



# BOYCE MAYVIEW PARK MASTER PLAN

## TOWNSHIP OF UPPER ST. CLAIR, PENNSYLVANIA

### Master Plan

*Submitted to:*  
Township of Upper St. Clair

*Submitted by:*  
Wallace Roberts & Todd

*with*  
Ecological Restorations, Inc.  
Economics Research Associates  
H.F. Lenz Company



**October 1999**

# BOYCE MAYVIEW PARK MASTER PLAN

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# BOYCE MAYVIEW PARK MASTER PLAN

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# PREFACE

This document provides an overview of the process and products generated to form the Master Plan for Boyce Mayview Park. Detailed information related to each section of this report can be found in the Boyce Mayview Park Technical Memorandum Appendix. The eleven Technical Memoranda found in the Appendix were submitted to Upper St. Clair Township to document each phase of the master planning process. The Technical Memorandum Appendix includes:

1. Site Inventory and Analysis
2. Habitat Evaluation Report
3. Key Informant Interviews
4. Preliminary Program List
5. Opportunities and Constraints
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10. Order of Magnitude Cost Estimate
11. Implementation – Permitting and Funding Issues



## **A VISION FOR BOYCE MAYVIEW PARK, 2010**

*A red tailed hawk hovers above the autumn meadow, its eye fixed on prey in the meadow below. At the meadow's edge, a solitary hiker crouches, binoculars raised to the sky. In the nearby woods, a group of children bound for the marsh wind their way along the path to a clearing by the Creek for a look at the egrets. On the hilltop overlook, a group of seniors from Friendship Village, out for a Saturday morning walk, look from the meadow up to the north at the soccer game on Morton Field.*

*Community gardeners and their grandchildren are harvesting pumpkins and gourds for the harvest festival this afternoon at the Mayview Commons.*

*Over at the Commons things are just getting started: tables are being set up in the Community Center courtyard and preparations are being made for the festival, the morning aerobics class at the recreation center is just finishing, and several dog walkers stand together in the dog run lawn sipping coffee, talking and watching their Labradors play. Organizers are busy decorating the picnic pavilion for the festival with corn stalks and gourds from the gardens. Children play in the lawn in front of the pavilion in the sight of their parents. Families sit in the Commons Plaza talking about the harvest ball held the night before at the Community Center, their older kids tossing frisbees at the multi purpose field past the pavilion.*

*Visitors to the Environmental Education Center arrive for the weekly nature walk. They join a group waiting on the path in front of the Center for a guided walk through the woods. Among today's group is a mix of older residents, disabled residents and parents with toddlers and infants in strollers who will walk down the easy grade of the arc walk to the wetland after an orientation talk at the Center.*

*It's another Saturday at the park: along the creek the sound of water is all that can be heard. In the meadow a hawk shadow passes over a rabbit.*



# EXECUTIVE SUMMARY

## THE VISION FOR BOYCE MAYVIEW PARK

The vision of the park on the preceding page would be the result of a concerted, cooperative effort on the part of the residents, government and funding partners of Upper St. Clair. The physical plan and actions necessary to reach that vision are described in this report. The Master Plan for Boyce Mayview Park demonstrates the capacity of the property to accommodate the diverse recreational and preservation interests of Upper St. Clair Township. The design, construction, and operation of Boyce Mayview Park should serve as a model of sustainable design in practice.



### Master Plan:

Boyce Mayview Park balances the community's needs for passive, nature oriented activities with limited recreational activities. 86% of the park will be for passive, nature-oriented activities served by trails, overlooks and seating areas. Miles of trails thread through open meadows and forests, and gently traverse high value habitats and restoration areas.

Active uses clustered in the Mayview Commons are conceived as a "village center" around green space comparable to a New England town common. With a long history of productive uses that included farming and coal mining, the park's varied heritage is expressed in a contemporary theme of productive, sustainable development.

Boyce Mayview Park, in recognition of its importance in the Township, offers more than active and passive recreation. Environmental preservation and recreation are placed in the context of a larger message of **sustainable development** and **community**. This message is presented through the inclusion of an Environmental Education Center, community gardens, and the community composting/recycling facility.

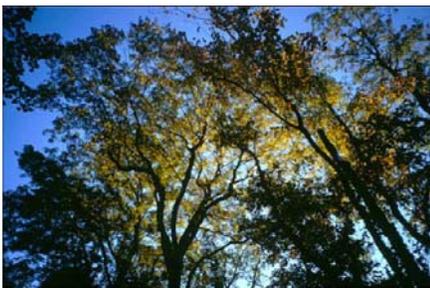
***"[Sustainable design] is a concept that recognizes that human civilization is an integral part of the natural world and that nature must be preserved and perpetuated if the human community is to sustain itself indefinitely. Sustainable design is the philosophy that human development should exemplify the principles of conservation, and encourage the application of those principles in our daily lives."***

- ***Guiding Principles of Sustainable Design, National Park Service, 1993.***

### SUMMARY OF RECOMMENDATIONS/PRINCIPLES

The planning and design of the park was informed by a series of guiding principles derived from the findings of the site analysis and community involvement process. These principles comprise the core of the master plan and are the touchstones for determining the physical form the park will take on.





