

Chapter One:

Foundation Statements



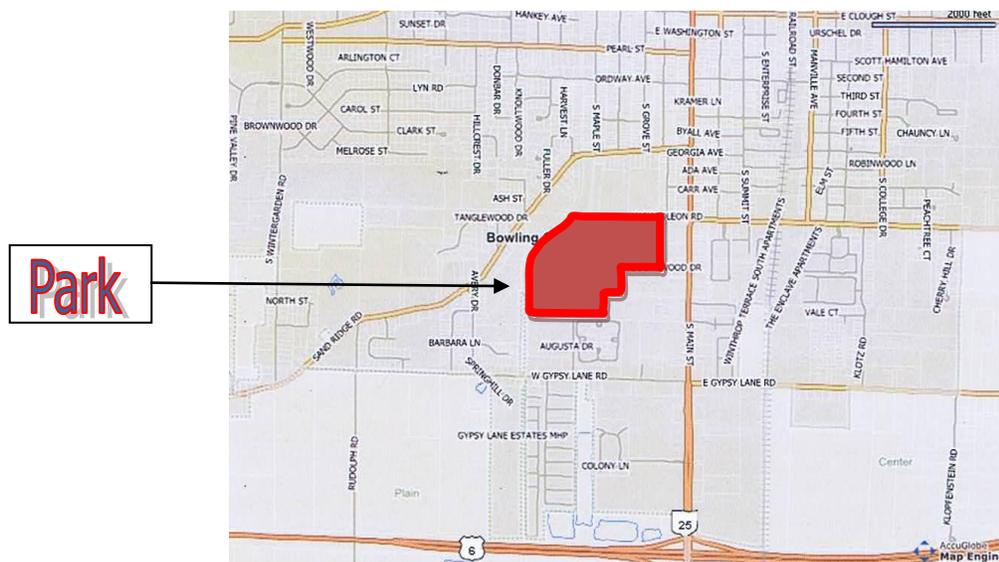
Purpose and Need for a General Management Plan

The purpose of this General Management Plan/Environmental Impact Statement is to outline the community's vision for the Black Swamp Preserve. A partnership has been established between the Wood County Park District and the City of Bowling Green to enhance the quality of life for its residents, reduce the city's operating costs, and rehabilitate the natural environment within the city, through responsible management of this key piece of property.

The need for this plan is to set forth a clearly defined management philosophy and a direction for resource preservation, interpretation, linkages, and visitor experiences for the next 15-20 years.

Park Location

The eastern boundary of the park consists of a staggered line running parallel to State Route 25 which is 950 feet east of the park and Kenwood Avenue, backing up against commercial development. The property consists of retail, financial, grocery and auto maintenance & supply stores. The southern boundary of the property runs parallel to Gypsy Lane Road, approximately 2,865 feet north of the road. Along the southern boundary, to the southeast is a residential community and to the southwest is a steel manufacturing plant operated by Rosenboom Machine & Tool Inc. The northern boundary of the property runs adjacent to the property line of the Bowling Green Montessori School and Kenwood Elementary school. Kenwood School is in proximity to many residential properties. The western boundary of the property runs directly adjacent to the Slippery Elm Trail, which is a regional bike trail owned and managed by the Wood County Park District.



Decisions to be Made – Potential Conflicts

From the initial scoping for the projects on June 8, 2010, a range of comments were received that expressed various opinions for the future management of the Black Swamp Preserve (Appendix B). The ranges of comments are expressed in the decision points listed below. The decision points are written as questions that show the range of comments received and are answered through the various design alternatives in chapter two.

Development –vs- Preservation

1. To what degree should the need for pedestrian and bicycle circulation through the park be allowed to affect resource conditions, interpretive programming, and recreational opportunities?

Partnerships

2. Can the resources be protected and made available to the community through the creation of partnerships and community volunteer opportunities or through the park district and city's budget?

Interpretation

3. Can we provide various levels of visitor contact to the resource throughout the wetlands or should access be restricted to a few sites and the visitor understanding enhanced in some other ways?

Visitor Experience

4. To what level do we provide for visitor comfort, services and support facilities?

General Management Planning Overview

The General Management Plan (GMP) for the Black Swamp Preserve relies on the park's management statements which are based on the agreement for acquisition through the Ohio Department of Natural Resource's Clean Ohio Fund and the significance of the site as a jurisdictional wetland as determined by the Army Corps of Engineers. Scoping meetings were held to seek public input in the development of the various management statements found in this chapter.

The public provided written comments which were used by the planning advisory committee to develop the management statements.

The intent of this general management plan is twofold:

- To specify resource conditions and visitor experiences to be achieved
- To provide the basic foundation for decision-making regarding the management of the parks and future decisions.

This GMP represents an initial agreement between the Wood County Park District (park district), City of Bowling Green Parks and Recreation Division (identified in this document as the City of Bowling Green or city), and the residents living in Bowling Green, Ohio. It describes how their park will be used and managed. As such, it is intended to:

- Confirm the purpose, significance and mission statements for the park;
- Establish the goals of the management entities and the public in regard to visitor experience, natural resources, and cultural resources;
- Outline the future types of resource management activities, visitor experiences, and identify the development that will be appropriate in the park to meet established goals
- Help the management entities determine staffing levels and determine whether actions proposed by the city and park district, or others, are consistent with the stated management statements;
- Serve as the basis for shorter-term management documents such as strategic plans, annual performance plans, and implementation plans that will be tied to this document

Some future visitor experience, natural resource, and cultural resource conditions at this park are specified in this document through management objectives. Others are open to debate and must be determined in the future through site specific planning. This general management plan addresses the resources and visitor experience conditions that are not already mandated by law, policy or past written agreements.

The Wood County Park District and City of Bowling Green views the public as an integral team member in establishing the desired resource and experience conditions that will guide the management of the Black Swamp Preserve. Measures taken by the park district and city include the public as a partner in general management planning for the park including soliciting formal and informal public participation in the planning process and incorporating suggestions from the public into the proposed management alternatives.

This plan identifies several specific actions while leaving others more general. The plan does not describe how particular programs or projects will be ranked or implemented. Those decisions will be addressed during the more detailed planning associated with strategic plans, implementation plans and annual performance plans utilizing an established delegation of authority protocol as illustrated in appendix D. All of those plans will be derived from the goals, future conditions, and appropriate types of activities established in this general management plan which is based off of public participation and input as incorporated.

Mandates

The GMP/EIS, which includes the visitor use plan for the Black Swamp Preserve, will identify the overall direction for park management over the next 15-20 years. It will also provide a framework for the park district and city to use when making decisions about issues that determine how to best protect the park resources, how to provide a quality visitor experience, how to manage visitor use, and what kinds of facilities if any, to develop in the park.

The main over-riding mandate for making design decisions are the deed restrictions agreed to in the 2003 Clean Ohio Grant for Land Acquisition. The use and development limitations and perpetual management constraints are part of the Declaration of Restrictions dated September 1, 2003 between the Wood County Park District and Ohio Public Works Commission. The applicable portion of the declaration is located in appendix C.

The sections specific to the planning of this park are as follows:

1. Use and Development Restrictions. *The described premises shall remain in the ownership and control of the Wood County Park District in perpetuity. Further, said premises shall be utilized as public parkland in perpetuity and shall be used for the preservation of open space and passive recreation. The premises shall allow access and parking areas suitable for park users, maintenance and emergency vehicles.*

Any future improvements to the property will be in keeping with the past practices and policies of the Wood County Park District. Possible future passive recreational uses include nature study, fishing, development of hiking, biking and equestrian trails, and rest facilities including benches, shelters, and rest rooms and picnicking facilities.

2. Perpetual Restrictions. *The restrictions set forth in this Declaration shall be perpetual and shall run with the land for the benefit of, and shall be enforceable by, Ohio Public Works Commission (OPWC). This Declaration and the covenants and restrictions set forth herein shall not be amended, released, extinguished or otherwise modified without the prior written consent of OPWC, which consent may be withheld in its sole and absolute discretion.*

Public Involvement

The mission, purpose and significance statements were developed by the planning advisory committee based off of the initial public comment received in June of 2010. The statements were reviewed by the public at the October 16, 2010 public meeting. The feedback from the meeting confirmed to the planning advisory committee, that the statements reflected the community's vision for the park. The statements are presented below. They provide a valuable context and basis for planning; understanding and evaluating the three design alternatives and the no action alternative described in Chapter 2.

Purpose

The purpose for the Black Swamp Preserve identifies the community's understanding about why the park exists:

To preserve, restore and interpret remnants of the Great Black Swamp, in the heart of the City of Bowling Green, and illustrate the park's significance protecting these historic wetlands so they can support modern storm water needs and providing opportunities for those seeking natural beauty, environmental education, and passive recreational opportunities.

Significance

Significance statements identify specifically, why the Black Swamp Preserve was established. It focuses on what specific park resources and values are significant to warrant its existence. The significance statements help the park district and city to set priorities for resource management and to identify interpretive themes and desired visitor experiences. If even one of the seven significance statements shown below is removed from the list, it would decrease the importance of the park by its citizens.

The park possesses numerous wetland and passive recreational opportunities, supporting a strong and enduring quality of life which includes:

- 1. Providing the community with a natural landscape of high environmental and aesthetic quality within the city limits.*
- 2. Maintaining accessible linkages between community parks, multi-use regional trails, adjacent schools and active recreation facilities throughout the area and buffering between contrasting land uses.*
- 3. Holding and purifying storm water, recharging the aquifer and increasing the community's environmental and economic sustainability.*
- 4. Creating opportunities to increase hands-on education that focuses on increasing science and environmental literacy for school children and immersing park visitors of all ages into the function and importance of a balanced wetland ecosystem.*
- 5. Preserving the local heritage of the Great Black Swamp through the education, appreciation, and understanding of the site's swamp woodlands and open wet meadows.*
- 6. Utilizing this central green space, within an urban setting, to combat global warming, reduce carbon emissions and provide a heat island to reduce ambient air temperatures.*
- 7. Functioning as a refuge and rest stop for migratory birds and as a breeding area for local wildlife.*

Mission

It is important to have a mission statement for the Black Swamp Preserve to identify the particular goals of the park. The mission statement links the park to the overall mission of the two organizations managing the parkland. The missions for each park organization are as follows:

Mission of the Wood County Park District

To preserve, enhance, protect and interpret the natural resources of Wood County, while providing quality passive recreational and educational opportunities for present and future Wood County citizens

Mission of the Bowling Green Parks and Recreation Department

The Bowling Green Parks and Recreation Department provides programs and facilities that enhance the quality of life for the citizens of Bowling Green. We achieve this goal by:

- Building and programming our own facilities and cooperating with other public and private entities in shared management and programming.
- Supporting other agencies, corporations and individuals in their efforts to provide recreational programs and facilities for the general public.

Mission of Black Swamp Preserve

The mission for the Black Swamp Preserve was developed by analyzing the purpose and significance statements, in general terms, to avoid precluding any legitimate alternatives from being studied during the planning process. It also ties in the two mission statements from the two park organizations.

Through a partnership between the Wood County Park District and The City of Bowling Green, the park will be preserved, enhanced, protected, and valued by present and future generations and the public will understand and appreciate how the parkland plays a critical role in the community's environmental, social and economic systems.

Desired Future Conditions

Desired future conditions are the broad ideals and visions that define how park resources and visitor experiences are to be developed and managed in the future. They articulate specific goals that are to be achieved. The following desired future conditions were identified by the planning advisory committee and reviewed by the public during the initial phases of planning:

Cultural Resources *(including archeological, ethnographic and historic resources; cultural landscapes; collections)*

- All known and unknown historical resources are protected for public appreciation and education
- The park character reflects the early settlement of the Great Black Swamp

Natural Resources *(including vegetation, wildlife and hydrology)*

- Plant and animal habitats typically found in the wetlands of the Great Black Swamp are restored and maintained to the highest biodiversity standards without fragmentation of the resource
- Water quality and riparian health is monitored to educate and influence responsible land use practices in the community

Visitor Use *(including orientation, visitor services and facilities, access and circulation, and trails)*

- Defined trails within the park are accessible, safe, well marked and low impact to the resources
- The park provides a variety of year-round passive recreational opportunities to its visitors
- Visitors are encouraged to explore opportunities to learn about the resources present within the park
- Appropriate facilities are provided to enhance visitor comforts

View sheds

- Long views through the natural setting of the park are enhanced for public appreciation and enjoyment

Boundaries

- Natural and legal boundaries around the park are identified and protected from encroachment
- Visitors to the park will be aware of and respect the boundaries

Surrounding Land Uses

- The park is surrounded by compatible land uses which will not prevent the park from being established and enjoyed by future generations

Connections and Linkages

- Connections to and between community resources are clear and concise

Park Management and Operations

- Appropriate interpretive and maintenance facilities are provided to serve the programs and operations at the park with emphasis given to both sustainability and aesthetics

Partnerships

- Partnerships between other organizations are developed to enhance operations, support community initiatives and encourage collaboration

Interpretive Themes

Interpretive themes represent the concepts and underlying principles that are important to communicating the significance of the sites using programs, signs, brochures, and other media. The following ideas, concepts, and compelling stories are central to the site's purpose and significance, and to visitor experiences. The four interpretive themes for the Black Swamp Preserve are:

1. Provide for self directed, teacher directed and park staff directed environmental education through partnering opportunities between various educational institutions, encouraging ongoing research, sponsorships and volunteer opportunities.
2. Illustrate the role of a balanced wetland to the water cycle which is directly related to improved drinking water quality and public health & wellness.
3. Preserve a backdrop and capture the essence of the conditions faced and opportunities available to the American Indians, military and settlers to the local area through cultural and historical programming.
4. Support and increase scores related to state education standards utilizing a cross curriculum in science, history, and math through real life learning and real time situations.

