

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: August 28, 1981

File Ref: 2510

To: C. D. Besadny - ADM/5

From: David L. Weizenicker

Subject: Havenwoods Forest Preserve and Nature Center Master Plan

With the assistance and advice of the Havenwoods Ad Hoc Citizens Advisory Committee, a master plan has been prepared for the Havenwoods Forest Preserve and Nature Center.

The 237-acre Havenwoods site is entirely state-owned. Two parcels, a 170-acre parcel formerly owned by the City of Milwaukee and a 62-acre parcel formerly held by the Federal General Services Administration, were transferred to the Department. A .23-acre gift of land was donated by the Friends of Havenwoods, Incorporated, and the remaining 3.4-acre parcel was purchased by the Department. The recommended acreage goal is 237 acres.

The primary purpose of Havenwoods is to preserve a significant amount of open space for environmental education and interpretation within an urban setting. The following development will be carefully planned to accomplish that goal: environmental awareness center, childrens natural play area, special events area, hiker rest area, wetland basins, trails, landscaping, and general site cleanup and preparation. Estimated cost of development is \$1.6 million in 1981 dollars. The City of Milwaukee has contributed to the Department a \$100,000 cash grant toward the development of Havenwoods.

Informational meetings were held July 7, 1981, at the McGovern Park Recreation Center in Milwaukee for the purpose of receiving public comment on the master plan. About 40 people attended both sessions. The overall reaction to the plan was favorable with only two attendees opposed to the Havenwoods proposal because of concerns with property taxes.

The master plan was also sent to both advisory councils (Wild Resources Advisory Council and Scientific Areas Preservation Council) for their review in accordance with the approved master plan procedures. Comments from the advisory councils with our response are in the appendix of the master plan.

T0: C. D. Besadny - August 28, 1981

2.

An approved Environmental Impact Assessment Worksheet for the Havenwoods Master Plan is on file.

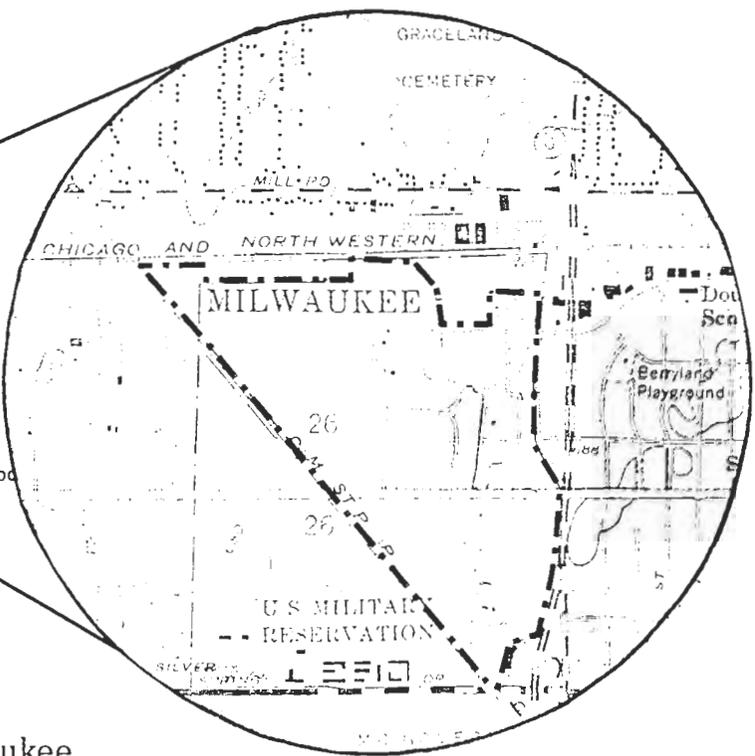
It is recommended that the Board approve the master plan for Havenwoods Forest Preserve and Nature Center.

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HAVENWOODS MASTER PLAN

Wisconsin Department of Natural Resources

September 1981



HAVENWOODS



LOCATOR MAP

Table of Contents

	<u>Page</u>
INTRODUCTION	1
SECTION I - ACTION	
A. Goals and Objectives	1
B. Recommended Management and Development Program	3
1. Management	3
2. Development	4
3. Land Ownership	6
SECTION II - SUPPORT DATA	
A. Background	6
1. History of Property	6
2. Department of Natural Resources Administrative History	8
3. Current Uses	8
4. Initial Management	8
B. Resource Capabilities and Inventory	8
1. Open Space	8
2. Topography - Geology - Soils	9
3. Water Resources	10
4. Vegetation	10
5. Wildlife	11
6. Archaeological	11
7. Structural Resources	11
C. Management and Development Problems	12
1. Security	12
2. Vegetation	12
3. Level of Use	13
4. Wildlife	13
5. Soils	13
6. Aesthetics	13
7. Volunteer Staff	13
8. Lincoln Creek and Wetland Basin	13
9. Nike Pad	14
10. Alternative Energy and Technology Demonstration	15
D. Needs and Justifications	15
E. Analysis of Alternatives	16
1. Do Nothing	16
2. Resource Protection Only	16
3. Urban Environmental Awareness Center and Forest Preserve	17
4. Intensive Recreational Development	17
Appendix A - Supplementary Tables and Figures	18
Appendix B - Resolutions of the City of Milwaukee and Department of Natural Resources Board	30
Appendix C - Note From State Historical Society Pertaining to Archaeological Investigation	35
Appendix D - List of Havenwoods Ad Hoc Committee	37
Appendix E - Department of Natural Resources Board Minutes and Actions Regarding Havenwoods	39

INTRODUCTION

The Havenwoods Forest Preserve and Nature Center consists of 237 acres of open grassland and scattered trees located about six miles northwest of downtown Milwaukee, inside the city limits. It is surrounded by residential and light industrial areas with an army reserve headquarters and training area on its southwest side. The area has a history of governmental use first as a County House of Correction, then as an Army Disciplinary Barracks, and as a Nike Missile site.

In 1978 Governor Schreiber recommended that the City of Milwaukee and the Federal General Services Administration transfer the land to the DNR for establishment of a nature and wildlife preserve in an urban area. Since then the land has been transferred to the state and the area established in Chapter 28, Wis. Stats., as the "Havenwoods Forest Preserve and Nature Center."

In the fall of 1979, the Secretary of the Department of Natural Resources established the Havenwoods Ad Hoc Advisory Committee to assist the Department in the development of a master plan for the property. During the period from September, 1979 to March, 1980, the Committee held a number of meetings, all open to the public, including an "open Mike" public input session; the Committee then developed a set of goals and objectives to guide the master planning process.

This master plan spells out in concept form how the Department of Natural Resources will develop and manage the property. The implementation of the plan will be guided by detailed engineering and site plans, yet to be made, and the appropriation of funds for specific projects by the Legislature, all within the general framework described in this master plan.

SECTION I - ACTION PLAN

A. Goals and Objectives

Goals:

To develop the focus of Havenwoods as an Urban Environmental Education Center -- charged with the stewardship of the land and dedicated to the quality of the natural habitat in the urban environment. To provide compatible limited recreational opportunities for all citizens including those with special needs.

Objectives:

Environmental Education

An environmental education program shall be developed and implemented that provides for the following in a way which relates to the urban environment:

- To foster clear awareness and concern about economic, social, political, and ecological interdependence in urban and rural areas.
- To provide every person with opportunities to acquire the knowledge, values, attributes, commitment, and skills needed to protect and improve the environment.
- To create new patterns of behavior of individuals, groups, and society as a whole towards the environment.
- To foster an understanding and appreciation of the need for sound management of natural resources.
- To emphasize hands-on learning experiences for citizens.
- To provide a clearinghouse for environmental information.

Environmental Programs

The facility will be for experimental environmental activities that benefit the city's schools, community, universities, and general public. The facilities should accommodate, but not be limited to, programs such as:

- Information Exchange
- Resource Center
- Natural Resource Research
- Presentations, Exhibits and Projects Concerning Urban Management and Environmental Issues
- Networking System to Coordinate with Existing Community Environmental Programs and Resource People
- Administration Center
- Visitor Center
- Learning/Resource Meeting Rooms

Building Design

To utilize wind energy, passive and active solar energy, with emphasis on passive solar systems, earth sheltering, and site development techniques to approach an energy self-sufficient center.

Land Acquisition

A special effort shall be made to acquire the private lands within Havenwoods and appropriate rights and safe access to adjacent military lands.

Resource Management

- Preserve specific wildlife habitats without human interference and maintain records of Havenwoods' changing landscape.
- Preserve flora and fauna and such habitat areas as the intermittent creek in the southeast corner of the Havenwoods site.
- Establish an experimental land area for vegetation reclamation of specific disturbed sites under the auspices of research programs.
- Retain the existing open fields and meadows in order to maintain wildlife balance.
- Provide creative explanation of the vegetation and plant succession areas and other environmental processes such as watershed areas, soil-water-vegetation-climate interrelationships, etc., particularly as affected by the urban habitat.
- Explore the feasibility of maintaining a Nike silo as a reminder of part of Havenwoods' history.
- Create a wetland basin for the purpose of water quality improvement, flood control, and wildlife habitat enhancement on Lincoln Creeek, maintaining the natural characteristics of the area to the maximum extent.
- Develop a demonstration area, over time, of Havenwoods' vegetation communities showing various stages of natural succession on disturbed soil and exhibits of land recovery from vacant field to plant restoration, including a prairie.
- To investigate the possibility of using and demonstrating leaf composting to rebuild soil profiles.
- Establish Havenwoods as a wildlife and fish refuge.

Recreation

- Provide trails for recreation such as hiking, biking, ski touring, and physical fitness. Maintain the integrity of Havenwoods by prohibiting horseback riding, snowmobiling and other motorized vehicles, pets except on leashes, as well as other activities not considered compatible with general use concepts.
- Provide a creative play and discovery area for children using natural materials.
- Provide and maintain a reasonable area of plant material capable of withstanding foot traffic, so visitors can explore and experience nature in a natural setting.
- Provide visitors to the center with an eating area, including an open shelter, planned so that it does not interfere with wildlife habitats and designed so that it is keeping with the natural environmental experience of Havenwoods.
- Provide trails and observation tower for viewing different vegetational zones without disturbing the wildlife or disrupting plant material.
- Provide trails for the handicapped.

Operations, Maintenance, and Protection

- Hire a qualified environmental coordinator/instructor for the Havenwoods Center. Hired!
- Develop a phased master plan to be reviewed and revised over a 10 to 20-year period.
- Implement a volunteer program to assist staff in interpreting and coordinating environmental programs.

- Provide and maintain a high level of security for Havenwoods, its facilities, vegetation, wildlife, and visitors.
- Establish a fee schedule other than the state vehicle sticker.
- Provide facilities and encourage activities of individuals and groups whose purpose is compatible with the goals of Havenwoods.
- Work with established citizen groups regarding operations and program at Havenwoods on an ongoing basis.

B. Recommended Management and Development Program

1. Management

The major focus of Havenwoods will be urban environmental awareness programs and nature oriented recreation. The programs will be oriented towards school groups, kindergarten through college level school curriculums, and will include youth groups, unaffiliated adults and families. Evening programs for adults and organizations interested in environmental or natural resource issues will be developed with the aid of a volunteer staff.

The programs will emphasize urban environmental issues such as energy conservation, water and air quality, sewage and hazardous waste disposal, land use planning and understanding plant and animal communities. Materials for the urban environmental programs should be generated from a number of sources. Among them are: DNR technical staff, the universities and technical schools of the state, conservation organizations and groups, citizen volunteers, and state school systems. In order to achieve a diverse and balanced program, an effort will be made to include all the representatives of the groups just mentioned. The Environmental Awareness Center will serve as a gathering place to bring these diverse groups together to develop programs and to exchange information on environmental issues. The intent is to accommodate citizen involvement in development of programs related to the environment and natural resources serving a wide range of people.

Volunteer programs will be critical to the success of the Havenwoods Environmental Awareness Center. In an effort to improve citizen participation, a volunteer program will be established at Havenwoods. The areas of volunteer work can involve program development and presentation, as well as limited physical development that might include habitat restoration work and environmental research on the site.

The site will be managed to provide limited recreational activities. They would include such activities as nature study, hiking, outdoor exercise, cross-country skiing, and a natural play area for children. About three miles of recreational and educational trail will be developed on the site to accommodate many of the recreational and educational activities.

A special effort will be made to accommodate persons having special needs, including the physically and mentally handicapped. This will be accomplished by the design and development of facilities that eliminate all reasonable physical barriers to the handicapped and development of a volunteer program to aid handicapped participants.

Security for the Havenwoods site will emphasize quality development, a one-entrance control point, and elimination of secondary volunteer entrances. Security for the building should be provided through architectural design, electronic building security, and by staffing with DNR personnel. In addition to these security measures, the presence of visitors and regular involvement of the Milwaukee City Police Department will serve as a deterrent to vandalism.

In light of the special education nature of Havenwoods no general fee will be charged. The traditional vehicle sticker used in the state park system would not be practical to collect because of the anticipated heavy use by school groups and the availability of street parking.

However, the Department should encourage citizen fund raising efforts on behalf of Havenwoods. "Friends Groups", "Citizen Groups", or organizations should have access to facilities to conduct special environmental programs or events and to collect a "special events fee" or "membership fee" to cover cost. The fee should be minimal. All excess funds should be made available for use on Havenwoods.

The Havenwoods property will ultimately be staffed by five permanent positions.

1. Manager - responsible for overall operation of the site.
2. Program Director - responsible for program development including environmental awareness programs, volunteer programs and community relations.

3. Assistant program director.
4. Secretary/receptionist.
5. Maintenance Worker - responsible for physical plant.

Limited term employes will be used on projects which cannot be accomplished by permanent or volunteer staff.

Volunteer staffing will make up the balance of the program needs. Volunteers will serve in the areas of program presentation, habitat development, and nature interpretation. Volunteer support funds should be budgeted to provide volunteer program materials, printing supplies and equipment used at Havenwoods.

The Department of Natural Resources needs to maintain liaison on a regular basis with the citizenry regarding the operation and management of the Havenwoods site. In order to establish the line of communication, the Department recognizes the Friends of Havenwoods, Inc., and other citizen groups as advisors representing the interests of the citizens.

The annual operational cost is estimated to be \$180,000 (Table 1). This figure represents cost at full level of operation to be achieved no earlier than 1983. The Havenwoods site will be managed and developed to accommodate about 150,000 visitors annually.

Table 1
Summary of Estimated Staffing and Operational Cost

	<u>1980-1981</u>	<u>1981-1982</u>	<u>1982-1983</u>	<u>1983-1984</u>
Permanent Salaries (1 p/yr)	\$23,500	(1 p/yr) \$25,615	(1 p/yr) \$27,920	(5 p/yr) \$109,209
Fringe Benefits	\$ 7,100	\$ 7,731	\$ 8,403	\$29,618
Limited Term Employes	\$ 5,000	\$ 5,350	\$ 5,724	\$ 6,125
Service (2000)	\$ 9,000	\$ 9,450	\$ 9,922	\$31,254
Permanent Property	<u>\$ 4,000</u>	<u>\$26,000</u>	<u>\$ 4,000</u>	<u>\$ 4,000</u>
Total Operational Costs	\$48,600	\$74,146	\$55,965	\$180,206*

*Figure represents full annual operational costs, including volunteer support.