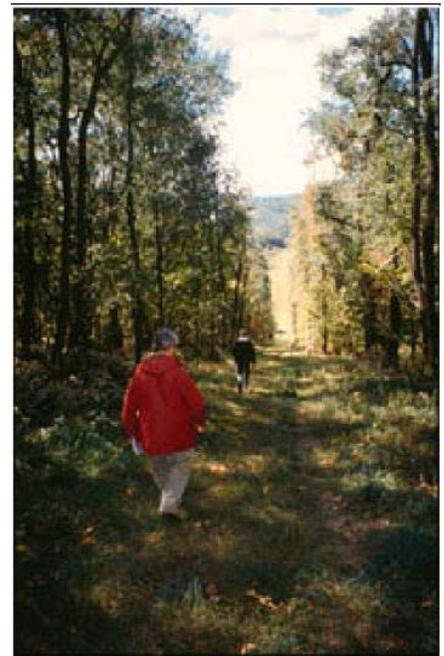
#### Principles:

- **Preserve sensitive habitats.** The park is blessed by an extraordinarily diverse range of topography, vegetation, and water resources. Together these systems form specific habitats for most of the native flora and fauna indigenous to the region.
- **Improve water quality.** Stretched along the Chartiers Creek, the park can act as a giant filter for urban stormwater runoff from adjacent development. Water quality is a major issue nationwide, and the actions taken in the park specific to Chartiers Creek will aid the ongoing efforts to improve water quality in the Creek.
- **Limit vehicular access to the perimeter of the site to preserve the interior.** Provide access to the park, but in a way that does not trammel the very resource being preserved.
- **Link Boyce and Mayview properties.** The two properties are separated by a deep ravine that effectively severs the expanse of the entire 475 acres. By linking north and south the public can better experience the total park.
- **Define and enhance spatial areas.** Diversity of habitat is paralleled by diversity of space on the park, ranging from hilltops to the creek valley, from flat meadows to precipitous slopes. The changing spatial experience of passing through and among these spaces makes the park seem much larger, and greatly adds to its worth.
- **Limit active recreation to the north area of the site.** To retain the largest reasonable area for preservation of wildlife habitat, limit intensive human activity and vehicular access as much as possible to the north of the site which is less constrained by the presence of sensitive natural resources.
- **Connect major habitats, program features and key adjacent uses.** A fully developed network of pedestrian and bicycle access to and within the park will enable the community to fully appreciate the park.
- **Improve pedestrian access by developing trail links from the community to the key areas within the Park.** Getting people to the park conveniently with the least amount of disturbance to the park requires excellent connections to the planned sidewalk and bicycle paths proposed by the Township. More people reaching the park on foot and by bike mean less traffic in the adjoining neighborhoods and less impact on the park.
- **Green Design.** The Park should be designed as a model of “green design” using recycled materials, energy conservation techniques, and low maintenance landscape treatments.

**Program:**

Developed from interviews, public workshops, and the user survey, the program below represents the diversity and intensity of interest in the park held by the community. Because the park abuts two other public parks, its design must take into account the adjacent facilities in terms of circulation and access. The program for the park listed below includes all the features within the public right of way around the park as noted.

- **Community Center:** Possibly re-using the existing Mayview Dairy Barn, the community center could provide an attractive focal point in the park for compatible activities.
- **Recreation Center:** An indoor space for basketball and other activities in a new building.
- **Environmental Education Center:** A building that could accommodate the needs of UStC and other school districts in meeting state-mandated requirements for hands-on environmental education facilities.
- **Active Recreation:** Primarily accommodated in Baker Park, limited facilities would be provided at Boyce Mayview.
  - **Multipurpose Field:** A level lawn area accommodating up to two soccer-sized fields for overflow practice facilities
  - **Multi-Use (Bicycle) Trail:** A trail around the park linking the township sidewalk and path systems to the park and to a potential spur connection to the Montour Trail via a rail-to-trail corridor.
- **Pet Exercise Area (Dog Run):** A popular activity at present in the park, this space would provide a *controlled* area for unleashed dogs to run without impact on other park users and wildlife.
- **Baker Park and Morton Fields:** The existing facilities would remain intact and be linked to the park. Impact from runoff would be mitigated within the park.
- **Passive Recreation:** Open lawn areas will allow for diverse unprogrammed activities such as picnicking not possible on the other programmed fields occupied by sports activities. Woodland and wetland areas will invite passive appreciation of nature.
- **Trails:** A network of trails will provide opportunities for peaceful exploration of the site away from the higher activity areas.
- **Open Space:** The feeling of open space that is so compelling now in the park will be retained through the careful placement of new structures and arrangement of paths and access roads to enhance the feeling of openness.
- **Gathering Areas:** The park will provide a variety of places for the community to be together inside and outside, extending the season of use of the park year round and capitalizing on the township's investment in improvements.





- **Community Gardens:** The park provides space for the gardeners near a long-desired source of irrigation water. The gardens can be screened by trees, fences, shrubs, arbors as necessary to satisfy the desires of the gardeners to be removed from deer and park activities, as well as the desire of neighboring residents to avoid views of the gardens.

### **SUMMARY OF COSTS**

The recommendations of the Plan if implemented in their entirety are estimated to require between \$15 million and \$30 million. The cost range for implementation of all features of the master plan is very broad at this stage because the major proposed facilities: recreation center, community center, and environmental education center are still variable in program, size, and level of finish, and require further coordination with Township staff, the community, and potential funding partners. This cost range is based on the assumptions presented in the program statement contained in the Technical Memorandum Appendix. If the program increases or if a higher level of finish is required, the costs may exceed the maximum amount stated.

WRT has prepared a menu of items that could be implemented over a ten year + period, depending on the interest and commitment of the community and available funding. Annual operating costs are estimated at \$300 - \$400,000.

It should be stressed that the Township's share of both capital and operating costs could vary greatly depending on choices made with regard to funding partners and operating policies.