Chapter Two:

Design Alternatives and the Preferred Alternative



The alternatives were based on public input gathered during the June 8 and October 16, 2010 meetings. The alternatives fit within the purpose and need for the park as described in chapter one, page 1 and reflect the diverse expertise of the planning advisory committee. The preferred alternative and the other design alternatives, including the one that would not substantially change existing conditions (“no action alternative”), are intended to support the Black Swamp Preserve’s significance and purpose, achieve desired future conditions, avoid unacceptable resource impacts, and provide for public appreciation and enjoyment of the park.

The main body of this section includes detailed descriptions of the preferred alternative and the other alternatives. Potential environmental impacts of the preferred alternative and alternatives are presented in the subsequent environmental consequences in chapter four.

Actions common to all design alternatives

The following are actions that will apply to all alternatives except for the no action alternative.

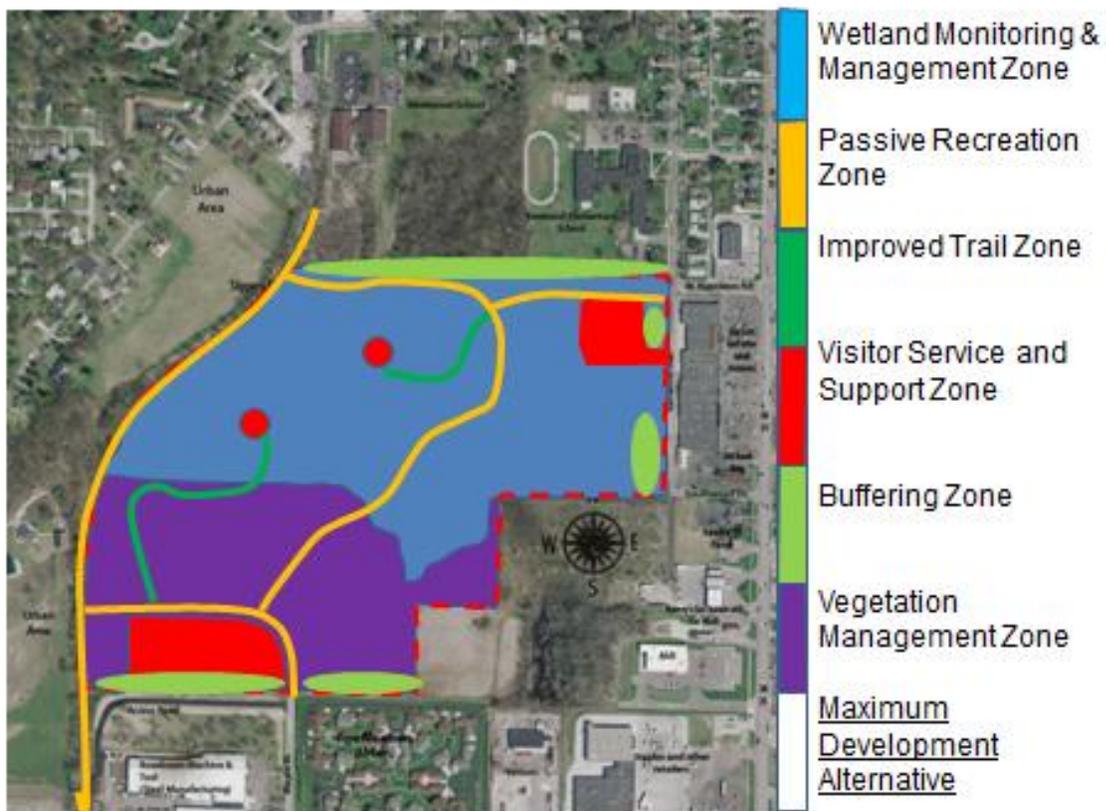
- As soon as the GMP/EIS is approved, the management would actively seek partnerships and opportunities inside and outside the park, to encourage cooperation with local communities, government agencies, non-profit organizations, neighborhood groups, and other entities that may have an interest in helping to achieve the park’s desired future conditions (chapter one, page 7). The park departments would also cooperate and partner to help others achieve their goals outside the park, when such cooperation would also advance a purpose for which the park was established. The parks departments may work with others to identify and pursue funds, staff, volunteers and other resources that might be acquired to supplement operating funds.
- The park would continue to be managed to maintain and enhance the wetlands within its boundaries.
- A variety of visitor activities and facilities, appropriate in the park, would provide the management entities with a range of opportunities, time commitments, and levels of exertion while in the park.
- Any new adjacent development would be influenced by the park entities and designed to avoid visual intrusions into the park landscape.
- In areas anticipated to have higher visitor use, visitor movement and access would be controlled by park managers to ensure continuous resource protection while accommodating the multiple use activities. Controls on visitor use may include limited improvements such as walkways, barriers, benches and interpretive & informational signs as per the Prescription Management Zones.

Alternative A - No Action – (Basis for Measuring Intensity)

The no action alternative is only a continuation of existing conditions and management practices. It provides a baseline comparison, or benchmark, to measure intensity of impacts for the other alternatives. No action doesn't mean the park would not be maintained, it just means it will be managed as is currently being done.

- The visitor experience would not change from what currently exists
- Resources are maintained to control non-native/invasive species
- Visitors would be allowed uncontrolled access to the park
- Wetlands will be minimally managed with the goal to maintain public health and discourage the establishment of non-native and invasive species
- No partnerships will be established to maintain the site
- No barrier free access will be available
- No programming will be available
- Parking will only be available on existing adjacent streets and parking lots
- No restrooms will be provided
- There will be no long range planning for the park
- Monitoring by park rangers, city police department, emergency services and the general public will be limited mostly to the perimeter

Alternative B – Maximum Development



Cultural Resources

- Replica structures typical of a settlement in the Great Black Swamp will be placed throughout the park to entertain visitors and support many uses including visitor services, maintenance and interpretation and passive recreation. Each structure provides a specific element in the experience. An archeological phase II investigation should be conducted in areas where the ground may be permanently disturbed to identify and remove any artifacts that are not yet identified.

Natural Resources

Impacts on natural resources may be considered, and likely impacts to resources would be mitigated through appropriate design and placement measures and/or recreating additional wetlands in areas not developed.

- Protection of the natural resources are mandated in the deed restrictions (appendix C)

- Physical controls on visitor movement and access may provide for resource protection while accommodating high levels of use.

Visitor Use

- Multiple visitor experience goals may include interpretation of cultural and natural resources, designated passive recreation, and expanding the Slippery Elm Trail.
- This alternative is designed for maximum visitor access and stimulation of the senses.

Trails

- The park will support a main trail through the park with two small trails into sensitive areas which are designed to interpret different themes or subjects. Viewing areas will be provided along the trails to observe wildlife.
- An offsite recreation trail will be proposed to maximize the variety of trail activities. It would run from the northeast corner of the park to Kenwood Avenue and onto Sand Ridge Road, returning on the Slippery Elm Trail and back onto the park's trail system.
- Schools may access the park either via the Slippery Elm Trail or Kenwood Avenue.

Physical Exertion

- Physical exertion on the site may range from low to high, accommodating every user and providing for many different experiences into the Great Black Swamp.

Interpretation

- Interpretation and educational activities may include programs of a special nature such as off trail staff led walks. Other opportunities could include trailside exhibits and virtual experiences.
- The park is developed using various themes; cultural, natural resources, and passive recreation.
- All interpretation may be on site. Some programs may be presented in the third person format.

Development

- Development may be located throughout the park and may include picnic areas, restrooms, a community playground and a mowed area to provide for impromptu play.

Restroom/Parking

- Large parking areas will be provided in the northeast and southwest corners. They will include flush restrooms. The restrooms and parking will be accessed off of Maple Street and off of Kenwood Avenue. Overflow parking into adjacent areas will be provided for public and private events.

View sheds

- Buffers along the south boundary will be placed in front of the steel manufacturing facility and adjacent residential community.
- Buffers to the north may be a solid screen along the boundary.

Boundaries

- All boundaries may be identified but access from multiple points may be allowed.

Surrounding Land Use

- The two park organizations may support development along the boundaries when appropriate, to encourage people to the park resulting in the park becoming a destination for the public.

Connections and Linkages

- Two significant linkages may be built along the Slippery Elm Trail leading to the east side of the park, to support defined and undefined uses.

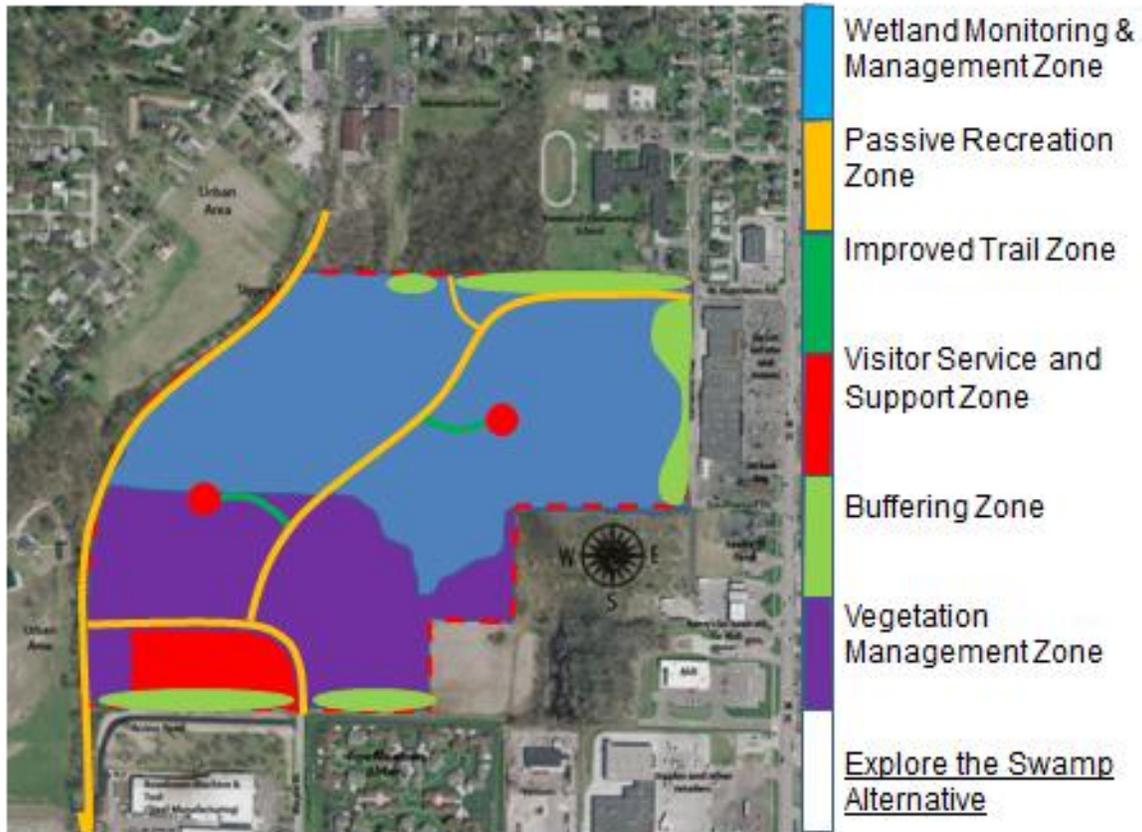
Park Management and Operations

- A small maintenance facility may be established on the south side of the park, adjacent to the public parking and restrooms, with full time staff.

Partnerships

- With the park supporting many uses, a high level of interest may be created to support development and programs.
- Opportunities for partnerships may be high compared to the other alternatives because more options are available.

Alternative C - Immersion into the wetland



Cultural Resources

- There may be no replica structures relating to the Great Black Swamp. Any supporting elements may be built out of natural materials to blend into the setting of the park.
- A phase II archeological investigation may be conducted under proposed paved trails or structures to rule out any impacts to undiscovered resources.

Natural Resources

- This alternative may be developed with the least impact to the resources.
- Impacts to the wetland resources may be minimal and the function of the wetlands may be paramount to visitor accommodations.

- Protection of the natural resources is mandated in the deed restrictions (appendix C)

Visitor Use

- Management of the natural resources may focus on the ecological, educational, and inspirational values of the wetland, and on understanding and facilitating the process that would permit the wetlands to fully express itself.
- The park may promote a heightening of the senses: sound – wildlife, touch – at ground level, sight – design aesthetics, sound – locating trails towards the center of the park.

Trails

- An elevated boardwalk bisects the property.
- Two separate trails come off of the central boardwalk, each with a different interpretive theme. Each of these trails may be gated to control access during programs and give the participants an in-depth learning experience.
- A gated, private trail may lead from the park to a point along the north boundary between the two schools for the students to have private access into the park.
- The level of trail maintenance may be the lowest compared to the other alternatives to keep the experience as natural as possible.

Physical Exertion

- Physical exertion may be moderate to high depending on visitor's needs and desires.

Interpretation

- The focus of this alternative is integrating management of the natural and cultural resources for the site, which reflects the deep intertwining of these resources in the park.
- Contains a minimal amount of educational support facilities to provide for in depth studies of the wetlands. Most interpretation may be done off site.
- This alternative supports formal and informal programming opportunities.

Development

- Trails may be developed though the center of the park. The visitor service may be provided in the northeast and southwest corner only.

Restroom / Parking

- Parking and restrooms may only be provided off Maple Street. It may be moderate in size compared to the development in other alternatives.
- Flush restrooms may be built on this side of the park.

View sheds

- Buffering may be established along the south boundary to screen the steel manufacturing facility and residential area; the east boundary to block the view of the commercial buildings and along the property line of Kenwood Elementary School .and Montessori School.

Boundaries

- All boundaries may be fenced and gated to provide maximum security.

Surrounding Land Use

- The two park organizations may closely monitor any proposed surrounding development that would impact any part of the park's resources. They may request on site mitigation for impacts imposed on the surrounding properties to reflect responsible resource development.

Connections and Linkages

- There may be one access point from the Slippery Elm Trail to the northeast corner of the property which connects both sides of the park. This may be the longest route of the three alternatives, increasing the duration of visitors being in the park.