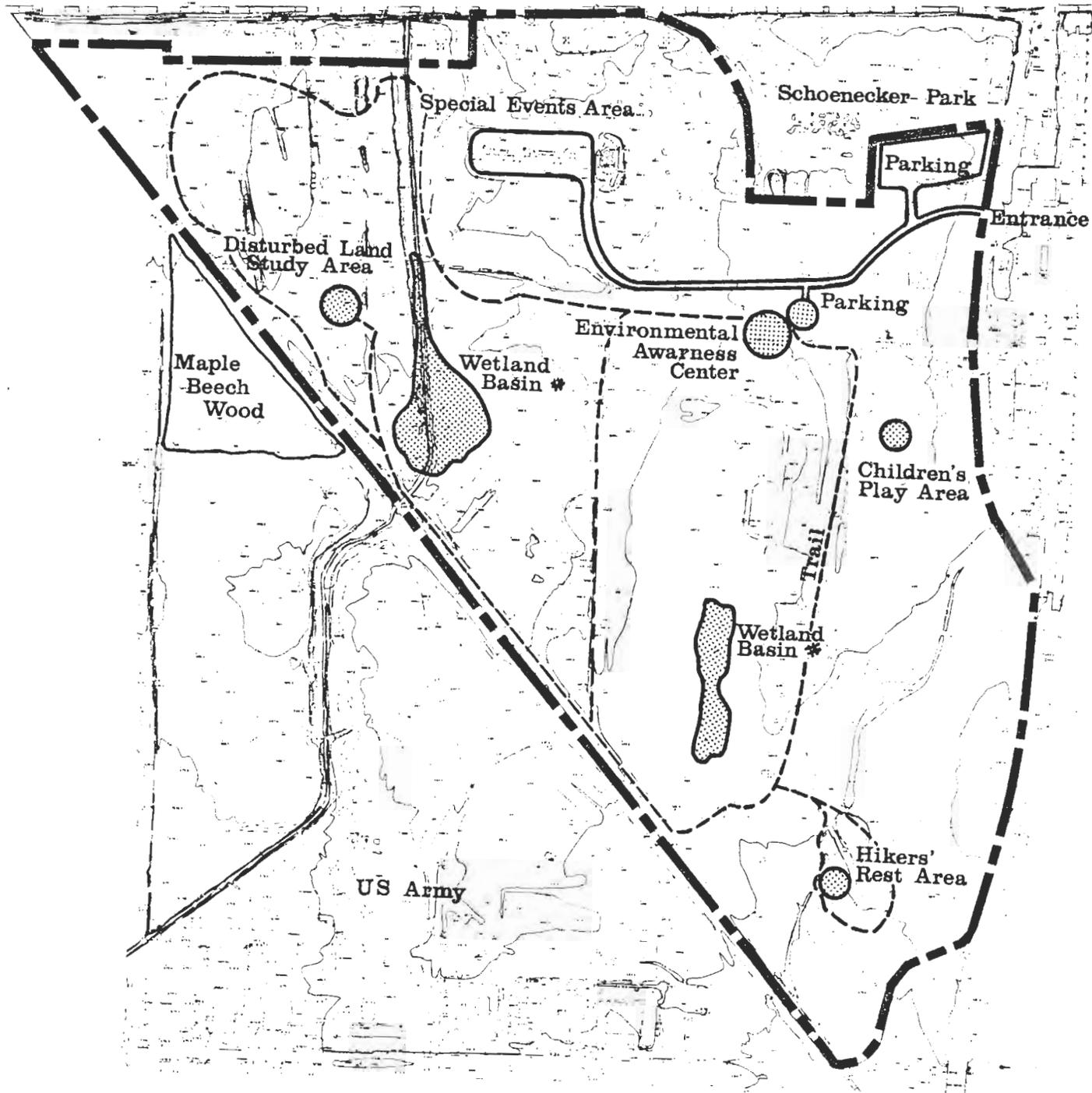
2. Development

One of the primary purposes of Havenwoods is to preserve a significant amount of open space. This will be done largely through carefully designed site development and designation of the site as a wildlife refuge under State Statute 29.56, and development of a vegetation management plan. The vegetation management plan will be developed: (1) to provide an aesthetically pleasing environment; (2) to protect and enhance plant and animal diversity and habitat; (3) for educational purposes; and (4) to preserve the open-space quality.

An Environmental Awareness Center building will be developed on the central portion of the site (Figure 1). The purpose of this facility will be to house many of the environmental programs that will take place on the site. The building will include reception and lobby area, small auditorium, exhibit space, library room, classrooms, administrative offices, inside and outside eating areas, work and storage areas. A facility for vehicle storage and maintenance work will be intergrated in the facility.

The center building will serve as an example of efficient energy use. The building should, subject to detailed design and cost considerations, include earth sheltering, passive solar design, natural lighting, solar hot water system, efficient furnace designs, gray water recycling and onsite generation of electricity by wind generator. These alternative technologies would be part of the education aspect of the center, even though some of these technologies are currently not cost competitive with traditional technology. In keeping with the concept of community involvement, it is proposed that an architectural design competition be held to arrive at a design for the center. The Department will retain a professional architect recommended by the Havenwoods Advisory Committee, as a professional advisor for the competition. It is the intent of the Department of Natural Resources to commission the winner of the competition to do the final design.

Fig 1



Proposed Development Map

HAVENWOODS



A parking area for buses and cars will be developed adjoining the center. A two-way entrance road will be developed off West Douglas Avenue. It will be the primary means of public access to the site.

Two wetland basins are proposed, the primary one on Lincoln Creek and another on the south central portion of the site (Figure 1). The basins will be developed (1) for aesthetics; (2) to improve wildlife habitat; and (3) for educational value. The basin on Lincoln Creek will be integrated into flood control efforts if studies by Southeastern Wisconsin Regional Planning Commission (SEWRPC) and the Milwaukee Metropolitan Sewerage District demonstrate a need for such a basin at the Havenwoods location. Flood control efforts will require non-DNR funds. The second basin would be approximately three surface acres. The Lincoln Creek Basin would serve as an example of a basin having water quality problems with emphasis on water quality improvement. The second basin, its watershed located within the Havenwoods site, would exemplify a basin having little or no water quality problems. Together, they could be a valuable teaching demonstration of water quality.

An area designed as a hiker's rest area will be developed in the southeastern part of the site. This will include an area suitable for eating lunch or for gathering. The site will have only simple benches and several small, cleared grassy areas. Access to the site will be through an interior trail system and will not involve motor vehicles, except in the case of special provisions for the handicapped.

An interior core trail system of about three miles will be developed, and will take advantage of some existing road corridors on the site. The trails will be surfaced with appropriate materials and will be designed to accommodate large school groups, the handicapped, two-way recreational use, and service vehicle access throughout the site. Trail locations are shown in Figure 1. Additional trails will be developed as needed to take advantage of restoration efforts. It is impossible to provide the exact location of trails until restoration efforts and development of wetland basin design plans are complete. The trail system will be used for nature study, hiking, cross-country skiing, outdoor exercise, and service access.

The nature trail will cover various vegetative and wildlife zones, and will include a self-guided section, which will allow use in the absence of guides. The rest of the trail will be incorporated into programs. The nature trail will include crossings in wetland areas where a boardwalk may be employed, and access to Lincoln Creek where biological sampling of various kinds could be accomplished safely. Side trails or spur trails connected to the core trail will be employed in the development of the nature trail.

In general, all of the three-mile trail system could be used for hiking. This is the most basic and least expensive form of recreation available to the site user.

Cross-country skiing will be available through the winter months depending on snow conditions. Although the site is not exceptional in terms of topography for the development of an interesting and challenging cross-country ski trail, it does afford basic opportunity to enjoy cross-country skiing in conjunction with nature study. Annual snowfall in the area is about 46 inches per year. Dependable snowfall will generally occur between December and March, with the prime cross-country skiing season being between mid-December and early March.

Physical fitness aspects of the recreation program can be accommodated on the core trail system. These activities might include running, jogging, or walking for physical fitness. The width of the core trail system will be large enough to allow the overtaking and passing of slower trail users such as hikers.

A children's play area will be developed on the site. Natural materials such as tree trunks, existing trees, and earth mounds will be used. Picnic tables will be provided for adults to encourage adult supervision at the play area.

A special events area will be developed on the former Nike Pad on the north central portion of the site (Figure 1) This area will serve as a gathering point for special outdoor events. It can serve as a demonstration area for alternative energy, environmental protection technology, musical concerts or art shows. The area will have drinking water, composting toilet facilities, and underground electrical power. A two-way road will be developed to provide access to the special events area. Parking for the area will be at the Environmental Awareness Center and existing 100-car parking area near Schoenecker County Park in the northeast corner of the Havenwoods site. A trail system will join the parking area with the special events area.

Two eating or lunch areas will be developed on the site. One will be located in the southeastern part of the site labeled hikers rest area (see Figure 1 for location), where water and benches will be provided in an outdoor setting. The other eating facility, an indoor and outdoor, will be incorporated into the design of the Environmental Awareness Center building and grounds. This area can be used during periods of inclement weather.

A disturbed land study area, located west of Lincoln Creek, will be used to provide an ongoing demonstration of how land reclaims itself. The demonstration might include such things as natural plant succession, leaf composting, and research into natural vegetation processes. The site could also be used to dispose of earth fill generated as a result of wetland basin construction.

The Havenwoods Advisory Committee recommended that an observation tower be included in the next master planning period as a development item.

The total cost of the proposed development for Havenwoods is estimated to be \$1.6 million in 1981 dollars. Development costs are summarized in Table 2. An itemized listing of development costs is provided in Appendix A (Table 1).

Table 2
Summary of Estimated Cost of Development
(1981 Cost)

1. Environmental Awareness Center	\$ 728,000
2. Demonstration of Alternative Technology	\$ 40,000
3. Children's Natural Play Area	\$ 10,000
4. Special Events Area	\$ 182,600
5. Hiker Rest Area	\$ 8,000
6. Wetland Basins	\$ 100,000
7. General Site Cleanup and Preparation	\$ 108,000
8. Trails	\$ 45,000
9. Vegetation Management Landscaping	\$ 132,000
10. Land Reclamation Study Area	\$ 15,000
	Total \$1,368,600
	20% Eng. & Contingencies \$ 273,720
	Grand Total \$1.6 Million*

*Actual 1983 development cost at 10% inflationary cost increase per year will equal \$1.9 million.

3. Land Ownership

The Havenwoods site is composed of four ownership parcels which equal approximately 237 acres (Figure 2). A parcel of 170 acres formerly belonging to the City of Milwaukee is now transferred to the Wisconsin Department of Natural Resources. A second parcel of 62 acres formerly held by Federal General Services Administration is now owned by the Department. A 3.4-acre parcel, formerly owned by the Milwaukee Development Corporation, was recently acquired by the Department. The Department authorized acceptance of a .23-acre gift of land to the Wisconsin Department of Natural Resources by the Friends of Havenwoods, Incorporated. The Havenwoods project will not require additional land acquisition.

The Wisconsin Department of Natural Resources will attempt to secure a special land use agreement on U.S. Army property adjacent to the Havenwoods site. The land is located northwest of Lincoln Creek. It includes a maple/beech forest and some open land to the south. Since the land is separated from Havenwoods by a railroad grade, easy access to the site will not be possible from Havenwoods. However, the site could be utilized on a supervised or organized basis as part of the environmental awareness interpretation program. See attached ownership map (Figure 2) for location of this area.

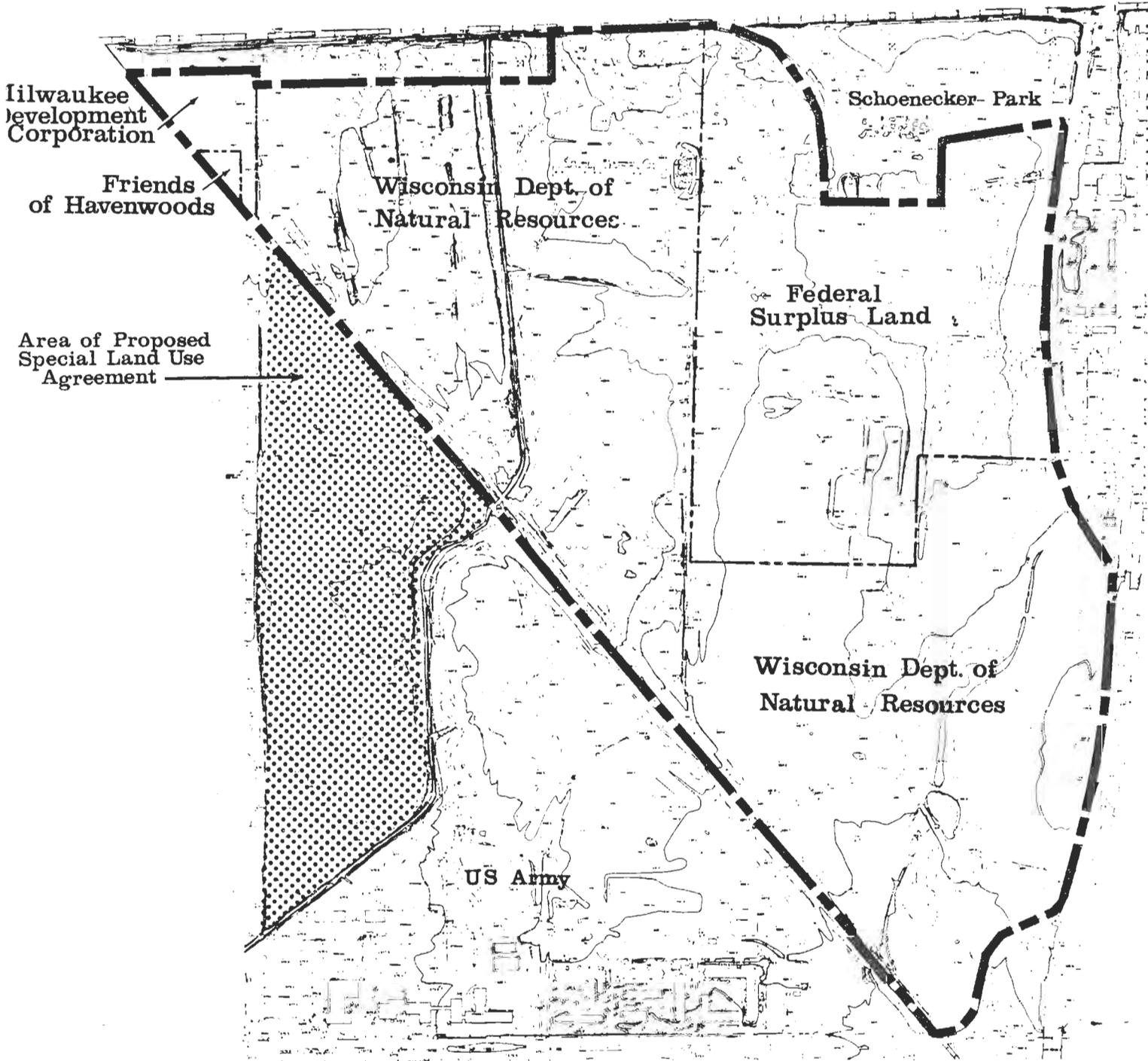
SECTION II - SUPPORT DATA

A. Background

1. History of Property

Prior to the European settlement of the region, the site that is now Havenwoods was quite different than it appears now. Being located about four miles from the Lake Michigan shore, the site was under the influence of the Lake Michigan climate. According to The Vegetation of Wisconsin by John T. Curtis, a mesic forest composed principally of maple and beech covered much of what is now the Havenwoods site. This climax forest was made up of tall trees with a high canopy and a sparse understory.

Fig. 2



HAVENWOODS

Ownership Map

--- Project Boundary



The areas adjoining Lincoln Creek and the intermittent creek in the southeast corner of the property were probably marshy and more open. The land along these water features was probably covered with lowland forest types composed of silver maple and red elm.

Because of the type of vegetation that existed on this site, wildlife was not very abundant. The high canopy of the forest did not afford much food and shelter for animals and the site lacked sufficient "edge" to provide habitat for large numbers or for great diversity of wildlife.

The Havenwoods site is removed from the major historical arteries of travel such as the Lake Michigan shore or the Milwaukee River. It was probably not used very intensively by native Americans. It is impossible to say what tribe laid claim to the area. Winnebago, Fox, Sac, Chippewa, Ottawa, Menomonee and Potawatomi were known to inhabit the Milwaukee area.

During the 1800's, New England and New York "Yankees," along with European immigrants, began to occupy the region. The first private owner of record was the Zautcke family, that was in 1849; they established a farm in the southeast corner of the site. They cultivated the land producing small grain, fruits, vegetables, and cattle for themselves and the growing Milwaukee market.

At about the turn of the century, Milwaukee County acquired the land and, in 1904, began using Havenwoods as the site for the house of corrections. The prison buildings were located in the northeast part of the site. Housing for guards and other personnel were located south of these buildings. At that time prison systems were pretty much self-sufficient, and much of the adjoining land was farmed to provide food for inmates and staff.

In 1945, the U.S. Army acquired the site and began using it as a disciplinary barracks. In the 1950's, the Army established the Nike missile site in the north central portion of the site. The construction of this missile site involved three underground launchers. While the Army occupied this site, they did a good deal of mowing to maintain the vegetation. The U.S. Army 84th Division Headquarters is still located southwest of the current Havenwoods site.

From 1958 to 1970, 50 acres west of Lincoln Creek was used as a landfill site by the county. In 1959, Schoenecker Park was established in the northeast corner and consisted of 11.9 acres. In 1970, the Army declared an additional 5.7 acres surplus land. The land was added to Schoenecker Park bringing it to 17.6 acres. In 1970, the federal government declared the land northeast of the Wisconsin Southern R.R. grade surplus. The City of Milwaukee became heir to the land for park and recreation purposes.

In early 1973, the Disciplinary Barracks Advisory Task Force was appointed by Alderman Stude. The recommendations of this task force were that the land remain undeveloped except for environmental education and the preservation and protection of open space.

The Havenwoods Study Committee (HSC) was subsequently established to investigate alternatives in funding. In December 1977, a final report, entitled "Havenwood Awareness Center," authorized by the Common Council, was submitted by the University of Wisconsin Environmental Awareness Center as a comprehensive plan for the development of Havenwoods as a natural land preserve for outdoor recreation and environmental education. HSC consisted of two (2) citizens, Nancy Noeske and Gaylord Yost, two (2) aldermen, James Kondziella and Gregory Gorak, the Commissioner of Public Works, Commissioner of City Development, and the City Forester. HSC was also instructed to contact and involve the Milwaukee County Board, School Board, County Park Commission, Southeastern Wisconsin Regional Planning Commission, Department of Natural Resources, University of Wisconsin-Milwaukee, and community and environmental groups.

In April 1978, a resolution authorizing the City of Milwaukee to convey to the Milwaukee Area Technical College (MATC) 20 acres of land, the "Blue Hole" site, in exchange for 62 acres of land on the Havenwoods site. In November 1978, MATC and the City of Milwaukee signed an agreement providing for the exchange. It was felt by the entire committee that if other agencies were not interested in Havenwoods, it could potentially fall by the wayside. It had become apparent that development of the site would require more resources than the city had at its command. In early August of 1978 a tour was scheduled for members of the DNR Board in the hope of generating interest. Those hopes were realized on August 25, 1978, when the DNR Board ordered a study to examine the feasibility of making Havenwoods a state property.

