaks Playground	\$40,000	\$40,000	\$0
D	Firefighters Park Concession/Restroom	\$98,000	\$13,000	\$85,000
D	Friends of Kettle Ponds - Graber Pond	\$3,000	\$1,500	\$1,500
D	Friends of Kettle Ponds - Vegetated Islands	\$2,000	\$1,000	\$1,000
D	Fleet Feet	\$1,500	\$1,500	\$0
D	Friends of Pheasant Branch - Weed Control	\$500	\$500	\$0
D	UW Health - Trails Fund	\$1,200	\$1,200	\$0
D	Neighborhood Association - Graber Pond Prairie	\$2,500	\$2,500	\$0
D	Memorial Benches	\$3,250	\$3,250	\$0
D	Nest Boxes	\$300	\$300	\$0
	Dog Park Donations and Fees (200-4854-00)	\$9,897	\$0	\$0
2010 TOTAL		\$765,247	\$407,447	\$352,800

Source: City of Middleton, 2010

3. Inventory of Conservancy Lands

3.1 Location Map

The Middleton Conservation Lands and Parks System Map is included in Appendix A and shows the conservancy and active park lands in the city of Middleton. The map also depicts existing and proposed trails that connect these open space areas to important community and neighborhood destinations.

3.2 Acres

Middleton's conservancy lands contain a total of 822.7 acres. Additionally, there are 22.3 miles of trails within the city of Middleton and many of these trails are located on conservancy lands. For a complete summary of conservancy lands, please refer to the City of Middleton Conservancy Lands Inventory Table, located in Appendix B.

3.3 Vegetative Habitat Types/Landscape Features

A variety of vegetative habitat types and landscape features are found within Middleton's conservancy lands, including:

Aquatic: Consists of the riparian vegetation on land located along the edge of ponds or lakes and the aquatic vegetation that grows in the water.

Detention Pond: Middleton has both retention ponds and detention ponds. For the purpose of this report, both are referenced as detention ponds. A retention pond is designed for stormwater management to hold a specific amount of water indefinitely. Usually, the pond is designed to allow drainage overflow to another location when the water level rises above the pond capacity.

A detention pond is a low lying area that is designed to temporarily hold a set amount of water while slowly draining to another location. These facilities are designed for flood control when large amounts of rain could cause flash flooding if not dealt with properly.

Kettle Ponds: A geologic feature formed by a receding glacier. When an ice sheet retreats, several large portions may become detached, surrounded by mounds of soil. As the ice melts, a depression called a *kettle hole* remains. When water occupies the depression, it is called a kettle pond.

Lowland Forest: Lowland forests are found near creek bottoms and in low elevation areas where the water table is near the ground surface.

Mesic Prairies: Prairies that have moderate levels of moisture, and that vary between wet and dry conditions depending on the time of year and moisture conditions.

Oak Savanna: An oak savanna is a community of scattered oak trees (*Quercus* spp.) above a layer of prairie grasses and forbs. The trees are dispersed so that there is no closed canopy and the grasses and forbs receive plentiful amounts of sunlight. The savanna is a transition ecosystem between the tallgrass prairie and woodland environments, so it is an important habitat for both woodland and prairie animals and insect species. Additionally, the oak savanna is an endangered high-priority habitat in Wisconsin.

Prairie Wetland: Prairie wetlands are found in areas of Middleton where prairie vegetation is present, but other wetland characteristics are present in the form of wetland hydrology or soils.

Seeps: A location where water flows out of the ground to form a pool. Seeps are not as obvious as springs, since the water does not come from a single source but rather “seeps” out of the ground. Seeps are usually found on hillsides.

Springs: A spring is a place where an underground stream flows out of the ground, or where the water table meets the ground surface.

Stream Corridor: The area along a creek or stream, including the channel, banks and riparian vegetation.

Wetlands: Areas that are permanently wet, or intermittently water covered, such as swamps, marshes, bogs, potholes, swales, glades and overflow land of river and valleys.

Wet Prairie: Prairies with high levels of moisture that are wet most of the time.

Wooded Uplands: Wooded uplands are forested areas that are located on hilltops or higher elevation areas where the water table is not near the surface (oak woods).

3.4 Habitat Quality

The various habitats of each conservancy land are described in the City of Middleton Conservancy Lands Inventory Table, along with a description of habitat quality. For the purposes of this report, habitat quality is defined as follows:

Poor: Invasive species present, other habitat degradation, no funding available for restoration and no restoration efforts are occurring or planned for the area.

Average: Invasive species present, other habitat degradation, money is available for restoration but no restoration efforts have occurred or restoration efforts are just beginning.

Good: Invasive species present, may be other habitat degradation that is being corrected, money is available for restoration and restoration efforts have been occurring for one (1) year and will continue in the future.

Excellent: Invasive species most likely aren't present due to restoration efforts, other habitat degradation (erosion, creek stabilization, etc) is being corrected, money is available for restoration and restoration efforts have been occurring for more than one (1) year and will continue in the future.

3.5 Inventory of Conservancy Lands Parcels, Current Management & Management Plans Status

This section divides the city's 27 conservancy lands into six (6) categories. This was done in an effort to group similar resources (such as kettle ponds) with similar features and concerns. Categories include:

- A. Large Conservancy Areas
- B. Stream Corridors
- C. Kettle Ponds
- D. Wetland Conservancies
- E. Detention Pond Conservancies
- F. Oak Savanna/Prairie Conservancies

The name and description of the resource(s) under each category are detailed below.

A. LARGE CONSERVANCY AREAS WITH VARYING HABITAT TYPES

1. Pheasant Branch Conservancy (PBC)

Parcel Description

The Pheasant Branch Conservancy (PBC) is the city's largest conservancy area and is located on the northwest side of Lake Mendota. The entire Conservancy is 488 acres; the city of Middleton owns approximately 327 acres of wetland, woodland/forest and oak savanna in the southern part of the PBC. The northern portion is owned by Dane County Parks and the Wisconsin Department of Natural Resources. The PBC's West Trail system allows accessible recreational and educational access to approximately 50 acres of the conservancy. The PBC Southeast Trail system was completed in 2005. This shared-use trail system provides an important linkage between neighborhoods, schools, businesses and active recreation parks for residents and others to enjoy.

The PBC features natural springs and seeps that flow into Pheasant Branch Creek and Lake Mendota at a rate of 1,800 gallons of water per minute. The PBC's oak savannas, lowland forests, prairies and wetlands are home to an abundance of wildlife and migratory waterfowl and birds, including warblers and the sandhill crane.

Management

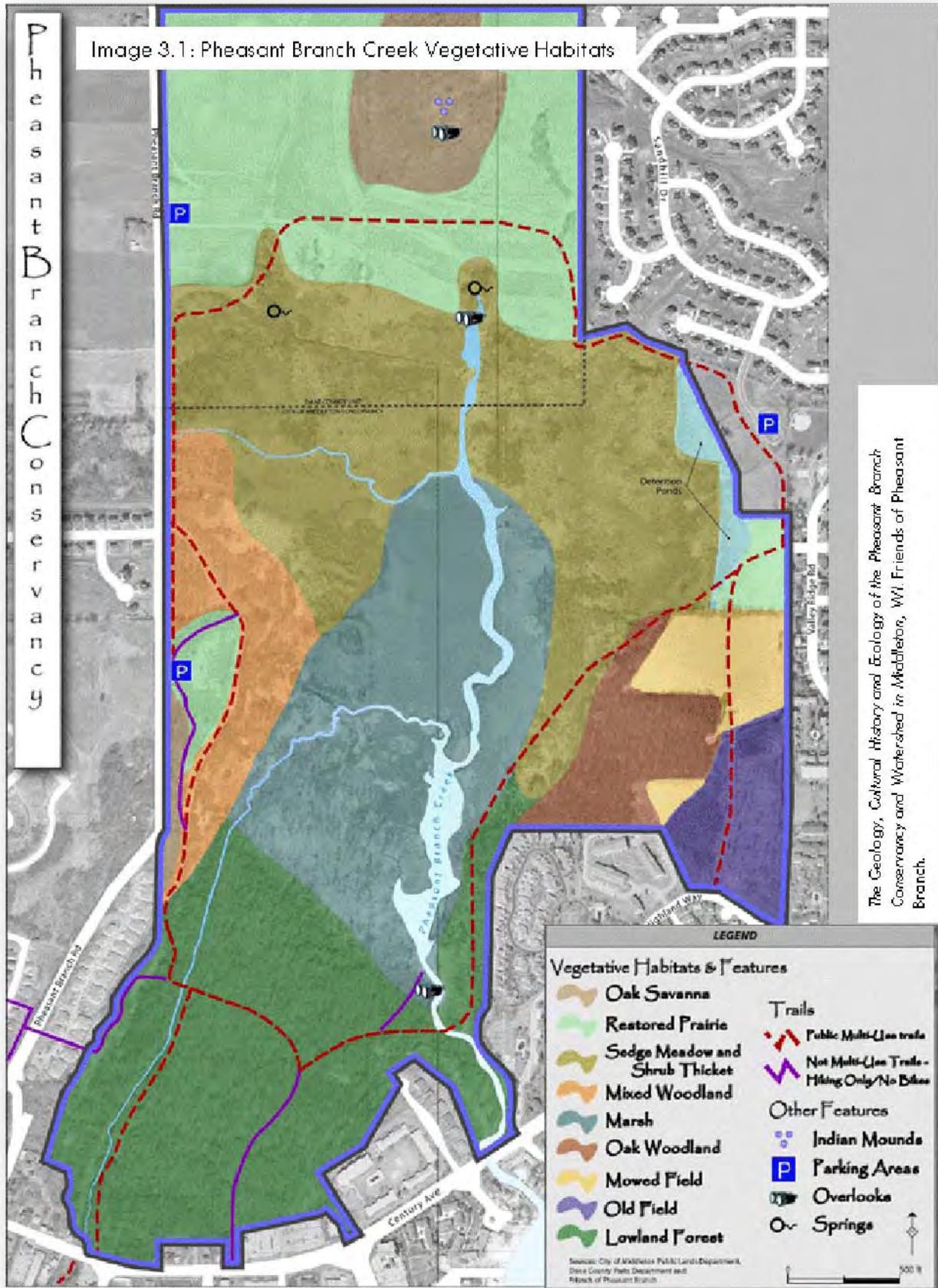
Management recommendations for the Pheasant Branch Conservancy are identified in the following plans: *Northern Lake Mendota Regional Plan Pheasant Branch & Belfontaine Conservancies* (1999); the Applied Ecological Services Vegetation Management Report (1998); *Soils of the Pheasant Branch Conservancy* (2008). Many of the recommendations in the Northern Lake Mendota Regional Plan have been implemented. Clark Forestry created a soil and species inventory in 2003 for the lowland forest area of Pheasant Branch Conservancy that made recommendations for management. This lowland forest management plan is an important resource to guide the conservancy lands staff in managing this vegetative area.