### **SUMMARY OF IMPLEMENTATION STRATEGY**

The first step in implementing the master plan is to form an Implementation Committee whose immediate charge will be to prepare a prioritized phasing plan. It should be recognized that this phasing plan will be adjusted from time to time as funding becomes available and as needs and community priorities dictate.

#### **Implementation Priorities**

It is suggested that the Implementation Committee consider grouping proposed projects into three categories: High Priority Immediate Actions, Moderate Priority Recommended Actions, and Low Priority Discretionary Actions.

**High Priority Immediate Actions**, including projects such as site clean up, hazardous waste removal, and structural stabilization, are the Township's responsibility to perform, based on the deed of trust for the land and the need to ensure the safety and well being of park users. These actions are high priority because they affect the health, safety and welfare of the community, and are the minimal actions necessary to protect the natural and cultural resources that have been entrusted to the Township. Certain actions, such as provision of vehicular access and trail construction, should be ranked as high priority actions as they have high utility, visibility and excellent cost-benefit ratio.

**Moderate Priority Recommended Actions** are important to the realization of the master plan. These actions must follow the high priority actions but are of sufficient importance to be committed to a finite implementation time frame, or are likely to be eligible for early funding. These actions include the major facilities whose funding is linked to other sources, and fundamental habitat enhancements.

**Low Priority Discretionary Actions** are not critical to staging or "critical mass" of the master plan, and can be phased throughout the project build-out period. These actions include the full development of the trail system and habitat enhancements

A plan for securing regulatory permitting is a necessary component of the implementation plan.

**Funding Sources:**

Funding for the park improvements will entail partnerships with public and private entities, particularly for major facilities. The Environmental Education Center could be a joint UStC/state/private/school districts partnership , and the pool and recreation center could be a partnership with the local YMCA. UStC's substantial bonding capacity would permit a high level of funding directly from the township. State (DCNR) and Federal grants (TEA-21) and in-kind services (US Army Corps of Engineers) are available for park improvements, infrastructure and bicycle path/sidewalk development. Additionally, volunteer labor can be used to defray the cost of labor-intensive activities. Other privately-sponsored efforts such as a corporate-sponsored "Friends of Boyce Mayview Park" could be a conduit for funding from private sources.

While there is no single, clear, easy strategy to follow with regard to the raising of capital funds or Operations and Maintenance (O&M) funds for the park, the community does have a number of choices/different directions

that it might take with regard to funding. The selection of the appropriate choice(s) will be a function of the community's values, needs and priorities.

### **Urgency**

To ensure the safety of the community, the Township needs to act quickly to remove hazards such as the unsecured, unsupervised barn, rusted metal fences, numerous utility remnants. The barns are important structures well worth further consideration for renovation. It is imperative that they are secured and stabilized before they are further vandalized and subject to weather damage. It is worth the Township to take immediate emergency action to safeguard these structures.

### **High Standard of Quality - High Standard of Living**

The Township is committed to excellence in its public facilities as is evident in its new high school and township offices. A high quality park brings quality of life, thereby maintaining the value and attractiveness of UStC as a *community of choice* among the best places to live in suburban Pittsburgh.

In implementing the vision for Boyce Mayview Park, the Township will have only one chance to "get it right" the first time. The high cost of any investment in public infrastructure dictates that the money be well spent and considered an investment rather than an expedience. As the community input had it during the meetings: "Whatever you do, make sure that it's done well." While it's typical that funds for "recreation" be the minimal amount necessary to meet the demand, today's real estate market is highly competitive and has proven that carefully considered high investment can generate returns in increased community value, both economically and intangibly in improved quality of life.

### **Competition**

With limited space available in the Township for substantial new community development other than at Boyce Mayview Park, the Township has been given a once-in-a-community opportunity to reinvent its image by positioning itself as leader in the quality of recreation in the South Hills communities. Excellence in implementation of Boyce Mayview Park could further secure the reputation for high quality public service in a time of increasing competition by neighboring communities for retention of present residents and recruitment of new residents. Several quantitative studies have proven that the value of private property in a community is stabilized or increased by the presence of high-quality open space. There is a clear benefit to the Community to have a park design that meets the standards of excellence of which Boyce Mayview is capable.

# 1.0 INTRODUCTION

## 1.1 PROJECT OVERVIEW

Having acquired the Boyce and Mayview parcels through transactions with Allegheny County and the State, Upper St. Clair Township set about several planning initiatives to determine a use for the park. Ultimately the township opted for a planning process that would lead to an inclusive, defensible planning process, and established the following goals for the planning process:

- To preserve and enhance the existing natural/scenic attributes of the site and provide for passive types of recreation.
- To use the property for historic conservation, or recreation purposes.
- To provide family-friendly opportunities and facilities for the use and enjoyment of all citizens of the Township.
- To provide environmental and historical educational opportunities.
- To involve citizens, agencies, and the Township in a single vision for the Park.
- To explore funding alternatives for developing and maintaining the park.
- To develop long range guidelines for preservation, recreating, planning, and development.

The largest of Upper St. Clair Township’s public parks, Boyce Mayview Park displays a unique diversity of natural features representative of the region and offers high quality passive recreation, with close access to active recreational areas. Its proximity to several Upper St. Clair neighborhoods, housing developments, and public schools make it accessible to many Township residents.

The information analyzed in the inventory of existing site features, combined with public input and dialogue with interested residents of Upper St. Clair throughout the master planning process, helped to form the specific recommendations regarding the development and management of the Park.