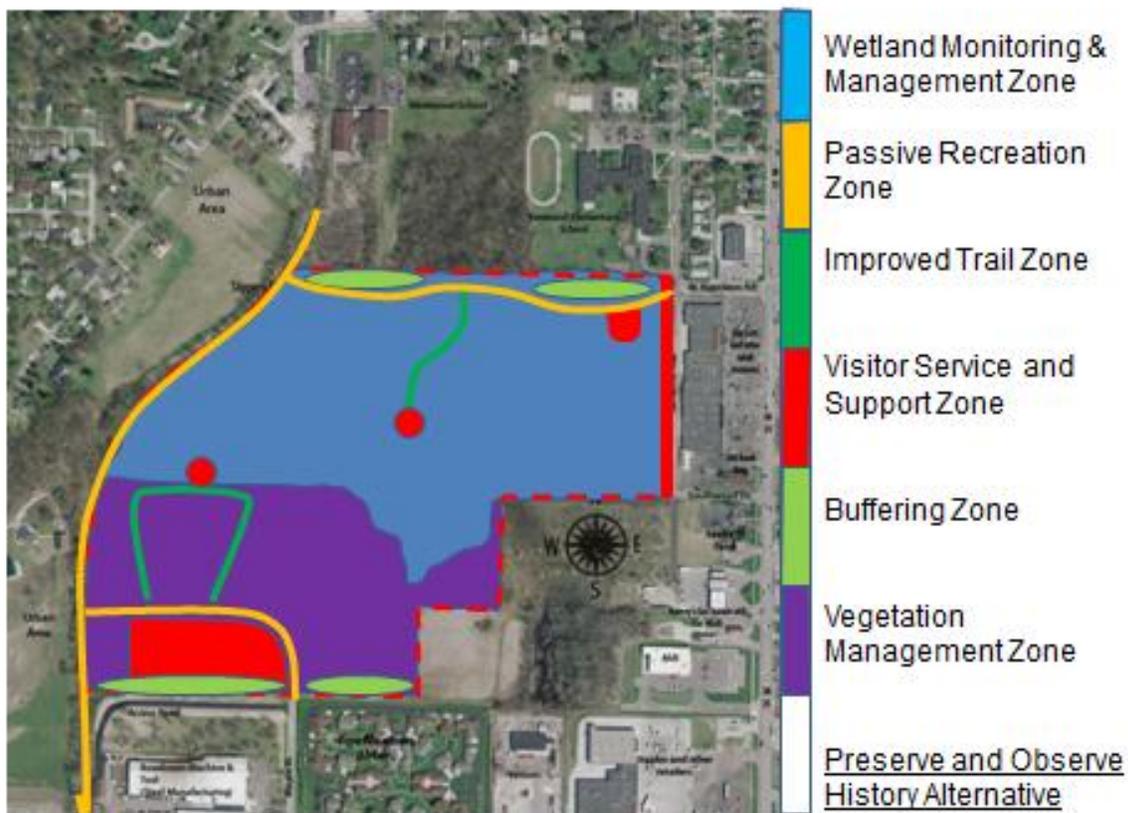
Park Management and Operations

- A small storage area may be provided to support limited maintenance and on site interpretive programs.

Partnerships

- Partnerships to support development and programming may focus on organizations and companies that promote nature and responsible development of the environment.
- Opportunities for partnerships may be limited more to organizations with an interest in preservation of the resources.

Alternative D – Focus on History – Preferred Alternative



Cultural Resources

- The cultural preservation may include managing landscapes, features, views, and vistas and interpreting these resources to the public.
- A phase II archeological investigation should be completed in the areas where permanent ground disturbances will take place although a majority of the trails may be board-walked.

Natural Resources

- The resources may be used as backdrops to historical interpretation.
- The natural resources provide a realistic setting for educational opportunities in the Great Black Swamp.
- Protection of the natural resources is mandated in the deed restrictions (appendix C).

Visitor Use

- The design of new developments may be sensitive to the cultural and natural environment; it would maintain harmony and continuity with the special visual qualities of the landscape and, with the natural and cultural features that create a sense of time and place, unique to the park.
- Visitor use may focus on education as per the interpretive themes, chapter one.

Trails

- The Slippery Elm Trail is the spine for the trail systems with two trails starting from the Slippery Elm Trail.
 - North trail – education theme for natural surroundings and interaction with the resources. Access to Kenwood may also be provided.
 - South trail – improved trail through the wet meadow with views into the wet woods.
- Connections may be made to the schools via Kenwood Avenue or the Slippery Elm Trail.

Physical Exertion

- Visitor exertion may be low to moderate and include scheduled and organized opportunities to participate in guided walks through the site off trail when conditions permit.

Interpretation

- This alternative may provide a focus on history of the Great Black Swamp while addressing the various interpretive themes.
- Through direct contact and varied interpretation efforts, visitors could understand the daily activities of people who settled in the Great Black Swamp.
- Educational opportunities may be equally divided between on site and off site experiences.

Development

- On street parking and portable restrooms may be provided in the northeast corner of the park.

Restroom/Parking

- A parking lot and flush restrooms will be located on the south side of the park, off of South Maple Street to serve park visitors and users of the Slippery Elm Trail. The Kenwood portion of the project would only have a restroom on park property. Parking would be along the

east boundary, on the shoulder of the road. A second small parking and restroom may be installed along Kenwood Road in an existing upland stone area just west of the road shoulder.

View Sheds

- Buffering will be used to screen out views of the steel manufacturing facility and residential development.

Boundaries

- Boundaries will be clearly marked. Various design features will be used to control access in critical areas

Surrounding Land Use

- The park organizations will monitor adjacent land uses to encourage aesthetics in the design and responsible development of the resources.

Connections and Linkages

- One linkage from the Slippery Elm Trail to Kenwood Avenue will be provided for bikes, walkers and joggers. It will be designed to concentrate passive recreation to the northern boundary of the park and encourage a low commitment of time in the park for these users shortest of the three alternatives.

Park Management and Operations

- A storage facility will be provided to support many on site programming activities. Storage will also be established for restroom cleaning and general maintenance.

Partnerships

- This alternative provides for a variety of interests. It will provide for multiple opportunities within the community to participate in maintenance, development and programming activities.
- The likelihood for developing a large variety of partnerships is high in this alternative because of the diversity of activities.

Management Prescription Zones

Management prescription zone descriptions have been developed based on what visitor experiences the public desires for their park. The descriptions agree with the park's purpose, significance and mission.

Visitors may come to the Black Swamp Preserve for very different and sometimes conflicting reasons. By providing a diversity of settings, visitors can theoretically select which experiences most closely match the reason they came to the park. In planning for a diversity of experiences, it helps to avoid the conflicts that often occur among visitors who want different things from their visit. With management prescription zones, the planning team has determined what resources, managerial conditions and visitor experience opportunities should exist in the park.

To define the design alternatives, the planning team applied management prescription zones to the actual park resources, creating a balance between resource preservation, creating a desired visitor experience, identifying measures to define and indicate impairments to the resource, defining corrective actions to take in the event of overuse of a resource, and communicating intended visitor expectations.

The management prescription zone descriptions define a prescriptive and proactive vision, categorized as follows:

- What visitor experience opportunities are provided in the park
- What the essential elements of those experiences are and how much land should be allocated to various visitor experience opportunities
- Where in the park should these opportunities be provided

We cannot expect to ensure that a diversity of experiences will be available at every facility in the park nor is it intended to provide all experiences in all zones.

In developing a range of potential resource conditions and visitor experiences, the management zones explain:

- Specific resource conditions to be protected or restored to.
- Expected social conditions in various zones.
- Kinds and levels of visitor uses throughout the park.
- Kinds and levels of park development
- Kinds and levels of management activity

Management zones used for the Black Swamp Preserve are:

Buffering Zone

Visitor Experience – Visitors would not be restricted from this zone but will not be accommodated within the zone. This zone would be enjoyed from outside the zone since it protects and mitigates impacts between zones and from the park looking outside its boundaries. This zone preserves natural and historical integrity of the park. Noise conditions may be moderate to high depending on the adjacent land use necessitating the buffer.

Resource Condition – The resources in this zone would be removed to support the type & style of buffering necessary to preserve adjacent zones.

Level of Development - This zone could contain earth berms, new vegetation, and fences with mowing strips. The park boundaries are identified and preserved.

Passive Recreation Zone

Visitor Experience – In this zone, a visitor would expect to encounter a variety of groups. Noise levels would vary from moderate to high depending on the activity. Physical exertion within this zone would be moderate to high. Use of this zone may conflict with uses of the natural or historic areas of the park. Opportunities for immersion into and of the specific resource would be low.

Resource Condition – This resource would be highly manipulated or changed to accommodate the intended activity. Native plant material may be transplanted to other areas of the park and known archeological resources would be removed.

Level of Development – The designated area would be groomed to support passive recreational activities. This zone may include highly developed trails, boardwalks, and open maintained meadows. No development would be permitted that supports use by organized sports teams

Wetland Monitoring and Management Zone

Visitor Experience – Visitors will not be accommodated in this zone unless on a temporary trail or during a special program. The park visitor would enter this zone for the purpose of learning and understanding the natural processes related to water quality. Within this zone, visitors may encounter others that are

alone or in small groups. Physical exertion in this zone would be moderate. Interpretation of the resources would be high. Noise levels within this zone will may be low.

Resource Condition – Resources within this zone would be protected from development at that specific location or in close proximity to the zone. It may be monitored for impairment caused by internal and external sources.

Level of Development - Development may be specific to standards set for the wetland construction which may include no filling within the zone for trails, elevated boardwalks and pier structures. All areas may be accessible to all visitors.

Vegetation Management Zone

Visitor Experience – Visitors will not be accommodated within this zone but would not be restricted from this zone. Experiences within this zone would be off trail and wild. Encounters with other visitors should not be expected while in this zone. Noise levels within this zone will be low.

Resource Condition – The resources within this zone would be managed to control non-native plant material and promote the reestablishment of a balanced natural area.

Level of Development - There will be no development within this zone. Access for maintenance or monitoring with motorized vehicles will be restricted by site conditions or seasonal wildlife habitats.

Visitor Service and Support Zone

Visitor Experience – In this zone, park visitors would receive their orientation and be provided with support services necessary for a positive park experience. Contact with other visitors would be moderate to high. Noise levels may be moderate to high. Exertion within this zone may be moderate.

Resource Condition – Resources may be removed from this area in order to accommodate the appropriate facilities. Revegetation of the area may be with native species and limited turf for circulation and safety.

Level of Development – This zone can contain parking lots, restrooms, paved trails, playgrounds, sitting platforms and shelters.

Natural Trail Zone

Visitor Experience – Visitors within this zone may be immersed into a natural experience. Intrusion by other park visitors would be low to moderate. Noise levels within this zone would also be moderate to low. Physical exertion within this zone may be moderate to high.

Resource Condition – The resources within this zone may have minimum modification to accommodate its use.

Level of Development - Development within this zone would be limited to mowing or mulching a footpath not exceeding six feet in width. Accessibility within this zone may vary based off of the resource and site conditions. Small boardwalks may be used if the natural resources would be impacted by trails on the surface.

Improved Trail Zone

Visitor Experience – The improved trail zone would consist of well maintained or groomed pathways designed to reach a specific destination or focus on a particular visitor’s experience. The use of this zone would require a commitment of time and moderate exertion. The probability of visitors encountering other visitors would be moderate on most days. There would be a fair to good chance of a secluded experience. Noise tolerance would be low to moderate. Visitor information would come from signs placed at overlooks, stops along the trail or interpretive media at the trailhead.

Resource Condition – Trails would be maintained in excellent condition based off of safety and the trail’s ability to protect the quality of the resource. Resource modifications would be evident but would harmonize with the surrounding environment through the use of color, setting and native materials. Tolerance for adverse impacts due to visitor use would be low. Facilities would be located away from sensitive cultural and natural resources that could not be protected.

Level of Development – The improved trail zone would be primarily moderate to high use trails. Hiking and cross-country skiing, and other traditional uses would also be appropriate. Horses and bikes would not be permitted. Trail materials may be turf, dirt, modified soil, stone, paved or boardwalked. Benches may be placed along the trail zone at designated intervals.

A summary comparison of the management prescription zones are in the table below

Zones	Expected noise levels	Expected encounters	Level of exertion	Level of disturbance	Allocation of time
Buffer	M - H	L	H	H	L
Passive rec.	M - H	H	M - H	H	H - M
Wetlands	L	L - M	M	L	M - L
Veg. manage.	L	L	M - H	L	L
Visitor serv.	M - H	M - H	M	L	L
Natural trail	M - L	L - M	M - H	M	H
Improved trail	L - M	M	M	M - H	M

L = Low M = Moderate H = High

Chapter Three

Affected Environment



The affected environment chapter represents information on the environmental, cultural, social, and economic considerations as they currently exist within the park and surrounding vicinity. Staff from the Wood County Park District and Bowling Green Parks and Recreation Department, the planning advisory committee composed of individuals that represent various local organizations and schools, and the feedback from the public meetings held on June 8, 2010, October 16, 2010, and March 24, 2011 have guided the information presented herein.