There are no buildings on the site. However, the building remnants, foundations, roadways, underground utilities, and other rubble can be seen throughout the site. The Nike missile pad and 1/2-mile long steam tunnel are the most prominent underground structures remaining.

General site information is provided in Appendix A (Figure 1).

2. Department of Natural Resources Administrative History

In August of 1978, Governor Martin Schreiber appeared before the Natural Resources Board and recommended that Havenwoods be established as the State's first "nature and wildlife preserve in an urban area." In October of 1978, both the City of Milwaukee and the Natural Resources Board passed separate, but similar, resolutions arranging for the transfer of land belonging to the City of Milwaukee and lands currently held by Milwaukee Area Technical College to the Department for the purposes of developing a "nature center and for a forest preserve." The City of Milwaukee also agreed to contribute \$100,000 cash grant toward the development of Havenwoods. In addition, the DNR was to give the City of Milwaukee an annual payment for aids in lieu of taxes pursuant to Section 70.113, Wisconsin Statutes, Special Assessments for Havenwoods property. The City of Milwaukee will return all such payments made under Section 70.113 to the Department to be used solely for the operation and maintenance of the Havenwoods property.

Aids-in-lieu of taxes were established under State Statutes to minimize the impact of the State accruing land and removing it from the local tax rolls. The value of the land is established usually through the local assessment mechanism. In the first year, 100% of the assessed valuation is paid on the land. In each succeeding year for a ten-year period, the amount is reduced by 10%, so in the second year, a 90% payment would be made, and on the third year, an 80% payment would be made, etc. Finally in the tenth year, the payment would be 10% of the initial assessment and remain at that level. All funds are to be held in a gift and donation account for use on Havenwoods.

The city is also obligated to provide fire and police protection for the site and any improvements thereon. Copies of the resolutions can be found in Appendix B of this plan. In December of 1978, the Governor authorized the Department to proceed to work out the details with the city.

The 1979-81 Budget Bill contained sections establishing the area as a "Havenwoods Forest Preserve and Nature Center" under Chapter 28 of the State Statutes. It provided for acquisition, development, and operation of the property as a state forest preserve. The project is to be financed from funds provided by State Forestry Segregated Account (Forestry Mill Tax), and cost shared with federal dollars, if they are available.

In September of 1979, Anthony Earl, Secretary of the Department of Natural Resources, established the Havenwoods Ad Hoc Advisory Committee to assist the Department in the development of a master plan for the site. The work of this Committee has been to develop a set of goals and objectives to serve as planning guidelines for development of the master plan. The Committee held a series of meetings from September 1979 to March 1980. The goals and objectives statement can be found in the Action Section of this report.

In April of 1980, following the release by the Building Commission of \$20,000 of engineering and planning monies, the Department began development of the Conceptual Master Plan for Havenwoods.

3. Current Uses

Currently, the Havenwoods site receives a moderate level of informal use by citizens from adjoining neighborhoods. The uses consist of nature study, walking dogs, hiking, and as a general play area for children. The property also receives some less desirable uses such as off-road vehicle use, littering, waste disposal, and vandalism. The City of Milwaukee provides police and fire protection. The DNR conducts periodic inspection of lands under its ownership.

4. Initial Management

In an effort to avoid future management problems, the Department should declare the portion of land under its ownership a wildlife refuge and post it as such. Enforcement is the responsibility of the City of Milwaukee Police Department. The site will remain open to the public for compatible uses such as nature study, hiking, walking of dogs on leash, and cross-country skiing in the winter. It is not the intent of the Department to discourage citizen use, but rather to provide a measure of protection for the resources of Havenwoods. When a more formal presence is established, such as the development of a nature center with trails and accompanying programs, undesirable use should diminish. It is important at this time to establish desirable use patterns for the Havenwoods site.

B. Resource Capabilities and Inventory

1. Open Space

Havenwoods' most significant resource is its open space quality. The site consists of 237 acres of open grassland. To the southwest is the Wisconsin Southern R.R. Co. (formerly Chicago, Milwaukee, St. Paul and Pacific Railroad) corridor that forms a vegetative screen. To the north, the Chicago Northwestern Railroad right-of-way provides a topographic barrier in the form of railroad ballast. To the east, the tree planting around the former County House of Corrections and the large trees

along the intermittent creek in the southeast corner form an effective visual screen. When standing in the center of the site, one has the illusion of being surrounded by open-space. Yet, the surrounding land use is that of heavily urbanized area. The property is sufficiently large so as to exclude much of the noise associated with the surrounding urban area. General site information is provided in Appendix A (Figure 1).

Although the Havenwoods site is not large by state forest standards, its 237 acres represent a significant open space resource in light of its urban location.

2. Topography - Geology - Soils

Topography

Havenwoods is relatively flat to gently rolling. The site slopes slightly to the southwest. The lowest point on the site, however, is in the southeast corner while the highest point is the northeast corner. There is about a 40-foot elevation change from south to north. The high point of the Havenwoods site is about 120 feet above the level of Lake Michigan. Lincoln Creek bisects the northwest corner of the site and a small intermittent creek crosses the southeast corner. Both Lincoln Creek and the intermittent creek drain in the south-southeasterly direction.

Geology

Like all of southeastern Wisconsin, Havenwoods has felt the effects of continental glaciation that ended some 10,000 years ago. The site is covered with a thick mantle of ground moraine hundreds of feet thick. It is composed of clay, sand, gravel and stone that were carried by the continental glacier and deposited over the bedrock. The underlying bedrock below Havenwoods is made up of Niagara dolomite. The dolomite or limestone formation is part of a large plate of limestone that covers the southern part of the Great Lakes. The east end of this plate forms Niagara Falls from which the formation takes its name.

This ground moraine mantle is of great significance in Wisconsin in that it is a water-bearing layer from which many farms and domestic water supplies are drawn. For the most part, the shallow wells are a few hundred feet deep. In contrast, water supplies for the cities of Wisconsin come from water-bearing layers that are 1,600 feet deep. These are primarily sandstone formations.

Soils

The soils of the Havenwoods site can be described as highly disturbed. Most of the soils in the north central portion of the site and on the west side of Lincoln Creek received a high level of disturbance as a result of past land use.

In the areas of heavy disturbance, it is impossible to classify the soils because of the mixing that occurred during construction and demolition. Areas of moderate disturbance to slight disturbance tend to occur at the perimeter of the Havenwoods site. These soils have some soil profile remaining. Areas where the soils are intact tend to be at the extremes of the site. These include the areas along Sherman Boulevard and the intermittent creek and along the adjoining railroad grades. All the soil profiles that are intact have shown evidence of farming or pasturing (see Appendix A, Figure 2, Soils Map for details). Soil types found on Havenwoods and some of their characteristics and limitations are as follows:

AsA-Ashkum - This is a mineral soil often associated with water-loving grasses and sedges. It is often found in the bottom of drainage ways or depressions. It is prone to flooding and ponding which usually occurs during periods of heavy run-off in the spring. The Ashkum soils are not well suited for building, nor are they particularly well suited for recreation. These soil areas can be used for a demonstration of wetland plant and animal communities. In order to cross these types of soils, special structures such as boardwalks should be used.

MTA-Mequcon Silt Loams - This is a mineral soil characterized by having a horizon made of accumulated clay. It is characterized by slow runoff and is slow to warm in the spring. Original vegetation associated with this type of soil was probably that of lowland forest. The Mequcon soils are not well suited for building and have a moderate limitation for recreational uses.

OuB-Ozaukee Silt Loams - This soil is characterized by a well drained mineral soil that probably supported mesic forest, a maple, beech, and basswood forest. It has the capacity to hold water, however, rain water usually runs off because of the soil's poor permeability. The Ozaukee soils are suitable for building although they do have some moderate limitations because of their shrinking and swelling potential. However, Ozaukee soils are well suited for active recreation.

3. Water Resources

Havenwoods has three types of surface water resources. Lincoln Creek is the major water feature of the Havenwoods site. It is located in the northwest corner and flows in a southerly direction through the property. It is a permanent water feature and has a variable flow rate. In low flow periods, usually in the late fall, it has a flow of 2 cubic feet per second. During the spring runoff, flow approaches 36 cubic feet per second. The watershed for this creek lies directly north of the Havenwoods site, and is a combination residential and industrial development area.

The Lincoln Creek stream channel has been altered significantly. In the past, it was a broad basin with adjoining wetlands. Over the years, landfill and other land uses have caused the stream to be channelized or otherwise made straight. A corridor of vegetation consisting of shrubs and small trees has developed along the stream, however, its banks still remain unstable. The stream, because of its wide levels of flow, experiences scouring on an annual basis. This diminishes the potential for permanent aquatic life in the stream. Fecal coliform counts exceed safe limits during high flows. During these times Lincoln Creek would not be suitable for body contact recreation such as swimming. However, during periods of low flow, the stream would be considered suitable for partial body contact such as biological sampling. It is anticipated that as pollution abatement efforts continue the water quality of the creek will improve.

On the southeast part of the site, there is an intermittent stream. It is primarily surface water that drains from a residential area to the northeast of Havenwoods. In the early spring, during the period of snow-melt, flows in the stream can be high. However, for the most part, flow in the stream is minimal to nonexistent; stagnant pools are usually the norm. The stream flows through a broad depression. At one point, its banks are lined with lowland forest type made up of large silver maple and ash trees. At one time, a small impoundment existed on this stream. A concrete dam is still visible. The outlet of this dam is open and much of the pond basin has been filled in either through man-made filling or natural sedimentation. The intermittent creek drains into Lincoln Creek.

A third water resource on the site is surface drainage. In general, the topography of the site drains to the southwest, however, there are a number of depressions on the property that gather water on an intermittent basis. Surface water ponding areas are located in the south central portion of the property, in the northwest corner, and east of the Nike Pad. These depressions collect water for extended periods of time. These surface water impounding areas may have potential to be developed as wetland areas with some surface modifications. See General Site Map Appendix A (Figure 1).

4. Vegetation

The vegetation of the Havenwoods site has been heavily disturbed. For years, the pattern of land use has resulted in most of the original vegetation being disturbed to some degree. The heaviest disturbance has occurred in the north central portion of the site. The vegetation on perimeters of the site tends to be undisturbed. Because of this, the perimeter areas will be easier to manage and establish as desirable plant communities. In the central areas, where high levels of disturbance occurred, it will be much more difficult to establish desirable plant communities. See Vegetation Map Appendix A (Figure 3).

The areas of high disturbance are characterized by pioneer invading plant species often of an alien nature. Dominant species tend to be sweet clover, foxtail, ragweed, chicory, and evening primrose. Their densities tend to be low, exposing the soil to erosion.

The middle old-field type areas tend to be in the perimeter of the site. They include the southeast section, the south central, and the north central. These areas are characterized by 60% to 80% cover made up of brome, bluegrass, goldenrod, common milkweed, and occasional prairie plants.

The third category of vegetation is that of late old-field type. It consists of about 80% to 100% cover and is found in scattered pockets, again usually at the extremes of the site up in the extreme northwest corner and along the railroad corridor to the southwest.

Forest canopy can only be found in two scattered locations on the site itself. In the northeast section, Norway maples were part of a landscape planting. Over the years a more or less continuous canopy has developed, and their dense shade prevents the development of an understory. The other area where forest canopy remains is the area along the intermittent creek in the southeast section of the site. It is composed chiefly of silver maple and white ash. They are large trees, but they do not form a continuous canopy. They do give the visual impression of forest area. The understory has been degraded by grazing and fires, but the potential exists for restoration. A third area, although not within the site's project boundary, is the maple-beech woods that exists on the U.S. Army property west of the Wisconsin and Southern R.R. Co. (formerly Milwaukee Road)

right-of-way. It is an interesting forest area that deserves specific mention. It forms a visual barrier for the Havenwoods site and represents the forest type that was probably dominant on the site prior to settlement. It is composed of maple, beech, and red oak that form a continuous forest canopy. It has an established understory although somewhat degraded through vandalism. Many wildflowers can be seen in early spring. The site is worthy of some form of protection.

Although the Havenwoods site has been highly disturbed, it is obviously in the process of revegetating itself as evidenced by the number of trees, shrubs and herbaceous plants that continue to recolonize the site. A prime seed source is the railroad corridor, which also provides a visual barrier that protects the integrity of the Havenwoods site. For a listing of trees, shrubs, herbaceous plants, and grasses that are present on Havenwoods, see Appendix A (Table 2). The maple-beech woods outside the project boundary are also included in the species list.

5. Wildlife

Havenwoods is home to a significant amount of wildlife. In a casual walk around the site, one can expect to see any number of a dozen different wildlife species. The most common species to be seen are ring-necked pheasants, Hungarian partridge, cottontail rabbits, ground squirrels, thrushes, finches, and warblers. Although these species are not rare, they do represent an opportunity to observe wildlife in an urban area.

In addition to the resident population of wildlife, the site is of sufficient size to attract migrating wildlife. These are often such species as the red-tailed hawk, sparrow hawk, woodcock, warblers, mallard, teal, and some wading birds.

The wildlife species list compiled by the Friends of Havenwoods can be found in Appendix A (Table 3). This list represents a good cross-section of what is readily visible on the Havenwoods site. Continued investigations will undoubtedly lead to a more complete list.

6. Archaeological

The Havenwoods site is about four miles west of the Lake Michigan shore and about three miles west of the Milwaukee River. It lies at the headwaters of Lincoln Creek, a tributary to the Milwaukee River. Given this location, far removed from historical travel routes, it is doubtful that there is much material of archaeological significance on the site. Also, because of the amount of disturbance that has occurred on the site, it is doubtful that any archaeological artifacts originally present could be found. However, an archaeological investigation will be made to comply with both federal and state requirements (See appendix C note from State Historical Society regarding the investigations.).

7. Structural Resources

As indicated earlier in the text, many of the structural items such as buildings and roads have been removed, however, several major underground structures remain. The most prominent is the Nike missile pad in the north central portion of the site, which consists of three missile launcher emplacements. See Appendix A (Figure 4). Each missile launcher emplacement consists of a trench-like area. On either side of this trench are magazine rooms which held eight missiles on each side for a total of sixteen. These could be tracked into the launcher and fired. Each emplacement has a large underground chamber that is some 60 feet x 60 feet. Adjoining the chamber rooms to the northwest is a control room about 20 feet x 20 feet with a set of stairways providing access to the surface. There are three of these emplacements in a series. All are currently filled with water. The hatches and doors that provide access to the missile pad have been welded shut. The land surface impacted by the missile facility covers an area approximately 600 feet x 200 feet.

On September 10-11, 1980, the Wisconsin Department of Natural Resources Engineering staff pumped the water out of two of the three underground Nike installations. The water was removed to allow for radiation testing and an assessment of the structural quality of the underground installation. The results are as follows: (1) Absolutely no level of radiation other than normal levels was detected; and (2) The structural quality of the Nike installation is excellent. Thus, this Nike pad represents a significant underground structural resource on the site.

A second significant structural resource on the site, is a structure referred to as "the steam tunnel," (see General Site Map Appendix A Figure 1), which consists of approximately 2,700 linear feet of tunnel. The tunnel is of sufficient size for a person to walk throughout. It has a number of manholes that provide access to it from the top. The tunnel runs in a roughly north-south direction and follows the principal roadway through the east central part of the site. It is currently being used as a play area for neighborhood children. The south end of this tunnel crosses the intermittent stream in the southeast section of the site. At that location, the tunnel has been used for explosive storage. Large steel doors provide access to the storage unit, but the doors are currently welded shut.

In the northeast corner of the site there are some concrete roadways, curbing, and related structures that were part of the County House of Corrections. Although they represent a resource they are, in fact, of limited value. In the central portion of the Havenwoods site are numerous foundations and underground utilities. The full extent of these underground utilities may never be known, however, they do not detract significantly from the value of the site. They can be removed or buried as part of the general cleanup process.

A small one-way bridge crossing Lincoln Creek allows vehicle access to the land west of Lincoln Creek (see Appendix A Figure 1). Further upstream on Lincoln Creek, a small foot bridge crosses the creek as well (see Appendix A Figure 1).

A 100-car parking lot is located in the northeast corner of the Havenwoods site adjacent to Schoenecker Park.

C. Management and Development Problems

Working groups composed of the Havenwoods Advisory Committee members, DNR personnel, and other specialists met to deal with management and development problems. Their recommendations are included in the following discussions.

1. Security

Security will be a management problem for the Havenwoods site. Over the years, a pattern of undesirable use has developed on the site. It has become known as a waste disposal site and area for off-road vehicles. The vegetation has often been damaged or destroyed, wildlife harassed, and remaining structures, although principally underground, continue to be vandalized.

The City of Milwaukee is obligated to provide police and fire protection for the site as stated in both City of Milwaukee and Department of Natural Resources Board resolutions (Appendix B).