## 1.2 MASTER PLANNING PROCESS/PUBLIC INVOLVEMENT

The Master Planning process began with data collection and review, including a site reconnaissance visit, key informant interviews, and review of data such as the 1997 Boyce Mayview Park Recreational Preference Survey, UStC Township Comprehensive Plan, Allegheny County Natural Heritage Inventory Report, and a variety of other documents and maps identifying natural features and existing conditions.

The site inventory and analysis synthesized the collected data on hydrology/ floodplain patterns, wetland locations, slope categories, and habitat units on site into a composite sensitivity map identifying the areas of the site most and least suited for development (maps can be found in Section 2.0 of this report). The Site Inventory and Analysis maps were presented to the public at Public Meeting #1 in February 1999.

After the natural and cultural features of the Park site were analyzed, opportunities for and constraints to park development were summarized with respect to habitat conservation and the location of possible program elements on site. This information is presented in two separate maps: Habitat Opportunities and Constraints and Recreation Opportunities and Constraints (found in Section 2.0 of this report). The Opportunities and Constraints were presented to the public at Public Meeting #2 in April 1999.

Potential program elements to be located on the Park site were generated based on the UStC Recreational Preference Survey, Key Informant Interviews, and input from the study group. The proposed program elements were arranged on the areas of the Park site deemed most suited for development in the opportunities and constraints. Three alternative site layout schemes were presented to the public at Public Meeting #3 in May 1999. Comments were received from the public at this meeting and the comments were reviewed to generate a diagrammatic Master Plan Concept.

The Master Plan Concept (found in Section 4.0 of this report) was then developed into a more detailed draft Master Plan. The draft Master Plan proposed the approximate size, placement, and orientation of buildings and other program elements, and presented a proposed circulation and parking layout. This draft Master Plan was presented to the public at Public Meeting #4 in September 1999.

Comments on the draft Master Plan were received from the Township residents and officials and the Plan was revised accordingly. The final illustrative Master Plan (found in Section 5.0 of this report) was presented to the public at Public Meeting #5 in October 1999.

### **1.3 TECHNICAL MEMORANDUM APPENDIX**

This report provides an overview of the process and products generated to form the Master Plan for Boyce Mayview Park. Detailed information related to each section of this report can be found in the Boyce Mayview Park Technical Memorandum Appendix. The eleven Technical Memoranda found in this appendix were submitted to the Township to document each phase

of the master planning process and include the following:

1. Site Inventory and Analysis
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## 2.0 CONTEXT AND SITE ANALYSIS

The following establishes a thorough knowledge of the external and internal factors that bear on the park plan. These factors form the basis for understanding the intrinsic value of the park prior to considering the use and facility program. Please refer to the “Existing Conditions” plan at the end of this Section for a view of the existing conditions of the site.

### 2.1 REGIONAL CONTEXT

The Boyce Mayview Park site is located within the Township of Upper St. Clair, Allegheny County, Pennsylvania. Allegheny County is approximately 741 square miles in area with the City of Pittsburgh at its center. Upper St. Clair Township is located on the southwest boundary of the County, bordered by South Fayette Township to the west, Bridgeville and Scott Townships to the northwest, Mount Lebanon Township to the north, and Bethel Park Township to the east.

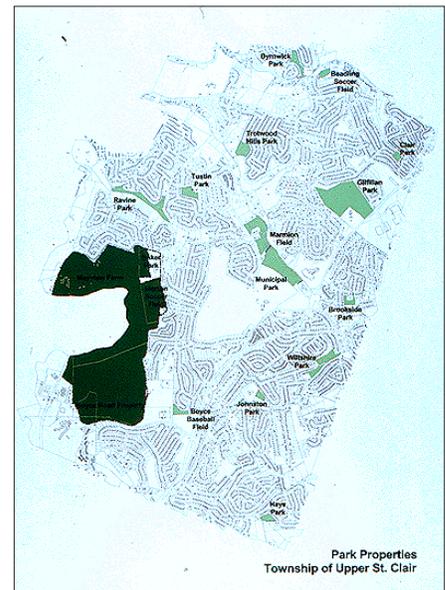
Chartiers Creek forms the western boundary of Boyce Mayview Park. The Creek flows north between Upper St. Clair Township and South Fayette Township, then through 16 other Townships to its confluence with the Ohio River.

Within Upper St. Clair Township, the Boyce Mayview Park site is located on the western Township boundary with South Fayette Township and is the largest of the 19 Township parks at 475 acres. The majority of Upper St. Clair’s 660 acres of public parks offer primarily active recreation facilities, but the Boyce Mayview site offers abundant natural open space for passive recreation, with many walking trails and a convenient location relative to residential neighborhoods in Upper St. Clair. Many of the other parks offer nature study trails for passive recreation, but the relative areas of these parks, ranging from 1.5 acres to 60 acres, are significantly smaller than the area of the Boyce Mayview Park. Two Township parks offering active recreational facilities, Baker Park and Morton Fields, are directly adjacent to the Boyce Mayview property, offering opportunities for active recreation near the passive recreational activities of the Boyce Mayview Park.

