Conceptual Park & Open Space Proposal:

A Guide to the Planning Process

Prepared by the City of Fitchburg
Parks, Recreation & Forestry Department

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May 6, 2008
We would like to give credit and thanks to the following people for their support and contributions to the project:

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Tom Hovel
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Phil Lewis
Professor Phil Lewis’ Regional Design Academy

City of Fitchburg Parks Commission

City of Fitchburg Plan Commission

City of Fitchburg Common Council

City of Fitchburg Staff

Dane County Staff

Bureau of Endangered Resources
Wisconsin Department of Natural Resources

Residents of Fitchburg
Executive Summary

Beginning in 2007, the Conceptual Park & Open Space Proposal was developed as a comprehensive study of Fitchburg’s natural and cultural resources. Ed Bartell, City Forester/Naturalist, and Dana Dentice, Landscape Architect Intern, have spearheaded the project. Other City staff has also made significant contributions. The Parks, Recreation & Forestry Department and the Planning Department have coordinated their efforts as this proposal and the Comprehensive Plan have both undergone drafting at the same time.

This proposal serves as only a recommendation of areas to be considered for future parks/recreation facilities and protected open space. It is not necessarily the City’s plan for acquisition of private land for public use. Some designated areas in the proposal could be protected through private ownership. This plan is not a land grab.

Concept and Goals

After reviewing a 2005 park and open space concept, the Parks, Recreation & Forestry Department decided to expand it and draft a new proposal using a more comprehensive and resource-based planning model.

The goal of the initial concept, proposed by Tom Hovel (City Planner) and Jim Christoph (former Director of Parks, Recreation & Forestry), was to design a system of linked parks and open space that protect Fitchburg’s natural areas and create a buffer between current and future development. The main feature of their conceptual proposal was the creation of a greenbelt buffer (Moraine Edge Park) at the southern boundary of the current urban service area that could showcase Fitchburg’s agricultural history. Hovel and Christoph also wanted to link this greenbelt to environmentally sensitive corridors and other significant natural features through park and open space.

The primary goals of the current Park & Open Space Proposal are to:

• Identify all areas outside the urban service area that have environmental and cultural significance and should be considered for preservation
• Make the public aware of these resources and their value
• Guide responsible urban growth and park/recreation planning decisions

The rich variety of environmental and cultural resources in Fitchburg accounts for a significant amount of land that is worth protecting or using for recreation purposes. Therefore, areas of higher priority for both acquisition and future development consideration were designated in the plan as follows:

• Areas most feasible for expansion of the City’s recreational facilities will receive higher priority in terms of land acquisition and park planning efforts.
• Future urban growth areas, especially those of near term development, will become a priority in terms of further study and documentation of resources and integration of the Park & Open Space Proposal.

The Parks Commission has strongly endorsed the Proposal and its concept and goals and has contributed through their recommendation of three priorities:

• The greenbelt, deemed Moraine Edge Park & Preserve, running along the southern urban service area boundaries (While specific plans have not been established, this land has potential for a diverse array of recreational and educational opportunities.)
• The west and south expansion of McGaw Park (for additional active recreation facilities)
• The Northeast Neighborhood (furthest along in the development planning process)

Fitchburg has the potential to be a permanently green and sustainable community -- a model for other communities. We can achieve this by being proactive in protecting existing resources that our community values, therefore, enhancing the quality of life for generations to come.
Methodology

As stated previously, the Conceptual Park & Open Space Proposal was drafted using a resource-based model. In other words, all available natural and cultural resources data was collected and mapped to determine areas most sensitive to development. This includes the following resources:

Environmental Resources
- Forest resources
- Steep slopes & moraines
- Wetlands
- Water resources
- Hydric soils
- Public land
- Dane County environmental corridors
- Groundwater recharge
- Prime farmland
- Endangered/rare species and significant natural features and plant communities

Cultural/Historical Resources
- Indian trails, camps, mounds
- Historic buildings/sites
- Historic mines/quarries
- Territorial roads and lead trails
- Scenic resources
- Railroad corridors

The boundaries of the proposed park and open space were drafted based on a composite of these resources and the following criteria:

- Exclusion of
  - Urban service area
  - Most private structures
- Inclusion of
  - Hovel and Christoph’s greenbelt (formerly Moraine Edge Park)
  - Most water features, wetlands, and their 300-ft buffers
  - Most woodlands
  - County, State, and Federal public lands
  - All Dane County environmental corridors
  - Areas with multiple resources
  - Areas with a single resource that link and/or lie adjacent to areas that meet the above criteria
  - Non-resource areas (to provide wildlife, plant, and recreational corridors)