In 1999, the *Northern Lake Mendota Regional Plan* was developed by the CLC to serve as a master plan for managing the Pheasant Branch Conservancy. This plan has helped guide development of shared-use trail opportunities, wildlife habitat management and vegetative restoration efforts. A regional trail corridor is being developed around the PBC, which will provide important recreational and pedestrian/bicycle linkages to surrounding open space areas and other regional trails (Good Neighbor Trail, USH 12 Trail). A self-guided interpretive trail system was installed in 2005 to allow visitors to enjoy the area and link the PBC to other areas.

An analysis of the soil features and their suitability for recreational uses was discussed in the *Soils of the Pheasant Branch Conservancy* report developed by the DNR in 2008. The report finds that more than half of the soils in the PBC are under water, near saturation, or frozen during much of the year, making them unsuitable for many recreational uses/development. The other primary soil types are high in silt content resulting in significant challenges for developing paths and trails, playgrounds, picnic areas, and roads. The report concludes the PBC should remain in a primarily undeveloped state, especially for the flood prevention and control functions the predominant soil types provide. The conservancy won a WPRA Award of Excellence in 2007.

Figure 3.1: Site Images Pheasant Branch Conservancy





B. STREAM CORRIDOR CONSERVANCY AREAS

2. Pheasant Branch Creek Corridor

Parcel Description

This conservancy area follows Pheasant Branch Creek from south of Century Avenue, west to US Highway 12. Interpretive signage was installed in 2001 along the entire length of the corridor with paved and porous paved surface trails and bridges installed in 2009. The habitat consists of a stream corridor with steep slopes, wetlands, lowland forests, wooded uplands and oak savanna.

Management

Foth and VanDyke created a stream erosion report in 1996 and Applied Ecological Services created a vegetation report for the corridor in 1998, including the lowland forests and oak savanna areas.

Habitat quality has been degraded in some locations, and there are problems with slope destabilization and sediment runoff into the creek. DNR Urban Rivers grants for slope restoration efforts are ongoing. A completed DNR Urban Rivers grant at Parisi Park included vegetative management and slope stabilization activities. Six (6) gradient control structures and five (5) fords were constructed in 1972, but intermittent flooding is a hazard along this creek, thus bicycle/pedestrian bridges were installed in 2009. The fords, and access to these facilities, were left intact to dissipate water flow and to allow access to the creek edge.

The Pheasant Branch marsh has acted as a filter for sediment in the creek, but it has filled with sediment in the past several decades because of development and urbanization in the area. Instead of filtering through the marsh, sediment now enters the creek and works its way into Lake Mendota. Because of the continual sediment transport, this will continue to be an issue if not properly managed. The city limits upstream sediment flow through physical methods like the online sediment basins installed near Highway 12 which have decreased sediment loads in the upper reaches of the creek by approximately 25 percent. The 2005 stormwater management plan recommends periodically dredging the lower reaches of Pheasant Branch Creek to control sediment loads. The plan also recommends installing another sediment basin to capture some of the sediment transport on the lower reaches of the creek.

In 2008-09, JFNew performed stream bank stabilization work (DNR grants – NPS, CLWF) and gabion wall replacement (FEMA) near Century Avenue. Additional projects included a public/private venture with Pheasant Run Apartments for bioswales and erosion control, rootwad construction in 2008, and seed establishment on streambanks in 2009.

Amenities include interpretive signs, new paved (and porous paved) trail surfaces, and new bridges. Benches and birding alcoves (constructed of felled trees) are also accessible to path users. The birding alcoves are not complete, JFNew is working on bird trail brochures and signage. There are some repairs necessary to the interpretive sign assemblies and additional stream bank stabilization needs. Two access issues include a worn path in the grass from the sidewalk near Parmenter Street to the Pheasant Branch Trail, and the stairwell from the parking lot at Firemen's Park to the trail. Both issues could be resolved by installing additional facilities (sidewalk near Parmenter Street and a bike ramp installed near the stairwell).

Figure 3.2: Site Images Pheasant Branch Creek Corridor

Desire line near Parmenter Street



Birding alcove (in process)



Stream bank erosion (left) and stabilization (right) images



3. Pheasant Branch Creek Corridor -South Fork

Parcel Description

This conservancy area extends along the South Fork of Pheasant Branch Creek, roughly paralleling Deming Way from Excelsior Drive north to Confluence Pond. A shared-use, accessible paved trail system and interpretive signage was developed in 2003/2004 along this corridor. Habitat types include stream corridor, wetlands and prairie.

South Pond



Management

The South Fork of Pheasant Branch Creek has a 1995 vegetative management plan that guides the conservancy lands staff in the management of this area. Riprap has been installed to improve streambank stabilization and prairie restoration has been ongoing in this area from 1995 through 2003 to improve water infiltration.

The South Fork of Pheasant Branch Creek has been significantly impacted by new construction and development between Market Street and Deming Way in the Greenway Station development. Flooding has occurred in 2000, 2001, 2007 and 2008. Grants for stream bank stabilization continue to be developed and submitted to the DNR NPS program. In addition to flooding and streambank management, the corridor provides an important trail linkage between the South Fork Trail and the Pleasant View Golf Course and the Good Neighbor Trail. Plans are ongoing to link all trails.

4. Pheasant Branch Creek Corridor - North Fork and Confluence Pond

Parcel Description

The North Fork of Pheasant Branch Creek extends from Airport Road to Confluence Pond, where it joins the South Fork and becomes the main branch of Pheasant Creek. The habitat type of this 10-acre conservancy area consists of stream corridor, wetlands and prairie. This conservancy area has shared-use asphalt trails.

Confluence Pond



Management

A vegetation management plan was created for the North Fork of Pheasant Branch Creek in 2004 by Biologic Environmental Consulting and this plan guided wetland restoration efforts that occurred in 2004-2005. Biologic Environmental Consulting also completed an assessment of the Confluence Pond in 2004 and provided management recommendations in *Pheasant Branch Creek Confluence Pond: An Assessment of Current Conditions and Recommendations for Management*. The city performs weed control as well as burning and seeding as required. A kiosk was installed with interpretive sign at the south end of the channel. The pond path was resurfaced in 2007 and the last segment of trail near Deming Way is scheduled for completion

before 2015.

There are large trees planted along the path which should be a continued practice as should installation of duck boxes. There are trailhead maps near major roadways (Deming Way, etc.). Dredging may improve water quality at the outflow of Confluence Pond (south). A viewing platform at the southeast corner by the bridge would provide a respite for trail users and an observation area for wildlife and interpretive signs.

C. KETTLE POND CONSERVANCY AREAS

5. Stricker Pond Conservancy Area

Parcel Description

Stricker Pond is Middleton's largest kettle pond, and is approximately 30 acres in size. The pond and its surrounding watershed contain around 557 acres. The pond has an important history as a paleo-archaic native people's encampment. The north side of the pond features a five (5) acre mesic prairie as well as an ADA accessible hiking trail from Middleton Street west to the Stricker Pond neighborhood park. Waterfowl spotted in the area include blue-winged teal, great blue herons, wood ducks, green herons, mallard ducks, Canada geese, cattle egrets, black crowned night herons and double-crested cormorants. The west side of the pond provides a wooded area with a woodchip hiking trail that links to the city of Madison's conservancy area.

Management

Stricker Pond's original management plan was created in 1982 and was updated in 2006 through a DNR Urban Forestry grant adding an oak savanna management plan for this area. Most of the pond's herbaceous shoreline vegetation has been compromised by stormwater runoff, but areas are being restored to native wet prairie vegetation. Middleton has received several DNR Wetland Incentive grants for vegetative management of the pond and shoreline since 2002. Improvements made as a result of the grants have had a positive impact on wildlife habitat and water infiltration around the pond. Middleton has improved stormwater runoff points on the ponds and has made an effort to control flooding. The city also installed a water control system to manage the pond water levels. These recent efforts to control and reduce the water levels in the pond have produced opportunities to manage the pond edge vegetation, aquatic vegetation and wildlife habitat, and improve the nature trails around the pond.

Installed amenities include donated benches (some overgrown with weeds), interpretive signs, a bird house area (purple martins), rain gardens (Middleton Cross Plains SD), and the viewing platform (Eagle Scouts; wood with metal rail). Middleton maintains a crushed limestone trail around the pond. A c-gate will be installed separating the shared use trail (Middleton) from the hiking trail (Madison). Additional grants are being pursued for continued stormwater management. Flooding causes overflow on the north and east ends forcing closure of the trail. Portions of the trail often require trimming for clearance. This park would benefit from a master plan focused on uniting the recreational features (Middleton and Madison).

Figure 3.3: Site Images Stricker Pond Conservancy Area



6. Tiedeman Pond Conservancy Area

Parcel Description

This 25 acre glacial kettle pond and restored wetland was part of the George Tiedeman family farm. Today the pond and shoreline buffer areas are a designated conservancy area. Access to the pond is provided via an asphalt pedestrian/biking trail off of South Avenue, which follows the west edge of the pond to Woodside Heights Park. A nature trail continues around the pond with a 1000' long, six (6) foot wide accessible boardwalk along the east shoreline. This shallow kettle pond is home to a variety of wildlife, including muskrat, blue-winged teal, great blue herons, wood ducks, green herons, mallard ducks, Canada geese, cattle egrets, black crowned night herons, double-crested cormorants, garter snakes, snapping turtles, bullfrogs, green frogs, spring peepers and spotted salamanders. A wildlife viewing platform was constructed on the west shore in 2002 with a donation from Waterfowl USA.

Management

Tiedeman Pond's master plan was created in 1972 and needs to be updated. JFNew completed an ecological assessment in 2006. The site's vegetation consists mostly of restored shoreland buffer areas surrounding the pond. Restoration efforts include eradication of invasive species, native prairie and wet prairie seeding, aquatic plantings and construction of an ADA accessible wildlife viewing platform. Improvements to stormwater drains should continue in order to improve overall water quality in the pond and in Lake Mendota. DNR Lake Protection grants helped restoration efforts at the pond.

Despite efforts to reduce or eliminate reed canary grass, it continues to be an on-going concern in this area. Reed canary grass is an invasive species that forms "large, monotypic stands that harbor few other plant species and are subsequently of little use to wildlife"¹. The foliage generally collapses during mid-summer and forms a dense mat that further limits its wildlife value.

Additionally, reed canary grass often prevents the establishment of desirable native species because of its aggressive growth, prolific seed production and because it casts dense shade that causes mortality of the slower growing native plants. Therefore, controlling reed canary grass is essential to successfully restoring Tiedeman Pond and other conservancy lands.

Figure 3.4: Site Images Tiedeman Pond Conservancy Area



DNR lake education grants for community education have helped promote the area and ecological understanding. The Middleton Cross Plains SD planted a rain garden in 2006. Additional improvements include a sun dial near the observation platform, the installation of four forebays (2007) and BMP's initiated around the pond in 2008.

7. Graber Pond Conservancy Area

Parcel Description

This conservancy area is located on the city's northern boundary. The 33-acre site is uniquely bowl-shaped, sloping down toward the pond. The vegetation of the area reflects the changes in topography, with an oak and hickory woodland, large cottonwood trees mixed with cherry trees located on the steep slopes, and reed canary grass near the pond's edges.

The pond is home to a variety of waterfowl including wood ducks, mallards, blue-winged teal, Canada geese, great blue herons and green herons. A new residential development on the pond's north side provides views of the pond via a paved shared use path that will eventually connect to the USH 12 Trail.