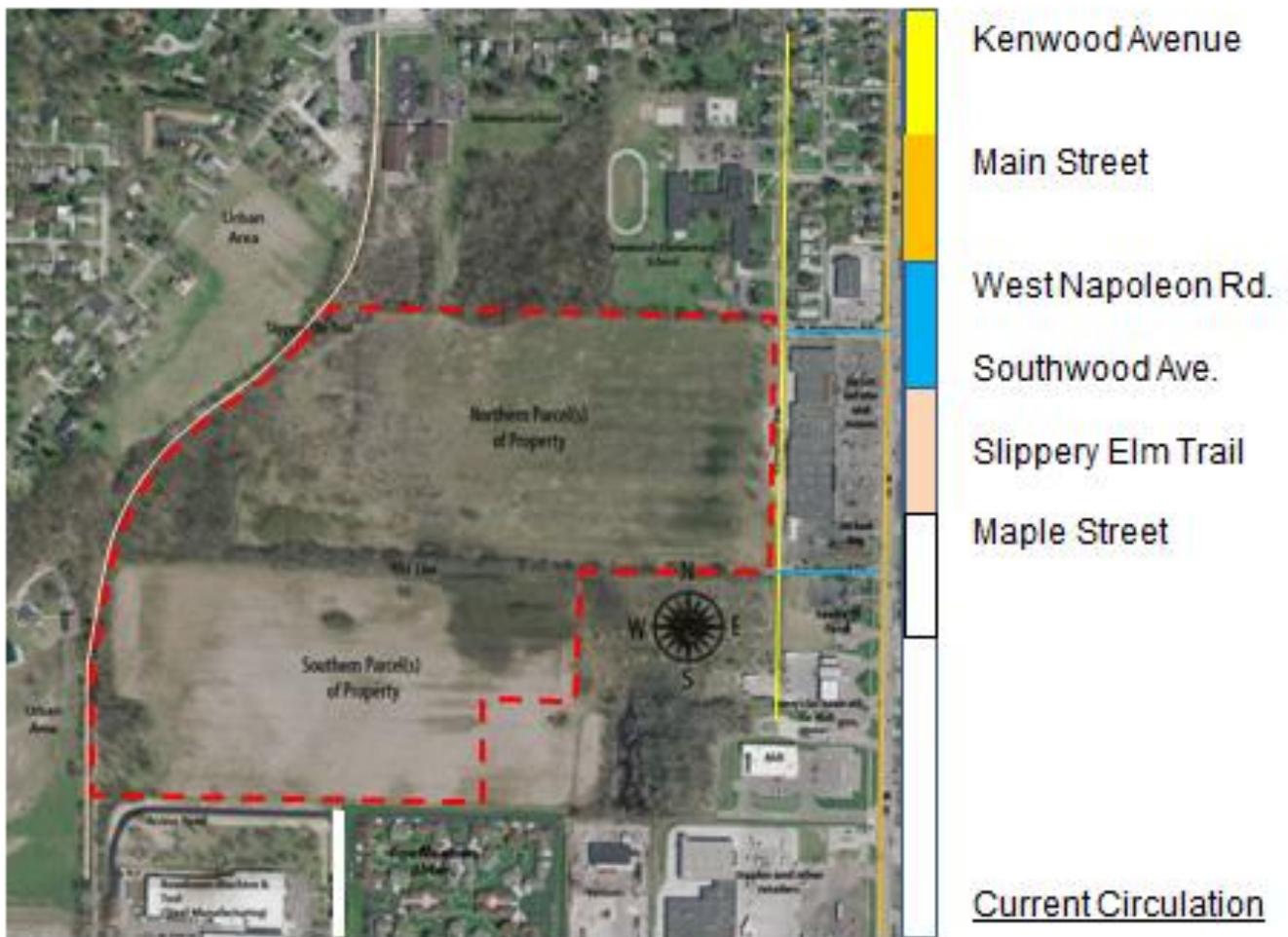
The design alternatives and the preferred alternative could potentially affect critical elements of the natural environment. Those elements are listed below:

- Accessibility
- Past Uses
- Wetland/Riparian Zones/Floodplains
- Hydrology
- Soils
- Geology
- Wildlife/Birds
- Threatened or endangered species
- Vegetation - Invasive/Non-invasive Species
- Cultural Resources
- Soundscape
- Visual Quality
- Topography

In addition to the critical elements, this chapter discusses the existing information in terms of park transportation and recreation.

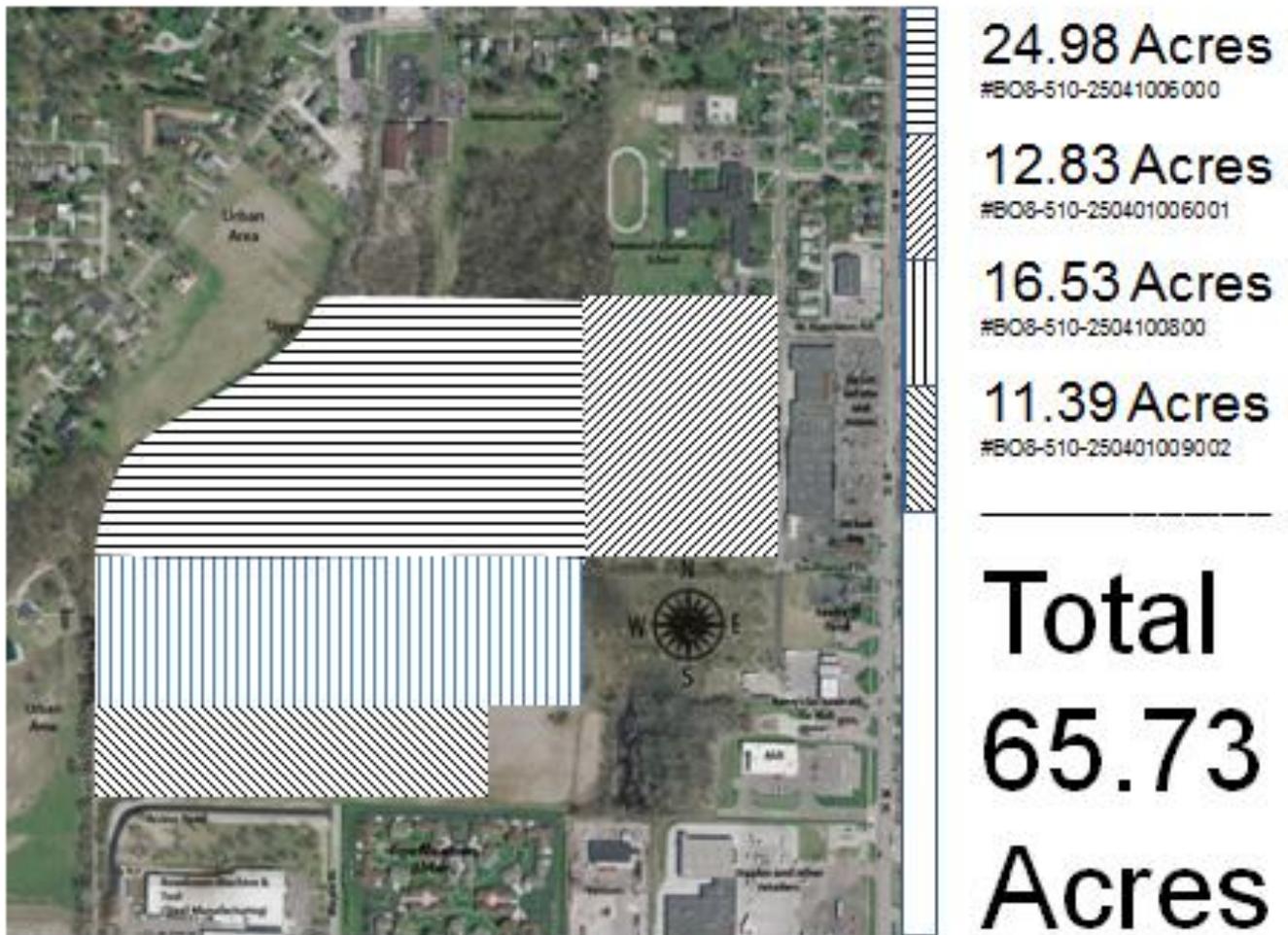
The total surface area of the park is 65.73 acres. This disturbance would be from trails, restrooms, shelters, parking areas, etc. as determined through design themes which relate directly to public input. Existing county, city and private roads and the Slippery Elm Trail on the perimeter of the park are not included in the estimate of the surface disturbance.

Accessibility



The parkland can be accessed by vehicles from Gypsy Lane Road via Maple Street, running north between Rosenboom Machine & Tool Inc. and a residential community. The land is also accessible from State Route 25 via W. Napoleon Road or Southwood Drive. Both streets lead to Kenwood Ave. Access exclusively for bikes and pedestrians can be obtained along the length of the Slippery Elm Trail which connects to the neighborhoods on Sand Ridge Road and Gypsy Lane Road. Neighborhoods northeast of the park gain bike and pedestrian access via Kenwood Avenue. The adjacent school zone provides for safe loading and unloading of students from other schools who are visiting the park.

Background of the Property – Past Uses



Context of the land's past use may be important in future planning

The parkland is located in Wood County Ohio, Plain Township, and within the the City of Bowling Green It consists of a total size of 65.73 acres. The background of the four separate, adjacent parcels, which were assembled to create the park, is as follows:

Parcel #B08-510-250401006001

This 12.83 acre, northern parcel was purchased by the Board of Public Utilities and is owned by the City of Bowling Green Department of Public Utilities. It was been held in ownership by the Board of Education since 1886. The existing Kenwood Elementary School was developed on a portion of this land prior to its separation and transfer to the City of Bowling Green.

Parcel #B08-510-250401006000

This 24.98 acre parcel on the northwest corner of the park was used primarily for intensive farming, supporting mostly corn, soybeans and wheat. It was purchased by the Wood County Park District in 1988. Since the time of acquisition, only small land management projects to control invasive species have taken place on this land.

Parcel #B08-510-250401008000 and B08-510-250401009002

The remaining 27.92 acres was former farmland owned previously by the current owner of the adjacent Baron Iron and Metal Company. It was purchased by the company with the intention to develop an apartment complex however, community opposition and the Bowling Green planning commission led to an eventual sale to the Wood County Park District in 2008.

Slippery Elm Trail

The Wood County Park District has owned and operated the Slippery Elm Trail since 1995. The 13 mile linear park, formerly a railroad right-of-way, consists of an asphalt trail connecting Rudolph, Ohio with North Baltimore, Ohio. It's conversion to parkland, to support passive recreational pursuits, has been considered as being very positive to the community. The acreage of the Slippery Elm Trail is not calculated in the total acreage for the Kenwood/Napoleon parkland.

Wetlands



Wetland

Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3(b)).

A majority of the parkland is designated as jurisdictional wetland. It is regulated through the Army Corps of Engineers and Ohio Environmental Protection Agency.

The Nationwide Permit 27 (NW27) authorizes the restoration and enhancement of degraded wetlands on public or private land, permitting activities including revegetation, the mechanized removal of nonnative invasive species and other activities associated with improvements to the functions and values of the aquatic resource. Nationwide Permit 14 (NW 14) authorizes activities required to

construct trails, limiting those activities in wetlands to ½ acre or less. Unavoidable impacts to wetlands must be mitigated as a condition of NW 14.

Based off of the Slippery Elm Trail Wetland Park Restoration Plan and Application for Nationwide Permits 27 and 14, dated March 23, 2006, the site contains 35.3 ± acres of jurisdictional wetlands including approximately 28.9 acres of scrub wetland, approximately 2.9 acres of forested wetland and approximately 3.5 acres of palustrine herbaceous wetland.

Hydrology

The park is located within the Portage River Basin Watershed. Any storm water discharge from the property runs into the North Branch of the Portage River. Significant discharge from the park is unlikely due to recent improvements by the City of Bowling Green. The Federal Emergency Management Agency (FEMA) regulates construction work within a 100-year floodplain. They determined that the park project involves no discharge into a floodway or floodplain which, if there was discharge, could have resulted in increased flood events in Bowling Green. The park lies within an area designated by FEMA as “unmapped”. Stormwater discharge is of significant importance for interpreting the need for communities to preserve open green space to lessen impacts to the region’s natural systems.

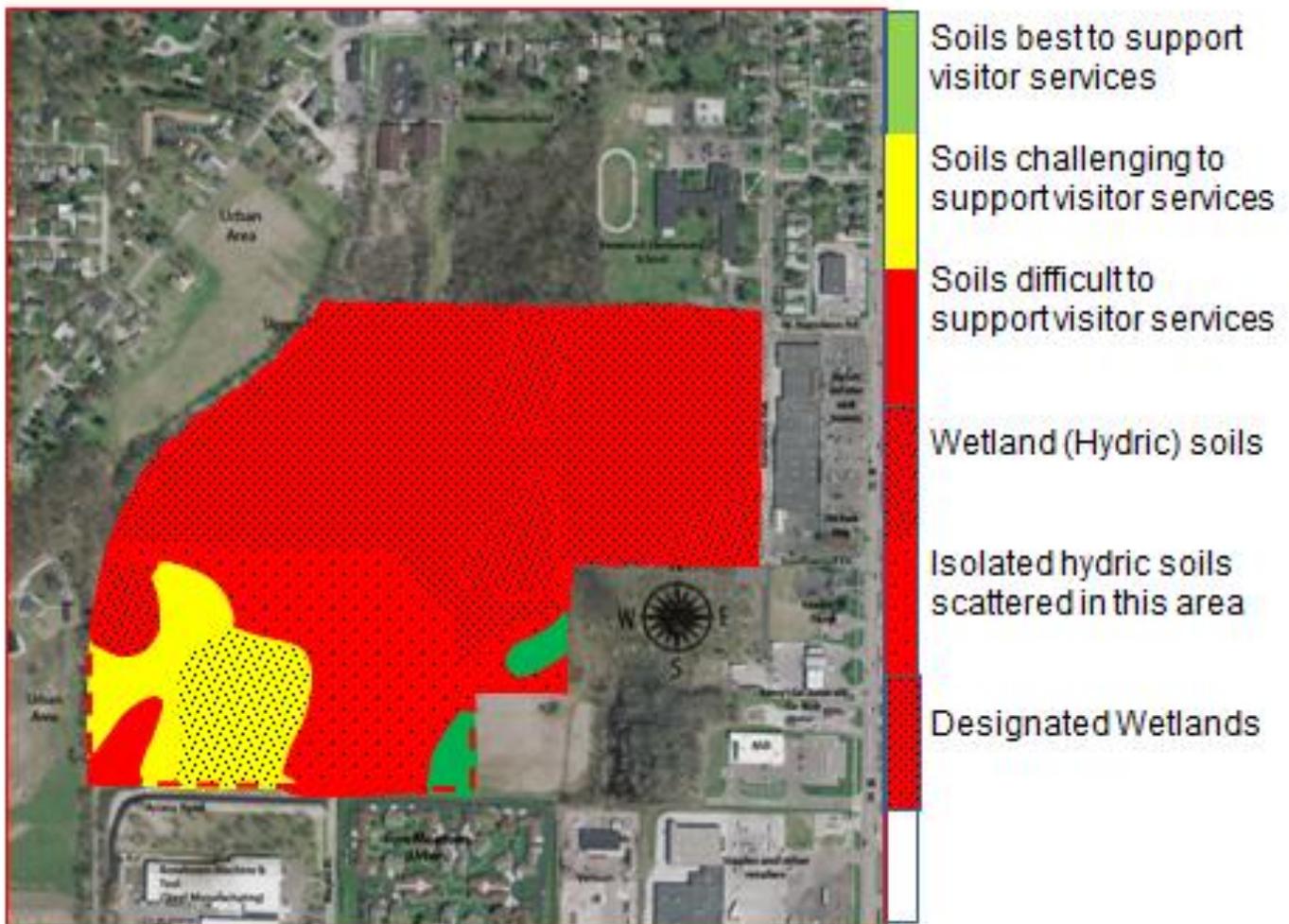
Surface water drainage is typically slow because of the seasonal and temporary high ground water table and soil conditions. Water collects seasonally in the northern corner of the northwest parcel and the southwest corner of the southern parcel. A ditch runs east and west separating the northern and southern parcels. Water does not flow off the property on the west due to the Slippery Elm Trail except through a ditch built by the railroad. The former railroad bed is built higher than the surrounding grade and acts as a dike to the park. Field tile may still function in portions of the park. If, in the future resource development plan, it is identified that the park should restore most of the natural hydrology, the remaining field tile would need to be located and blocked.