Land Acquisition Mechanisms

There are numerous mechanisms and financial resources for acquiring parkland and preserving open space. Public lands could be acquired through park dedication, donations, and purchase of title from willing landowners. Potential mechanisms for protecting private open space include conservation easements, the purchase/transfer of development rights, and government regulation (comprehensive plan policy and State law). In addition to City funds and park dedication fees, there are State and County grants available to fund this type of project.
# Illustration and Map Reference List

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Conceptual Park & Open Space Proposal

The purpose of this document is to provide all interested parties with background information on the planning process used to draft the Conceptual Park & Open Space Proposal. The proposal was developed by the Parks, Recreation & Forestry Department staff to determine the areas most sensitive to future development that should be considered for protection for both short-term and long-term park and open space planning.

Initial Concept

Developed by Tom Hovel, City Planner and Jim Christoph, former Director of Parks, Recreation and Forestry, the goal of this plan was to create a greenbelt at the southern boundary of the current urban service area. This was intended to provide a buffer between current and future development. This greenbelt, approximately 950 acres, in addition to other significant parcels of land, created a system of linked parks and open space that would further protect and enhance the natural areas of Fitchburg for future generations.

One of the themes of the original plan focused on agriculture in Fitchburg, from an historical perspective. Its focus was to demonstrate a progression of farming technology from the time of the first settlers to the current biotechnology industry. It accounted for a corridor that extended southeast from Stoner Prairie to Irish Lane, then east to the Swan Creek plat.

The original plan also considered the importance of significant geologic, environmental, and historical attributes, but more research regarding those and other characteristics was necessary to develop a thorough, resource-based planning model.

Project Goals

1. Identify all areas outside the urban service area that have environmental and cultural significance and should be considered for preservation
2. Make the public aware of these resources and their value
3. Guide responsible urban growth and park/recreation planning decisions

By protecting its natural resources, Fitchburg can maintain wildlife corridors, protect groundwater recharge areas and sensitive environmental sites, avoid the development of high risk contamination areas, and preserve important historical and cultural features of the city.

Methodology: Resource-Based Planning Model

All available environmental and cultural resources data was collected and mapped to determine the areas most sensitive to development. Each of the following resources has a map associated with it that defines its coverage (refer to page 4). The following section discusses the significance and/or definition of each resource and the criteria for drafting the Park & Open Space Proposal.

Environmental Resources

Vegetation (Forest Resources)

Mapped vegetation data is limited to forest resources and includes woodlots and heritage oak trees. The woodlots are delineated based on the most recent air photos. They do not include thin tree lines that
separate agricultural fields or low density tree groupings. The heritage oak inventory is based on the original 1976 inventory done by Walter Scott, who located oak trees estimated to be at least 200 years old within an 8-mile radius from the Capitol. Conditions of the trees are unknown at this time. There are likely to be more trees that fit the age criteria, but they cannot be surveyed without landowner knowledge and consent.

Benefits of Forest Resources
- Economic value
- Energy conservation
- Air quality
- Water pollutant reduction
- Increased property value
- Timber products

Steep Topography

Steep slopes are those with a slope of 12% and greater. These slopes are significant as they are used as criteria by the Dane County Regional Planning Commission (DCRPC) and other commissions to define environmental corridors. Steep wooded slopes minimize erosion and provide wildlife habitat (Community Analysis and Planning Division, 1997). Building on steep slopes can be problematic and costly, especially near water resources. Fitchburg also hosts numerous glacial moraines.

Wetlands

Wetlands serve as “habitat for more species of plants and animals than any other type of landscape”. They also store water to prevent flooding and protect water quality. Wisconsin only has about half of the 10 million acres of wetland that were present in 1848 (WDNR, 2008).

The proposal includes a 300-foot wetland buffer, the setback distance that will be established in the Comprehensive Plan. It also incorporates 300-foot buffers for all streams/waterways. “The [Army] Corps of Engineers recommends a minimum riparian buffer width of 300 ft. for avian populations and points out that the wider the buffer, the more protective of ecological functions” (Delaware River Keeper, 2006).

Water Resources

These include intermittent and perennial streams, lakes, ponds, and drainageways, and springs. These resources are critical to the survival of many species. Over 70% of terrestrial animals use riparian corridors. These corridors “afford wildlife relatively safe access to adjacent resources and serve as travel lanes for species dispersal and migration in our increasingly fragmented landscape” (Isaacson, 1999).