¹ Wisconsin Manual of Control Recommendations for Ecologically Invasive Plants. Kearns, Kelly and Randy Hoffman, eds., Wisconsin Department of Natural Resources, Bureau of Endangered Resources, 1997.

Management

A master plan was created in 2006 (Saiki Design/JFNew). Recent restoration efforts involved installation of riprap for stormwater runoff control on the south side of the pond. Other vegetative management efforts are needed, as the site currently lacks plant diversity and reed canary grass is the dominant species. As residential and industrial development continues to occur, this pond provides a necessary urban greenspace and recreational facility for the city's northwestern neighborhoods.

Riprap was installed for stormwater runoff control on the south side of the pond in 2004. Controlling reed canary grass and invasive species is still primary need throughout the site. There were 5 acres of prairie restoration on the north shore with Friends of Kettle Ponds, and 15 acres of oak savanna restoration on the south shore between 2008-2010. In 2011, planned development includes a porous paved path and boardwalk on the east side of the pond from Misty Valley to Graber Road. Interpretive signs, viewing platforms and an information kiosk are also planned for future development (with help from Friends of Kettle Ponds, and Eagle Scouts).

Figure 3.5: Site Images Graber Pond Conservancy Area

This southern access will be removed.

Northern access will be established off of this paved path.



8. Esser Pond Conservancy Area

Parcel Description

This pond was historically an isolated kettle pond, but was engineered to connect to the South Fork of Pheasant Branch Creek and now receives stormwater runoff from this creek system. The pond is connected to the 23 square mile Pheasant Branch Watershed and the site consists mainly of a restored prairie wetland and several asphalt bike and pedestrian trails. The conservancy contains ten (10) acres of wet prairie planted in 2004 and five (5) acres of mesic prairie planted in 1998. Both plantings were conducted by Biologic Environmental Consulting. The remainder is detention pond. A wildlife viewing platform at the site has environmental interpretive signage and a paved bicycle and pedestrian path passes through the restoration areas from Greenway Boulevard to Market Street and then north to Terrace Avenue.

Management

A Vegetative Management Plan was prepared by Biologic in 2004. Habitat quality is good at this site, and restoration efforts have been completed on the north, west and east sides of the pond. Middleton received a DNR Lake Protection grant in 2005. Additional funding will be needed to continue restoration efforts. Prescribed burns were previously performed on an annual basis, but new commercial development surrounding the pond has necessitated a staggered schedule. Additional trail connections are being explored to enhance access to the USH 12 Trail and South Fork Trail.

Esser Pond



9. Middleton Hills Pond and Conservancy Area (Outlot 10)

Parcel Description

This pond and conservancy area is located along the west side of Pheasant Branch Road near the intersection with Old Creek Road and extending north to Diversity Road. It is thought that the pond was originally a kettle pond, but it is now used for stormwater management. A trail facility exists through a portion of this area and connects to the Middleton Hills Oak Savanna and the Pheasant Branch Conservancy West Trail.

Middleton Hills Pond



Management

Extensive restoration was done on the pond during 2003/04 with a DNR wetlands grant. The uplands were brushed (large oak and hickory were retained) and planted to prairie and savanna and routine habitat maintenance is necessary. The pond, pond shoreline and pond banks were cleared of invasive species and planted with aquatic, shoreline and prairie species. Work was done by Biologic Environmental Consulting and city Staff. The CLC needs to appropriate funds to continue with these management efforts.

D. WETLAND CONSERVANCY AREAS

10. Middleton Hills Wetland Conservancy Area

Parcel Description

This 12-acre site is located in Middleton Hills, between Frank Lloyd Wright Avenue and High Road. The site consists of wetland vegetation, a 700-foot ADA accessible boardwalk, interpretive signs and a loop hiking trail. A secondary loop hiking trail was completed in 2004 by city Staff. There is also a signed “tree walk” along the conservancy edge with trees labeled with identification plaques.

Middleton Hills Wetland Conservancy



Management

This area has a management plan that was created in conjunction with the Marshall Erdman plan for the Middleton Hills stormwater/wetland management system. Marshall Erdman Associates also hired Applied Ecological Services (AES) to conduct a wetland inventory and management efforts for the Middleton Hills wetland area. AES completed native wetland plantings between 2001 and 2002. Funding needs to be appropriated to continue restoration and management in this area.

E. DETENTION POND CONSERVANCY AREAS

Because of stormwater use and wet soils of these areas, detention ponds in Middleton are generally managed as wet prairies, but their primary function is stormwater management. These areas must receive regular stormwater clean-up maintenance two (2) times annually or the existing wet prairie vegetation will not survive. The numerous detention ponds that are managed by the CLC generally do not have formal management plans. It is recommended that the CLC coordinate with public works and the Water Resources Management Commission to identify management strategies for these areas. Also, one management plan should be written for all detention ponds so that conservancy lands and public works staffs are in agreement on management operations of these facilities. Recommendations from the Confluence Pond Management Plan (2005) are easily translatable to the detention ponds and should be reviewed for management strategies. As the number of parcels and the amount of acres that the CLC is responsible for continues to expand, the operating budget needs to grow to account for these added responsibilities.

11. Stonefield Conservancy Area (east and west)

Parcel Description

This 5.3-acre site is located along Stonefield Road, between the railroad tracks and Old Middleton Road. A six (6) foot accessible walkway exists between Walnut Circle and Cypress Trail, there is also access to the conservancy off Willow Trail. The site abuts a city of Madison undesignated natural area with dirt trail. The Stonefield Conservancy Area is classified as prairie and detention pond.

Management

A memo was prepared in 1996 for the water resources drainageway at this site, but it is not a formal management plan. The drainageway has been seeded with prairie vegetation and there is now a diverse community of restored native vegetation. Storm sewers should be checked and cleaned out by public works and the CLC should also coordinate reseeding and management efforts with this agency. City Staff

performs annual maintenance and weed control in this area, and funding is needed if these efforts are to continue.

A pair of culverts were added beneath the paved path located between Walnut Circle and Cypress Trail. These culverts connect the drainageway and provide habitat for a variety of grasses including purple fountain and silver feather. There is a loose pea gravel trail north of Stonefield Road that connects to the paved path near Cypress Trail; the condition of the trail varies from very good to almost undetectable depending on how recently the facility has had gravel reapplied. The drainageway south of Stonefield Road is mowed but does not contain formal trail facilities. There are plans to porous pave the trail network in 2011-2012 and there are also discussions about connecting to the city of Madison parks (south).

Stonefield Conservancy Area (west end)



12. Pheasant Branch Ridge Drainageway

Parcel Description

This conservancy area is located north of Whitlesey Road and west of Pheasant Branch Road and extends west to Graber Pond; much of this drainageway is located in the Town of Middleton. This conservancy area primarily exhibits prairie and wet prairie habitat. No facilities exist at the site; however, a trail is planned from Highway 12, north of Graber Pond to connect to Pheasant Branch Conservancy's West Trail.

Management

This area does not have a management plan, but management efforts are underway. The area is burned, treated for invasive species, seeded and planted with native vegetation. The city received one (1) Dane County Land Conservation grant in 2001/2002 for this management work. More funding for management of this area is needed.

The drainageway will be an important linkage to connect to the Pheasant Branch Conservancy (east) and USH 12 Trail (west). A connection to Pheasant Branch Ridge Park should also be established. There are a lot of mature trees (oak, willow, cottonwood) along the corridor and thick understory growth. The trail should be designed so it does not detract from the value of this area as a drainageway.

Pheasant Branch Ridge Drainageway



13. Gaylord Nelson Road Detention Pond Conservancy Area

Parcel Description

This three (3)-acre detention pond, seeded as wet prairie, is located on Gaylord Nelson Road and was installed in the fall of 2004 by the developer. No facilities exist at this site.

Management

Invasive species are present at this site and it is recommended the city continue to remove invasive species and restore native vegetation. The CLC will need to plan, budget for and manage this area through weed control, burns and native species plantings over time.

14. Shorecrest Detention Pond Conservancy Area

Parcel Description

This 1.2-acre detention pond, seeded as wet prairie, is located south of Shorecrest Drive and has no facilities.

Management

This area does not have a management plan. The public lands department conducted vegetative restoration efforts between 2001 and 2004 using volunteer laborers and donated native seeds and plants, but a long-term management plan is needed.

Shorecrest Detention Pond



15. Spring Hill Detention Pond Conservancy Area

Parcel Description

This detention pond and wet prairie is located north of Spring Hill Drive and has no facilities.

Management

This area does not have a management plan. The public lands department conducts management efforts on this site to restore the area to a prairie/wet prairie habitat. Currently, there is no public access to the conservancy. The need for access may change as land use development occurs.

F. OAK SAVANNA/PRAIRIE CONSERVANCY AREAS

16. Elm Lawn School/Tiedeman Pond Conservancy Area

Parcel Description

This three (3) acre conservancy area is located east of Gammon Road across from Tiedeman Pond. The habitat type is primarily oak savanna and prairie. The area has a trail, interpretive signs, a nature study area and benches.

Management

Reed canary grass and other invasive species are found at this site and management efforts have occurred to remove the invasive species and replant the area with native vegetation. In August, 2004, elementary students, volunteers, neighborhood residents, Friends Groups, city staff, Biologic Environmental Consulting staff and the Wisconsin Conservation Corps (WCC) undertook a major wetland, prairie and savanna restoration project at this site. A federal NACO grant project helped fund these restoration efforts. Biologic Environmental Consulting wrote the grant, conducted and helped coordinate the work, and created a five (5) year management plan for the site as part of the grant project.

Elm Lawn School Trail



A variety of tree species are found in the conservancy including red oak, red pine, cottonwood, mulberry, and black locust. Some trees are dead and the area would benefit from removing unproductive specimens.

17. Boundary Road Park Conservancy Area

Parcel Description

This small site is located behind Boundary Road Park and borders Madison city limits. The habitat type is oak savanna and contains severe slopes.

Management

This area is adjacent to a city mini-park and does not have a management plan. Invasive species like buckthorn are threatening the native habitat and should be controlled through restoration management efforts.

18. Lakeview Park Conservancy Area - Areas A, B, C, D, E, F, G

Parcel Description

Areas A, B, and C of this conservancy are located in Lakeview Park west of Allen Blvd; areas D, E, F and G are located between Allen Blvd and Middleton Beach Road. This wooded lowland area is underlain by flat glacial lakebed sediment and the site was originally a treeless sedge meadow until development began in the area around 1961. Facilities include an eight (8) foot wide shared-use asphalt trail in Lakeview Park. The conservancy covers over 15 acres. Parcel F is signed as the “Mary E. Jacobsen Wetland Conservancy Area” and is visible from Allen Blvd.

Lakeview Park Conservancy



Management

This area has an approved management plan, *Lakeview Park Conservancy Areas – Middleton, WI Ecological Assessment and Restoration Plan*, that was created in October of 2002 by Clark Forestry Consulting. The plan identifies specific management goals for identified areas and these goals need to be implemented. The city received a \$10,000 DNR Wetland Restoration grant for Area G, and completed the work per the Clark Forestry plan. Other restoration efforts may include thinning invasive vegetation, rerouting and infiltrating stormwater to the wetland, native plantings, and removing hazard trees. More grants and funding are needed to carry out the goals of the plan.