The working group dealing with management problems addressed several alternative solutions to security problems at Havenwoods. They indicated that the DNR presence will be the single most effective means of deterring illegal activities. They further recommended that no general fencing or ditching be included in the development of the site. Instead, they suggested a development approach emphasizing quality development, a one entrance control point, and elimination of secondary volunteer entrances. Security for the building should be provided through architectural design, electronic building security, staffing with DNR personnel, and surveillance by the Milwaukee Police Department. This combination should provide an adequate level of security for the building. The balance of the site should employ heavy-duty construction so that it can withstand most minor vandalism. These areas include trails, hiker rest areas, and special events area. In addition to these security measures, the presence of park visitors and the regular involvement of the Milwaukee Police Department will serve as a deterrent to vandalism. A law enforcement agreement should be worked out with the City of Milwaukee.

2. Vegetation

The vegetation on the Havenwoods site is clearly in a state of change. Some sort of management of this vegetation will be required to maintain the open space quality of Havenwoods. Without some management the site will revert to a shrubby brush complex, followed by succession of mid-sized trees made up of box elders, silver maple, elm, Russian olive, and honeysuckle. Although these trees and shrubs would initially provide quite a bit of habitat, eventually they would revert to larger and taller species slowly destroying the understory.

Maintaining open space will mean restoring some plant communities and designating other areas to be left alone to revegetate themselves naturally so that the process can be studied. It is recommended that the central portion of the site be maintained with prairie species that represent the prairie communities of Wisconsin. The perimeter areas that currently have forest canopy or are quickly developing into forest types should be encouraged to do so (see Vegetation Management Zones Appendix A, Figure 5). Some physical activities, such as mowing of the prairie areas, will be required to maintain or limit shrub and tree invasion and, perhaps, selective pruning and cutting in the perimeter area to encourage plant diversity.

Maintenance of prairie by burning was considered, but was rejected because of the air pollution problem that would result in an urban area. Mechanical mowing will expend fuel and generate some air pollution, but it seems the most reasonable approach given the site's location. Mowing would not have to be conducted on an annual basis. Once every two to three years would be sufficient to suppress shrub and tree invasion in the prairie areas.

In all restoration efforts, the species list provided in the Vegetation of Wisconsin will be used as a guide for species and stocking rates.

3. Level of Use

Establishing an appropriate level of use for Havenwoods is difficult. The design capacity of parking areas, trail length and building size impose some limitation on the numbers of users.

The easiest way to determine if environmental damage is being done through overuse is to monitor the condition of the vegetation. This responsibility should rest with the manager of the property. When evidence of damage appears, the activity that is causing the damage should be curtailed or the area should be closed. The area that is damaged should be allowed to heal itself or corrective action should be taken.

4. Wildlife

Both the number and diversity of wildlife are limited by the type and amount of habitat available on the Havenwoods site. The development of wetland would provide aquatic plant and animal diversity, currently not well represented on the Havenwoods site. These would include fish, amphibians, wading birds, aquatic insects and microorganisms. A vegetation management plan that provides for forest, shrubs and prairie plant communities will encourage significant number and diversity of animals. The size and location of the Havenwoods site will ultimately limit the amount of wildlife that the site can carry.

5. Soils

The soils of Havenwoods are heavily disturbed, especially in the north central area. The most effective way to stabilize and improve soil is through the establishment of prairie communities. There are topsoil resources on the Havenwoods site, composted leaves near the Nike pad and mounded topsoil near the R.R. grade (see General Site Map, Appendix A, Figure 1) that can be used for tree and shrub planting. However, these resources are not sufficient to rebuild the soil profiles over the entire disturbed areas. Additional leaf composting could be done on the land reclamation study area to provide topsoil for the worst of the areas. The most natural and cost effective method of management of the heavily disturbed soils is through the establishment of prairie plant communities as recommended in the vegetation management plan.

6. Aesthetics

In an effort to provide a pleasing environment, the site should be cleaned up. It will involve removal and proper disposal of old foundation, some roadways and utilities. The Nike pad will be sealed as a result of converting it into the special events area. The steam tunnel is structurally sound but will require welding manholes shut and covering the portion of the tunnel that is within roadways with limestone screening to provide trail surface. The exposed portion of the steam tunnel (where it crosses the intermittent creek) will be removed as part of the general site cleanup. Areas of intensive cleanup needs are shown in Appendix A (Figure 6).

7. Volunteer Staff

A well-developed volunteer program will require special efforts on the part of the Department in the way of training. The skill level of volunteers will vary. For example, university and technical school volunteers, who are already trained in the development and presentation of programs, may need little additional assistance in developing programs they would like to present. However, a citizen with no previous training in teaching may require additional assistance. It is the intent of this program to provide the necessary instruction and materials to assist citizen effort of this nature. Clearly, volunteers engaged in such work as habitat development on the site may require additional training to use the equipment and hand tools.

8. Lincoln Creek and Wetland Basins

The Southeastern Regional Planning Commission (SEWRPC) has prepared a Community Assistance Planning Report No. 13 entitled "Flood Control Plan for Lincoln Creek, Milwaukee County, Wisconsin." The plan identifies the portion of Lincoln Creek that runs through Havenwoods as a potential site for a flood control structure. SEWRPC is in the process of updating that report. To date, the original report has not been adopted by the Milwaukee Metropolitan Sewerage District for implementation.

If SEWRPC and the Milwaukee Metropolitan Sewerage District develop and approve a basin wide plan for the control of flood water on the creek and the Havenwoods site is identified as one of those sites that would be required to implement flood control, the Department of Natural Resources will work with SEWRPC and/or the Milwaukee Metropolitan Sewerage District to make the control structure compatible with program goals as outlined in this plan. This would probably involve giving some design consideration to the shape of the basin, gradient and public access.

Development of a wetland basin on Lincoln Creek would include a small permanent pool with adjoining wetlands. The wetland basin would require periodic removal of silt to maintain the pool. The spoils could be disposed of in the land reclamation study area. The flood control objectives cannot be financed with Department of Natural Resources funds.

A second wetland basin (Site No. 2) could be developed independently of any flood control effort on Lincoln Creek. The entire watershed of this second site is within the project boundaries. The major problem with developing this second site is that the water source is of a less permanent nature. Even with the use of a clay liner, the basin may dry out during prolonged drought. It would be desirable from an educational value standpoint to develop both the basins, one basin being completed within the project boundary and demonstrating a relatively high degree of water quality, and the other basin extending off the project boundary that would include the watershed to the north exhibiting pollution problems. Wetland Site No. 2 would closely resemble a prairie pothole or slough, making an interesting focal point as seen from the proposed Environmental Awareness Center building.

9. Nike Pad

Converting the Nike installation to some useful purpose poses some special development problems. Each underground launch facility has the equivalent of 3,600 square feet of floor space. At a conversion cost of \$60/sq. ft., it would cost approximately \$216,000 per launcher emplacement. Some of the considerations that would be required to make the underground rooms habitable to the general public are as follows:

- (a) Water both in the form of groundwater and surface rain water seeps into the underground chambers. Some sort of concrete sealant and proper sealing of the exposed surface area of the installation would be required. Sump pumping and some form of dehumidification would be required to make the space habitable.
- (b) Building code requirements would require both a front and back entrance. Currently, a back entrance through the former control room exists. A front entrance would have to be constructed.
- (c) In order to make the underground installation accessible to the handicapped, an elevator system would have to be installed.
- (d) Ventilation, heating, lighting, toilet facilities and drinking water would need to be installed.

Converting one launcher emplacement would not meet program needs. Converting two launcher emplacements would result in more space than is needed. It would also require costly tunneling to connect the two units or duplication of utilities.

Demolition of the site is by far the least expensive solution to the problem. It would cost about \$40,000 to cave in the top of the three launchers and fill the remaining hole. However, this would mean destroying a structurally sound underground resource of the site for lack of an innovative use at this time.

In general, if the underground installation could be used in a more primitive way, the economics of converting the underground space would look much better. Some examples of primitive uses that might prove economically feasible are:

- (a) Heat storage. The water could be used as a thermal mass for heating buildings.
- (b) Service building and storage. The space could be used for this purpose and would not require the major conversions that would be necessitated by public use. However, space of that size is not required at Havenwoods.
- (c) Simple water storage. Each chamber is capable of storing about half a million gallons of water. Together, they could hold 1.5-million gallons of water.

Development of the surface of the site into a special events area would preserve the installation. This would involve general cleanup of the site, removal of an asphalt apron around the Nike pads and restoring the area to a grass turf. In addition to providing drinking water and toilet facilities, underground electrical power would be provided near the pad area. Preparation of the site would involve sealing all hatch openings, including the main missile hatches, so the infiltration of surface water into the underground installation would be stopped. Anchoring devices should be installed. This would be done so that exhibit materials could be secured to the site. The protruding portions of the missile installation can be treated with a textured design and/or painted. Both permanent and removable planters could be employed to design exhibit space and break up otherwise monotonous planes. The overall treatment of the special events area would be that of an earth sculpture. This action would preserve the underground installation for some future innovative use.

10. Alternative Energy and Technology Demonstration

The Environmental Awareness Center building at Havenwoods is proposed to be a demonstration of alternative energy and energy conservation measures that can be applied to situations existing in our urban areas. The building should include passive solar design that includes large expansive south-facing glass and appropriate thermal mass to absorb and store the heat during the daylight hours. Insulating panels should be placed over the south-facing glass areas during the nighttime hours to prevent overnight heat loss. In addition, the building should provide a high degree of insulation currently being referred to as super-insulation. This insulation could be in the form of earth sheltering or above ground construction with special provisions for higher than normal amounts of insulation such as 6-inch wall construction, triple glazing, etc. A third energy conservation measure that has broad applications is furnace design. Recent developments in gas and oil-fired furnaces have created equipment capable of reducing gas and oil consumption by 30%. This type of energy conservation measure, although not as dramatic as solar, perhaps has the widest application among residential and urban users of energy.

On-site generation of electrical energy is possible. Wind generators seem to be the most viable option at this time for on-site generation of electricity. The wind energy system can be intergraded in the regular electrical power grid by means of an inverter. The wind generator will provide power to the facility and sell excess to the power system. During periods of insufficient wind, i.e. less than 8 miles, the facility would use power from the regular electrical power system. Several wind energy systems are being tested by the University of Wisconsin at this time.

Other forms of on-site generation of electricity could be achieved through photovoltaics. Currently, the costs of developing a photovoltaic system far exceeds the practical energy benefit derived. The current level of technology indicates that the energy involved in the production of a solar cell probably cannot be recovered under the current price structure for the useful life of that cell. Photovoltaics are cost effective only in the most special circumstances such as space exploration.

Biomass and other forms of energy generation, such as methane, would prove impractical given the limited resources of biomass within the Havenwoods site and in general within the urban areas.

Other forms of alternative technology that were recommended by the Citizen Advisory Committee were composting toilet and gray water recycling.

Composting toilet systems are currently available for commercial buildings. However, state health regulations don't allow them in public buildings. They are allowed in private residences. A variance would be required for use of the system at Havenwoods.

Gray water recycling systems are becoming commercially available. They represent another form of new "soft technology". Gray water recycling system allows waste water such as domestic water to be recycled and used in places where water less than potable is acceptable. One of the primary uses of recycled gray water is toilet flushing (40% of household water). However, the composting toilet system would negate the need for gray water recycling. Gray water recycling has the potential of reducing water demand as well as reducing the amount of waste water to be treated at sewage treatment plants. It seems reasonable to drop the composting toilet recommendation in the center building in favor of the wider benefit of gray water recycling. However, composting toilet facility would be well suited in the Special Events area.

It is recommended that passive solar design be employed with a high degree of insulation and efficient back-up furnace design and active solar hot water heating. These forms of alternative energy and conservation technology are proven, have a broad application and would serve as a useful demonstration of effective energy use. In addition, wind generation of electricity, composting toilet and gray water recycling can be employed to provide a demonstration and support of a new technology. These forms of alternatives are not necessarily cost effective at this time, but do provide an environmentally positive alternative.

D. Need and Justification

The "Guide for Growth, Milwaukee County Park System 1978", available from Milwaukee County Parks Commission, indicates that 2,096 additional acres of Type I and Type II lands be acquired in Milwaukee County (Appendix A, Table 4). Type I and Type II lands include natural resource oriented parks such as nature centers, nature trails, hiking, ski touring trails, etc.

Current population distribution and trends within the area are summarized in Appendix A, Table 5. The regional trend indicates that there will be a population increase of 26.4% between 1970 and the year 2000. This rate of growth is in excess of the 24.3% national average predicted over the same period. Although the region is predicted to gain in population, Milwaukee County showed a 12% loss in population in 1980 census.

The Wisconsin Department of Natural Resources conducted a summer recreation demand survey in 1980. Results indicated a strong demand (42%) for hiking and other trail related recreation that is close to the users home.

The Citizens Advisory Committee, appointed by the Secretary of the Department of Natural Resources, found at the "open mike" public hearing conducted in October, 1979, regarding the development and use of Havenwoods site that demand did exist for an Environmental Awareness Center. The Committee formed the goals and objectives based upon the information compiled. The principal objective is to develop an Urban Environmental Education Center at Havenwoods. In addition, the Citizen Advisory Committee identified preservation of open space and enhancement of the natural resources of the site as one of the primary goals. The Committee further recommended that limited forms of recreation compatible with the environmental awareness concept and open space preservation be allowed on the site.

Because the Havenwoods site is located in a populous southeastern part of the state, actually within the City of Milwaukee, it has a high degree of access to the local residents. In general, about half the population of the state is in within one hour's driving time of the site. Annual use is estimated to be about 150,000 persons per year.

E. Analysis of Alternatives

1. Do Nothing

The no action alternative would be one of continued informal use by the local public. Activities such as hiking, bird watching, running of dogs, off-road vehicle use would continue. Waste disposal and vandalism would continue and probably increase in time.

A significant amount of soil erosion will occur with the continued use of trail bikes, go-carts and off-road vehicles on the site. These activities would also destroy or disrupt wildlife on the site.

In time, tree and shrub vegetation of a low quality type would come to dominate the entire site. These would probably include box elder, elms, exotics such as Russian olive and honeysuckle, as well as some old field native plants such as dogwoods and willow. If this were to occur, in general, plant and animal diversity in the long run would decline. The understory areas of box elder, elm and other pioneer invaders would eliminate the more desirable shrubs and grasses and plant and animal diversity. It is possible that accidental burning or malicious burning could reverse the process to some extent creating a somewhat better plant and animal habitat. It would take 100 years or more to revert to a native forestry type.

Eventually, the high real estate value of the land will dictate that some more intensive use such as housing, industrial development or intensive recreational development would take place. The land would probably be divided into smaller more marketable parcels and intensive development would ensue. Eventually the open space quality of Havenwoods would be lost probably this time forever.

If no action is taken by the Department, monies would be available for the acquisition and development of other state park and recreation areas in Wisconsin. However, because most of the lands involved in Havenwoods were or are being transferred at no cost, it is doubtful that acreage of the size of Havenwoods could be duplicated in southeastern Wisconsin without the expenditure of much money. The money saved for other purposes would be primarily in the form of development monies.

Nondevelopment would result in lost opportunities to provide public recreation and open space in a highly urbanized portion of the state and to increase the number of recreational facilities in southeastern Wisconsin. The cost of providing this open space and recreation land at other locations in southeastern Wisconsin would be far more costly.

2. Resource Protection Alternative

It is possible to preserve and to somewhat enhance the plant and animal aesthetic resources on the Havenwoods site solely through a resource protection management plan with little or no additional development. This would involve designation of the site in several habitat protection categories that might include wildlife refuge, natural area or even scientific area. This action would require a commitment of resources by the Department to provide a level of surveillance and a limited amount of management protection. This alternative would allow informal uses to continue provided they were compatible with the resource protection goals. However, the full potential of the resource capabilities of the site, its recreation potential and general public use potential would never be realized. It would merely be a form of "banking" the site, perhaps for future levels of more intense use. It would, for the most part, remain a local or neighborhood informal recreation area.

Because of the management effort in terms of resource protection, many of the problems associated with the no action alternative (soil erosion, continued vandalism and safety hazards) could be eliminated.

3. Urban Environmental Awareness Center and Nature Preserve

The Environmental Awareness Center and Nature Preserve concept would to a large extent realize the full potential of the site. It would allow for relatively high level use by the citizens of the state while preserving the resources of the site. The Environmental Awareness Center building and accompanying staff would create a presence which would drastically reduce the amount and the kinds of undesirable use that is occurring. This action would allow a moderate to high degree of site management which could enhance the natural resource assets of the site. In addition, it will further enhance plant and animal diversity, benefit or serve a wider spectrum of citizens of the state, and help create a general awareness of environmental values, not only on Havenwoods but in our state. It could serve as a convenient and enjoyable way to educate the citizens of the state in regard to the environmental questions of our day.

4. Intensive Recreation Development

This action would involve the expenditure of a significant amount of development money to realize the full potential of the site. It would allow a high degree of active recreation. It would undoubtedly receive the highest degree of use. It would, however, sacrifice the open space quality and displace or degrade the natural resources of the site through intensive recreational development. It would require large scale parking facilities and large staff to run. The action would also generate a significant amount of traffic to the site along with accompanying higher levels of automobile exhaust pollution. An area of this type could be designated as a state recreation area. For all practical purposes such development would be irreversible, limiting future use of the site for other than intensive recreational activities.