Hydric Soils

Hydric soils play a major role in the identification of wetlands. Areas that meet hydric soil criteria, as well as hydrophytic vegetation and wetland hydrology criteria, are classified as wetlands. According to the Natural Resources Conservation Service (2008), a hydric soil is one “that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part…Soils in which the hydrology has been artificially modified is hydric if the soil, in an unaltered state, was hydric.” Possible hydric inclusions, which are non-hydric soil map units but likely to contain hydric inclusions, are also included in the analysis.
Public Lands

Public land includes all parcels of land owned by a governmental body. This includes City, County, State, and Federal property. Public land may be used for park and open space or have facilities that provide services for residents (i.e. police/fire stations, wells). Some properties may have limited public access. Existing and proposed recreational trails are also included in the Proposal. One proposed recreational trail is the conceptual Heritage Circle Route that connects the two railroad corridors through County Highway M.

Dane County Environmental Corridors

Generally speaking, “environmental corridors encompass linear landscape features containing concentrations of natural and cultural resource amenities.” Phil Lewis, Jr., UW-Madison professor emeritus, brought attention to the term starting in the 1960s. The planning community has expanded its definition to meet government requirements (Murrell, 2003). Dane County Department of Planning and Development (1997) defines environmental corridors as "continuous systems of open space in urban and urbanizing areas, that include environmentally sensitive lands and natural resources requiring protection from disturbance and development, and lands needed for open space and recreational use."

According to Murrell (2003), DCRPC has mapped environmental corridors for Dane County, including Fitchburg. They are delineated based on available information and the following criteria:

1. All waterways and water bodies, including lakes, ponds, intermittent and perennial streams, and drainage ways.
2. Vegetated buffer strips along drainage ways, streams, lakes, and wetlands.
3. 100-year floodplains.
4. Mapped wetlands (taken from the DNR’s Wisconsin Wetland Inventory).
5. Steep slopes (those 12% or greater).
6. Woodlands.
7. Existing and proposed parks, greenways, conservancy areas, and storm water management areas.
8. Areas of unique vegetation or geology.

Groundwater Recharge

All of Dane County’s drinking water comes from groundwater which originates as recharge. Municipal water use causes significant lowering of water levels. This in turn influences lake and surface water levels (Bradbury, 2006). Some soils have a greater potential for groundwater recharge while impervious surfaces have no opportunity for recharge. Based on data that shows the top 25% of natural infiltration opportunities, there are significant opportunities for groundwater recharge in the City of Fitchburg.

Soil Productivity (Prime Farmland)

Agriculture is a major land use in Fitchburg and this is beneficial for protecting our food source and maintaining Fitchburg’s rural character. Many government agencies, both national and local, recognize the importance of farmland protection and in turn, have drafted related policy. According to data that rates the best soils for agriculture (agricultural groups 1 and 2 of 8), the majority of rural Fitchburg is very suitable for farming.
Natural Heritage Inventory

Wisconsin’s Natural Heritage Inventory program is run by the Wisconsin Department of Natural Resources (WDNR). “NHI programs focus on locating and documenting occurrences of rare species and natural communities, including state and federal endangered and threatened species.” Because NHI data are exempt from Wisconsin's Open Records Law due to the vulnerability of rare species to collection and destruction, their locations are generalized for public use (WDNR, 2005).

There are 18 NHI plant and natural community occurrences recorded for Fitchburg. The dates of last observation range from 1880 to 1999. Natural communities include the following: shrub-carr, southern sedge meadow, emergent marsh, shallow lake, warm stream, and wet mesic prairie. Plant occurrences include prairie false-dandelion, Wilcox panic grass, Hall’s bulrush, Engelmann spike-rush, Adder’s tongue, pale-purple coneflower, Flodman thistle, prairie white-fringed orchid, yellow giant hyssop, slim-stem small reedgrass, small white lady’s slipper, and yellow gentian (WDNR, 2007). Since the current status of these historic plant occurrences is unknown, a DNR review is needed to determine if the habitat still exists on site.

Cultural/Historical Resources

There has been documentation that the Ho-Chunk, formerly the Winnebago Indians, predominated in southern Wisconsin, including the area of Fitchburg. They camped near water and hunted and fished for several months before moving to a new location. They traditionally located themselves along Lake Barney and on the mound above Nine Springs (Fitchburg Bicentennial Committee, 1976). Charles Brown, former Museum Director of the Wisconsin Historical Society, documented the locations of numerous Indian trails, camps, and mounds throughout the State. An atlas of known archaeological sites and trails was completed using his findings. One of the mapped Indian trails runs from north to south in the Northeast Neighborhood, and connects all the way down to Swan Pond (S. Fish Hatchery Road). The atlas also includes the locations of two camps and a mound group north of E. Clayton Road (Brown and Hixon & Co., 1924). It is unknown whether any remnants of the trail, camps, or mounds still remain. The existence of marker trees, trees bent by the Indians to guide trail users, may be the only evidence of the historic Indian trails.