A wide variety of trees are located on sites E, F and G including cottonwood, river birch, ash, tag alder, walnut, hickory, and white oak. Dead elm trees and invasive species should be removed from the conservancy. There is no formal access to the interior of the conservancy. A trail around the entire conservancy east of Allen Blvd would increase use and awareness of this conservancy. Additional access west of Allen Blvd could be managed through installation of board walks linking areas A and B.

19. Middleton Hills Oak Savanna Conservancy Area

Parcel Description

This three (3) acre site is located in Middleton Hills. The site was an oak savanna when the earliest settlers arrived, and was since invaded by a variety of invasive trees and shrubs not typically associated with savanna, including box elder, slippery and American elm, black cherry, apple, hackberry, buckthorn and honeysuckle. While many of the original oak savanna trees remained, there were very few naturally occurring groundlayer plants because of extensive cattle grazing and the shade cast by the abundance of non-savanna trees and shrubs. Facilities include soft surface or wood chipped hiking trails, interpretive signage and benches.

Management

This area has a management plan, the *Middleton Hills Oak Savanna Assessment and Restoration Plan* that was created by Biologic Environmental Consulting in 2004. The plan provides guidelines for the restoration and management of the site, including opportunities for public education and for community and neighborhood involvement. The plan recommends removing hazard trees, dead elm, buckthorn and honeysuckle and controlling weeds through herbicides, burning and planting of native vegetation. A vast majority of the recommendations have been completed through 2010. Ongoing maintenance will be necessary to ensure establishment of native flora populations.

Middleton Hills Oak Savanna



20. Quarry Hill Conservancy Area

Parcel Description

This 6.3 acre site is located north of Hillcrest Avenue in Quarry Park. The area historically was classified as oak savanna, but now is primarily vegetated with invasive species. No facilities exist here.

Management

This area is in need of a management plan for restoration of the threatened and endangered native oak savanna habitat, which is currently in poor condition because of the abundance of invasive species. There is some erosion south of the skate park. Mature trees include several varieties of oak, walnut, and elm.

21. Orchid Heights Conservancy Area

Parcel Description

This 5-acre prairie conservancy area is located along Valley Ridge Road, south of Orchid Heights Park. An ADA accessible shared-use trail exists at this site. There is a detention pond in this area that is managed by WRMC.

Management

This area has a management plan, and the public lands department began restoration management efforts at this site in 2003 to remove invasive species and restore the area to native prairie. Continued funding is necessary to continue management efforts.

Hay field south of Orchid Heights Conservancy



22. Henry Street/High Point Road Conservancy Area

Parcel Description

The CLC has acquired several dedicated greenways throughout the city as part of the platting process. This prairie conservancy area extends along both sides of the Wisconsin and Southern Railroad tracks between Henry Street and High Point Road.

Management

A management plan was created for this area in 1996 by Dave Eagan. Management efforts are ongoing and include weed control efforts like burning and seeding to restore native vegetation. The conservancy contains some invasive species like thistle, but the large scale of the native vegetation provides a prairie setting in downtown. Due to the narrow width of the corridor, many visitors to downtown use the conservancy and railroad as a cut-through between downtown locations. A taller or denser vegetative barrier may decrease occurrence of this activity.

CLC funds need to be appropriated to continue management along this corridor.

Henry/High Point Conservancy



23. Pleasant View Golf Course Conservancy Area

Parcel Description

The golf course encompasses several prairie areas (totaling 51 acres) located on the west and north sides of the Pleasant View Golf Course. These areas are cooperatively managed by the CLC and the U.S. Fish and Wildlife Service (USFWS) and cross-country ski trails are provided during the winter months.

Management

This area has a 10-year USFWS management plan and restoration efforts are occurring with the assistance of a USFWS grant. This grant helped restore portions of this area to high-quality grassland prairie between 2002 and 2004. Continue the burning cycle on the northeast prairie. The north end of the parking lot (by the club house) shows evidence of trash and gravel from plowing and recreational activities. There are numerous mature trees in this area though some are dead or dying (including some oak and elm). Species observed include black cherry, oak, ash, cottonwood, box elder, and assorted pines. In winter, cross country ski trails utilize the conservancy area. The trails can be accessed in summer months via a mountain bike trail network (Bikes Belong Grant - 2010) that is being established along with a pump track at the east end of the parking lot. Trail access and signage could be improved however, if the network is meant to provide hiking as a recreational option. Additional funds are needed for annual management and maintenance.

Pleasant View G.C. Conservancy (north prairie)



24. Capitol Ice Arena Conservancy Area

Parcel Description

This prairie and wet prairie conservancy area is located east of Twin Sunset Lane. A paved bicycle and pedestrian trail exists at this site and connects to the Quisling Park facility.

Management

This area has a management plan with the Town of Middleton and restoration efforts began in 2002 to restore the area to native wet prairie and prairie. It will be important to continue these joint management efforts in the future and funding is needed to ensure this will be possible.

Capitol Ice Arena Conservancy Area



25. Middleton Hills Outlots 63 & 64

Parcel Description

The outlots are located in the Middleton Hills neighborhood adjacent to Glacier Ridge Rd (east and west) just north of Diversity Road. Outlot 63 is 1.6 acres and Outlot 64 is 6.3 acres. They contain remnants of oak savanna and are currently a mixture of old field and dry-mesic forest comprised largely of mature white, bur, and red oak mixed with smaller and younger box elder, hackberry, black cherry, elm, aspen, and a variety of native and non-native shrubs.

Management

Recommendations from the management plan include enhancing ecological conditions in the oak savanna unit and using interpretive signs to tell the cultural history of the site. This would be best accomplished through the creation of walking trails that link to other trails, the mitigation of hazard trees, placement of screening trees, and following BMPs. Implementation includes brushing weeds (2009) and ongoing hazard tree removal and plantings. Trails should be developed as soon as possible to minimize the potential of complaints from future residents (on unbuilt parcels surrounding the outlots). There is also a desire to develop a gazebo and council ring area. Additional funding is necessary to implement the management plan.

26. John C. Bock Community Forest

Parcel Description

The 19.2-acre site was initially divided into four survey units based on vegetation: 1) oak woodland; 2) hay field; 3) old field; and, 4) brushland. Land records from the 1830s indicate the Bock Forest was oak savanna. Since this time, portions of the site were used as an active hay field and forested area. The site contains a trail that connects to the South Trail of the Pheasant Branch Conservancy. There is an information kiosk near the south end.

Management

Recommendations from the management plan include brushing weeds and other site preparation and improvement of the trail connection. This has

John C. Bock Community Forest (trail)



been completed. The site is undergoing chemical treatment to kill off invasive species (August 2010). Due to removal efforts, the higher elevation portion of the conservancy is sparse with vegetation. There is a community garden located near Highland Way. An information kiosk and stone monument are also located on site. Additional efforts will include restoring the brushland and plantings in the oak woodland. Removal of invasives is expected to last through 2011, and then plantings will begin. Educational events at this site include Forestry Field Day and special events as posted on the kiosk.

27. Hidden Oaks

Parcel Description

This prairie conservancy is maintained as a natural area south of White Coral Way, west of Pleasant View Road. The site contains a shared use trail (Hidden Oaks Trail) that connects to the North Fork Trail.

Management

The site is maintained as a natural area and provides an important stormwater, recreational, and habitat function on the western side of Middleton. Additional trail extension to the west and removal of hazard trees and invasive plants is a long-term need. Additional funding is required for action.

3.6 Trail Inventory

Trail Facilities

Pheasant Branch Conservancy -- West Trail, North Trail, South Trail, East Trail

In the summer of 2003, the city constructed the West Trail, a 10-foot wide crushed limestone multi-use trail along the west edge of the conservancy, between the Century Avenue/Branch Street intersection and the Pheasant Branch Road/Whittlesey Road intersection. In 2004, the city and county received a grant to work together to create the North Trail, which extends north and east from the West Trail to connect with Orchid Heights Park. Work on this project began in July 2005 and was completed in August 2005. The South Trail includes both gravel and boardwalk surfaces connecting the PBC to Orchid Heights Park. Each of these trail segments is approximately one (1) mile in length. The East Trail is just over one-half mile in length and connects Orchid Heights Park to Highland Way through the Bock Community Forest. The entire trail loop around the conservancy is approximately three (3) miles long.

Many of the city's activity and employment centers are located along or within a few blocks of the Pheasant Branch Trail network, including the middle and high schools, the aquatic center, several community parks, and numerous large employers and service centers. Several segments of the trail play a key role in facilitating circulation within the community.

- The west segment of the Conservancy Loop provides the most direct and level route between the Century Ave./Branch St. intersection and Whittlesey Road (the Pheasant Branch Ridge neighborhood)
- The east and north branches of the trail loop provide residents of northeast Middleton with direct connections to the rest of the city, including the schools that serve their neighborhoods. The east trail segment connects Orchid Heights Park to Highland Way while the north trail connects Pheasant Branch Road with Orchid Heights Park.

Pheasant Branch Creek Corridor Trail

This trail is approximately 1.2 miles long and connects Parmenter Street (USH 12) with Century Avenue at Branch Street and serves as a vital link to the alternative transportation system. In 2008, the city of Middleton received a Transportation Enhancement Grant from the Wisconsin Department of Transportation for the development of a multi-use recreational trail in the Pheasant Branch Creek Corridor. During the planning and implementation stages of this project, the city was awarded several other Department of Natural Resources grants to expand the scope of the project to include stream bank restoration efforts, invasive species removal, and natural habitat improvements.

In 2008-2009, portions of the trail were re-graded to provide ADA compliant slopes and the entire length of the trail was paved using porous asphalt. The asphalt mixture is comprised of recycled shingles, carpet fibers, and rubber, all from a local source, which allows stormwater to infiltrate into the subgrade. Density tests show that the porous asphalt mixture is approximately 20% softer than standard asphalt or concrete reducing stress on joints. The porous pavement also has the benefit of allowing snow and ice to melt at a quicker rate reducing the amount of winter maintenance and permitting year round use. Three 60' long, 12' wide clearspan bridges were installed over the creek replacing the existing stone steps.

North Fork Trail

Since September of 2003, trail users have been able to travel on a paved trail between Evergreen Road in the Town of Middleton and Confluence Pond near the Deming Way bridge over Pheasant Branch Creek. The trail is approximately 1.4 miles long. In 2006, a portion of this trail was reconstructed, and the last link in the Pheasant Branch Trail was installed connecting to the Highway 12 Trail. Completion of these segments make it possible for users to bike or in-line skate between Middleton High School and the Capital Ice arena or the soccer fields and baseball diamonds at Quisling Park and beyond. This trail serves as a gateway to the Black Earth Creek watershed from downtown Middleton and to parts north of Middleton via the Highway 12 Trail.

Esser Pond / South Fork Trail

This 1.1-mile paved trail follows the South Fork of the Pheasant Branch Creek, connecting downtown Middleton with Greenway Boulevard, west of Greenway Station. It is necessary to follow the Deming Way on-road bike route for a short distance of this route. A long-term goal is to connect this trail across Highway 14 in conjunction with development of the Good Neighbor Trail.