Appendix A
Supplementary Tables & Figures

Table 1	Itemized Summary of Proposed Development and Estimated Cost (1981)
Table 2	Havenwoods Species List of Plants
Table 3	Havenwoods Species List of Wildlife
Table 4	Park, Recreation Area and Open Space Need Analysis for Milwaukee County for the Years 1980 and 2000
Table 5	Population Projections and Forecasts for Milwaukee County, the Region, Wisconsin, and the United States (1970-2000)
Figure 1	General Site Map
Figure 2	Soils
Figure 3	Vegetation
Figure 4	Nike Missile Emplacement Cross Section
Figure 5	Proposed Vegetation Management Zones
Figure 6	Areas of Intensive Clean-up Needs

Appendix A
Table I
Itemized Summary of Proposed Development
and Estimated Cost (1980)

Development Item	Approximate Size	Unit Cost	Estimated Cost	
1. <u>Environmental Awareness Center</u>	9,000 sq. ft.	\$75/sq. ft.	\$675,000	
Entrance road 1,000 ft. 2-way	2-way road 1,000 ft.	\$2,200/100 ft.	\$ 22,000	
Parking	4 buses, 40 cars	-----	\$ 25,000	
Landscaping (windbreaks other misc.)	-----		\$ 6,000	\$728,000
2. <u>Demonstration of Alternative Technology</u>				
Wind Generator	10 Kw. est.	-----	\$ 35,000	
Gray Water Recycling System	2 Units	-----	\$ 5,000	\$40,000
3. <u>Children's Natural Play Area</u>	-----	-----	\$ 10,000	\$10,000
4. <u>Special Events Area</u>				
(Utilities: Electric, water, toilet)			\$100,000	
Sealing Nike pads, clean up, landscaping	600' X200'		\$ 54,000	
Access road	2-way 1,300 ft.	\$2,200/100 ft.	\$ 28,600	\$182,600
5. <u>Hiker Rest Area</u>				
Minor landscaping and benches	-----	-----	\$ 8,000	\$ 8,000
6. <u>Wetland Basins</u>				
Lincoln Creek, (represents Non-flood control value)			\$ 80,000	
Meadows area (w/(clay liner)	3-A		\$ 20,000	\$100,000
7. <u>General Site Clean-Up</u>				
Road removal	-----	-----	\$ 10,000	
Old foundations	-----	-----	\$ 18,000	
Steam tunnel 200'	-----	-----	\$ 55,000	
(across intermittent creek)	-----	-----	\$ 18,000	
Earth berm removal	-----	-----	\$ 7,000	\$108,000
8. <u>Trails</u>				
General purpose recreational and nature trail	3 mi +	-----	\$ 20,000	
Boardwalk, limestone screening	-----	-----	\$ 25,000	\$ 45,000
9. <u>Vegetation Management and Landscaping</u>				
Prairie	58 A	\$1,500/A	\$ 87,000	
Woodland Mesic Forest	15 A	\$3,000/A	\$ 45,000	\$132,000
10. <u>Land Reclamation - Study Area</u>				
			\$ 15,000	\$ 15,000
		Total	\$1,368,600	
		20% Engineering & Contingencies	\$273,720	
		Grand Total	1.6 million dollars	

TABLE 2

Havenwoods Species List of Plants

Box Elder	<u>Acer negundo</u>	Poison Ivy	<u>Toxicodendron radicans</u>
Red Maple	<u>Acer rubrum</u>	Red Clover	<u>Trifolium pratense</u>
Silver Maple	<u>Acer saccharinum</u>	Common Mullein	<u>Verbascum thapsus</u>
Sugar Maple	<u>Acer saccharum</u>	Riverbank Grape	<u>Vitis riparia</u>
Bitternut Hickory	<u>Carya cordiformis</u>	Yarrow, Milfoil	<u>Achillea millefolium</u>
Snagbark Hickory	<u>Carya ovata</u>	Quack Grass	<u>Agropyron repens</u>
Gray Dogwood	<u>Cornus racemosa</u>	Slender Wheat Grass	<u>Agropyron trachycaulum</u>
Red-osier Dogwood	<u>Cornus stolonifera</u>	Redtop Bentgrass	<u>Agrostis gigantea</u>
Hawthorn	<u>Crataegus</u>	Common Ragweed	<u>Ambrosia artemisiifolia</u>
Beech	<u>Fagus grandifolia</u>	Common Burdock	<u>Arctium minus</u>
Red Ash	<u>Fraxinus pensylvanica</u>	Common Milkweed	<u>Asclepias syriaca</u>
Apple	<u>Malus pumila (Pyrus malus)</u>	Whorled Milkweed	<u>Asclepias verticillata</u>
Norway Spruce	<u>Picea abies</u>	Heath Aster	<u>Aster ericoides</u>
Red Pine	<u>Pinus resinosa</u>	New England Aster	<u>Aster novae-angliae</u>
White Pine	<u>Pinus strobus</u>	Hairy Aster	<u>Aster pilosus</u>
Cottonwood	<u>Populus deltoides</u>	Arrow-leaved Aster	<u>Aster saggittifolius</u>
Quaking Aspen	<u>Populus tremuloides</u>	Hungarian Brome	<u>Bromus inermis</u>
Wild Plum	<u>Prunus americana</u>	Lamb's Quarters	<u>Chenopodium album</u>
Wild Black Cherry	<u>Prunus serotina</u>	Thistle	<u>Cirsium</u>
Swamp White Oak	<u>Quercus bicolor</u>	Horseweed	<u>Conyza canadensis</u>
Bur Oak	<u>Quercus macrocarpa</u>	Wild Carrot, Queen Anne's Lace	<u>Daucus carota</u>
Red Oak	<u>Quercus rubra</u>	Crabgrass	<u>Digitaria</u>
Black Locust	<u>Robinia pseudo-acacia</u>	Wall Rocket	<u>Diploaxis muralis</u>
Sandbar Willow	<u>Salix interior</u>	Wild Millet	<u>Echinochloa pungens</u>
Basswood, American Linden	<u>Tilia americana</u>	Wild Strawberry	<u>Fragaria virginiana</u>
American Elm	<u>Ulmus americana</u>	Squirrel-tail Grass	<u>Hordeum jubatum</u>
Slippery Elm	<u>Ulmus rubra</u>	Ivy-leaved Morning Glory	<u>Ipomoea hederacea</u>
Smooth Sumac	<u>Rhus glabra</u>	Burning Bush, Summer Cypress	<u>Kochia scoparia</u>
Early Wild Rose	<u>Rosa blanda</u>	Butter-and-Egg, Toad Flax	<u>Linaria vulgaris</u>
Wild Rose	<u>Rosa virginiana</u>	Honeysuckle	<u>Lonicera</u>
Bramble	<u>Rubus</u>	Common Mallow, Cheeses	<u>Malva neglecta</u>
Curly Dock	<u>Rumex crispus</u>	White Sweet Clover	<u>Melilotus alba</u>
Green Foxtail	<u>Setaria viridis</u>	Yellow Sweet Clover	<u>Melilotus officinalis</u>
False Solomon's Seal	<u>Smilacina racemosa</u>	Wild Bergamot	<u>Monarda fistulosa</u>
Bittersweet Nightshade	<u>Solanum dulcamara</u>	Virginia Creeper	<u>Parthenocissus quinquefolia</u>
Tall Goldenrod	<u>Solidago altissima</u>	Timothy	<u>Phleum pratense</u>
Grass-leaved Goldenrod	<u>Solidago graminifolia</u>	Common Plantain	<u>Plantago major</u>
Spiny Sow Thistle	<u>Sonchus asper</u>	Kentucky Blue Grass	<u>Poa pratensis</u>
Common Dandelion	<u>Taraxacum officianale</u>	Yellow Coneflower	<u>Ratibida pinnata</u>

TABLE 3

Havenwoods Species List of Wildlife

Birds

Night Hawk	<u>Chordeiles minor minor</u>
Rose-breasted Grosbeak	<u>Pneucticus ludovicianus</u>
White-breasted Nuthatch	<u>Sitta carolinensis cooki</u>
Green Heron	<u>Butorides virescens</u>
Solitary Sandpiper	<u>Tringa solitaria</u>
Bobolink	<u>Dolichonyx orizivorus</u>
Kingbird	<u>Tyrannus tyrannus</u>
Fox Sparrow	<u>Passerella iliaca</u>
Red-tailed Hawk	<u>Buteo jamaicensis borealis</u>
Killdeer	<u>Charadrius vociferus</u>
Brown Thrasher	<u>Toxostoma rufum</u>
Owl	sp. ?
Mourning Dove	<u>Zenaidura macroura carolinensis</u>
Pheasant	<u>Phasianus colchicus torquatus</u>
Hungarian Partridge	<u>Perdix perdix perdix</u>
Finch	sp. ?
Warblers	Many species during migration
Northern Flicker	<u>Colaptes auratus luteus</u>
Yellow-bellied Sapsucker	<u>Sphyrapicus varius varius</u>
Red-headed Woodpecker	<u>Melanerpes erythrocephalus erythrocephalus</u>
Cowbird	<u>Molothrus ater ater</u>
Mallard	<u>Anas platyrhynchos platyrhynchos</u>
American Redstart	<u>Setophaga ruticilla</u>
Flycatcher	sp. ?
Robin	<u>Turdus migratorius migratorius</u>
Swamp Sparrow	<u>Melospiza georgiana</u>
Indigo Bunting	<u>Passerina cyanea</u>
Cedar Waxwing	<u>Bombocilla cedrorum</u>
Bluejay	<u>Cyanocitta cristata</u>
Black-capped Chickadee	<u>Parus atricapillus atricapillus</u>
Red-winged Blackbird	<u>Agelaius phoeniceus phoeniceus</u>
Bronzed Grackle	<u>Quiscalus versicolor</u>
Crow	<u>Corvus brachyrhynchos brachyrhynchos</u>
Slate-colored Junco	<u>Junco hyemalis hyemalis</u>

Mammals

White-tailed Deer	<u>Odocoileus virginianus borealis</u>
Red Fox	<u>Vulpes fulva fulva</u>
Gray Squirrel	<u>Sciurus carolinensis hypophaeus</u>
Gray Chipmunk	<u>Tamias striatus griseus</u>
13-striped Ground Squirrel	<u>Citellus tridecemlineatus tridecemlineatus</u>
Raccoon	<u>Procyon lotor hirtus</u>
Opossum	<u>Didelphis marsupialis virginiana</u>
Woodchuck	<u>Marmota monax monax</u>
Muskrat	<u>Ondatra zibethicus zibethicus</u>
Badger	<u>Taxidea taxus jacksoni</u>
Cottontail Rabbit	<u>Sylvilagus floridanus mearnsii</u>
Northern Plains Skunk	<u>Mephitis mephitis hudsonica</u>
Meadow Mouse	<u>Microtus pennsylvanicus pennsylvanicus</u>

Reptiles & Amphibians

Garter Snake	Eastern
Frog, Leopard	<u>Rana pipiens</u>
Spring Peeper	<u>Hyla crucifer crucifer</u>
Toad	<u>Bufo americanus americanus</u>
Gray Tree Frog or	<u>Hyla versicolor versicolor</u>
Cope's Tree Frog	<u>Hyla versicolor chrysocelis</u>
Central Newt	<u>Diemictylus viridescens louisianensis</u>

Table 4
 PARK, RECREATION AREA AND OPEN SPACE NEED ANALYSIS FOR MILWAUKEE COUNTY FOR THE YEARS 1980 and 2000 *

Area Classification	Acreage Required by Spatial Standard		Park, Recreation Area and Open Space Inventory, 1/1/77				Additional Acreage Needed In		
	1980	2000	School Areas	Municipal Areas	County Park System		1980	2000	
					Sp. Pks.	Parks	In Pkwy.	Total	TOTAL ACRES
TYPE IV (Schools and Parks)									
Type IV (Schools)	1624	1680	1204	437					1641
Type IV (Parks)	1726	1785	104	104				1000	1104
Total Type IV	3350	3465	1204	541				1000	2745
TYPE III (Schools and Parks)									
Type III (Schools)	914	945	215	27					242
Type III (Parks)	2233	2310	40	40				1455	1495
Total Type III	3147	3255	215	67				1455	1737
TOTAL TYPES III and IV	6497	6720	1419	608				2455	4482
TYPES I AND II **									
Type II	2335	2415						1328	1328
Type I	5380	5565						4556	4556
Total Types I and II	7715	7980						5884	5884
RECREATION CORRIDORS	4060	4200						2638	2638
TOTAL STANDARD AREAS	18272	18900	1419	608				10977	13004
CONSERVATION AREAS									
MISCELLANEOUS OPEN SPACE			52					528	3355
			110	214				619	324
TOTAL AREAS	18272	18900	1581	822				619	16683

*Based on SEMRPC Recommended Standards, and Area Classification, 1978

**Types I and II include natural resources oriented parks; including nature centers, nature trails, hiking, ski touring, etc.

Source: Guide For Growth, Milwaukee County Parks

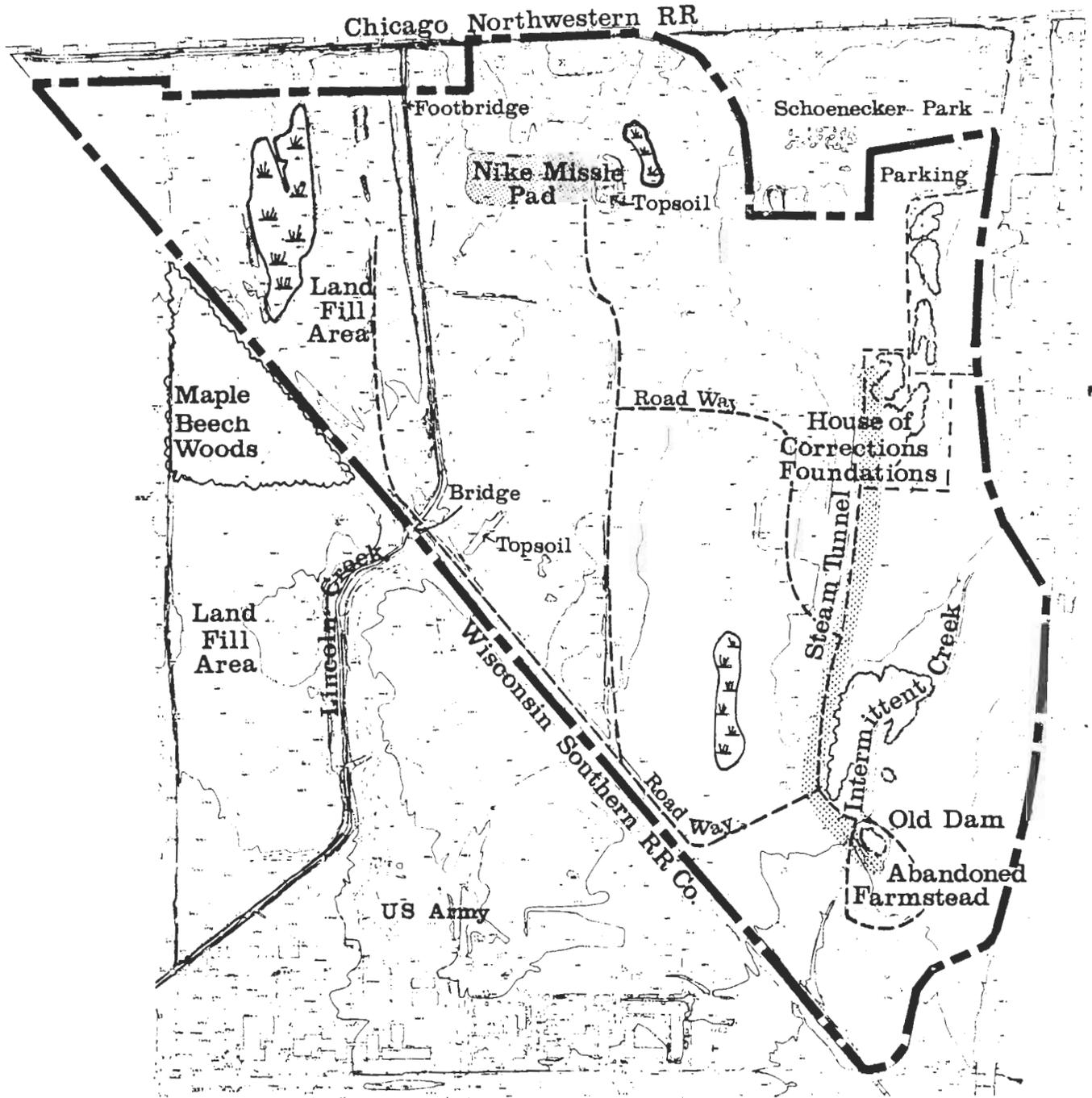
Table 5

Population Projections and Forecasts for Milwaukee County,
the Region, Wisconsin, and the United States
(1970-2000)

Year	Population (In Thousands)			
	Milwaukee County	Region	Wisconsin	United States
1970	1,054	1,756	4,418	204,800
1980	1,015	1,873	4,819	220,664
1990	1,022	2,043	5,383	237,678
2000	1,050	2,219	5,840	254,502
Percent Change 1970-2000	- 0.4	26.4	32.2	24.3