The Park & Open Space Proposal also documents other historical features. These include historic buildings and sites, mines/quarries, territorial road, lead trails, and railroad corridors. Fitchburg still has most of its one room schoolhouses and it is host to five places on the National Register of Historic Places.

Scenic Resource Inventory

Scenic resources have many benefits to a community. They stimulate higher property values and increased tourism revenue, add to sense of place, and improve the quality of life. The Parks, Recreation & Forestry Department has given the citizens of Fitchburg an opportunity to contribute to this Proposal through their participation in a scenic resource inventory. Citizens have been asked to take pictures of what they feel to be the most scenic locations within the City. Unfortunately, few citizens have participated. However, of those who did, the most scenic area appears to be the land west of Seminole Highway between Lacy Road and Grandview Road.
Methodology

The boundaries of the proposed park and open space were drafted based on a composite of the aforementioned resources and the following criteria:

- Exclusion of
  - Urban service area
  - Most private structures
- Inclusion of
  - Hovel and Christoph’s greenbelt (formerly Moraine Edge Park)
  - Most water features, wetlands, and their 300-ft buffers
  - Most woodlands
  - County, State, and Federal public lands
  - All Dane County environmental corridors
  - Areas with multiple resources
  - Areas with a single resource that link and/or lie adjacent to areas that meet the above criteria
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The rich variety of environmental and cultural resources in Fitchburg accounts for a significant amount of land that is worth protecting or using for recreation purposes. Therefore, areas of higher priority for both acquisition and future development consideration were designated in the plan as follows:

- Areas most feasible for expansion of the City’s recreational facilities will receive higher priority in terms of land acquisition and park planning efforts.
- Future urban growth areas, especially those of near term development, will become a priority in terms of further study and documentation of resources and integration of the Park & Open Space Proposal.

Recommendations

The Parks Commission has strongly endorsed the Proposal and its concept and goals and has contributed through their recommendation of three priorities:

- The greenbelt, deemed Moraine Edge Park & Preserve, running along the southern urban service area boundaries (While specific plans have not been established, this land has potential for a diverse array of recreational and educational opportunities.)
- The west and south expansion of McGaw Park (for additional active recreation facilities)
- The Northeast Neighborhood (furthest along in the development planning process)

Methods for Preserving Parks and Open Space

Because of high land values, a number of preservation and acquisition strategies would need to be utilized to implement this proposal. Mechanisms and resources for acquisition could include donation, park dedication, conservation easements, purchase of title, or the purchase/transfer of development rights (lands remains private). There are state and county grants available to fund this type of a project.

Lands that are designated as wetlands or streams and their buffers will be protected through state regulation and Fitchburg’s Comprehensive Plan. Typically, when areas are developed these lands are dedicated to the city, but not as park dedication.
Fitchburg has the potential to be a permanently green and sustainable community -- a model for other communities. We can achieve this by being proactive in protecting existing resources that our community values, therefore, enhancing the quality of life for generations to come.

**How to Get Involved**

Do your part to help plan Fitchburg's future parks and open spaces! The following are a couple current opportunities to participate:

**Heritage Oak Inventory**

We have identified many of the trees in the original survey. However, the survey does not cover the entire area of Fitchburg and most trees in the survey area are on private property.

Please help us identify old oak trees that are estimated to be at least 200 years old. White or bur oaks need a trunk circumference measured at 4.5 feet above ground level of at least 10 feet, and pin, black, and red oaks need a trunk circumference of 11 feet. If you see a potential tree that is on private property, please do not trespass. Email the location and we will contact the landowner.

You can email Dana Dentice with new tree information at dana.dentice@city.fitchburg.wi.us.

**Scenic Resource Inventory**

We are looking for the public to submit photographs of the places they find most aesthetically pleasing, areas that should be protected for their high scenic quality. These locations must be outside the urban service area to be considered for the Conceptual Park & Open Space Proposal. See the following website for further instruction:

http://www.city.fitchburg.wi.us/parks_forestry/ParkOpenSpaceProposal.php

Please direct any questions to Dana Dentice at 270-4287 or dana.dentice@city.fitchburg.wi.us.