Stricker Pond Trail

A trail of approximately one (1)-mile with varying surface types loops around Stricker Pond. The south side of the pond has a road right-of-way gravel and turf path, the west side has a six (6)-foot wide wood chipped trail, and the north side has a six (6)-foot wide crushed limestone trail.

Tiedeman Pond Trail

A variety of trail types create a 0.9-mile loop around Tiedeman Pond. A 1000' long, six (6)-foot wide boardwalk is installed on the east side of the pond. The far west side of the pond has an 8-10 foot wide paved asphalt path and the rest of the pond is surrounded by woodchip trails.

Middleton Hills Trails

Approximately 0.5 miles of trails of varying surfaces exist in Middleton Hills and connect Middleton Hills Neighborhood Park South to the Pheasant Branch Creek West Trail at Pheasant Branch Creek Road. Woodchip trails allow hikers to traverse the Middleton Hills Oak Savanna. A loop trail is planned for Outlot 63 & 64.

Graber Pond

A paved trail exists on the north shore at Graber Pond in a new subdivision. The trail will be expanded to loop the pond and eventually connect to Pheasant Branch Creek Conservancy and the West Trail in the future.

Highway 12 Trail

In 2005, the Wisconsin Dept. of Transportation completed construction of the paved Highway 12 Trail, which follows the west side of the new Middleton Bypass from the Pheasant Branch Creek Trail north to Schneider Road. From Schneider, the trail extends north along the east side of the highway to the Springfield Hill area, for a total distance of about 8 miles. This work was done in conjunction with the State's USH 12 widening project.

Trail Linkages

The city of Middleton has an outstanding trail network that is part of a well-established regional trail network. It is critical to include linkages in this network to ensure that trail users in Middleton can connect to all trails, both within and outside of the city.

It is strongly recommended that when land is set aside for trail easements, that land be high, dry ground that is appropriate for trail development. These trails should be paved for ADA access, requiring minimal long-term maintenance. Additionally, it is recommended that the developer be required to install the trail instead of donating fees-in-lieu of, to ensure that the most suitable area is acquired for the trail. Also, this insures that the trail is in place before residents who might oppose the trail move in, but will typically appreciate if it is already in place.

Good Neighbor Trail

The Good Neighbor Trail is a collaborative effort to construct a regional shared use path along USH 14. The trail planning corridor is two miles wide following USH 14 and Black Earth Creek westerly from the city of Middleton to Mazomanie. This corridor is an area of diverse environmental and recreation quality. A conceptual trail master plan was completed in 2010 (JSD Professional Services) linking public lands into an integrated recreational and/or greenway corridor. The trail would be open to a variety of users including snowmobilers, cyclists, hikers, equestrians, skiers, and ATV riders. While the conceptual trail follows USH 14 through Middleton, connecting this trail to the existing network will be important to provide access to Middleton's numerous park, conservancy, and business districts.

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4. Policies and Recommendations

4.1 Trail Standards

As Middleton continues to maintain and expand their existing trail system, it is important for the city to have guidelines it can use to ensure all trails are safe and up to federal, state, and local standards. The following standards should be followed in any upgrades or new trail expansions of the Middleton conservancy lands trail system:

- a. Hiking trails should generally be six (6)-to eight (8)-feet wide and ADA accessible hard surfaced asphalt (porous paving) or crushed limestone. However, the CLC should consider allowing “primitive” (3-4 foot wide) hiking trails in delineated wetlands as needed.
- b. Boardwalks should be 10-foot wide for all shared use bicycle and pedestrian trails and 6-foot wide for pedestrian only trails
- c. Shared bicycle-pedestrian use paths should be at least 12-foot wide if more than 50 users/ hour are expected during peak use hours. A 10-foot wide path is adequate on paths with fewer travelers. Improved trail surfaces such as asphalt (porous paving) or crushed limestone should be used.
- d. Paths, in general, should be separated by five (5) or more feet from motor vehicle traffic by an open space or a barrier.
- e. A concrete or asphalt path should have a stone base with a minimum width of 10-feet (12 feet is preferred if the path is heavily used).
- f. Bicycle safe drainage grates should be used along any trails that allow bicycles.
- g. Bituminous or Portland cement concrete surfaces are recommended for heavily used bike facilities. Porous paving is preferred. To help reduce user conflicts, mark the centerline of paved trails and post signage in key locations to remind all trail users of safety precautions and proper trail etiquette.
- h. Bicycle/pedestrian bridges should be at least 12-foot wide with an additional clear zone of two (2)-feet on each side. Ramp grades should not exceed eight (8) percent. A railing or fence with a minimum height of 4.5 feet should be provided along both sides of the bridge.
- i. In general, all off-street paths should have a minimum right-of-way of 20 feet.
- j. Wood chipped trails are labor intensive and should only be used where all other surface type possibilities have been exhausted.
- k. Existing soft surface trails should be upgraded for ADA, hard surfaced, and a five (5)-year management plan should be implemented.

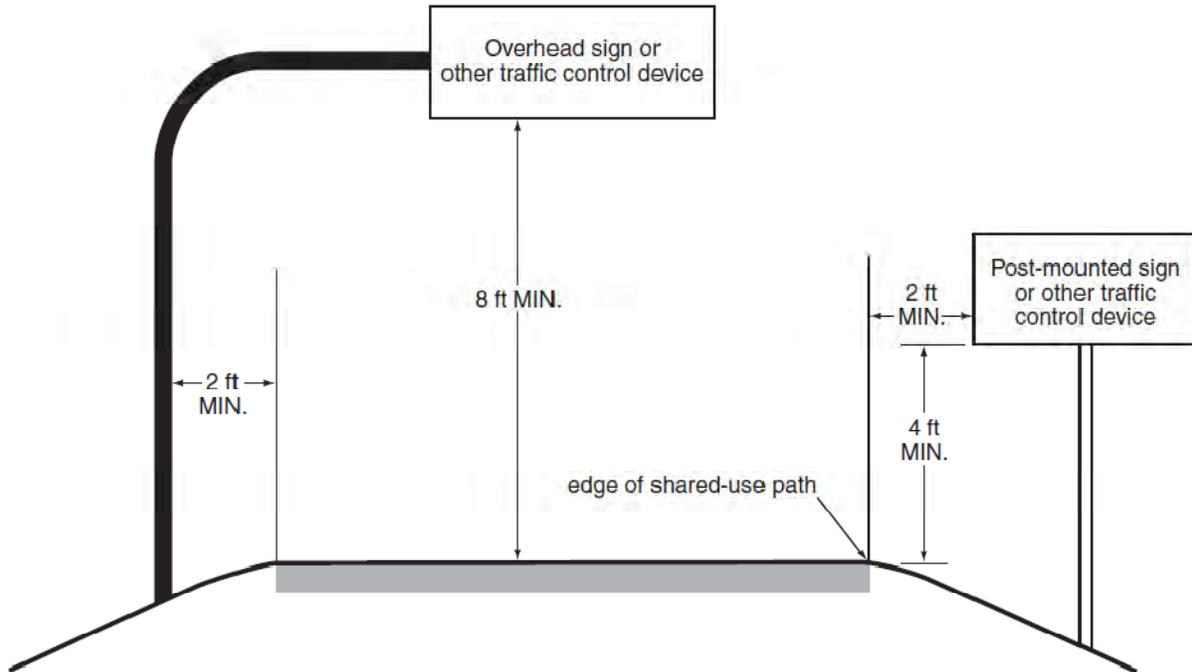
4.2 Sign Standards

An important element of Middleton’s conservancy land system is the wayfinding, kiosk and interpretive signs used to identify features and entry points.

- a. All bicycle and pedestrian signage within the Middleton conservancy lands system should be designed in accordance with the Wisconsin Manual on Uniform Traffic Control Devices (MUTCD).
- b. Placement of signs near shared use paths should maintain clearances as describe on Figure 4.1.
- c. Continue using DNR-style Lexan interpretive signs as it is vandal proof, durable, cost effective and no maintenance is required. The signage is a standard 8.5 x 11 inch up to 2 x 3 foot free standing framed type.
- d. Continue use of identification of conservancy lands with posted 11 x 18 inch black and white “Rule Signs” at each entry point. This sign will continue to be posted at entry points to conservancy lands and will list citywide ordinance rules and regulations for conservancy lands.
- e. All trails are marked with standard carsonite signs and specified use decal markers. Signage is also installed along trail boundaries, at entrances to private land and at restoration sites. Signage may

- denote “hiking, biking, skiing, dogs on leash, stay on trail, caution, curve ahead, bridge, bikes not recommended” and more.
- f. Conservancy land boundaries should continue to be posted with six (6)-foot carsonite brown markers with decals to denote CLC property lines. It is important to mark these boundaries to inform the public of where the conservancy lands are located, to delineate management responsibilities and to prevent unintended encroachment.
 - g. Brochures should be provided for all designated use areas to inform visitors of rules, regulations, restoration activities and trails, and/or posted at kiosks in all conservancy areas with designated use areas.

Figure 4.1: Sign Placement on Shared Use Paths (2009 MUTCD)



4.3 Detention Pond Recommendations

Five (5) detention ponds exist within Middleton’s conservancy lands system. Initially, detention ponds or retention ponds are managed by the Public Works Department. This arrangement has the advantage of ensuring ponds are managed by the same people who design the stormwater inlets and flood controls. However, the Public Lands Department is generally charged with management of the ponds once they’re established even though Public Works may continue to perform maintenance, such as dredging, on a periodic basis. This practice has the potential to conflict with the CLC’s management goals of preserving and enhancing natural resources and allowing these areas to fill in for wetland and wildlife habitat.

- a. Identify strategies to satisfy both conservancy and Public Works long-term management responsibilities of sediment removal, weed control, and improving infiltration while maintaining or improving wildlife and fish habitat. Strategies may include:
 - i. Securing funding to manage these areas
 - ii. Appropriately staffing the Public Lands Department so they are capable of maintaining the shoreline and upland area as conservancy land and can work with public works to ensure they dredge the pond with as little vegetative disturbance possible.

- iii. Upon assuming ownership of detention or retention ponds, Public Works should provide the Public Lands Manager with drawings of all Middleton detention ponds, planting plans, maintenance costs and similar information. Boundaries of the detention ponds should be signed at this time so that residents and the general public understand the primary purpose of the ponds is for stormwater management and they are not designated wetlands.
- iv. Define the management responsibilities of each agency.
- b. The CLC should determine policies guiding whether or not sediment basins or other detention or stormwater facilities may be installed within conservancy lands.

4.4 Tree Disease and Insect Policy

The CLC is committed to maintaining the health and natural ecosystem of all conservancy lands. Under the statutes that govern the CLC, 2.16 of the City's Code of Ordinances, the objectives and powers of the commission require the CLC to plan and implement programs designed to restore and develop conservancy lands so as to accomplish ecological restoration and natural scenic beauty. The CLC also has responsibilities to oversee planting, trimming, spraying, protection and removal of all trees, shrubs, plants, and grasses for conservation purposes.

Policy

The CLC shall work with the City Forester and other professionals to identify and eradicate pests, problem trees and control for future disease.