There is storm water runoff from the parking lots to the east of the property. Run off from other adjacent properties are minimal, with the only contributing factors being from the schools or houses to the north of the property.

In 2009, the City of Bowling Green engineered a storm water retention area in the upland area of the 27.92 acre parcel by redirecting rainwater via pumps from the storm sewer near Montessori School through a series of dikes, swales, and filtering plants. The purified water then drains into the wetland, recharging it and restoring a hydrology more in keeping with the pre-settlement history of the site. This adds to the diversity of the wetland, expands it into the upland filtering area, and forms a low-maintenance way to reduce run-off into adjacent streams and enhance an existing wetland. Maintenance actions include inspections and upkeep of the water control and outflow structures in the upland, control of invasive and exotic species and native plant re-establishment projects.

The wetland also provides important economic and ecological benefits to the citizens of Bowling Green. By removing storm water from the combined sewer, citizens benefit from lower water treatment costs and the City prevents dumping of untreated sewage into adjacent streams and ditches during high rainfall periods. The park becomes a living demonstration site of how to naturally handle excess rainwater, sending it through filtering plants and enhancing a natural wetland to support more wildlife and plants. Restoring more natural hydrology to the site also presents an excellent way for residents to appreciate the importance and beauty of Black Swamp remnants. And the fact that the site has become a public park with access through the wetlands is a demonstration of how agencies can work together to provide public land that serves multiple purposes without damaging the natural resources present.

Soils



The park contains eleven different soil types including Mermill sandy clay loam, Millsdale silty clay loam, Romeo soils, Wauseon fine sandy loam, Randolph loam, Haskins-Digby loam, Seward loamy fine sand, Ottokee loamy fine sand, Spinks loamy fine sand, Tedrow loamy fine sand, and Hoytville clay.

Most of the soils in the property are classified as either clays or loams which, due to their small soil particle size, retain water well. Seven of the soils are hydric and dominate the site, encompassing 61 acres of the total 65.73 acres. Hydric soils are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil. Hydric soils are one of the indicators in determining the location of wetlands and are considered very poorly drained. It is anticipated that the next wetland delineation will show an increase in the total acreage of the wetland.

The twelve different soil types will dictate many aspects for park development. Below is a listing of the soils within the park. The soils are listed in order of limitations to park development. The soils at the top of the list are more buildable than the soils at the bottom of the list.

Soil Name	Best Use	Drainage	Habitat	Hydric
Ottokee loamy fine sand	Play Fields	Good	Not Suitable	Moderate
Seward loamy fine sand	Play Fields	Good	Not Suitable	No
Spinks loamy fine sand	Play Fields	Good	Not Suitable	Yes
Digby loam	Transition Area	Fair	Not Suitable	Yes
Tedrow loamy fine sand	Transition Area	Fair	Not suitable	Yes
Haskins loam	Trails	Fair	Little Suitability	Yes
Randolph loam	Trails	Fair	Some Suitability	No
Hoytville clay	Marsh	Poor	Good Suitability	Yes
Millsdale silty clay loam	Marsh	Poor	Good Suitability	Yes
Romeo soils	Marsh	Poor	Good Suitability	No
Mermill sandy clay loam	Marsh	Poor	Good Suitability	Moderate
Wauseon fine sandy loam	Marsh	Poor	Good Suitability	Moderate

The table illustrates the challenges and restrictions for development based off of soil conditions

Descriptions of best use, drainage, ability to support quality habitat are based off of the soil's suitability for development to accommodate passive recreation. Soils with a moderate label in the hydric column are non-hydric but they do contain hydric components. The hydric components are typically found in low areas.

Geology

The bedrock found in Wood County was likely deposited during the Silurian Period (438 to 408 million years ago). During that time, Dolomite, Limestone, and Shale were deposited over western Ohio and in some places the bedrock rises to within a few feet of the surface (Boone, Brown, Frobose, Jones) in the Kenwood/Napoleon Park. Wood County's bedrock is dominantly made up of limestone. Limestone consists of fossilized seashells, shell fragments, calcareous sand, and consolidated mud. The main mineral in limestone is calcium carbonate (CaCO₃). The high bedrock creates a high water table, making it easier for wetlands to develop.

Soil borings from the southern parcel confirm the existence of high bedrock. In places, it is located less than 2 feet from the surface, making excavation difficult. This area is part of the Cincinnati Arch that runs through Northwest Ohio and pushes limestone bedrock to the surface.

The shallow bedrock in the park creates some significant restrictions on certain types of development for the park. The obvious restriction would be any excavations for such things as utilities, foundations and other infrastructure.

Wildlife

Urban wildlife is abundant within the park and provides positive experiences for the visitors. During the public scoping sessions, there were many positive comments about viewing the typical mammals that are found in the area. This would include bats, raccoons, rabbits/hares, deer, mice, rats, squirrels, skunks, and chipmunks (ODNR, 2009).

Bird watching also provides for a significant draw to the park. During the times of seasonal migration, many additional species of birds utilize the park as a resting area. Warblers, Sparrows, and Finches are common to the area. Cardinals, Vireos, and Orioles have also been reported.

The children in both elementary schools said they were very excited to go into the park and look for toads. There are 4 species of amphibians that may occupy the park. The Gray Tree Frog, Leopard Frog, American Toad, and the Chorus Frog have all been seen and heard.

Threatened and Endangered Species

As required by NW 27/14 General Conditions 11 and the provisions set forth in Section 7 of the Endangered Species Act, an inventory of state and federal threatened and endangered species and special interest species in the park was obtained from the Ohio Department of Natural Resources and the U.S. Fish and Wildlife Service. Both agencies were requested to search the project area defined by legal boundaries. They also searched a 0.5-mile radius around the project boundaries to identify the extent of habitat areas. Inventory results showed no threatened or endangered species in the park.

Vegetation – Invasive and Non-native Species

The 66 acres of land consists of a mixture of wetland, semi-dry prairie, and several pockets of wooded areas and forested wetland.

There were 43 species of plants discovered on the property and recorded by Dr. Michelle T. Grigore in her report for the City of Bowling Green in 2006. There were no endangered species found on the site. Previously farmland, the property has several invasive species of plants which are overtaking native species. Identified were Multiflora Rose (*Rosa Multiflora* Thunb), Eastern Poison Ivy (*Toxicodendron radicans* (L.) Kuntze), and Fuller's Teasel (*Dipsacus Fullonum* L.).

Native plants include Wild Bergamot (*Monarda fistulosa* L.), Canada and Giant Goldenrod (*Solidago Canadensis*, *gigantea* Aiton), various asters, and wild grasses can be seen in abundance throughout the parcels of land. Red maples (*Acer rubrum*) were one of the most dominant trees seen in the area followed by Eastern Cottonwoods (*Populus deltoides*).

Cultural Resources

As per the provisions in Section 106 of the National Historic Preservation Act, it is required that a historical inventory of archeological sites, state historic places and bridges, and national historic places and landmarks be conducted for the proposed park. A class I search found no known historical properties or sites within the park boundaries. That does not mean currently unidentified archeological resources may be found during construction.

More recent evidence of cultural sites can still be seen. The two significant elements are the Slippery Elm Trail which historically was part of a railroad line that ran north and south through Bowling Green. The property was also farmed up to approximately 1990. Furrows can still be detected where the fields were once cultivated. Drainage tile still exists and function below grade. In order to restore the natural wetland, these tiles would need to be located and blocked.

Soundscape

The commercial properties along Main Street, two schools, a subdivision, businesses, and roadways reduce the visitor experience of immersion into the wetlands due to noise pollution. Obviously, noise levels are greater during the school year near the adjacent schools. Traffic noise is noticeable at all times of the day with heavier concentrations during the commuting times of early morning and late weekday afternoons. The factory near the southwest corner of the park is also a source of undesirable sounds. If there is a need to immerse the visitor into the wetland experience, the best times would more than likely be weekend mornings and during the week before sunrise and in the evening.

There is no site specific data measuring decibels from the various sound sources. Park planners will need to consider the sources time sequence, duration and possible buffers. Buffers could include such things as vegetation, fencing, and distance.

No measurable data is available that is site specific to this park. While the initial comments on soundscape were completed through direct observation, actual baseline readings could be recorded to compare against future impacts on the park.

Visual Quality and Design

Views from inside the park to the north are to the schools which are blocked by deciduous vegetation. To the west end of the park, houses are visible during winter, along with the bike path. There is a tree line to the south end of the park but the houses from the subdivision and factory building are noticeable in all season. A majority of the east side of the park is exposed to the loading docks, trash facilities, and employee parking for the commercial buildings.

New development would be designed to match the line, form, natural colors, textures and scale of the surrounding environment. This practice would reduce most noticeable human impacts to the natural areas. If screening or buffering is desired, it should blend into the existing vegetation and not stand out from its surroundings. It is recommended that the designs for the park follow these basic principles:

- Every element should align with other elements, natural or constructed, to create a visual connection
- Repetition strengthens unity and order in the landscape and creates organization.
- Enhance the value of the visitor experience and instill family memories and traditions.
- If an improvement is not the same as what exists, make it very different.
- The proximity of items related to each other should be grouped together.

Topography

In the geologic past, a vast body of water known as Lake Warren covered the region. The ancient lake caused the underlying glacial till to level out into a flat plain and also form sand bars. The geomorphic landscape is level lake plain and relatively flat outwash and/or till plain. The topography in the park is nearly flat, with very shallow depressions. Minor relief occurs along the Slippery Elm Trail, on the west end of the site. A natural slough is evident from north to south. Some evidence of field rows still remain even though it has been over ten years since it was last farmed.

Chapter Four

Methodology for Analyzing Impacts



The impact analysis and conclusions were based on the Wood County Park District and Bowling Green Parks and Recreation's staff knowledge and the planning and advisory committee's familiarity on the resources and the site, a review of the rationale for decision making and best professional judgment.

Environmental Consequences and the Intensity of Impacts (quantification)

Intensity refers to the degree or severity of an impact. Impacts are described as adverse or beneficial, and the levels of intensity for each impact topic were determined using the definitions presented below.

Cultural Resources. Cultural resources analyzed in this general management plan are limited to the cultural landscape of the Great Black Swamp. The following definitions are used for impact intensities:

- *Negligible:* The impact would be barely perceptible and not measurable, and it would be confined to a small area or single contributing element of the site.
- *Minor:* The impact would be perceptible and measurable, and it would be confined to a small area or single contributing element of the site.
- *Moderate:* The impact would be sufficient to cause a change in the character- defining features of the resource, and it would generally involve a single or small group of contributing elements of the site.
- *Major:* The impact would result in substantial and highly noticeable changes in character- defining features of a resource, and it would involve a large group of contributing elements and/or an individually significant historic setting.

Natural Resources. For the purposes of estimating impacts on soils and vegetation, the following assumptions were used (estimates for soil disturbance were rounded to the nearest tenth of an acre):

Trails – The lineal distances for trails were derived through scaling from the design alternatives concept maps. Construction disturbance was assumed to be 10 to 12 feet (average 11 feet) for trails in the recreation trail zone and 6 to 8 (average 7 feet) for trails in the improved trail and natural trail zone.

For the purposes of the natural resource analysis (soils and water resources, vegetation and wildlife), the intensity of impact is defined as follows:

- *Negligible:* The impact would be barely perceptible or not measurable and would be confined to a small area.
- *Minor:* The impact would be perceptible or not measurable, but it would be localized.
- *Moderate:* The impact would be clearly detectable, and it could have an appreciable effect on a natural resource.
- *Major:* The impact would have a substantial, highly noticeable influence on the natural resource.

Visitor Use. The intensity of impacts on visitor experience and interpretation was determined using the following definitions:

- *Negligible*: The impact would not be detectable by visitors, and it would have no discernible effects on their experiences.
- *Minor*: The impacts would be slightly detectable by some visitors, but it would not affect overall visitor use or experiences.
- *Moderate*: The impact would be clearly detectable by many visitors, and it could not have an appreciable effect on visitor experiences.
- *Major*: The impact would have a substantial, highly noticeable influence on most visitors' experiences, and it could permanently alter access, use, and availability of various aspects of the visitor experience.