Source: SEWRPC

Fig. 1

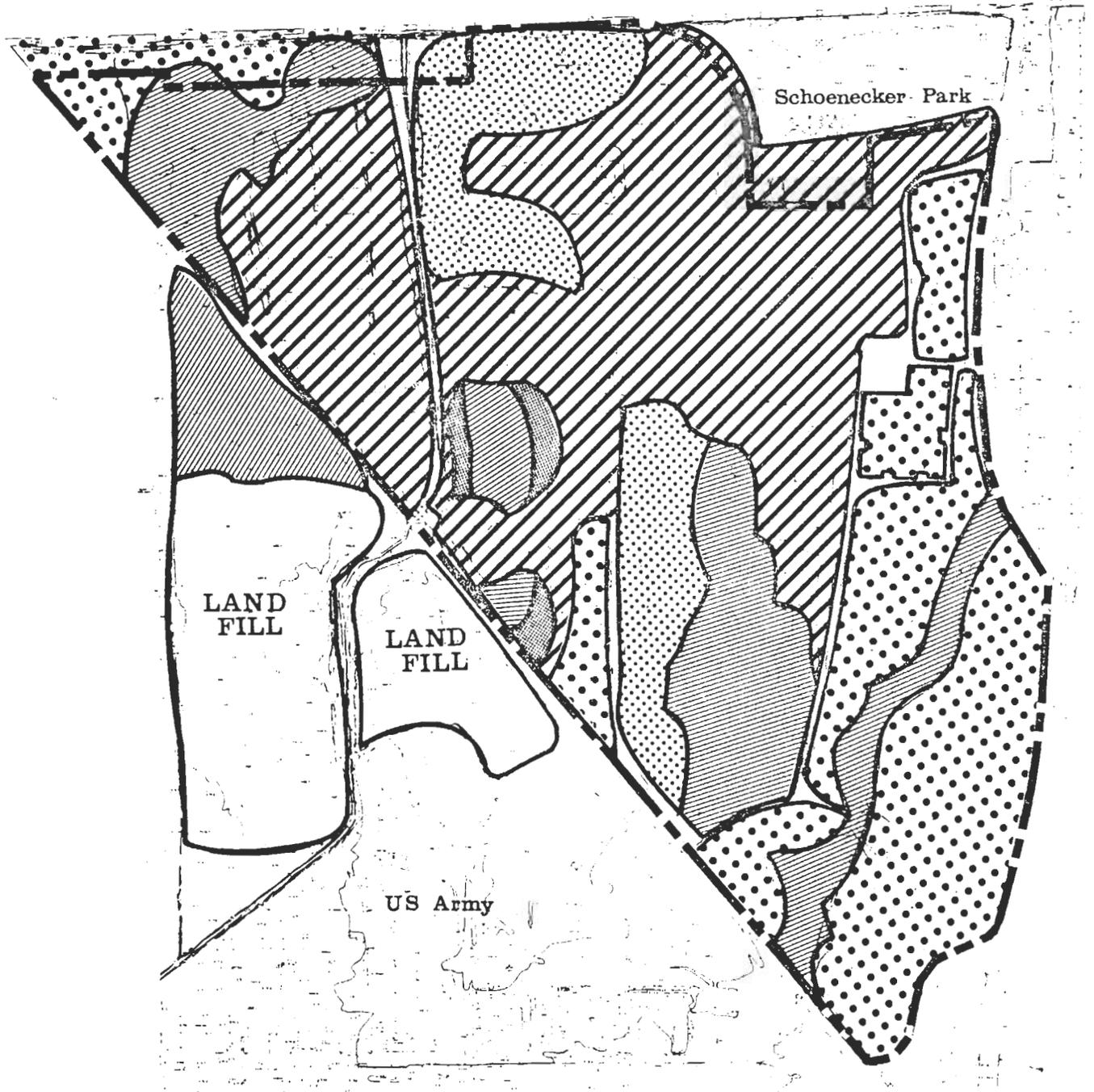


HAVENWOODS

General Site Map

-  Existing Roads
-  Project Boundary
-  Intermittent Wetland





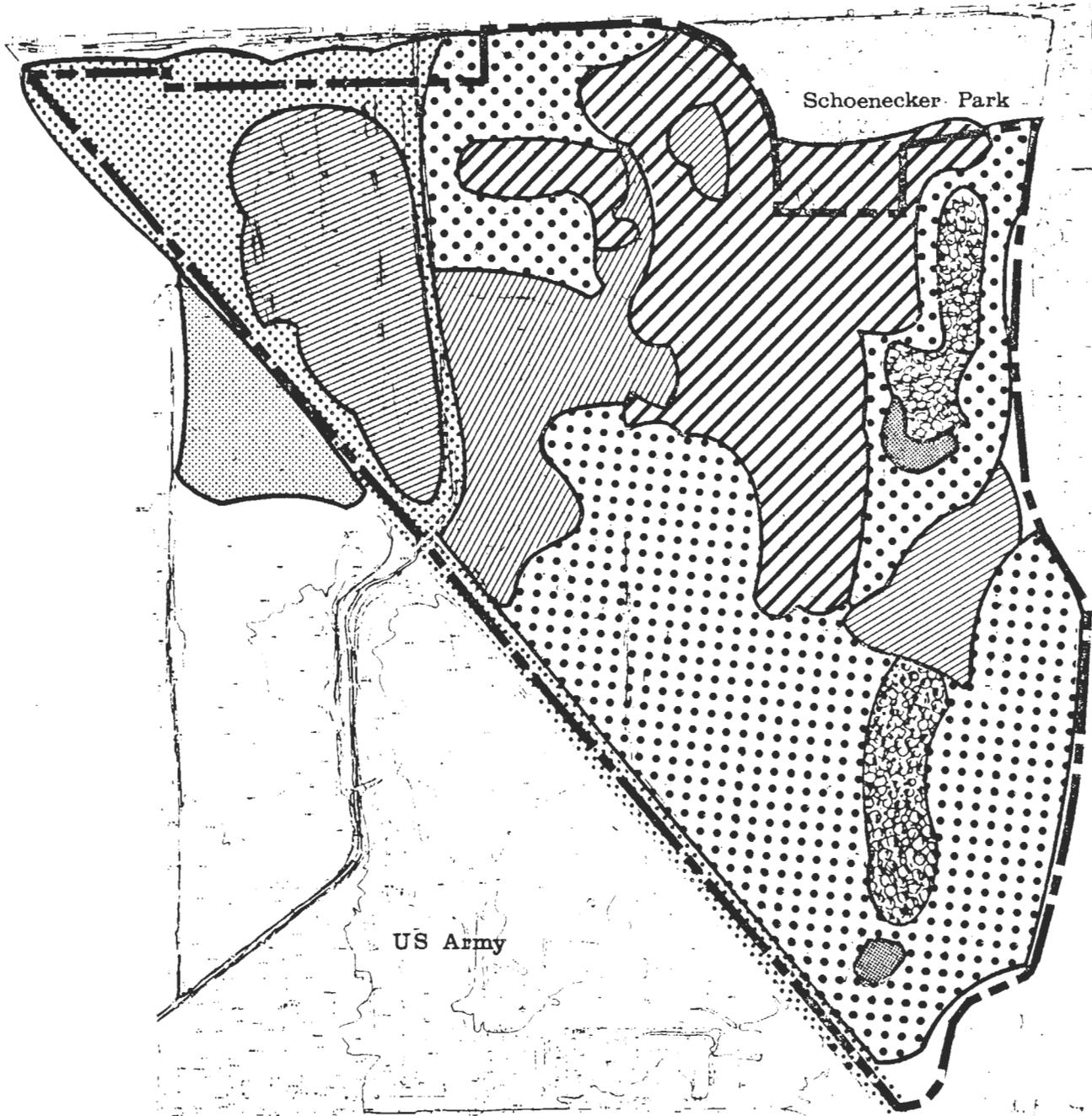
Soils

-  Heavily Disturbed Land
 -  QuB
 -  QuB₂
 -  MtA
 -  AsA
- Ozaukee
Mequon
Ashkum

HAVENWOODS



Fig. 3

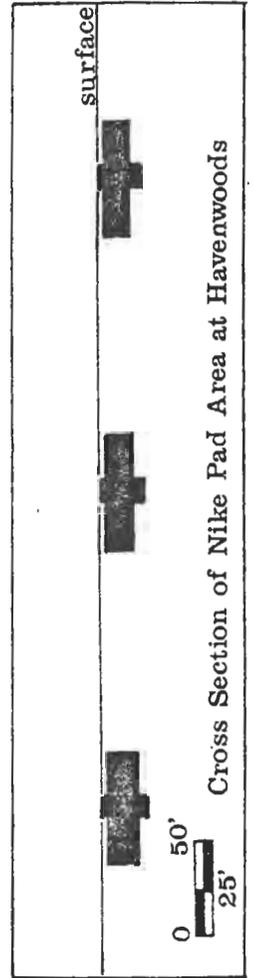
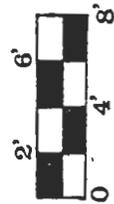
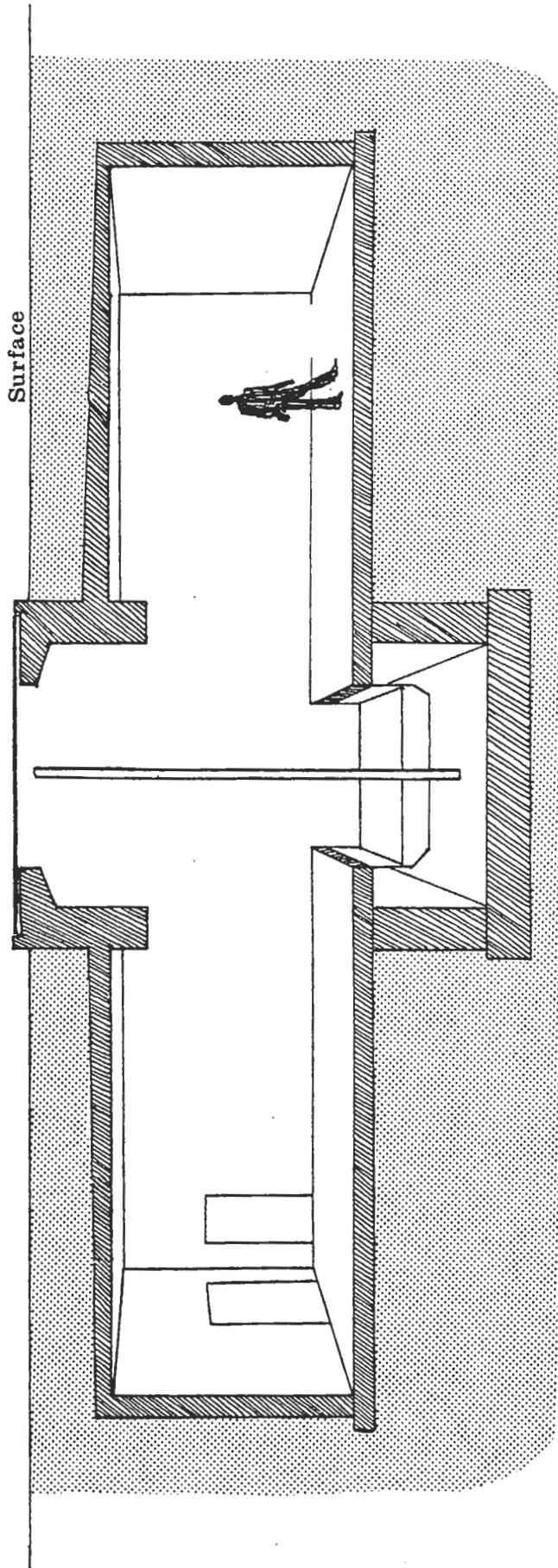


Vegetation

HAVENWOODS

-  Weedy pioneer invaders
-  Early old field
-  Mid old field
-  Late old field-early forest
-  Forest canopy degraded ground layer
-  Maple Beech woods
-  Orchard

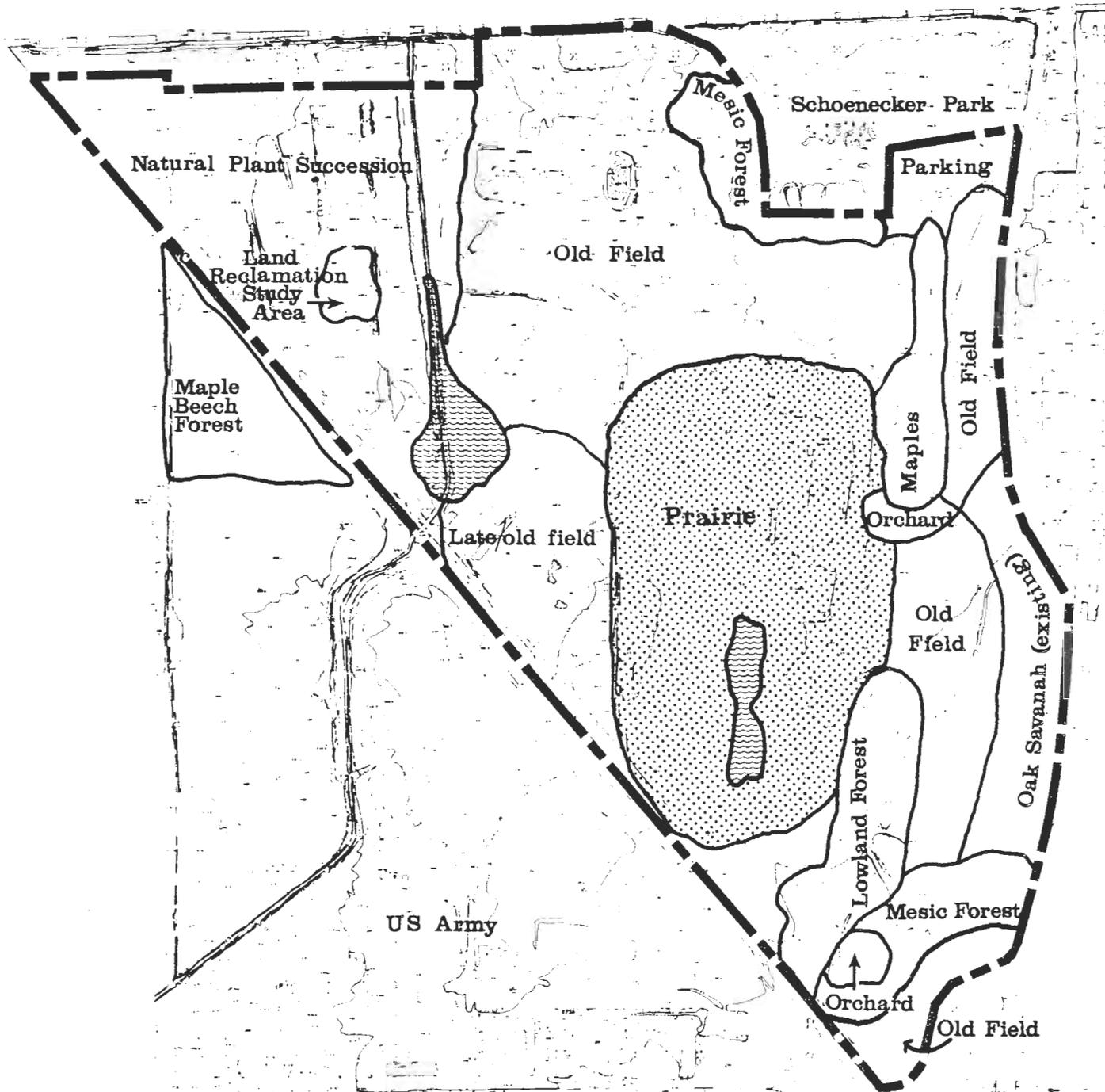




**Nike Missile
Emplacement
Cross Section**

Cross Section of Nike Pad Area at Havenwoods

Fig. 5



Proposed Vegetation Management Zones

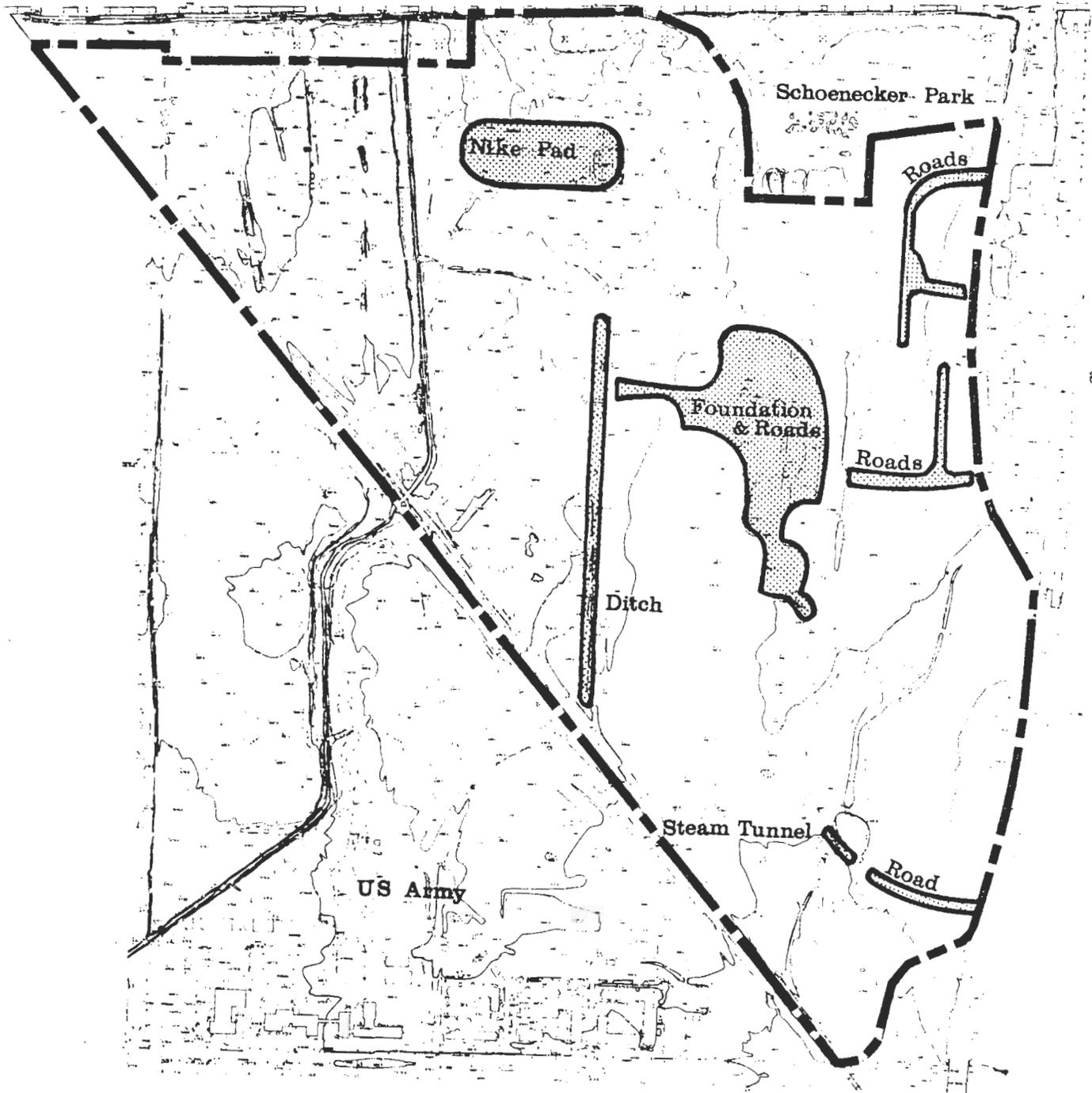


Water or Wetland

HAVENWOODS



Fig. 6



HAVENWOODS

 Areas of Intensive Clean-up Needs



Appendix B

Resolutions by the City of Milwaukee Common Council
and the Wisconsin Natural Resources Board