4.5 Public Use Policies

Bicycles

Bicycles are prohibited on the following trails:

- Conservancy Condos – PBC West Berm and Easement Trail
- Middleton Hills Boardwalk
- Stricker Pond – West trail link to the city of Madison conservancy lands
- Tiedeman Pond woodchip trails and boardwalk
- North and south of the Pheasant Branch Conservancy parking lot, as trails are too steep and not designed for bicycles
- Mowed trails around the perimeter of Orchid Heights prairie area

Policy

Bicycles are allowed on all trails on PRFC and CLC lands, unless marked otherwise.

Dogs

The only location where dogs are prohibited is at Stricker Pond from the West Trail to the city of Madison conservancy area.

Policy

Dogs are allowed on leash on all trails unless marked otherwise.

Cross-Country Skiing

Designated groomed trails are located only at the Pleasant View Golf Course. It is recommended that the CLC assess the demand for additional groomed trails within Pheasant Branch Creek Conservancy and the Pheasant Branch Creek Corridor and determine whether single track, one way, two way or skate skiing

could be accommodated on any of the trails. Currently, no money is allocated to grooming such trails and it is uncertain as to whether or not the existing trails would meet the necessary standards for accommodation of cross-country skiing. According to the Recreational Trail Design and Construction guidebook by Rathke and Baughman, minimum width for a lightly used one way trail is eight (8) feet, with at least 10- to 12-feet in width on steep uphill slopes to allow for herringbone or sidestep skiing techniques. The trail clearing width should be doubled at trail or motorized roadway intersections. An even wider clearance or runouts should be provided on downhill sections. There are 10 foot wide trails in both conservancy areas, but it is uncertain whether extra width would be available for the intersections, or hilly sections.

Policy

Cross-country skiing is allowed on all trails unless marked otherwise.

4.6 Management Policy

Management plans exist for most of Middleton's larger conservancy areas and for 2/3 of conservancy lands overall. There are no management plans for any of the detention ponds. The City of Middleton Conservancy Lands Inventory Table identifies which areas need management plans (Appendix B).

The city's overall current management goals include:

1. ADA accessibility
2. Trails development and signage
3. Streambank stabilization
4. Water quality/infiltration
5. Restoration and enhancements
6. Invasive species control (including prescribed burnings and weed control efforts like mowing, herbicide spraying and tree/brush removal)
7. Forest habitat improvement
8. Fish and wildlife habitat improvement
9. Research and nature study
10. Education and interpretation

Policy

A management plan will be created and followed for each conservancy land area or habitat type (stream corridor, wetland, detention pond, prairie, etc.).

4.7 Volunteers and Friends Groups

Many different kinds of groups volunteer for the city of Middleton's Public Lands Department. There are individuals, scout groups, adopt-a-park groups and Friends Group volunteers.

Volunteers

All volunteers are required to review the city of Middleton Public Lands Volunteer Program Guidelines and sign a release and indemnification form prior to performing any volunteer work. Once the necessary paperwork has been completed, the volunteers can set their own schedule or work dates, recruit their own volunteers and coordinate with the Public Lands Manager to set project goals or objectives in accordance with specific park or conservancy area master plans.

Existing partnerships include:

- Middleton Optimist Club

- Middleton Kiwanis Club
- Middleton Hills Neighborhood Association
- Stonefield Neighborhood Association
- Foxridge Neighborhood Association
- James Tiedeman Family
- Boy Scout Troop #140 and #940
- Middleton Alternative Senior High (MASH)
- Middleton Blackhawk Girl Scouts
- Pheasant Branch Ridge Neighborhood
- Friends of Pheasant Branch Conservancy (FOPB)
- Friends of the Kettle Ponds (FOKP)
- MCPSD
- Middleton Chamber of Commerce
- UW-Madison Forest Ecology Department
- Dane County Conservation League (DCCL)
- Yahara Fishing Club
- Madison Fishing Expo
- Wisconsin Waterfowl Association (WWA)
- Waterfowl USA
- Madison East FFA

FOPB Volunteers
www.pheasantbranch.org



Friends Groups

A Friends Group is a formal volunteer group that has signed an agreement with the city of Middleton and has a specific mission. The agreement is a signed resolution approved by the Middleton Common Council, PRFC or CLC and the Public Lands Manager. It is the goal of the Public Lands Department to create new Friends Groups over time that will serve to cooperate and assist with CLC goals and objectives. At the time of this writing, Middleton has two (2) Friends Groups that support conservancy lands: The Friends of Pheasant Branch and Friends of the Kettle Ponds.

The Friends of Pheasant Branch (FOPB)

The Friends of Pheasant Branch is a non-profit organization whose mission is “To restore, preserve and promote the value of conservancy lands and other habitats in the Pheasant Branch watershed for today and tomorrow”, including DNR, Dane County Parks land and city lands.

The Friends have been volunteering with Dane County Parks since 1996. Primarily they have been involved with habitat restoration on Dane County Parks land, but have also sponsored volunteer activities on city lands. The group has focused on brush cutting, seeding, weed control and controlled burns. Volunteers planned, funded and completed construction of an observation deck at the top of the hill as well as a protective observation deck that provides easy, safe access for viewing the springs and seeps. In recent years the Friends have been planting prairies, keeping the hill clear of buckthorn and honeysuckle, and collecting prairie seeds. The FOPB has also sponsored several descriptive publications on the PBC, including “Geology, Cultural History and Ecology of the Pheasant Branch Conservancy and Watershed in Middleton, Wisconsin” and “Birds of Pheasant Branch Conservancy”.

Middleton High School students who volunteer at the PBC receive a Youth Stewardship Award from the Natural Heritage Land Trust (formerly the Dane County Natural Heritage Foundation). In 1999 the Friends were recognized by the Yahara Lakes Association for their leadership role on the North Fork Pheasant Branch Watershed Committee, along with the Middleton City Council and the Bruce Company. In 2001 they received an Orchid Award for their work in protecting the Pheasant Branch Watershed. The Friends of Pheasant Branch also received a U.S. Fish and Wildlife Service NAWCA Grant in 2004/2005 for wetland and oak savanna restoration work to be conducted on DNR, Dane County Parks and city lands in the Pheasant Branch Conservancy.

Recent efforts include restoration and education efforts at the John C. Bock Community Forest. An annual Forest Field day provides recreation and education programming each fall. Restoration efforts by FOPB have included prescribed burns including the entire Dane County section on the Conservancy with the Wisconsin Partners for Fish and Wildlife in 2010. Volunteerism is strong and in 2009 restoration volunteers logged 3004 hours.

Friends of the Kettle Ponds

The Friends of the Kettle Ponds is a non-profit group whose mission is to improve the quality and enjoyment of the kettle ponds in Middleton. There are five (5) kettle ponds that the group represents in Middleton and the west edge of Madison. The group is initially concentrating on improvements to Stricker Pond, Tiedeman Pond and Esser Pond.

The Public Lands Manager organized a kick off meeting in the fall of 2001 and as a result, the "Friends of the Kettle Ponds" was formed with a set of bylaws and a mission/vision to guide it in a collaborative effort to improve the ponds. This meeting was a continuation of the Friends of the Kettle Ponds education "Neighbor Nite at the Ponds" summer parks series.

The group organizes a variety of volunteer projects and assists in maintenance activities including MASN birding hikes, garlic mustard removal, clean-up days, trail maintenance, wetland restoration plantings and Arbor Day events. The group partnered with the city of Middleton and received a \$27,800 DNR ADLP grant in 2003 for the creation of the Tiedeman Pond Boardwalk, which was completed in 2005.

Park Management Agreements and Volunteer Agreements

Dane County Parks sometimes enters into an agreement with a Friends Group to assist in managing a park. A memorandum of understanding is executed between the county, the Friends Group and the local Parks Department outlining the legal and fiduciary rights and responsibilities of the parties, and tailored to each Friends Group. Neither Friends Group in Middleton has entered into an agreement with the county.

The city of Middleton Public Lands Department also has a Friends of the Park or Conservancy Group policy and procedure form, which outlines the purpose of the group and the operating procedures that the group must follow. The Friends of Kettle Ponds has signed an agreement.

In addition to the Friends agreements, the city of Middleton has Public Lands Volunteer Program Guidelines. These guidelines pertain to all individuals who provide volunteer services to the city of Middleton Public Lands Department on city lands.

5. Implementation

Middleton has a long history of working to protect its important natural resource and conservancy areas. In order to maintain this success, the city must continue to provide staff and funding for management enhancements and acquisition of these areas. The following summary provides direction to help ensure the important conservancy areas in Middleton are protected into the future.

5.1 Overcoming Potential Threats to Conservancy Lands

While Middleton has done an outstanding job of protecting its conservancy lands and other important natural resource areas, there are constant threats to both existing and potential conservancy land areas. Threats within existing conservancy lands include disease, insects, stormwater runoff, and invasive species. Potential conservancy lands are primarily impacted by development and destruction of vital habitats before they are protected in the conservancy lands system. Therefore, it is important to continue to maintain and improve the ecological health of the existing conservancy lands and to acquire sensitive areas for the conservancy lands system before they experience harm.

5.2 Priority Projects

Table 5 identifies a listing of priority projects that the city of Middleton should carry out over the next five (5) years to work toward achieving its conservancy lands goals and objectives. These priorities include capital projects.

Table 5: Future Priority Projects

Project Type	Project Summary	Target Year	Priority*	Est. Fee *	Grants**
Trails	PBC Trails development and interpretive signage	2011-12	1	\$ 119,000	
Improvement	Tiedeman Pond Improvements (west forebay, etc.)	2011-12	1	\$ 110,700	eligible
Improvement	PBC Creek Corridor Stream Bank Stabilization	2011-12	1	\$ 25,000	eligible
Improvement	PBC - Harbor Village Stabilization	2011-12	1	\$ 97,000	eligible
Improvement	Graber Pond Master Plan Implementation	2011-12	1	\$ 132,600	eligible
Improvement	Invasive Species Control Citywide	2011-12	1	\$ 125,000	
Improvement	DNR Mandatory Wetland Mitigation Sites	2011-12	1	\$ 5,000	
Study	Stricker Park Master Plan	2013-14	2	\$ 15,000	
Improvement	DNR NPS Grant for Lakeview Park	2013-14	2	\$ 138,000	eligible
Acquisition	Gerhardt Property - PBC Land Acquisition	2013-14	2	\$ 200,000	eligible
Improvement	PBC Bock Community Forest	2013-14	2	\$ 25,000	eligible
Improvement	Middlton Hills Restoration Efforts	2013-14	2	\$ 43,000	eligible

Improvement	Property Boundary Signage & Surveying	2013-14	2	\$ 10,000	
Improvement	PBC West Trail Stormwater Ditch Improvements	2013-14	2	\$ 12,000	
Improvement	Rail Corridor Restoration	2013-14	2	\$ 5,000	
Improvement	Stricker Management Plan Pond Stormwater Detention	2013-14	2	\$ 100,000	eligible
Study	Boundary Road Park Master Plan	2015-16	3	\$ 5,000	
Trails	Bike/Pedway to connect to Governor Nelson	2015-16	3	\$ 300,000	eligible
Study	Esser Pond Master Plan	2015-16	3	\$ 15,000	
Study	Quarry Hill Conservancy Park Master Plan	2015-16	3	\$ 10,000	
Unassigned	Esser, Tiedeman, Graber Ponds	2015-16	3	\$ 10,000	
Trails	Full Compass, Esser Pond, Gunderson Trail	2015-16	3	\$ 100,000	eligible
* as assigned by Public Lands staff					
**DNR grants received by Middleton in past years include Urban Forestry; Wetlands Incentive; ADLP; Stewardship; Urban Non Point Source Pollution; CLWF; RTA; NPS; see Chapter 2 for a complete listing of grant awards by year (2002-2010)			Priority		Total
			1		\$ 614,300
			2		\$ 548,000
			3		\$ 440,000

5.3 Staffing Needs

The identification of staffing needs is one of the key outcomes of this *Plan*. Additional staff, especially LTE maintenance workers, is needed for the following activities:

- Habitat restoration; planning, implementation and maintenance
- Trail planning, development, signage and maintenance
- Volunteer coordination and management

In addition, a full-time park planner/landscape architect could offset the costs Middleton currently incurs for grant writing services, planning studies, and construction documentation. A detailed discussion of staffing needs is provided in Chapter 2 of this *Plan*.