Park Operations. The intensity of impacts on operations was determined using the following definitions:

- *Negligible*: The impact would be barely detectable, and it would have no discernable effects on park operations or facilities.
- *Minor*: The impact would be slightly detectable, but it would not affect overall services and maintenance functions, or access and transportation.
- *Moderate*: The impact would be clearly detectable, and it could have an appreciable effect on park operations and facilities, or access and transportation.
- *Major*: The impact would have a substantial, highly noticeable influence on park operations and facilities, the provision of adequate services or facilities, or access and transportation.

Land use. The intensity of impacts on the economy, population, and local land use was determined using the following definitions:

- *Negligible*: The impact would be barely detectable, and it would have no discernible effect on the local economy.
- *Minor*: The impact would be slightly detectable, but it would not have an appreciable effect on the local economy and population, nor would it affect local land use within the community.
- *Moderate*: The impact would be clearly detectable, it could have an appreciable effect on the local economy and population, and it could affect local land use within the community.
- *Major*: The impact would have a substantial, highly noticeable influence on the local economy and population and would result in local land use changes.

Duration of Impacts

Duration refers to the time periods over which the effects persist. The following durations were used for all impact topics.

- *Short-term*: The impact would last less than one year.
- *Long-term*: The impact would last one year or longer.
- *Permanent*: The impact would last forever.

Cumulative Impacts

Cumulative impacts are impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what entity undertakes such action. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative impacts analyzed in this document consider the incremental effects of each alternative in conjunction with past, current, and future actions.

Mitigation

Mitigation measures are defined as:

- Avoiding the impact altogether by not taking certain action or parts of an action
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impacts by repairing, rehabilitating, or restoring the affected environment
- Reducing or eliminating impact over time by preservation and maintenance operations during the life of the actions
- Compensation for the impact by replacing or providing substitute resources or environments

Mitigation was integrated into the formulation of the alternatives, such as proposing various locations for parking, restrooms, and maintenance facilities that avoid impacts. As areas are developed, if required per grant requirements, may allow for a class II archeological investigation which may result in the discovery of artifacts.

Impairment of Resources

In addition to determining the environmental consequences of implementing the preferred and other alternatives, the potential effects will be analyzed with regard to whether actions would impair site resources and natural resources.

Impairment is an impact that, in the professional judgment of the responsible resource specialist, would harm the integrity of park resources or values including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition

depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact would be more likely to constitute an impairment to the extent that it is a major adverse impact and it affects a resource or value whose conservation is:

- necessary to fulfill the various statements from chapter one;
- key to the natural integrity of the park; or
- Identified as a goal in this general management plan, or other planning document.

Impairment may result from visitor activities, management activities, contractors or others operating within the park.

Projected Annual and Daily Visitor Use Trends and its Effect on Air Quality

Visitation to Black Swamp Preserve under alternatives B, C, and D is projected to be similar to Wintergarden Park. Wintergarden is owned and managed by the City of Bowling Green Parks and Recreation Department.

To determine the number of vehicles and potential impacts on air quality and traffic, projected visitor use at the park during the summer peak season, was analyzed. Assuming that visitation was evenly distributed over June, July and August (and not accounting for holiday usage), and conservatively estimating two people per vehicle. This use would further be spread throughout the day, and it is assumed that perhaps 80% of the use would occur from 9 a.m. to 3 p.m.

In actuality it is likely that school groups would account for a sizable percentage of use and they would either arrive by bus, near Kenwood Elementary School zone, or on foot from Bowling Green Montessori School or Kenwood Elementary School. This pattern of visitation from fall to spring will likely reduce the amount of vehicles estimated. Also, use would likely be greater on Holidays. It was further assumed that some visitors will actually be using the Slippery Elm Trail rather than trails within the park under alternatives B, C, or D.

Considering the adjacent land uses now and into the future, the development of this park would contribute, at a negligible level, to air quality emissions.

No measurable data is available that is site specific to this park. While the initial comments on air quality were completed through comparison with other parks, actual baseline readings could be recorded to compare against future impacts on the park.

Impacts of Alternative A – No Action

Cultural Resources

Analysis – The terrain typical of the Great Black Swamp remains intact in the park and would not be affected by the no action alternative. This property existed as wet woods. Once the ditches were established, the land was logged, drained, and farmed. Farming has been discontinued and replaced with wet open meadow. Under alternative A, the woods would become reestablished through natural succession; no action would be taken to actively reestablish historic vegetation conditions. Fallen trees and other natural debris would be allowed to accumulate.

Cumulative Impacts – No significant new development will likely occur along the boundary of the site. Vehicular traffic will remain or slightly increase on surrounding streets. These intrusions would be minor to moderate, adverse and long term.

Conclusion – Over the long term, alternative A would have a moderate beneficial impact on the cultural landscape because no farming would be allowed and the wet woods would be re-established gradually over the long term as a result of fallen trees and other natural debris accumulating on the ground.

There would be negligible impacts to the cultural landscape, and there would be no impairment of park resources or values.

Natural Resource

Soil, air and water

Analysis – Increased visitation would lead to a slight increase in the number of vehicles visiting the park, but having no designated parking spaces would limit the number of cars.

Under the no action alternative, present soil and water resource conditions in the park would remain constant. Stopping agricultural production and associated agri-chemical applications have reduced any sediments and fertilizer levels in adjacent drainage areas. Applications of herbicides would control invasive plants. Only herbicides approved by the Ohio Department of Agriculture and recommended by the ODNR Division of Natural Areas and Preserves, and the Nature Conservancy guidelines would be applied. Such herbicides have a short term toxicity specific to invasive plants, break down quickly in soils, and have no effect on water quality.

Cumulative Impacts – Overall, the levels of emissions from all sources could increase slightly, but a change is expected to be negligible.

In conjunction with past, present and reasonably foreseeable future actions, water quality is expected to remain good with no adverse effects on soils.

Conclusion – Impacts on air quality from increased vehicular use would be negligible. Cumulative impacts would be negligible to minor. Impacts on air quality from increased vehicular use would be

negligible. Cumulative impacts would be negligible to minor. Because impacts on air quality would not be major or adverse, there would be no impairment of park resources or values.

Alternative A would result in a beneficial, permanent impact on soil and water quality as a result of agricultural production being discontinued. Cumulative impacts would be negligible. There would be no adverse impacts on soil and water resources.

Vegetation and Wildlife

Analysis – Under alternative A vegetation and wildlife in the park would gradually revert to more native conditions. Early succession woodland and young age classes of trees would continue to be represent, while stands more than 60 years would remain underrepresented due to previous timber harvests. Wildlife would be monitored by staff to identify species, and impacts from deer will be recorded.

Wildlife species that favor wet woodland would benefit from the woodland area expanding. Neotropical migrating birds would be attracted to the woodland and fields as they revert to shrub/scrub communities than to wet woodland.

Cumulative Impacts – Active and successful fire suppression efforts would continue the trend of increased fuel loads across the landscape, particularly in this woodland, which would not be actively managed. Cumulative impacts would be negligible.

Conclusion - Over the long term the gradual succession of native vegetation and wildlife at the park would reestablish conditions more typical of the Great Black Swamp. Alternative A would result in a moderate, beneficial, long term effect on vegetation and wildlife. Cumulative impacts would be negligible.

There will be no impairment on native vegetation or wildlife, and there would be no impairment of park resources or values except through succession.

Visitor Use

Analysis – Under alternative A, visitor use in the park would be limited to occasional scheduled group tours. Parking facilities would consist of adjacent roadways. No restrooms or trails would be provided. Minimal orientation would be available before visitors enter the park. Visitors participating in scheduled tours would receive limited interpretation. Seasonal flooding can make visitation extremely difficult.

Cumulative Impacts – There would be no programs and visitors to the park will have to do their own research.

Conclusion - Under alternative A, opportunities for the public to visit the park and to appreciate the site resources would be extremely limited. Impacts on the visitor experience and interpretation would be moderate and adverse over the long term. With regard to cumulative effects, not providing physical connections to other portions of the site within the community would have adverse effects on visitor experiences.

Trails

Analysis – With this alternative, no trails would be designated on the site. Any visitor experiences in the park will be by hiking through brush, woods, saturated soils and standing water.

Cumulative Impacts – Visitors could potentially follow deer trails which crisscross through the site. Concentrated use of these trails over the long term will result in moderate to adverse impacts to vegetation and soils.

Conclusion – Under alternative A there will be few opportunities for the public to visit the park. There will be no official trails established, no barrier free accessibility and limited access. Impacts to the resource will be moderate to major.

Physical Exertion

Analysis – With no facilities provided in the park, visitors will be required to experience difficult hikes through thick vegetation, wet soils and standing water. It should be expected that any exertion will be high.

Cumulative Impacts – The access in the no action alternative will significantly restrict most potential visitors from entering the site and enjoying its resources. Property values and the general public's satisfaction will be moderate to low because use of the park is very limited.

Conclusion – Under alternative A access and use of the park will be limited to individuals who want a complete immersion into the park and are prepared for the natural environmental conditions. Impacts to the resource would be major.

Interpretation

Analysis – There would be no on site interpretation. Any learning would be off site or through limited, scheduled programming where interpreters would be present to lead the group.

Cumulative Impacts – Since no facilities will be provided for onsite interpretation, there will be low to minimal impacts to the resources.

Conclusion – Any understanding and appreciation of the resources will only take place if the park visitor seeks out information.

Development

Analysis – Alternative A will have no development of any kind within the park

Cumulative Impacts – No resources will be negatively impacted by development in this alternative

Conclusion – Development in the park will be negligible to non-existent

Restrooms/Parking

Analysis – In alternative A, parking will be off site, on adjacent roadways and parking lots. There will be no restroom facilities provided.

Cumulative Impacts – Impacts to the site by having roadside parking carries the potential for illegal dumping, increased crime and damage to the vehicles and a lack of control, by the park rangers, on who parks near the park and the activities they engage in.

Conclusion – A lack of parking in this alternative and restrooms will greatly limit appropriate activities in the park and provide for activities that may harm the resources and public health and safety over the long term. Impacts would be negligible.

View Sheds

Analysis – Alternative A will provide for short term views and vistas of the property. As succession proceeds, any views will decrease and become non-existent.

Cumulative Impacts – in the long term, views will be blocked from both inside the park looking out and outside the park looking in. This will significantly reduce the abilities of the public, police and rangers to monitor access points and activities in the park.

Conclusion – Not maintaining view sheds within the park will significantly reduce desired visitor experiences of maintaining vistas and biodiversity. Impacts to the resource would be major

Boundaries

Analysis – Alternative A will allow for unlimited access in and out of the park, increased potential for dumping and encroachments.

Cumulative Impacts – The lack of boundary designation will have a moderate to high negative impact both to the park and to its neighbors because people can move between public and private properties without notice from neighbors outside the park.

Conclusion – Without designated boundaries, there is a higher potential for negligible to minor impacts to the park and to its neighbors.

Surrounding Land Use

Analysis – The no action alternative will have very limited influence on what happens on adjacent properties.

Cumulative Impacts – The result of having minimal maintenance in the park will decrease values of adjacent properties and provide moderate to negligible impacts. With the lower property values, it encourages private land owners who may not have the best interests of the park in mind and moderate to high impacts to the property.

Conclusion - While the current adjacent land uses are compatible for the park, in the long term, the chances of having quality resources in the park could be moderately to high.

Connections and Linkages

Analysis – It was determined through public scoping that there is a desire to have the park provide more and better access to the park. With alternative A, no connections will be provided for the community to access other areas of the neighborhood.

Cumulative Impacts – The lack of pedestrian and bike trails will result in those users either relying on motorized transportation or walking and riding bikes on public roadways which have the potential for conflicts

Conclusion – The no action alternative will not provide the desired access routes in and around Kenwood/Napoleon Park and would cause a major impact on the residents near the park.

Park Management and Operations

Analysis – With the limited maintenance operations coming from a different park, no additional impacts from development of maintenance facilities would be realized . Maintaining former agricultural fields in a vegetative cover crop and keeping invasive plants to a minimum through periodic herbicide applications with small vehicles would result in a minor adverse impact on maintenance operation.

Minimal operations at the park would have minor adverse impacts on staffing.

Security at the site includes periodic walking inspections, and ranger patrols during daylight and evening hours this would cause, a minor adverse effect on park staffing.

Fuel consumption is required for routine maintenance operations and will result in minor, adverse, long term impacts.

Cumulative Impacts – Prevailing winds from the southwest could blow trash into the site from adjacent properties. Removing trash would be a constant maintenance concern.

Conclusion – Locating park operations off site would result in a negligible impact to the park now and into the future. Continuing minimal operations at the park would have a minor adverse impact on staffing. Infrequent security patrols would result in a moderate potential for undesirable activities to occur in the park. Energy consumption related to maintenance operations would continue to result in minor impacts over the short and long terms. Impacts would be negligible.

Partnerships

Analysis – There will be no program to establish or maintain opportunities for others to share in the limited activities related to the Kenwood/Napoleon Park.

Cumulative Impacts – The lack of partnership opportunities in the no action alternative will result in those potential partners seeking other causes within the community to partner on.

Conclusion – The lack of a partnering program will put major fiscal responsibility on the city and park district.

Impacts of Alternative B – Maximum Development Alternative

Cultural Resources

Analysis –In alternative B, replica structures typical of an early settlement in the Great Black Swamp will be placed within the wetland and perimeter throughout the park to support interpretive programming and many modern day needs including restrooms, storage and maintenance.

Cumulative Impacts – Replica designs may conflict and/or contrast with offsite views unless buffering is placed strategically to serve as backdrops to the time period being interpreted. This will result in a moderate impact to the resource. The development of cultural features may impact yet to be discovered archeological resources

Conclusion – In the maximum development alternative, structures and buffers will create moderate to major impacts within the park to provide a setting and character typical of a settlement in the Great Black Swamp.