### 2.2 SITE HISTORY

Archaeological investigation at the PennDOT wetlands revealed presence of Indian settlement in the Chartiers Creek floodplain terrace. The Park site was used primarily as a farm during Upper St. Clair’s settlement period. The Mayview State Hospital, constructed in 1892, was occupied by inmates and

**Maps presented in this Section  
are also available on the  
Upper St. Clair Township  
Web Site:  
[www.sgi.net/uscadmin/usc.htm](http://www.sgi.net/uscadmin/usc.htm)**



**Park Properties of  
Upper St. Clair**



Land Use

patients by 1894. The State Hospital’s farm site was located in Upper St. Clair Township, just across Chartiers Creek from the Mayview Hospital Grounds at the Barn Complex that is seen today. The farm produced food for the Mayview State Hospital and included a variety of livestock, including hogs, Holstein cows, and chickens, as well as a fruit and vegetable garden. Memoirs of farm families note the celebrations that took place near the orchards in the northwest corner of the park property. The entire park property has been deep mined for coal, which involved the creation of an extensive underground tunnels (room and pillar mining) for the transport of coal.

### 2.3 EXISTING CULTURAL FEATURES

#### Existing Structures and Building Assessment

The Mayview Barn Complex is located in the northwest section of the site. The existing structures on site include a large wooden storage building, a small wooden storage building (root cellar), a dairy barn with two pair of structural tile silos and one pair of concrete silos, a main hay storage barn with livestock pens and storage below, two attached milking barns with hay lofts above, attached concrete block milk handling rooms, a weigh station, a fuel storage building, an open pole barn, and other miscellaneous structures

Use of the complex as a dairy stopped in early 1980s. Since that time, while some attempt has been made to secure and maintain the buildings, moderate to severe damage from vandalism, scavenging of materials and the weather has occurred. Portions of some buildings have collapsed. The buildings are currently not used except for limited hay and machinery storage.



Historical Photograph of Mayview State Hospital grounds



*Plan view of Mayview Farm Property with figure-ground drawing of the coal mine patterns under the site. Note the Mayview Barn Complex on the lower left corner of the drawing.*



### **Vehicular Access**

Boyce Road forms the southern border of Boyce Mayview Park and is a heavily traveled roadway in Upper St. Clair Township, linking Route 19 with South Fayette Township. From Boyce Road, Boyce Mayview Park can be accessed at the location of the Community Gardens, near the intersection of Boyce Road and Morton Road, as well as from the southwest corner of the Park where the road leading to the municipal Compost Facility is located.

Morton Road forms the eastern border of Boyce Mayview Park and is a narrow roadway with a steep grade and many curves. The road does not have significant shoulders and is lined with guardrails in many places on the west edge of the road. The grade to the west of the road drops steeply down into the Park site in several locations.

Morrow Road borders the Baker Park and Baker School complex to the north and connects Sky Ridge Drive to Morton Road. One access point exists along Morrow Road to the Baker Park paved parking areas.



*Mayview Barn Complex*

Sky Ridge Drive is located to the north of the Boyce Mayview Park site and is a double loaded residential street. It is bordered on both sides by single family residential housing. Sky Ridge Drive offers no direct access to Boyce Mayview Park.

Mayview Road is located to the west of the Boyce Mayview Park site. It offers two accesses to the Park at the Mayview Barn complex and at a small scale access road at the north west corner of the Park near the junction of Sky Ridge Drive. The access to the Mayview Barn complex is currently closed to vehicles with a cable gate across the driveway to the Barns. No parking is currently available at either of these access points.

**Utilities/Infrastructure**

The existing utilities in the area of the Boyce Mayview Park property are primarily located around its perimeter. All utility connections to the site have been disconnected.

Several utilities such as electric, natural gas and sanitary sewers traverse the property. In general, it appears that utility services to serve new development within the Park could be secured. This would also be the case for the existing recreational complexes in the Park, which would be expanded or upgraded.

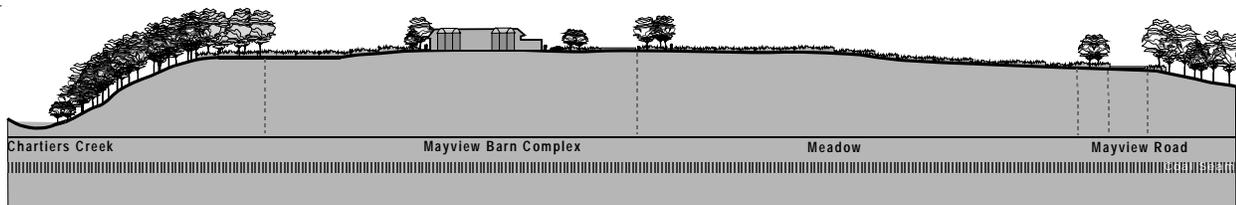
**2.4 EXISTING NATURAL FEATURES**

The combined value of the park’s wide range of physiographic characteristics is more important than any specific natural feature found in the park. The site includes the extremes of elevations found in the region and an unusual spectrum of topographic features. Ravines, floodplain or bottomlands, river terraces, upper plateaus, three unnamed headwater tributary streams and the full range of possible aspects and slopes are all present on the site.

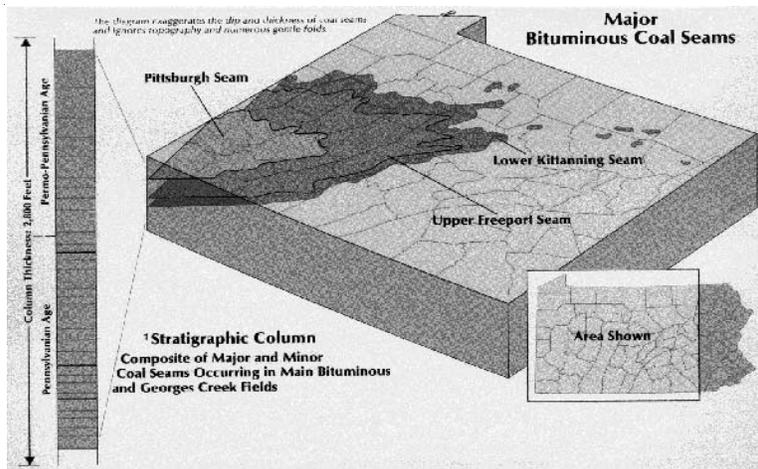
**Geology**

The geology of the Park site exhibits the range of geological features seen throughout the region.