5.4 Future Acquisitions

Long term, the acquisition of property remains an important preservation tool. However, in the short-term property acquisition is more likely to consist of rights-of-way to connect existing trails. Potential trail corridors include:

- Area west of Graber Pond to connect the Pheasant Branch West Trail to the Highway 12 Trail
- Good Neighbor Trail

Right-of-way acquisitions should include high, dry land that does not negatively impact sensitive resources. A minimum width of 20 feet is recommended to ensure adequate trail alignment, preservation of existing environmental features, separation from adjacent uses, and sufficient trail width.

The CLC has not identified any other specific acquisitions that they would like to secure at this time. However, as land is deeded from developers it should be incorporated into the conservancy lands system and efforts should be made to provide trail access, maintain and improve native vegetation, and eliminate and control invasive species.

The city of Middleton has an extensive conservancy lands system and will undoubtedly continue to add land to this system. The staff, CLC and volunteers do an excellent job of managing these properties with limited funds and resources. However, to continue to improve this system, and successfully add to it, additional funding and assistance will be needed. The conservancy lands provide an invaluable benefit to humans, wildlife and the environment in Middleton, and quality management of these areas must continue to be a high priority.

5.5 Parkland Dedications

The city of Middleton requires a parkland dedication or a park improvement fee for new residential developments. Each new dwelling unit is required to dedicate parkland or provide fees in lieu of parkland as determined by the Plan Commission. Land dedication is set at 1,450 square feet of land for each proposed residential dwelling unit. Not all of this space will be developed for active use parks and will likely include reservation of lands for open space or passive recreation facilities as allowed by ordinance. Ultimately, many of these lands will fall under the guidance of this *Plan*.

Fees in lieu of land dedication are exacted prior to the issuance of a building permit in the amount of \$1,650 for each dwelling unit with one bedroom or less and \$2,750 for each dwelling unit consisting of two bedrooms or more. These amounts were determined based on the cost of land in the Misty Valley subdivision in 2008. The Zoning Administrator can adjust the fee annually to reflect the true price of parkland. Plans for the reservation of land or provision of fees should consider the long-term recreational plans of Middleton, including this *Plan*, which identifies future lands for acquisition or trail development.

5.6 Plan Monitoring and Evaluation

Throughout this planning process, the need to evaluate the effectiveness of the conservancy lands plans and management activities has been stressed. While Public Lands Staff works with consultants to review managed lands and monitor the effectiveness of treatments, it is recommended that, to the extent possible, management results are independently monitored in subsequent years to ensure the desired outcomes are achieved. In practice, the CLC will need to assess the desired level of monitoring and land management activities compared to the availability of resources to perform these tasks and allocate resources based on need and public demand.

This *Plan* should be used to support the management of public lands and to assist decision-makers in the determination of project prioritization. Table 5 should be periodically updated and consistently monitored if the goals and objectives of this plan are to be realized.

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**Appendix A:
Middleton Public Lands & Parks System Existing
Facilities Map**

Conservancy Areas

LARGE CONSERVANCY AREAS AND STREAM CORRIDORS

- 1 Pheasant Branch Conservancy
- 2 Pheasant Branch Creek Corridor
- 3 Pheasant Branch Creek Corridor - South Fork
- 4 Pheasant Branch Creek Corridor - North Fork and Confluence Pond

KETTLE POND CONSERVANCY AREAS

- 5 Stricker Pond Conservancy Area
- 6 Tiedeman Pond Conservancy Area
- 7 Graber Pond Conservancy Area
- 8 Esser Pond Conservancy Area
- 9 Middleton Hills and Conservancy Area (Outlot 10)

WETLAND CONSERVANCY AREAS

- 10 Middleton Hills Wetland Conservancy Area

DETENTION POND CONSERVANCY AREAS

- 11 Stonefield Conservancy Area (East and West)
- 12 Pheasant Branch Ridge Drainageway

- 13 Gaylord Nelson Road Detention Pond Conservancy Area
 - 14 Shorecrest Detention Pond Conservancy Area
 - 15 Spring Hill Detention Pond Conservancy Area
- OAK SAVANNA/PRAIRIE CONSERVANCY AREAS**
- 16 Elm Lawn School/Tiedeman Pond Conservancy Area
 - 17 Boundary Road Park Conservancy Area
 - 18 Lakeview Park Conservancy Area
 - 19 Middleton Hills Oak Savanna Conservancy Area
 - 20 Quarry Hill Conservancy Area
 - 21 Orchid Heights Conservancy Area
 - 22 Henry Street/High Point Road Conservancy Area
 - 23 Pleasant View Golf Course Conservancy Area
 - 24 Capitol Ice Arena Conservancy Area
 - 25 Outlot 63 & 64
 - 26 Bock Forest
 - 27 Hidden Oaks

TOTAL CONSERVANCY AREA = 822.84 ACRES



Legend

- Publicly Owned Conservation Lands (Including Drainageways and Ponds)
- Dane County/DNR Land
- Active Parks
- Airport Managed Natural Areas
- Conservation Lands (adjacent to city)
- Active Park (adjacent to city)
- City Boundary
- Existing Multi-Use Trails
- Proposed Trails/ Under Construction
- Trail Crossings (Bridges/Underpass)
- Overlook/Vista
- P Public Parking Lot
- S School
- K Kiosk