**Project Updates and Other Info**

Refer to the following City webpage for updates and additional information regarding the Conceptual Park & Open Space Proposal. An electronic copy of this document can also be viewed there.

http://www.city.fitchburg.wi.us/parks_forestry/ParkOpenSpaceProposal.php
References


Ruekert-Mielke. (June 2007). Northeast Neighborhood Plan (Draft).


Fitchburg Moraine Open Space & Preservation Areas

This open space system will allow Fitchburg to preserve significant geologic and natural features. It will also create and preserve wildlife corridors, protect groundwater recharge areas and high risk contamination areas, as well as protect important historical and cultures features of the city. Open space elements could include multi-use recreational areas, connected pedestrian and bike trails, prairie-oak restoration and historic farmsteads.
The progression of farming in Fitchburg

Future

Past - Historic

Present Day

Timeline

Farming

Biotechnology

Faherty Homestead

Faherty Farming Village

Green Tech

Pico Technology

Parks Concept
Vegetation
(Forest Resources)

Legend

- Heritage Oak Tree (+200 years)
- Forest
- Railroad Corridor
- Right of Way
- City Limits

Data Sources:
Capital Area Regional Planning Commission, Feb. 2008
(data derived from 1990 aerial photography).
Fitchburg Parks Department, 2008.

Map prepared by Fitchburg Parks Department,
April 2008
Steep Topography

Legend
- Slopes 12% and Greater
- Small Moraine
- Medium Moraine
- City Limits
- Railroad Corridor
- Right of Way

Data Sources:
Capital Area Regional Planning Commission, April 2005
(data derived from 2005 DEM).
Map prepared by Fitchburg Parks Department,
April 2008
Wetlands

Legend
- Wetland with 300-ft Buffer
- City Limits
- Railroad Corridor
- Right of Way

Data Sources:
Capital Area Regional Planning Commission, 2008
(Derived from 1995 WDNR dataset).

Map prepared by Fitchburg Parks Department,
April 2008

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Data Sources:
Capital Area Regional Planning Commission, February 2008 (Dataset based on 1990 aerial photography interpreted by Dane County RPC).
Map prepared by Fitchburg Parks Department, May 2008.
Data Sources:
Dane County Land Information Office, 2004; Madison Metropolitan Planning Organization, Jan. 2006; City of Fitchburg, 2007.
Map prepared by Fitchburg Parks Department, April 2008.
Dane County Environmental Corridors are defined as "continuous systems of open space in urban and urbanizing areas, that include environmentally sensitive lands and natural resources requiring protection from disturbance and development, and lands needed for open space and recreational use."

Legend
- Environmental Corridor
- City Limits
- Railroad Corridor
- Right of Way

Data Sources:
Dane County Community Analysis and Planning Division, February 2006.
Map prepared by Fitchburg Parks Department, February 2008.
Other Considerations:  Top 25% of Natural Infiltration Opportunities for Groundwater Recharge

Legend

Infiltration Rating (0-10)

- 7.5
- 8
- 8.5, 9, 10

City Limits
Railroad Corridor
Right of Way

Data Source: Capital Area Regional Planning Commission, 2006.
Map prepared by Fitchburg Parks Dept. February 2008
Other Considerations: Productive Soils

Legend

- Soil Classes 1 & 2
- City Limits
- Railroad Corridor
- Right of Way

Data Source:

Map prepared by Fitchburg Parks Dept.
February 2008
Data Sources:

Map prepared by Fitchburg Parks Department, April 2008.
Environmental Resources
- Dane County Env. Corridor
- Wetland w/ 300-ft Buffer
- Possible Hydric Inclusion
- Hydric Soils
- Open Water
- 300-ft Water Buffer
- Streams/Water

Cultural/Historical Resources
- Indian Trail
- Mound Group
- Indian Camp
- Building Footprint
- Scenic Resource
- Historic Schoolhouse
- Current School
- Historic Lead Mine
- Historic Stone Quarry
- Historic Building/Site
- National Register of Historic Places
- Proposed Park & Open Space
- Urban Growth Boundary (50yr)
- Study Area
- Right of Way
- City Limits
- Existing Recreational Trail
- Proposed Rec. Trail
- Proposed Road

Data Sources:

Recommended Boundaries
- URBAN SERVICE AREA
- Proposed Park & Open Space
- Urban Growth Boundary (50yr)
- Study Area
- Right of Way
- City Limits
- Existing Recreational Trail
- Proposed Rec. Trail
- Proposed Road

May 2008