Natural Resource

Soil, Air and Water

Analysis - Impacts with the maximum development alternative on soil, air and water would be considered high. Impacts to resources would be mitigated on or off site through appropriate design and placement measures and/or expanding the wetlands in areas not developed or designated as jurisdictional wetlands.

Physical controls on visitor movement and access would provide for resource protection while accommodating high levels of use.

The level of resource management would be high to control natural succession and maintain esthetics.

Cumulative Impacts – Depending on the total area of natural resources to be impaired by constructing visitor support services, the impact will be moderate to major.

Conclusion – Sighting of replica structures have a strong potential to permanently affect the park’s natural resources on a moderate to high level.

Vegetation and Wildlife

Analysis – Under alternative B, vegetation and wildlife in the park would be removed at a moderate to high level to allow for development which would have the most impact.

Cumulative Impacts – Land management would be high to maintain a pristine look.

Conclusion – Both cumulative impacts and individual impacts would be moderate to high and long term.

Visitor Use

Analysis – In alternative B multiple visitor experience goals would include interpretation of cultural and natural resources, designated passive recreation, and expanding the Slippery Elm Trail.

This alternative is also designed for maximum visitor access and comfort.

Visitor use would be year-round on the paved trails.

Cumulative Impacts – The moderate to major impacts will provide for the needs of multiple user groups seeking very different types of experiences within the park

Conclusion – There will be a trade off in moderate to major impacts to the resources to accommodate multiple needs of park visitors over the short and long term.

Trails

Analysis - The park will support a main paved trail through the site with two small improved trails into sensitive areas designed to interpret different themes. Viewing areas will be provided at the end of the trails to observe wildlife and the landscape.

An offsite recreation trail will run from the northeast corner of the park to Kenwood Avenue to Sand Ridge Road, returning on the Slippery Elm Trail and back onto the park trail system.

Schools will access the park either via the Slippery Elm Trail or Kenwood Avenue.

Cumulative Impacts – In the maximum development alternative, there will be a major impact to the resources in order to provide the maximum amount of passive recreation trails within the park. The trails will extend out past the boundaries of the park to allow for multiple experiences.

Conclusion – Trails dictate many management decisions in this alternative because the need of the public is to have multiple options to enjoy the park. Moderate impacts should be expected.

Physical Exertion

Analysis – In alternative B, physical exertion on the site will range from low to high

Cumulative Impacts – In order to accommodate users who want to see the park resources but do not want to expend a lot of energy or users who want to primarily use the park for passive recreation, will have a moderate to major level of satisfaction.

Conclusion – There is a trade off on impairment of the resources in order to allow for accommodating the highest level of diversity for park visitor's use. Impacts will be moderate.

Interpretation

Analysis – The maximum development alternative supports all needs for interpretation and education activities that would include programs of a more special nature such as programmer lead walks. Other opportunities could include trailside exhibits and audio recorded tours.

The park will be divided into various themes; cultural, natural, and passive recreation.

Cumulative Impacts – By providing various levels of interpretation, there is a trade off in the level of impairment which can range from moderate to high.

Conclusion - Interpretation will have long term, moderate impacts to the park

Development

Analysis – In alternative B, development would be located throughout the park and may include picnic areas, reservable picnic areas, flush restrooms, a community playground and an open, mowed meadow to provide for impromptu play.

Cumulative Impacts – The maximum development alternative will moderately to majorly impact the park and its resources since the need will be to provide many services to the park visitor.

Conclusion – Moderate to major impacts from development are justified in order to accommodate the community and its use of the park.

Restrooms/Parking

Analysis – Alternative B will promote parking which can accommodate school busses and restrooms that will be accessed off of Kenwood and off of Maple Street. Overflow parking areas will provided for public and private events as well as an increased need for parking on the weekends.

Cumulative Impacts – This alternative will require a moderate to maximum level of impact in order to accommodate these facilities

Conclusion – Restrooms and parking will require additional mitigation measures because some of the more potentially sensitive areas will be impacted with this alternative. Major impacts are expected.

View Sheds

Analysis – Alternative B buffers areas to the south in front of the steel manufacturing facility and Fore Meadows subdivision, along Kenwood Avenue and in order to protect the schools.

Buffers to the north would be a solid screen along the entire boundary and varies in thickness.

Cumulative Impacts – The balance between preserving the wetlands, interpreting the great black swamp and providing passive recreation will be challenging and will influence how various views and vistas are laid out.

Conclusion – View sheds will be a significant factor in balancing all the various elements needed to satisfy the requirements of alternative B. Impacts will be minor to moderate.

Boundaries

Analysis – In alternative B, all boundaries will be signed but uncontrolled access from multiple points will be allowed.

Cumulative Impacts – Having multiple access points will have a moderate to high impact on the park and on adjacent land owners.

Conclusion – Having many access alternatives will accommodate the many park users who have various needs, weather desired or undesired. Impacts will be minor to moderate.

Surrounding Land Use

Analysis - The two park organizations will support development along the boundaries, when practical, to encourage that the park becomes a destination for the public.

Cumulative Impacts – Adjacent land owners will experience unwanted use by pedestrians accessing the park via the shortest route possible.

Conclusion – Surrounding land use will be moderately to majorly impacted since the park allows for multiple access points

Connections and Linkages

Analysis – In alternative B, two significant linkages will be built along the Slippery Elm Trail leading to the east side of the park.

Cumulative Impacts – The linkages will encourage and provide for many levels of connections between the neighborhoods, schools, and passive recreation and regional destinations.

Conclusion – The use of the parks connections will support a moderate to major use of non-motorized transportation.

Park Management and Operations

Analysis – The maximum development alternative will have the need for a maintenance facility that will be established within the park with full time staff.

Cumulative Impacts – With the city and park district supporting many different needs and uses, this will take away a moderate to major level of resources from other parks and programs

Conclusion – The city and park district must determine what unique visitor needs can be provided in the maximum development alternative and which needs are better accommodated at other parks

Partnerships

Analysis – The maximum development alternative will allow the park to support many uses. A high level of interest will be created to support development and programs.

Cumulative Impacts – Because this park accommodates the highest number of visitor needs, it will allow a moderate to major level of opportunities for partnerships from the community.

Conclusion – The more partnerships that can be provided, the more community support and partnering there will be. This will reduce operating costs for alternative B. Impacts will be moderate.

Impacts to Alternative C – Immersion into the Wetlands

Cultural Resources

Analysis - There will be no replica structures relating to the Great Black Swamp as was the case in alternative B. Protection and interpretation of the cultural resources will depend on the natural setting of the park and the park visitor's imagination.

Cumulative Impacts – Wetland management is paramount to the successful understanding of the settlement and stories of the great black swamp.

Conclusion – Cultural resources are reflected in a moderate to high levels of management of the wetland resources and a minor or negligible negative impact to the resources.

Natural Resource

Soil, Air and Water

Analysis - Alternative C will be developed with the least impact to the natural resources compared to the other alternatives.

Impacts to the wetland resources will be minor to negligible and the function of the wetlands will be enhanced.

Cumulative Impacts – The park will maintain or increase the level of benefit the community receives by having a wetland within the city limits.

Conclusion – The natural resources will be protected from unnecessary impacts caused by development impacts to the resource will be moderate to minor.

Vegetation and Wildlife

Analysis – Vegetation and wildlife will be impacted least in this alternative however a variety of views inside and outside of the wetland will be maintained for aesthetics and to maintain biodiversity.

Cumulative Impacts – Impacts to the cumulative resources will be minor to negligible.

Conclusion – Short term impacts to the resource will be moderate.

Visitor Use

Analysis - Management of the natural resources under alternative C would focus on the ecological, educational, and inspirational values of the wetland, and on understanding and facilitating the process that would permit the wetlands to fully express itself. A majority of experiences will be on trail.

It will also promote a heightening of the senses: sound – wildlife, touch – at grade access, sight – design aesthetics.

Visitor use would be year-round on the paved trails.

Cumulative Impacts – Cumulative impacts will be minor to negligible because benefits will be specifically to the community and to the park visitor desiring a personal wetland experience.

Conclusion – This alternative provides the park user an intensive, in depth, detailed wetland experience and cause moderate impacts.

Trails

Analysis – In the “explore the swamp” alternative, an elevated boardwalk bisects the property to protect the resource but still accommodate visitors. There will be no off trail experiences.

Two separate trails come off of the central boardwalk, each with a different interpretive theme.

A gated, private trail will lead from the park to a point along the north boundary between the two schools

Cumulative Impacts – This alternative promotes a lesser degree of intensity of travel from alternative B by having more meandering routes between Kenwood Avenue and the Slippery Elm Trail.

Conclusion – Trails allow for barrier free access into the park to view, appreciate and understand the functions of a balanced wetland.

Physical Exertion

Analysis – The physical exertion experienced in this alternative will be minor to moderate depending on the park visitor’s ability to exert energy to immerse themselves into the park resources.

Cumulative Impacts – This alternative will not accommodate all levels of park visitor’s seeking a passive recreational experience but will still be able to allow for various levels of exertion in order to interpret the wetland.

Conclusion – Providing multiple levels of moderate physical exertion will allow for a diverse level of users

Interpretation

Analysis - The focus of this alternative is the integrating management of the natural and cultural resources for the site, which reflects the deep intertwining of these resources in the park.

The wet woods and wet prairies will be maintained for the visitor’s understanding and appreciation of the resource.

Any park orientation will take place on the trails.

This alternative contains some level of educational facilities.

Alternative C supports formal and informal programming.

Cumulative Impacts – The “explore the swamp” alternative allows for moderate to minor programming in order to communicate the more significant aspects of the swamp and wetland.

Conclusion – Interpretation levels will match a majority of the community needs for understanding and interpreting the Great Black Swamp. Impacts will be moderate to minor.

Development

Analysis - Trails will be developed though the center of the park. Moderate to Major development will be in the northeast and southwest corners of the park.

Cumulative Impacts – Development will be concentrated to the southwest corner and to two small locations within the park.

Conclusion – This type of development is better suited to minimize impacts in the wetlands and around the perimeter. Impacts will be moderate to major

Restrooms/Parking

Analysis - Parking and restrooms will be off Kenwood Avenue only. There will be a small parking lot, portable toilets, no playgrounds or places for passive recreation. Busses and overflow parking will be off-site.

Cumulative Impacts – By only providing the needed support facilities in an area where there is less impact on the resources, it allows for a more concentrated development footprint in the park.

Conclusion – Resources will be impacted less with this alternative because disturbance is limited to specific and concentrated locations within park boundaries. Impacts will be moderate.

View Sheds

Analysis - Buffering will be established along the south boundary of the steel manufacturing facility and Fore Meadows residential area, the east boundary to block the view of the commercial buildings and along the property of Kenwood Elementary School since its proximity is closer than the Montessori School.

Cumulative Impacts – Backdrops to yet to be determined view sheds are significant enough to block undesirable views off site and allow for a more pristine views within the park..

Conclusion – More quality wetland view sheds will provide moderate levels of visitor satisfaction for those park users seeking an immersion in to the landscape. Impacts will be moderate to minor.

Boundaries

Analysis - All boundaries will be fenced and gated to provide maximum security. All access points will be restricted.

Cumulative Impacts – Resource level impacts would be minor to negligible however impacts to adjacent properties will me moderate to high for areas that desire views into the park while industrial and commercial neighbors will see a moderate to major negative impact.

Conclusion – A specific needs survey will be implemented in alternative C to accommodate both the needs to protect the resource while striving for satisfaction with adjacent land owners.

Surrounding Land Use

Analysis - The two park organizations will closely monitor any proposed developments that would impact any part of the park’s resources

Cumulative Impacts – Any future land uses will utilize an overlay district in order to lower the cities operating costs and educate the public in how wetlands and green space mitigate impacts of development and intensive land use.

Conclusion – Almost any types of land uses can be enhanced or mitigation though the existence of a functioning and balanced wetland.

Connections and Linkages

Analysis - There will be one access point from the southern end of the Slippery Elm Trail to the northeast corner of the property to connect both sides of the park.

Cumulative Impacts – A limited amount of access points will concentrate visitor use to specific locations and reduce cumulative impacts to the park resources and to the designated access points.

Conclusion – Connections and linkages will be accommodated in alternative C but will be restricted to areas that can support that use with minor to negligible impacts.

Park Management and Operations

Analysis – In alternative C, a small storage area will be provided to support maintenance and interpretive programs.

Cumulative Impacts – Impacts from providing support facilities will be balanced between on site and off site facilities which will benefit this park's resources because impacts will be minor to negligible.

Conclusion – The “explore the swamp” alternative allows for support facilities without any unnecessary impacts to the resources. Impacts will be minor to moderate.

Partnerships

Analysis - Partnerships to support development and programming will focus on organizations and companies that promote nature and responsible development of the environment.

Cumulative Impacts – By finding groups and organizations that specialize in preserving natural areas and wetlands, the park will benefit by having more specialists from the community who know how to assist the city parks and park district in operations and maintenance with minor involvement from park staff.

Conclusion – This alternative will attract more effective partners who can support the design theme of this alternative. Impacts will be moderate.

Impacts to Alternative D – Focus on History

Cultural Resources

Analysis - The cultural preservation in alternative D would include a moderate level of managing landscapes, features, views, and vistas and interpreting these resources to the public. This alternative provides a moderate level of resource management compared to the other alternatives.

Cumulative Impacts – This alternative provides a more realistic treatment of the cultural resources without a moderate to major manipulation of the wetland as what was seen alternative B.

Conclusion – Cultural resources are respected and enhanced through responsible, knowledge based decisions of the resources and of the interpretive needs. Impacts are anticipated to be moderate to minor.

Natural Resource

Soil, air and Water

Analysis - The resources will be used as backdrops to historical interpretation. There will be no development established within the designated wetland except behind the Montessori School.

Cumulative Impacts – Natural resources are maintained at a moderate level to assure a balanced resource to support community needs for a functioning wetland.

Conclusion – The negative impacts to the natural resources are minor to moderate because balance and function are strongly considered in the preserve and observe history alternative.