**Appendix B:
City of Middleton Conservancy Lands Inventory
Table, 2010**

City of Middleton Conservancy Lands Inventory Table, 2010

Conservancy Land	Location	Acres	Management Plan	Facilities	Habitat	Habitat Quality	Current Management Efforts
Large Conservancy Areas with Varying Habitat Types							
1. Pheasant Branch Conservancy	East of Highway 12, North of Century Avenue	322.2 (City owned) North End - 161 acres owned by DNR/Dane co.	Y (1998 Vegetation Management Plan, AES; 1999 North Lake Mendota Plan, SAA; 2006 Wetland Mitigation Report, Thomson & Assoc.)	ADA accessible shared use bike/ped trail system with 2 shared use bridges, 2 boardwalks, a wildlife viewing platform, parking lots, interpretive signage and kiosks. Passive hiking trails and 80 foot bridge.	Wetlands, lowland forests, sedge meadow, prairie, oak savanna/oak woodlands, open marsh, fen, natural springs, seeps	Good	Pheasant Branch Conservancy North is owned and managed by Dane County Parks and the DNR; Pheasant Branch Conservancy South is owned and managed by the City of Middleton. Management includes removal of non-native species and opening view corridors; trail linkages; prairie restoration and deer management. The Public Lands Department manages this area. Significant events for this site include installation of rootwads 2003; WDNR NPS grant 2005; Wetland Mitigation Report 2006; WPRO Award of Excellence 2007.
Stream Corridor Conservancy Areas							
2. Pheasant Branch Creek Corridor	South of Century Avenue to east of Highway 12	97.6	Y (1998 Vegetation Management Plan, Clark Forestry; Vegetation Management Plan, AES ; a comprehensive listing of studies and management reports is listed in the North Lake Mendota Plan 1999)	Shared use paved bike/ped trail and interpretive signage, birding alcoves, benches	Stream corridor, wetlands, lowland forests, oak savanna	Good	DNR Urban Rivers Grants secured in 2003/2004 and 2004/2005 to improve fish habitat, shoreline, and streambank stabilization. Invasive species and streambank instability are management concerns. Rootwad construction 2008; seed establishment on streambanks 2009; gabion removal and installation of rip rap 2009; construction of TE Grant trail improvements (1.25 miles of pavement and 3 bridges) 2009.
3. Pheasant Branch Creek Corridor - South Fork	Market Street to North Fork/ Confluence Pond	32.5	N	Asphalt shared use bike/ped trail and interpretive signage	Stream corridor, wetlands, prairie	Average to Poor	Rip rap installed in 2000 and 2001 as part of a FEMA mitigation plan to stabilize the streambank. Prairie restoration efforts conducted between 1995 and 2003 to improve water infiltration. The Public Lands Dept. will apply for a streambank stabilization grant in 2011.
4. Pheasant Branch Creek Corridor - North Fork and Confluence Pond	Airport Road to North Fork Confluence Pond	79.0	Y (2005 North Fork Management Plan and 2005 Confluence Pond Management Plan, Michael Anderson)	Asphalt shared use bike/ped trails and interpretive signage	Stream corridor, wetlands, prairie	Good	Conducted wetland and mesic prairie management activities 2002 to present; rechannelized Pheasant Branch Creek 2005 and provide wetland mitigation on designated site. This is a DNR wetland mitigation site.
Kettle Pond Conservancy Areas							
5. Stricker Pond Conservancy Area	From University Avenue, south on Gammon Road, west on Fortune Drive, north on Sweeney Drive, west on Voss Parkway to Stricker Park	24.9	Y (2005 Assessment and Restoration Plan for woodland areas, Michael Anderson, Biologic)	Ice skating, bike/ped shared use trail system, interpretive signage, viewing platform	Glacial kettle pond, wetlands, aquatic, mesic prairie, oak woodland	Good	Most of the pond's herbaceous shoreline vegetation was dominated by reed canary grass, which has been restored to wet prairie areas. The oak savanna, wetland, prairie and aquatic vegetation is also being restored. Friends of the Kettle Ponds also provides volunteer assistance on management and restoration efforts. The City of Middleton initiated a floodwater control system in 2001 whereby stormwater is piped from Stricker Pond to Tiedeman Pond and eventually to Lake Mendota via gravity flow. From 2003 - 2006 Middleton received two DNR lake protection grants and wetland incentive \$10,000 grants for wetland and shoreline restorations. In 2005/2006 the City received a DNR urban forestry grant for an ecological assessment and management plan for an oak savanna area on the west shore. The Middleton Cross Plains School District initiated planting projects in 2006. The area is maintained for passive recreation. A portion of this conservancy area is located within the City of Madison.
6. Tiedeman Pond Conservancy Area	From University Avenue, south on Gammon Road, west on Fortune Drive, north on Sweeney Drive, west on Voss Parkway to Woodside Heights Park	27.4	Y (2006 Ecological Assessment Plan, JFNew)	Ice skating, 1000' ADA accessible boardwalk, loop hiking trail system, wildlife viewing platform and interpretive signage	Glacial kettle pond, wet prairie, aquatic, wet prairie, oak savanna	Good	Restoration activities include eradication of invasive species, native plantings, water edge plantings, shoreland buffers and other vegetative management efforts. The Friends of Kettle Ponds, which formed in 2003, also participates in these restoration efforts. Since 2001, water has been pumped from the pond to Lake Mendota to manage water levels in the pond. The City of Middleton initiated a flood control mitigation project and installed a submersible pump in 2001 to control stormwater runoff and flooding of private lands. The City helped launch a "Friends" group known as Friends of Kettle Ponds. This group is dedicated to the preservation, enhancement and educational pursuits of the kettle ponds. Between 2003 and 2005, the City of Middleton received 2 \$10,000 DNR lake management grants for wetland restoration, and 2 \$3,000 DNR lake education grants for community educational events. Middleton Cross Plains School District planted a rain garden in 2006. Four forebays were installed in 2007. 2008 BMPs initiated around pond.
7. Graber Pond Conservancy Area (includes sewer easement to the northeast)	From Highway 12, east on Graber Road	33.5	Y (2006 Graber Pond Master Plan, Saiki/JFNew)	Informal trails	Glacial kettle pond, wetlands, wooded upland, viewsheds	Poor	Rip rap installed for stormwater runoff control on the south side of the pond in 2004. Reed canary grass dominates and the site currently lacks plant diversity. Invasive species control and restoration is a need. Paved paths and a boardwalk will be installed in 2011 on east side of pond. 5 acres of prairie restoration on north shore with Friends of Kettle Ponds, and 15 acres of oak savanna on south shore performed since 2008. Kiosk and interpretive signs will be installed.
8. Esser Pond Conservancy Area	From Highway 12, west on Greenway Boulevard, north on Deming Way	28.0	Y (2003-2004 Vegetation Management Plan, Biologic Environmental Consulting)	Asphalt bicycle and pedestrian path, interpretive signage and trail maps	Glacial kettle pond, prairie wetland, aquatic	Average	Restoration efforts have been completed on the north, west, and east sides of the pond; need to continue these efforts on the south side and monitor area development and stormwater impacts on the pond's ecosystem. The City received one \$10,000 Lake Protection incentive grant in 2004/2005. Controlled burns performed as needed. A path is being planned for connection to the USH 12 Trail.
9. Middleton Hills Pond and Conservancy Area (Outlot 10)	From Century Avenue, north on Old Creek Road, pond is just west of Pheasant Branch Road/Old Creek Road intersection and the outlot follows the west side of Pheasant Branch Road to Diversity Road	4.0	Y	Hiking trail links to Pheasant Branch Conservancy West Trail and Middleton Hills oak savanna	glacial kettle pond	Good	Extensive restoration was done on this pond during 2003 and 2004 with the help of a \$10,000 DNR Lake Protection/Wetland Incentive grant. The uplands were brushed (large oak and hickory were retained) and planted to prairie and savanna. The pond, pond shoreline and pond banks were cleared of invasive species and planted with aquatic, shoreline and prairie species. All work was done by Biologic Environmental Consulting and City staff. This conservancy area has a management plan. Old oaks exist at this site.
Wetland Conservancy Areas							
10. Middleton Hills Wetland Conservancy Area	From Century Avenue, north on High Point Road, conservancy area located between Frank Lloyd Wright Avenue and High Point Road	13.6	Y (1998 AES Report)	700 foot ADA accessible boardwalk, interpretive signage, loop hiking trail, tree walk	Wetland, open marsh	Good	AES provided wetland management plan and conducted wetland plantings in 2001; City of Middleton work conducted between 2003 and 2005 to enhance wetlands. City crews continue to monitor and maintain site as needed.
Detention Pond Conservancy Areas							
11. Stonefield Conservancy Area (east and west)	Along Stonefield Road, between railroad tracks and Old Middleton Road	9.3	N (1995 Memo, Dave Eagan)	Six (6) foot paved, accessible walkway between Walnut Circle and Cypress Trail, accessible hiking trail	Detention pond, prairie, wet prairie	Good	City of Middleton contracted with UW-Arboretum restoration specialist, Dave Eagan, to create a plan for the water resource drainage. The area has been seeded with prairie vegetation and there is now a diverse community of restored native plants. Trails will be porous paved in 2011-2012 and there are discussions about connecting to city of Madison parks (south).
12. Pheasant Branch Ridge Drainageway	From Century Avenue, north on Pheasant Branch Road, conservancy area on west side north of Whittlesey Road to Graber Pond	19.3	N	None	Detention pond, wet prairie	Average	City of Middleton uses prescribed burns, herbicides, and mowing in this area to control invasive species. The City received one Dane County Land Conservation Grant in 2001/2002 for segments south of Whittlesey Road. A high priority is connecting the PBC West Trail to the USH 12 Trail through this drainageway.
13. Gaylord Nelson Road Detention Pond	Gaylord Nelson Road	0.8	N	None	Detention pond, wet prairie	Poor to Average	A memo guides management efforts here and recommends burning and weed control. The area was installed by a developer in 2004 and does not have a management plan. A plan is needed as is funding in order to maintain this area in the future.

Conservancy Land	Location	Acres	Management Plan	Facilities	Habitat	Habitat Quality	Current Management Efforts
14. Shorecrest Detention Pond Conservancy Area	Shorecrest Drive	0.7	N	None	Detention pond, wet prairie	Average	Public Lands Department conducted restoration efforts between 2001 and 2004 with local volunteer efforts. This area needs a management plan.
15. Spring Hill Detention Pond	Spring Hill Drive	0.6	N	None	Detention pond, wet prairie	Good	The Public Lands Department manages activities for prairie/wet prairie habitat; it is inaccessible to the general public.
Oak Savanna/Prairie Conservancy Areas							
16. Elm Lawn School/Tiedeman Pond Conservancy Area	From University Avenue, south on Park Street (Gammon Road), conservancy area east of Gammon Road across from Tiedeman Pond	3.2	Y (2004 Biologic Environmental Consulting)	Trail, interpretive signage, nature study area, benches	Oak savanna, prairie	Good	The City of Middleton initiated a grant project with Elm Lawn Elementary School and Biologic Environmental Consulting. This prairie and oak savanna restoration project occurred in 2004 as part of a Federal NACO grant project. The project restored prairie and oak savanna habitat adjacent to Tiedeman Pond. There is additional restoration required on the north end (including path resurfacing).
17. Boundary Road Park Conservancy Area	Boundary Road	0.8	N	None	Oak savanna	Poor	Needs a management plan and restoration work.
18. Lakeview Park Conservancy Area - Areas A, B, C, D, E, F, G	Lakeview Park - West (A, B, C) Lakeview Park - East (D, E, F, G)	15.4	Y (2002 Ecological Assessment and Restoration Plan, Clark Forestry)	Asphalt bike/ped trails, on-shore ADA accessible fishing pier	Lowland woods, wet prairie, pond	Average	The City of Middleton completed restoration of area G with the DNR lake protection grant in 2003-2005. There is no access to the interior of the conservancy. A trail should be installed around the entire area east of Allen Blvd. There is the potential for boardwalks in areas A and B.
19. Middleton Hills Oak Savanna Conservancy Area	From Century Avenue, northeast on Frank Lloyd Wright Avenue, north on Glacier Ridge Road, conservancy area located east and west of the road just north of Black Cherry Lane	2.7	Y (2004 Assessment and Restoration Plan, Biologic Environmental Consulting)	Hiking trails, interpretive signage, benches	Oak savanna	Excellent	This area has old oaks and is being restored to oak savanna. Management activities include removing hazard trees, dead elm, buckthorn and honeysuckle. Also, control weeds through herbicides, burning and planting native vegetation. The City received a DNR Urban Forestry grant in 2004/2005 to develop a forest management plan and restore the oak savanna area, which has been completed between 2005-2010. Continued efforts include restoring understory growth and maintaining woodchip trails.
20. Quarry Hill Conservancy Area	North of Hillcrest Avenue in Quarry Park	6.3	N	None	Historically oak savanna	Poor	Needs a management plan.
21. Orchid Heights Prairie Conservancy Area	Valley Ridge Road (south of Orchid Heights Park)	4.9	Y	ADA shared-use crushed limestone trail and grass hiking trails	Prairie	Good	Public Lands Department management. Area was restored in 2002 - 2003. Detention pond maintained by WRMC.
22. Henry Street to High Point Road Railroad Corridor Conservancy Area	Railroad corridor	5.8	Y (1996 Management Plan, Dave Eagan)	None	Prairie	Average	Managed by Public Lands since 2002, some burning is conducted. Funds need to be allocated for management work to continue in this railroad corridor area.
23. Pleasant View Golf Course Conservancy Area	Pleasant View Golf Course	51.2	Y (2002, USFWS)	Mountain biking trails, pump track, Cross country ski trails in winter	Prairie	Good	The City received a USFWS grant to restore high quality grassland prairie areas between 2002 and 2004. A Bikes Belong grant funded development of mountain bike trails. Prairie is regularly burned and maintained. Additional invasive species removal in wooded conservancies is necessary.
24. Capitol Ice Arena Wetland Conservancy Area	West of ice arena	3.3	Y (City/Town of Middleton management plan for weed control and seed propagation source)	10 foot wide asphalt bicycle and pedestrian trail	Wet prairie	Average	City of Middleton 2001 - 2002 restoration efforts with the Town of Middleton.
25. Middleton Hills Outlot 63 & 64	Located on both sides of Glacier Ridge Rd, north of Diversity Rd, in Middleton Hills	7.9	Y (2009 Ecological Assessment and Management Plan, BioLogic)	None	Oak savanna, oak woodland, and prairie	Average	The implementation schedule includes brushing weeds, restoring the old field unit, and removal of hazard trees followed by prep and planting, the installation of signs, and some trails. A kiosk and council circle are also desired. Removal of invasive brush and planting of native trees and shrubs began in 2010. Shrub planting locations guided by neighbor comments at public meetings. Neighbors helped fund the purchase of trees and shrubs in 2010. Area is currently being prepared for planting of native prairie and savanna plants, per management plan.
26. John C. Bock Community Forest	Located along the north side of Highland Way southeast of the Pheasant Branch Conservancy	19.3	Y (2009 Ecological Assessment and Management Plan, BioLogic)	Trails, kiosk, monument, community garden	Oak savanna, oak woodland, and prairie	Good	This area is in the early stage of prairie, oak woodland, and oak savanna restoration, which began in 2009. A one-acre community garden with a native plant nursery was established in early 2010. Plants from the nursery, maintained by volunteer gardeners, will be used for the restoration. Removal of invasive species and hazard trees is being performed in preparation for plantings. The oak woodland plant community would benefit from additional invasive species removal.
27. Hidden Oaks	South of White Coral Way	8.6	N	Trails	Wet Prairie	Poor to Average	Needs a management plan in coordination with WRMC.