**Site Cross Section**



*This cross-section cuts through the Mayview Barn Complex. Coal deposits lie under much of the Park.*



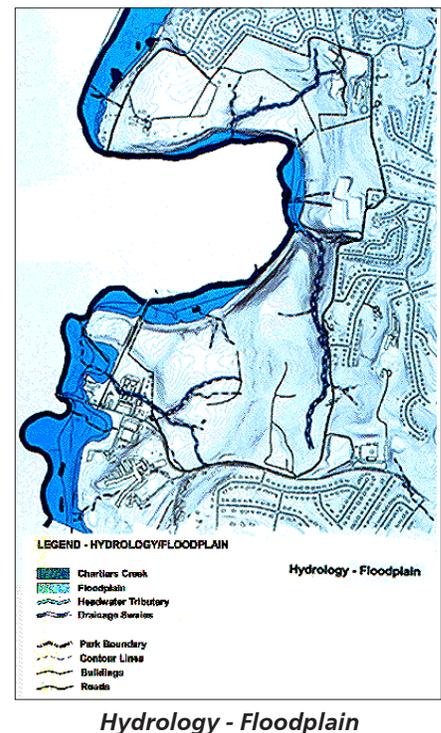
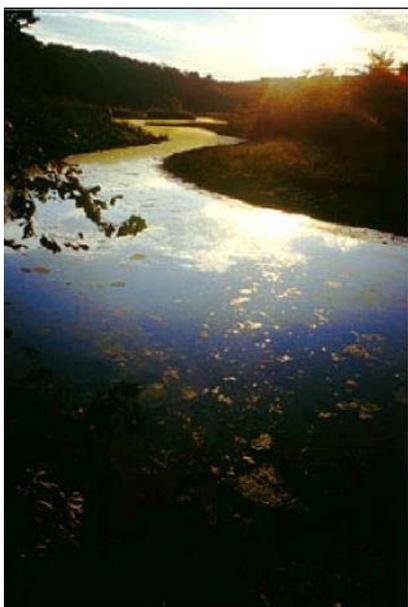
Map of coal seam deposits in southwestern Pennsylvania (source: *The Atlas of Pennsylvania*, Temple University Press, 1989)

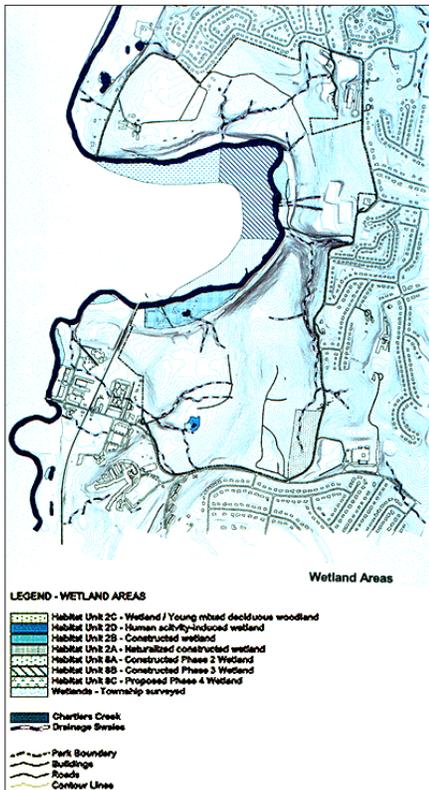
Bedrock underlying the Boyce Mayview Park site has been dated back to the Permian Age (250-290 million years). This sedimentary rock consists of shale, sandstone, conglomerate, limestone, and coal. The coal deposits for the Mayview Mine are classified as a Pittsburgh Seam, ranging from a surface elevation of 820-1170 feet to a depth of 780-840 feet.

### Hydrology/Wetlands

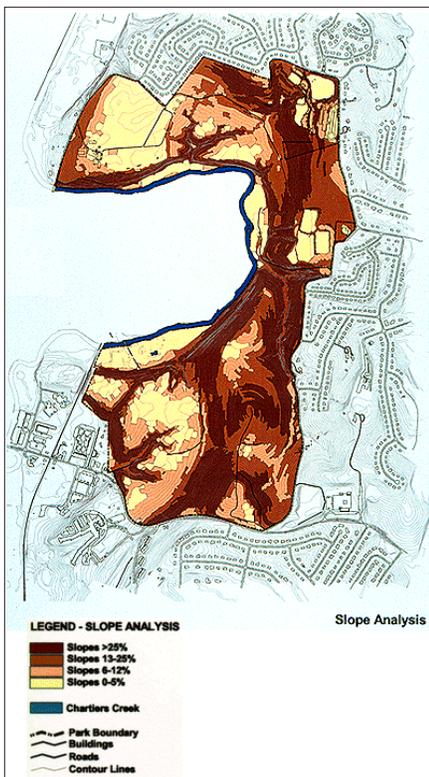
Chartiers Creek, bordering the site to the west, is considered to be a mid-sized stream within the region. Three unnamed headwater tributary streams exist on the Park site and flow into Chartiers Creek. Two of these tributaries lie within the Park boundaries in their entirety, providing a unique feature and educational opportunity.