Vegetation and Wildlife

Analysis – The trail system in alternative D is beneficial to the vegetation and wildlife in that it does not fragment the various habitats. Almost all development is outside the boundaries of the defined wetland.

Cumulative Impacts – Movement of wildlife through the site is mostly unobstructed. Movement between the park and Montessori school is provided for through an elevated boardwalk. Vegetation is not significantly affected because the level of development in this alternative is the lowest of the three development alternative.

Conclusions – Of all of the alternatives, this alternative provides for the most contiguous area for vegetation and wildlife. Various levels of biodiversity will be maintained through active land management practices.

Visitor Use

Analysis - Design of new developments would be sensitive to the cultural and natural environment; it would maintain harmony and continuity with the special visual qualities of the landscape, with the natural and cultural features, that creates a sense of time and place unique to the park.

Visitor use would be year-round on the paved trails.

Cumulative Impacts – Impacts to the surrounding community and to the park are minor to negligible because the balance of resources and uses are equal.

Conclusion – Visitor use will accommodate a park visitor seeking a natural and true black swamp experience that leaves out entertainment opportunities that may lessen the quality of the experience. Impacts will be minor.

Trails

Analysis - The Slippery Elm Trail is the spine for the trail systems with two connector trails.

- North trail – education theme for resources and interaction with the resources with access limited due to site conditions and programs.
- South trail – passive recreation.

Connections will be made to the school via Kenwood Avenue or the Slippery Elm Trail.

There will be no official off site trails however, some off trail experiences will be provided during educational programming.

Trails that dead end at education structures will be gated to control access when school children are present.

Cumulative Impacts – Paved trails are limited to routes that are direct, concise and connect to on site and off site resources.

Conclusion – The balance of trails to protection of the resources benefit the parks from a moderate to major level because more natural values are preserved.

Physical Exertion

Analysis - Visitor exertion would be low to moderate to major and include opportunities to walk off site through the wetlands through an organized, guided group.

Cumulative Impacts – All physical abilities are accommodated for access and circulation.

Conclusion – By not impacting the jurisdictional wetlands, it provides many visitors that have many levels of physical ability to experience the setting that the Great Black Swamp possessed prior to settlement.

Interpretation

Analysis - Through direct contact and varied interpretation efforts, visitors could understand the daily and annual activities of people who lived in the Great Black Swamp through time.

Cumulative Impacts – Interpretive opportunities vary and are within easy access from the parking areas and schools.

Conclusion – *Interpretation in Alternative D allows for immersion into the landscape that allows the visitor to understand and appreciate the obstacles that the early settlers had to overcome.*

Development

Analysis - Development will be concentrated in the northeast and southwest corners.

Cumulative Impacts – By concentrating development, the impacts to the resources are minor to moderate.

Conclusion – Alternative D provides for a minor to moderate impact to the resources while giving the park visitor a moderate to major quality experience

Restrooms/Parking

Analysis - The parking lot and restrooms are located on the south side of the park and off of Avenue Maple Street. The Kenwood portion of the project would only have a restroom on park property.

Parking would be along the east boundary off of the shoulder of the road. Adjacent off-site parking will accommodate busses.

Cumulative Impacts – Restroom and parking are divided between the Maple Street parking area and Kenwood Avenue parking area. Restrooms at the Kenwood Avenue location accommodates students from the resident elementary schools and students arriving via school busses.

Conclusion – In alternative D, parking and restrooms are balanced with the activities on the trails to disperse concentrated visitor use. Impacts will be minor to moderate.

View Sheds

Analysis - Buffering will block out views of the steel manufacturing building. Selective buffering will be used along the Fore Meadows subdivision. On the north boundary, buffers will only be placed to block the view of each school building. Visual access is maintained along Kenwood Avenue to provide for monitoring of activities along the boundary. Any buffering that does take place along Kenwood will be through off site mitigation along the back of the retail buildings

Cumulative Impacts – Alternative D concentrates the view sheds to relate directly to the two visitor services areas within the park that provide access to the wetlands

Conclusion – View sheds in alternative D are concentrated around the designated areas that help to interpret the history of the swamp. In this alternative, view sheds will include both open areas and the older wet woods. Impacts would be moderate.

Boundaries

Analysis - Boundaries will be clearly marked. Various design features will be used to control access in critical areas and provide visitors and neighbors to visually monitor access points

Cumulative Impacts – With the preserve/observe alternative, boundary designation will vary depending on the needs of the park and the desired of adjacent land owners.

Conclusion – Boundaries in this alternative provide the security of the boundary in alternative C and the aesthetics needed to please the neighbors and enhance the visitor experience. Impacts will be minor to moderate.

Surrounding Land Use

Analysis - The parks organizations will monitor adjacent land uses to encourage aesthetics in any design and encourage responsible development.

Cumulative Impacts – This alternative will benefit both the park visitors and the neighbors by balancing park use with the needs of the adjacent neighbors

Conclusion – Surrounding land uses support both interests

Connections and Linkages

Analysis - One linkage from the Slippery Elm Trail to Kenwood Avenue will be provided for bikes, walkers and joggers. This connection will concentrate the more active uses along the north boundary.

Cumulative Impacts – Linkages are clear and concise in alternative D, between off site, adjacent destinations.

Conclusion –Clearly defined connections lessen impacts to the other resources.

Park Management and Operations

Analysis - A storage facility will be provided to support programming. Minimal storage will be established for restroom cleaning and maintenance.

Cumulative Impacts – Maintenance and operational support in alternative D will impact the least amount of space needed. Additional support will be from off-site locations.

Conclusion – By utilizing both an on and off site facilities, it impacts the park’s resources from a moderate to minor

Partnerships

Analysis - This alternative provides for a variety of interests. Multiple opportunities are available for the community to participate in maintenance, development and programming.

Cumulative Impacts – Development is clear and concise with more of the park remaining as natural area. This design will allow a variety of community groups to commit to multiple opportunities to participate in partnering depending on their interests and specialties.

Conclusion – By providing a variety of opportunities to support the park, the city and park district will find a moderate to major level of community support both through labor and financial means. Impacts will be moderate.

Impacts Common to All Alternatives

Unavoidable Adverse Impacts

This section summarizes the adverse impacts that could not be avoided in the implementation of the alternatives. These are the impacts that would remain after mitigation was implemented. ???

Relationship of Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

This section discusses the effects of short-term use of resources resulting from implementing any of the alternatives on the long-term productivity of vegetation and wildlife. No short-term uses would adversely affect long-term productivity. Allowing natural succession through most of the property will enhance the natural productivity of this land

Irreversible and Irretrievable Commitments of Resources

An irreversible commitment of resources cannot be changed once it occurs except possibly in the extreme long term; an irretrievable commitment means the resource is lost for a period of time and is unlikely to be recovered or reused. All alternatives have somewhat the same level of development in visitor use areas. Parking lots, restrooms and maintenance facilities will remove all resources.

Water Quality

In all of the alternatives, water quality leaving the site through run off and percolation has improved through the parks naturalization and support of a functioning wetland. Continuous monitoring of storm water quality coming into the park and leaving the park will illustrate to the community how important these areas of open space are.

Resource Impacts from the Design Alternatives

Impact Category	Alternative A	Alternative B	Alternative C	Alternative D
Cultural	1	3-4	2-3	1-2
Natural	1-2	3-4	2-3	1-2
Soil/Water	1	3-4	2-3	1-2
Veg/Wildlife	3	3-4	3	2
Visitor Use	3	3-4	3	2
Trails	3-4	4	3-4	3
Physical Exertion	4	3	3	2
Interpretation	4	3	2-3	2-3
Development	1	3-4	2-3	2-3
Restroom/Parking	1	4	3	3
View Sheds	1-2	3	3	2-3
Boundaries	1-2	2	3	2-3
Surrounding Land Use	3-4	3-4	2-3	2-3
Connections/Linkages	4	3	2	3
Park Mgt./Operations	1	3-4	2-3	2-3
Partnerships	4	2-3	2-3	2-3
Range of Impacts	36-41	48-55	39-48	32-42

Value of Impact Scores: 1 = Negligible Impact 2= Minor Impact 3 – Moderate Impact 4-Major Impact

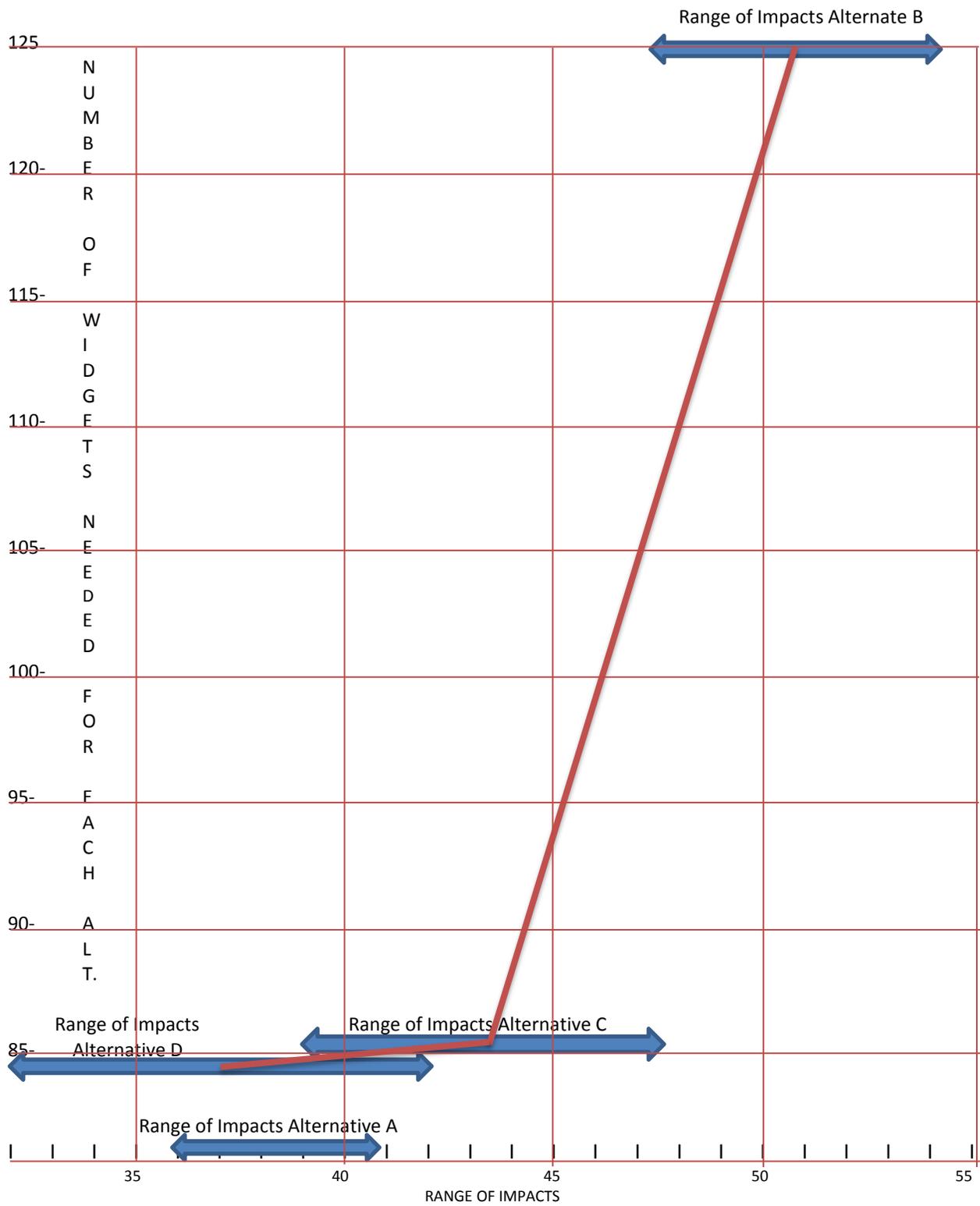
Rank (relationship between the other alternatives) A=Low Impact, B=High Impact, C=Moderate Impact, D=Minimal Impact.

Financial Impacts from the Design Alternatives

Zones	Alternative B	Alternative C	Alternative D
Passive Rec	3,120 lf	2,570 lf	1,260 lf
Cost	26,520*	21,020*	10,303*
Improved Trail	1,230 lf	630 lf	1,370 lf
Cost	11,070*	5,670*	12,330*
Visitor Services	218,700 sf	108,000 sf	140,000 sf
Cost	74,577*	36,828*	47,740*
Buffer – Plants	513,000 sf	540,000 sf	450,000 sf
Cost	12,825*	13,500*	11,250*
Buffer – Fence/Sign	Lump	3,000 lf	2,700 lf
Cost	500*	8,000*	3,375*
Total	125,498*	85,018*	84,095*

- Denotes the unit measure of widgets. A more accurate estimate can be established when decisions on additional site details are determined.

Conclusion: Alternative B will take the most widgets to develop the park
 Alternative C will take the second most widgets to develop the park
 Alternative D will take the least amount of widgets to develop the park



Conclusion

Based off of the final range of impacts and costs associated for each impact as illustrated in the graph on page 27, It has been recommended by the planning advisory committee that alternative D is the preferred alternative. The decision factors are summarized as follows:

Alternative D

- Has the lowest range of impacts to the park from development
- Compared to alternatives B, C alternative D is the least expensive alternative

Alternative A

- Has the second lowest range of impacts to the park for leaving it natural
- There are no costs for development but there are expenses for maintenance

Alternative C

- This alternative has the third lowest range of impacts to the park from development
- The cost for development is slightly higher than alternative D

Alternative B

- Alternative B has a significantly higher level of impacts compared to the other alternatives
- The cost for development is significantly higher than the other alternatives

Determination of the preferred alternative

- Alternative D can be developed with the least number of widgets
- Alternative C may provide more opportunities for park visitors however the impacts to the resources are significantly more than Alternative D
- Alternative D and the associated guidelines meet with the public's vision for the Black Swamp Preserve