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

RESOLUTION

WHEREAS, the Natural Resources Board is an agency of the government of the State of Wisconsin created by section 15.34, Wisconsin Statutes, and is empowered to acquire land by gift under section 23.09(2)(d)2., Wisconsin Statutes;

WHEREAS, the City of Milwaukee intends to donate certain lands situated within the incorporated limits of the City, popularly known as Havenwoods;

AND WHEREAS, the Department of Natural Resources has indicated a willingness to accept, develop and operate the Havenwoods site subject to approval of the following conditions by the Mayor and Common Council of the City of Milwaukee and the Natural Resources Board.

NOW THEREFORE BE IT RESOLVED that the Natural Resources Board of the State of Wisconsin at a duly called and legally convened meeting held on Thursday, October 26, 1978, at Madison, Wisconsin, does hereby agree:

1. To accept the property described and incorporated herein by reference as Parcels I, II and III in Appendix I of this resolution from the City of Milwaukee subject to approval by the Governor and restrictions and easements of record.

2. To accept the property described and incorporated herein by reference as Parcel IV in Appendix I of this resolution title to which is currently held by the Milwaukee Area Technical College subject to approval by the Governor and restrictions and easements of record.

3. To designate the subject property as the Havenwoods Forest Preserve and to construct a nature center thereon.

4. To utilize the Havenwoods property as a forest preserve and nature center which will stress ecology, management of animal and plant communities and natural resources.

5. To manage and develop the Havenwoods area consistent with purposes of the gift expressed herein.

6. To give the City of Milwaukee an annual payment for aids in lieu of taxes pursuant to section 70.113, Wisconsin Statutes, and special assessments for the Havenwoods property.

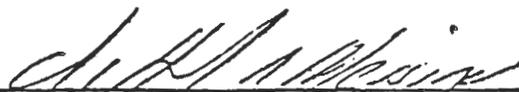
7. To use all payments made by the City of Milwaukee as a condition of this resolution for the development and operation of the Havenwoods Forest Preserve; and, be it

FURTHER RESOLVED that the above offer on the part of the Natural Resources Board is contingent upon Mayor and the Common Council of the City of Milwaukee accepting the following conditions:

1. To donate the above described property (Parcels I, II and III) to the Department of Natural Resources subject to restrictions and easements of record.
2. To transfer directly or petition the federal government for transfer to the Department of Natural Resources the property described as Parcel IV in Appendix I of this resolution title to which is currently held by the Milwaukee Area Technical College.
3. To obtain the consent of the Department of Interior, Department of Health, Education and Welfare, and the General Services Administration as appropriate for the conveyance of the subject property to the Department of Natural Resources.
4. To give the Department of Natural Resources One Hundred Thousand Dollars (\$100,000) for development of the Havenwoods area upon vesting of title in the Department of Natural Resources.
5. To provide fire and police protection for the subject property and any improvements thereon without cost to the Department of Natural Resources.
6. To dedicate to the Department of Natural Resources all annual payments made by the Department of Natural Resources for aids in lieu of taxes pursuant to section 70.113, Wisconsin Statutes, and special assessments for the Havenwoods property. Such annual payment shall be used solely for the operation and maintenance of the Havenwoods property; and, be it

FURTHER RESOLVED that the Secretary of the Department of Natural Resources is authorized and directed to take all action necessary and appropriate to carry out the intent of this resolution.

STATE OF WISCONSIN
NATURAL RESOURCES BOARD

By 
Clifford F. Messinger, Chairman

Dated October 26, 1978


John C. Brogan, Secretary

1 Resolution approving execution of agreement between the City of Milwaukee and
 2 Wisconsin Department of Natural Resources relative to transfer, development
 3 and operation of the Havenwoods site.

-Analysis-

This resolution sets forth the terms and conditions necessary to the transfer
 of the Havenwoods site to the Department of Natural Resources for development and
 management as the "Havenwoods Forest Preserve."

4 Whereas, The Mayor and Common Council of the City of Milwaukee have endorsed
 5 In principle the transfer, development and operation of the Havenwoods site by
 6 the Department of Natural Resources; and

7 Whereas, Negotiations between the City of Milwaukee and the Department of
 8 Natural Resources to effectuate the intent of that endorsement have been completed
 9 and

10 Whereas, The Department of Natural Resources has indicated a willingness to
 11 accept, develop and operate the Havenwoods site subject to approval of the follow-
 12 ing conditions by the Natural Resources Board and the Mayor and Common Council of
 13 the City of Milwaukee; now, therefore, be it

14 Resolved, That the Mayor and Common Council of the City of Milwaukee hereby
 15 agree:

- 16 1. To donate the property described, and incorporated herein by
 17 reference as Parcels I, II, and III in Appendix I attached to
 18 this file to the Department of Natural Resources subject
 19 to restrictions and easements of record;
- 20 2. To transfer directly or petition the federal government for
 21 transfer to the Department of Natural Resources the property
 22 described, and incorporated herein by reference as Parcel IV
 23 in Appendix I attached to this file, title to which is currently
 24 held by the Milwaukee Area Technical College;
- 25 3. To obtain the consent of the Department of Interior, Department
 26 of Health, Education and Welfare, and the General Services
 27 Administration as appropriate for the conveyance of the subject
 28 property to the Department of Natural Resources.
- 29 4. To give the Department of Natural Resources One Hundred Thousand
 30 Dollars (\$100,000) for development of the Havenwoods area upon
 31 vesting of title in the Department of Natural Resources.
- 32 5. To provide fire and police protection for the subject property
 33 and any improvements thereon without cost to the Department of
 34 Natural Resources.

1 6. To dedicate to the Department of Natural Resources all
2 annual payments made by the Department of Natural Resources
3 for aids in lieu of taxes pursuant to s. 70.113, Stats.,
4 and special assessments for the Havenwoods property. Such
5 annual payment shall be used solely for the operation and
6 maintenance of the Havenwood's property; and, be it

7 Further Resolved, That the above offer on the part of the City of Milwaukee
8 is contingent upon acceptance by the Department of Natural Resources of the
9 following conditions.

10 1. To accept the above described property subject to approval
11 by the Governor and restrictions and easements of records.

12 2. To designate the subject property as the Havenwoods Forest
13 Preserve and to construct a nature center thereon.

14 3. To utilize the Havenwoods property as a forest preserve and
15 nature center which will stress ecology, management of
16 animal and plant communities and natural resources.

17 4. To manage and develop the Havenwoods area consistent with
18 purposes of the gift expressed herein.

19 5. To give the City of Milwaukee an annual payment for aids
20 in lieu of taxes pursuant to s. 70.113, Stats., and special
21 assessments for the Havenwoods property.

22 6. To use all payments made by the City of Milwaukee as a
23 condition of this agreement for the development and operation
24 of the Havenwoods Forest Preserve; and, be it

25 Further Resolved, That the Department of Intergovernmental Fiscal Liaison and
26 the City Attorney are authorized and directed to take all actions necessary and
27 appropriate to carrying out the intent of this resolution; and, be it

28 Further Resolved, That the appropriate city officials are hereby authorized
29 to execute any and all documents required to implement the intent of this resolution
30 upon sufficient showing by the Department of Natural Resources that the terms and
31 conditions as set forth above have been accepted in full by the Department of Natural
32 Resources.

I hereby certify that the foregoing is a true and exact
copy of a resolution adopted by the Common Council of
the City of Milwaukee on November 14, 1978



City Clerk of Milwaukee, Wisconsin

Fiscal Liaison
KWC:jz
10/24/78

Appendix C

Note From State Historical Society
Detaining to Archaeological Investigation

STATE OF WISCONSIN

REPLY MESSAGE

FORM AD-18

FROM

DEYTER
THE STATE HISTORICAL SOCIETY OF WISCONSIN
816 STATE STREET
MADISON, WISCONSIN 53706

SUBJECT

SASCO 1093-81
HAYENWOODS PARK
MILWAUKEE

DATE

8/20/80

TO: Ron Ethington
DNIR / GEF II - 4th Floor

MESSAGE

RON,
NO ARCHAEOLOGICAL OR HISTORICAL SITES ARE KNOWN TO EXIST IN
THE HAYENWOODS PARK AREA. AN UNKNOWN AMOUNT OF THE PARK HAS BEEN
SUBSTANTIALLY ALTERED AS A RESULT OF THE CONSTRUCTION OF THE U.S. AIRWAY
FACILITIES. THERE IS LITTLE OR NO PROBABILITY THAT ARCHAEOLOGICAL
SITES WOULD HAVE SURVIVED SUCH CONSTRUCTION ACTIVITIES. IN
AREAS OF THE PARK THAT MAY NOT HAVE BEEN DISTURBED BY
CONSTRUCTION (IF ANY SUCH AREAS EXIST), THERE IS A FAMILY

REPLY

GOOD CHANCE THAT ARCHAEOLOGICAL SITES MIGHT BE PRESENT.

WE WOULD RECOMMEND THAT AN ARCHAEOLOGICAL SURVEY OF
UNDISTURBED AREAS BE UNDERTAKEN PRIOR TO ANY DEVELOPMENT.

SIGNED

DATE

Rete Deyter
SIGNED

THIS COPY FOR PERSON ADDRESSED

Appendix D

List of Havenwoods Ad Hoc Committee

Havenwoods Ad Hoc Committee

Mr. Robert Fuller
461 Hillcrest Road
Grafton, WI 53024

Ms. Cari Backes
5708 N. 56th St.
Milwaukee, WI 53209

Ms. Mary Jo Avery
2511 N. Buffum St.
Milwaukee, WI 53212

Mr. Irving F. Heipel
Milwaukee Co. Park Comm.
Court House, Room 308
Milwaukee, WI 53233

Mr. William Ryan Drew
Dept. of City Development
P.O. Box 324
Milwaukee, WI 53201

Mr. Harvey Frye, Pastor
Florist Ave. Lutheran Church
5975 N. 40th Street
Milwaukee, WI 53209

Mr. George Newkirk
6100 N. 40th Street
Milwaukee, WI 53209

Ms. Mary Krause
Milwaukee Co. Zoo
1001 W. Blue Mound Road
Milwaukee, WI 53226

Ms. Helen Jacobs
2220 E. Newberry
Milwaukee, WI 53211

Mr. Steven Kern
Sierra Club
1742 N. Prospect, #203
Milwaukee, WI 53202

Mr. Michael Magulski
Div. of Municipal Recreation
5225 W. Vliet Street
Milwaukee, WI 53208

Mr. Jerry Laudon
Milw. Co. Conservation Allianc
606 W. Columbia Ave.
South Milwaukee, WI 53172

Mr. Richard Barloga
11045 W. Parnell
Hales Corners, WI 53130

Ms. Joan Gander
5453 North 39th
Milwaukee, WI 53209

Appendix E

Department of Natural Resources Board Minutes
and Actions Regarding Havenwoods

6.C-3

Form 1100-1
Rev. 10-77

Item _____ Minutes of _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Madison, Wisconsin

ITEM RECOMMENDED FOR NATURAL RESOURCES BOARD AGENDA

TO THE SECRETARY: Anthony S. Earl

Date October 9, 1978

FROM: C. D. Besadny

SUBJECT: Donation - 225 acres of land (Havenwoods) from the City of Milwaukee for use as a forest preserve and nature center.

1. To be presented at October Board meeting by C. D. Besadny.

2. Appearances requested by the public:

Name

Representing whom?

3. Reference materials to be used: Attached Memorandum of Understanding.

4. Summary: The City of Milwaukee has offered to donate a tract of land of approximately 225 acres within the city limits to the Department for development and use as a Forest Preserve and Nature Center. The city has also offered to donate \$100,000 as a contribution toward the development of the area and to contribute an annual sum to the Department equal to the Department's annual payments for aids in lieu of taxes and special assessments.

The attached memorandum formally states the city's intent to make the gift and the Department's intent to accept it subject to the conditions indicated.

5. Recommendation: That the Board authorize the Secretary to execute the attached Memorandum of Understanding subject to the approval of the Governor.

APPROVED:

C.D. Besadny 10-9-78
C.D. Besadny, Administrator Date

Anthony S. Earl 10/10/78
Deputy Secretary Date
Secretary Anthony S. Earl

Signed:
C.D. Besadny
C. D. Besadny, Administrator
Division of Resource Management

Attach.

- cc: D. Mackie - 8
- D. Weizenicker - 8
- J. Treichel - 8
- G. Knudsen - 8
- R. Henneger - 13
- R. Prosis - 13
- R. Winnie - Milwaukee
- C. Besadny - 14
- J. Scullion - 14
- D. Konkol - 8

Form 1100-1
Rev. 10-77

Item 6.C-11 Minutes of _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
Madison, Wisconsin

ITEM RECOMMENDED FOR NATURAL RESOURCES BOARD AGENDA

TO THE SECRETARY:

Date August 27, 1980

FROM: James R. Huntoon

SUBJECT: Havenwood Forest Preserve land acquisition - Milwaukee County; and approval to modify the boundary and increase acreage goal by 4.15 acres (from 285 to 289.15 acres).

1. To be presented at September Board meeting by Jim Huntoon.

2. Appearances requested by the public:

Name

Representing whom?

3. Reference materials to be used:

Memo and Map

4. Summary:

The Department has obtained an agreement to purchase 3.4 acres for the Havenwood Forest Preserve in Milwaukee County. The parcel is outside of the project boundary. The cost is \$15,000.00 and the seller is the Milwaukee Land Company.

5. Recommendation: That the Board approve for Havenwood Forest Preserve:

1) purchase of 3.4 acres for \$15,000.00, 2) modification of the property boundary to include the parcel and a 0.75 acre parcel to be acquired in the future and 3) increasing the acreage goal from 285 acres by 4.15 acres to 289.15 acres.

APPROVED:

Mr. Besadny, Administrator 9-10-80
Date

Mr. Damon, Deputy Secretary Date
Anthony S. Earl 9/10/80
Secretary Date

Signed:
James R. Huntoon
James R. Huntoon, Director
Office of Lands

- cc: M. Reinke - FOR/4
- D. Konkol - FOR/4
- E. Faber - RE/4
- J. Huntoon - OL/4
- J. Scullion - ADM/5
- R. Nicotera - ADM/5
- R. Winnie - Milwaukee

October 25-26, 1978

14.

6.B-6 Proposal for purchase and stocking of rainbow trout in Lake Michigan. (Item 6.B-3, Minutes of July 26-27, 1978.)

Mr. Flaherty stated that the department will give the Board a report on the number of bids received, the names of the bidders and amounts, and the results of the bidding.

6.B-7 Augusta Dam. (Item 3.A, Minutes of July 26-27, 1978.)

Mr. Flaherty reported Committee discussion of the Augusta Dam situation. He noted that apparently the people in that area are now interested in an engineering study for a different type of dam so they may make application for a new permit.

6.B-8 Eddy Creek Dam. (Item 3.D, Minutes of August 23-24, 1978.)

Mr. Flaherty stated the Committee was informed there is a lawsuit pending in the Circuit Court for Dane County with regard to the Eddy Creek Dam. He indicated that the Eddy Creek Dam Preservation Association and others are questioning the department's authority with respect to actions taken.