Wetlands on site have been verified via field investigation by the team





Wetland Areas



Slope Analysis



ecologists. The Pennsylvania Department of Transportation (PennDOT) has completed three phases in a compensatory mitigation project to create wetlands along Chartiers Creek adjacent to the Boyce Mayview Park site. These three wetlands have been constructed to offset the impacts of local highway construction.

### Slopes

The slopes on site were analyzed and classified into four categories: 0-5 percent slopes (flat or gently sloping land), 6-12 percent slopes, 13-25 percent slopes, and slopes greater than 25 percent (steepest slopes). These slope categories, when compared against the Township development standards and regulations, assume that slopes from 0-5 percent are developable, 6-12 percent are developable, but would require more earthwork and be more costly to develop, 13-25 percent slopes are not appropriate for development, and slopes greater than 25 percent are not developable.

### Habitat Units

#### Soils:

Boyce-Mayview Park exhibits a variety of soil characteristics in the context of the surrounding region. The presence of the full range of regional soil types on site helps to account for the site's wide diversity of vegetation and habitat types. The parent material in the northern part of the region is characterized by acidic siltstone and sandstone, with silt loam and clayey soils.

The pH for the majority of the soils found throughout the site is slightly acidic (typical pH=5.5). The southern portion of the site, however, also includes soils that have shale imbedded with limestone as the parent material, resulting in a soil pH that is closer to neutral (pH=7). This soil condition is considered to be unique in the Allegheny County region. The varied soil pH

of the Boyce-Mayview site, therefore, results in a diversity of plant communities on the site, with a high diversity of canopy vegetation, including oaks (*Quercus spp.*), and a high diversity of wildflower species. The presence of such a high diversity of plant communities on one site is a condition not found in many other areas of the region.

Soil variation is incorporated into the habitat units mapping as soil types on this site are generally reflected in the vegetative cover.

*Vegetation:*

The relatively high diversity of site vegetation has been recorded by the team ecologists. The ecologists surveyed the site and observed the presence or likelihood of 66 species of trees, 47 species of shrubs, 409 herbaceous species and 19 types of vines. The species have been evaluated as being abundant, present and observed, rare, as observed or not observed but likely to occur within each habitat unit. (As field evaluation was performed in the winter months, some plants were dormant and unobservable). Each species has also been classified as native, introduced or designated as a species of special concern.

The site vegetation data collected by the ecologists were used to develop the habitat units described below and the criteria for ranking these habitat units in terms of relative sensitivity.

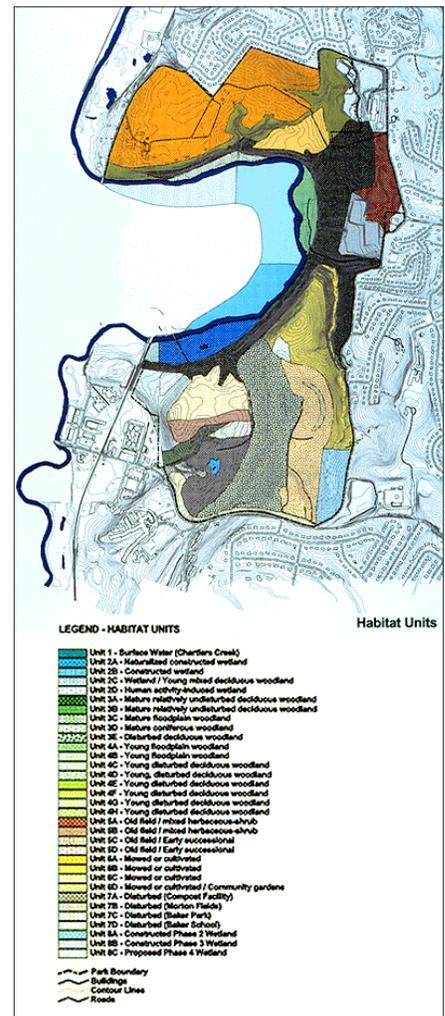
*Wildlife:*

The team ecologists have researched various primary and secondary sources to compile an inventory of probable and confirmed species within Boyce Mayview. The population dynamics of the faunal species within the park are directly related to both habitat characteristics and park management strategies. The habitat units identified by the team ecologists will support different species and population levels depending upon habitat characteristics such as vegetation range, degree of coverage, area and relationship to the larger landscape pattern.

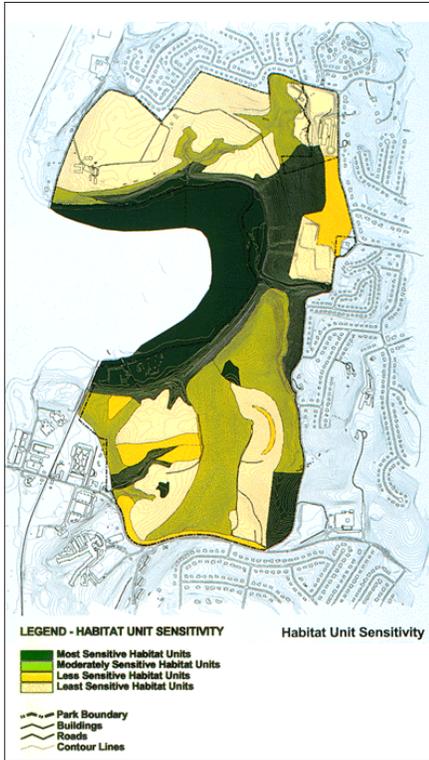
*Habitat Units:*

The team ecologists surveyed the site in March 1999 and have identified 33 Habitat Units within Boyce Mayview Park. The Habitat Units are characterized in terms of the existing soils, vegetation types and supported fauna. The preliminary data and detailed descriptions of each Habitat Unit are available in the Habitat Evaluation Report (Technical Memorandum #2).