6.C LAND AND BUSINESS COMMITTEE'S REPORT. (Items 6.C-1 to 6.C-10, inc.)

6.C-1 Minutes of August 23 and September 27, 1978.

Action deferred.

6.C-2 Appearance of David Masbruch, Belmont, concerning the Calamine-Platteville Trail. (Items 6.C-6, Minutes of September 15-16, 1976, and 6.C-5, Minutes of June 28-29, 1978.)

Mr. Lawton reported three appearances before the Land and Business Committee on this item, two farmers and the township chairman, who appeared in opposition to a recreational trail on the roadbed of the railroad between Belmont and Platteville. (See minutes of the Land and Business Committee for information regarding the viewpoints expressed at the Committee meeting.)

Mr. Lawton stated that the Land and Business Committee has no recommendation to make at this time regarding Board action. He indicated that he favored letting the prior action of the Board stand with respect to the Calamine-Platteville State Trail which in June 1978 was renamed the Pecatonica State Park Trail.

*

6.C-3 Donation - 225 acres of land (Havenwoods) from the City of Milwaukee for use as a forest preserve and nature center.

Mr. Lawton explained that the City of Milwaukee has offered to donate to the department a tract of land of approximately 225 acres within the city limits for development and use as a Forest Preserve and Nature Center. The City has also offered to donate \$100,000 as a contribution toward the development of the area and to contribute an annual sum to the department equal to the department's annual payments for aids in lieu of taxes and special assessments.

A copy of a proposed Memorandum of Understanding Between the City of Milwaukee and the State of Wisconsin Department of Natural Resources is incorporated in and made a part of these minutes. The memorandum contains descriptions of the parcels of land the City of Milwaukee has offered to donate to the department.

It was MOVED by Mr. Lawton and SECONDED by Ms. Conroy that the Board adopt the following resolution:

"WHEREAS, the Natural Resources Board is an agency of the government of the State of Wisconsin created by section 15.34, Wisconsin Statutes, and is empowered to acquire land by gift under section 23.09(2)(d)2., Wisconsin Statutes;

"WHEREAS, the City of Milwaukee intends to donate certain lands situated within the incorporated limits of the City, popularly known as Havenwoods;

October 25-26, 1978

15.

"AND WHEREAS, the Department of Natural Resources has indicated a willingness to accept, develop and operate the Havenwoods site subject to approval of the following conditions by the Mayor and Common Council of the City of Milwaukee and the Natural Resources Board.

"NOW, THEREFORE, BE IT RESOLVED that the Natural Resources Board of the State of Wisconsin at a duly called and legally convened meeting held on Thursday, October 26, 1978, at Madison, Wisconsin, does hereby agree:

"1. To accept the property described and incorporated herein by reference as Parcels I, II and III in Appendix I of this resolution from the City of Milwaukee subject to approval by the Governor and restrictions and easements of record.

"2. To accept the property described and incorporated herein by reference as Parcel IV in Appendix I of this resolution title to which is currently held by the Milwaukee Area Technical College subject to approval by the Governor and restrictions and easements of record.

"3. To designate the subject property as the Havenwoods Forest Preserve and to construct a nature center thereon.

"4. To utilize the Havenwoods property as a forest preserve and nature center which will stress ecology, management of animal and plant communities and natural resources.

"5. To manage and develop the Havenwoods area consistent with purposes of the gift expressed herein.

"6. To give the City of Milwaukee an annual payment for aids in lieu of taxes pursuant to section 70.113, Wisconsin Statutes, and special assessments for the Havenwoods property.

"7. To use all payments made by the City of Milwaukee as a condition of this resolution for the development and operation of the Havenwoods Forest Preserve; and, be it

"FURTHER RESOLVED that the above offer on the part of the Natural Resources Board is contingent upon Mayor and the Common Council of the City of Milwaukee accepting the following conditions:

"1. To donate the above described property (Parcels I, II and III) to the Department of Natural Resources subject to restrictions and easements of record.

"2. To transfer directly or petition the federal government for transfer to the Department of Natural Resources the property described as Parcel IV in Appendix I of this resolution title to which is currently held by the Milwaukee Area Technical College.

"3. To obtain the consent of the Department of Interior, Department of Health, Education and Welfare, and the General Services Administration as appropriate for the conveyance of the subject property to the Department of Natural Resources.

"4. To give the Department of Natural Resources One Hundred Thousand Dollars for development of the Havenwoods area upon vesting of title in the Department of Natural Resources.

"5. To provide fire and police protection for the subject property and any improvements thereon without cost to the Department of Natural Resources.

"6. To dedicate to the Department of Natural Resources all annual payments made by the Department of Natural Resources for aids in lieu of taxes pursuant to section 70.113, Wisconsin Statutes, and special assessments for the Havenwoods property. Such annual payment shall be used solely for the operation and maintenance of the Havenwoods property; and, be it

October 25-26, 1978

16.

"FURTHER RESOLVED that the Secretary of the Department of Natural Resources is authorized and directed to take all action necessary and appropriate to carry out the intent of this resolution."

Mr. Flaherty asked for clarification of Item 3 of the resolution: "3. To designate the subject property as the Havenwoods Forest Preserve and to construct a nature center thereon." He asked what type of nature center was contemplated.

Mr. Besadny explained that the department would work with the City and a group called "The Friends of Havenwoods" to develop a master plan for the area. This group, he said, is interested in the construction of some type of public contact building. Mr. Besadny suspected that the proposed nature center would be similar to the one presently under construction at the Kettle-Moraine State Forest (Northern Unit).

Mr. Flaherty suggested that the Memorandum of Understanding be recorded with the deed if the Board votes to accept the donation of land.

When put to a vote, motion was carried unanimously.

Mr. Lawton informed the Board that approximately 60 acres of federally owned wooded land lying immediately west of the Havenwoods site would be an ideal addition if it could be acquired.

The Land and Business Committee recommended and Mr. Lawton MOVED "that the staff be directed to work with the appropriate federal agencies to negotiate for the use or acquisition of the approximately 60 acres located immediately to the west of the Havenwoods site in the City of Milwaukee."

The motion was seconded by Ms. Conroy.

When put to a vote, motion was carried unanimously.

6.C-4 Donation - 28 acres of land from Mr. and Mrs. Louis Patzke, Wauwatosa, to be used as Scattered Forest Lands, Sawyer County.

Mr. Lawton explained that Mr. and Mrs. Louis Patzke, Wauwatosa, propose to donate to the DNR 28 acres of unimproved land valued at \$7,000. The land is located in the Chequamegon National Forest in Sawyer County. The land may be used by the department in a future exchange with the U.S. Forest Service for other needed lands.

The Land and Business Committee recommended and Mr. Lawton MOVED that the Board accept the donation of 28 acres from Mr. and Mrs. Patzke as Scattered Forest Lands in Sawyer County.

The motion was seconded by Ms. Conroy.

When put to a vote, motion was carried unanimously.

6.C-5 Statewide Public Access Area - Wind Lake land acquisition - Racine County.

Mr. Lawton reported that an option has been obtained to purchase one acre for \$49,900 from Mr. and Mrs. Dickie Schellenberger for the Statewide Public Access Program. The access site is on Wind Lake in Racine County. The option will expire on November 30, 1978. The item is being submitted to the Board because of high unit value.

Mr. Lawton explained that this is a Priority I purchase in the department's land acquisition plan. The one-acre lot is located on a town road about eight miles northeast of Burlington, and the Milwaukee metropolitan area is a few miles to the northeast. Terrain is fairly level and the site is covered with woods and lawn.

Improvements consist of a residence, garage-boathouse and a shed. These will be removed to provide area for public access development. The condition of the improvements is poor and estimated recoup of cost is minimal.

The site is located on Wind Lake, the largest lake in Racine County. Lake frontage consists of about 153 feet. The town road adjacent to the tract will facilitate development of a public access area. This will be the first state-owned public access site on Wind Lake. Water-related recreational opportunity will be more readily available to the large urban population in the area.



State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

BOX 7921
MADISON, WISCONSIN 53707

August 24, 1981

File Ref:

Mr. David Weizenicker
Bureau of Parks
Box 7921 - DNR
Madison, WI 53707

Dear Mr. Weizenicker:

The Wild Resources Advisory Council wishes to congratulate the Havenwoods Ad Hoc Advisory Committee and the Department for setting up a most ambitious Master Plan for the Havenwoods Forest Preserve and Nature Center.

Sincerely,

Henry Kolka
Henry W. Kolka, Chairperson
Wild Resources Advisory Council

HWK:RDL:ucd
0438a

General Review, Comments and Recommendations
for Havenwoods Master Plan
by the Wild Resources Advisory Council

General Review

The Wild Resources Advisory Council wishes to commend the Havenwoods Ad Hoc Advisory Committee and the Department for presenting an exceptionally elaborate and detailed Master Plan for the Havenwoods project area. The Council suspects that the plan is overly ambitious and, in many respects, unrealistic. A 237 acre publicly-owned, undeveloped block of land surrounded by urban dwellers is a valuable and welcome asset. However, to recreate a badly disturbed and, in some instances, environmentally mauled area into a quality natural ecosystem, in the Council's opinion, is a bit unrealistic and woefully expensive. WRAC does not wish to discredit the planners or discourage them in their dream of a credible natural area. In fact, the Council supports the basic concepts of your proposal on a long-term time frame. On short-term basis we encourage planners to consider the project area as an educational, recreational urban park catering mostly to the interests of the surrounding home owners; a place for children to learn and play, aged to gather and contemplate, joggers to do their thing, handicapped to enjoy, etc.

Comments and Recommendations

1. Page 1: Goals and Objectives

WRAC considers the goals and objectives as well conceived. Excellent.

2. Page 3: 4th paragraph under Management

Last sentence -- If there are to be meaningful trails, we suggest that they function educationally, as well as recreationally. Thus, the Council recommends that and educational be inserted between recreational and trails. Also that and educational be inserted between recreational and activities.

3. Page 4: Table 1

So as not to be labeled chauvinistic, the Council suggests that the phrase (1m/yr) repeated for 1982-1983 as (3m/yr) be changed to 1 or 3 p/yr.

4. Page 6: Table 2

WRAC does not believe that today's economy and money market can support expenditures of \$1.6+ million for project development. Even if such expenditure could be arranged the Council questions spending \$342,000 on Vegetative Management Landscaping.

5. Page 6: second paragraph under Land Ownership

WRAC supports the DNR's resolve to protect and preserve the maple-beach forest located on US Army property adjacent to Havenwoods site.

6. Page 16: first paragraph under Resource Protection Alternative

WRAC questions whether any site measures up to natural area qualification, and certainly not to scientific area level, on the 237 acre Havenwoods block.

7. Page 29: Figure 5

The charts in the Master Plan are exceptional. Figure 5, Proposed Vegetation Management Zones -- WRAC questions the advisability of setting aside as much land into prairie as indicated by Figure 5. Could there be some concern in having the bulk of trails looping through a prairie zone?

8. Additional Comment

In regenerating a forest cover in the project area, no clear plans were proposed as to species planting and management.

Respectfully Submitted,


Henry W. Kolka, Chairperson
Wild Resources Advisory Council

Date: September 4, 1981

File Ref: 2510

To: Richard Lindberg - PLN/6

From: D. L. Weizenicker *dlw*

Subject: WRAC Comments on Havenwoods Master Plan

Our Bureau's response to the Wild Resources Advisory Council comments and recommendations on the Havenwoods Forest Preserve and Nature Center Master Plan are as follows:

1. Page 1: Goals and Objectives

WRAC considers the goals and objectives as well conceived. Excellent.

Department Response:

We agree that the goal and objectives developed by the task force are well conceived.

2. Page 3: 4th paragraph under Management

Last sentence -- If there are to be meaningful trails, we suggest that they function educationally, as well as recreationally. Thus, the Council recommends that and educational be inserted between recreational and trails. Also that and educational be inserted between recreational and activities.

Department Response:

The paragraph was revised according to the Council's suggestion.

3. Page 4: Table 1

So as not to be labeled chauvinistic, the Council suggests that the phrase (1m/yr) repeated for 1982-1983 as (3m/yr) be changed to 1 or 3 p/yr.

Department Response:

Table 1 was revised as suggested by the Council.

4. Page 6: Table 2

WRAC does not believe that today's economy and money market can support expenditures of \$1.6+ million for project development. Even if such expenditure could be arranged the Council questions spending \$342,000 on Vegetative Management Landscaping.

T0: Richard Lindberg - September 4, 1981

2.

Department Response:

We have reconsidered the expenditure proposed for vegetative management and reduced it to \$120,000. The difference was transferred to the environmental awareness center estimate to cover square footage increases recommended by the Havenwoods Ad Hoc committee. Also, it must be recognized the master plan is a long-range document.

5. Page 6: Second paragraph under Land Ownership

WRAC supports the DNR's resolve to protect and preserve the maple-beech forest located on US Army property adjacent to Havenwoods site.

Department Response:

So noted.

6. Page 16: First paragraph under Resource Protection Alternative

WRAC questions whether any site measures up to natural area qualification, and certainly not to scientific area level, on the 237-acre Havenwoods block.

Department Response:

We agree that Havenwoods does not meet the scientific area criteria of being a natural area of statewide significance. However, the opportunity to observe through time the transformation of a highly disturbed site in an urban setting to one with more natural qualities may have some scientific importance in a different sense. Through vegetative management landscaping Havenwoods will achieve a more natural appearance. The reference to "natural area" on page 16 is not to be construed as the Public Use Natural Area land use classification.

7. Page 29: Figure 5

The charts in the Master Plan are exceptional. Figure 5, Proposed Vegetation Management Zones -- WRAC questions the advisability of setting aside as much land into prairie as indicated by Figure 5. Could there be some concern in having the bulk of trails looping through a prairie zone?

Department Response:

Thank you for the compliment. We have reconsidered our prairie proposal and reduced the area to be established as prairie by one-half. The other half will be designated as "old field".

8. Additional Comment

In regenerating a forest cover in the project area, no clear plans were proposed as to species planting and management.

TO: Richard Lindberg - September 4, 1981

3.

Department Response:

Vegetative management is covered in the vegetative section on page 12. Regarding species, the plan states on page 12 that "in all restoration efforts, the species list provided in the Vegetation of Wisconsin will be used as a guide for species and stocking rates".

We thank the Council for their thorough review of the Havenwoods Master Plan.

cc: J. L. Treichel - P&R/4
→ J. Kulhanek - P&R/4
R. Winnie - SED



The State of Wisconsin

SCIENTIFIC AREAS PRESERVATION COUNCIL

Box 7921
Madison, Wisconsin 53707

September 8, 1981

IN REPLY REFER TO: 2510

Mr. David Weizenicker
Bureau of Parks and Recreation
Department of Natural Resources
Madison, Wisconsin 53707

SEP 8 1981

Dear Dave:

We have reviewed the Havenwoods Master Plan and find no direct conflicts with our program objectives.

Since the presettlement vegetation in the Havenwood area was a beech-maple forest, we suggest less emphasis on prairie restoration and more emphasis on maintaining of natural successional stages including old field, shrub hedgerows, and early forest types. To provide more diversity of vegetation types the lowland woods could be expanded and efforts increased to protect the existing maple-beech woods.

Eventual acquisition of the U.S. Army tract to the west should be pursued to gain control of the maple-beech woods and provide access from the west.

We appreciate the opportunity to review the master plan, and wish the Department success in this most challenging property development.

Cordially,

Forest Stearns
Forest Stearns
Chairman

07360

Date: September 11, 1981

File Ref: 2510

To: K. Klepinger - RES/4

From: D. L. Weizenicker 

Subject: SAPC Comments on Havenwoods Master Plan

Our Bureau's response to the Scientific Areas Preservation Council comments and recommendations on the Havenwoods Master Plan are as follows:

1. First paragraph

We have reviewed the Havenwoods Master Plan and find no direct conflicts with our program objectives.

Department Response:

So noted.

2. Second paragraph

Since the presettlement vegetation in the Havenwoods area was a beech-maple forest, we suggest less emphasis on prairie restoration and more emphasis on maintaining of natural successional stages including old field, shrub hedgerows, and early forest types. To provide more diversity of vegetation types the lowland woods could be expanded and efforts increased to protect the existing maple-beech woods.

Department Response:

We have reconsidered our prairie proposal and reduced the area to be established as prairie by one-half, the other half to be designated as "old field".

The vegetative management proposals in the Master Plan (see Figure 5) do provide for a wide diversity of vegetation types. The extent of lowland forest is limited by the soil type that will support it.

3. Third paragraph

Eventual acquisition of the U.S. Army tract to the west should be pursued to gain control of the maple-beech woods and provide access from the west.

Department Response:

As proposed in the Master Plan (page 6, Land Ownership) the Department

To: K. Klepinger - RES/4 - September 11, 1981

will attempt to secure a special land use agreement in order to ensure protection of the maple-beech forest located on U. S. Army property. Since the forest is separated from Havenwoods by a railroad grade, easy access to the site will not be possible from Havenwoods. However, the site could be utilized on a supervised or organized basis as part of the environmental awareness interpretation program.

We thank the Council for their careful review and thoughtful comments on the Havenwoods Master Plan.

cc: J. Treichel - P&R/4
D. Kulhanek - P&R/4
R. Winnie - Milwaukee