After the Habitat Units were identified, they were ranked in terms of ecological importance and level of sensitivity to development. The five



**Habitat Units**



**Habitat Unit Sensitivity**

criteria used by the ecologists in determining the relative sensitivity of the designated Habitat Units were:

1. Diversity of vegetation and wildlife
2. Relative availability of the habitat regionally
3. Indicator/rare/endangered species (either confirmed or suspected)
4. Degree of past disturbance
5. Potential for enhancement of habitat quality/bio-diversity

These criteria are the basis of the ranking system used to classify the habitat units into a four-tier sensitivity ranking. The four tiers include:

1. Most Sensitive - Habitat Unit is of high value and should not be disturbed
2. Moderately Sensitive - Habitat Unit is minimally disturbed and may be enhanced through relatively modest means
3. Less Sensitive - Habitat Unit is significantly disturbed but may be significantly enhanced
4. Least Sensitive – Habitat has low value due to severe disturbance and potential exists for development or creation of new habitats

The most valuable habitat type on the site, as determined by the team ecologists, are mature woodlands. Mature forests are considered to be more rare than wetlands; they typically have been undisturbed and have maintained their original character.

## 2.5 SITE ANALYSIS

After studying the data collected on hydrology, wetlands, slopes, and habitat units on the Boyce Mayview site, a Composite Sensitivity map was developed to summarize and combine the analysis from all natural feature inventory maps. This analysis leads to an assessment of the areas of the Boyce Mayview Park site that could be used for program development.

The Composite Sensitivity map classifies the site into four categories: most sensitive areas, moderately sensitive areas, less sensitive areas, and least sensitive areas. The most sensitive areas are shown on the map with a dark green color, while the least sensitive areas are shown with a pale yellow.

The most sensitive areas are considered to be of high value and should not be disturbed. These areas include land with the steepest slopes and the Habitat Units ranked as “most sensitive.” Moderately sensitive areas include land with moderately steep slopes (13-25%) and minimally disturbed habitats

that might be enhanced through relatively modest means. Less sensitive areas include land with somewhat gentle slopes and significant disturbance, but with potential for significant enhancement. Least sensitive areas have gentle slopes and have been severely disturbed, resulting in a great potential for development and/or creation of new habitats.

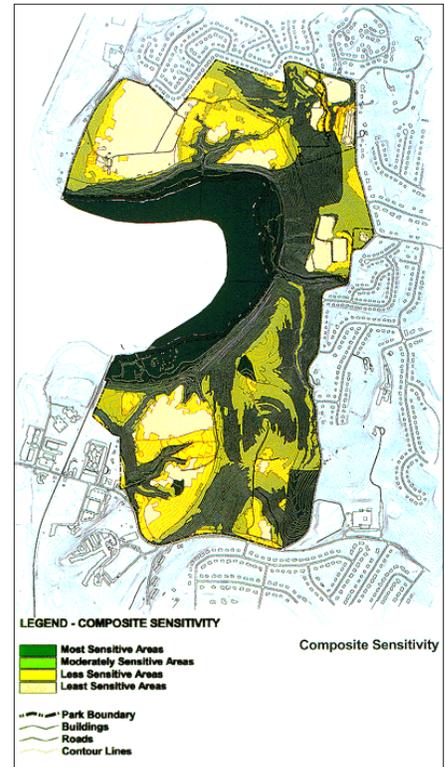
As can be seen in the Composite Sensitivity Map, the least sensitive areas of the Park include a large site in the northwest corner of the Park, adjacent to the Mayview Barn complex. Also on the north end of the park are two less sensitive areas between the Mayview Barn complex and the Baker School. In the southern area of the site, a large area in the southwest corner, near the Municipal Composting Facility and the PennDOT wetlands, has been categorized as less- or least sensitive. The southeast corner of the site contains small less sensitive areas where the existing Community Gardens are located. This southeast corner, however, consists mainly of most- to moderately sensitive areas adjacent to the Gardens, which could have greater habitat potential if these less sensitive areas were managed as successional woodlands to enhance habitat for the Park's many wildlife species.

## 2.6 SITE OPPORTUNITIES AND CONSTRAINTS

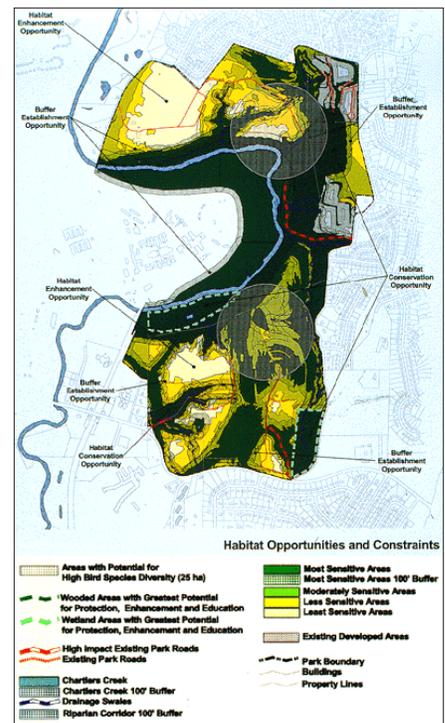
After assessing the value of the site features within the Boyce Mayview Park, the most important attributes to preserve, enhance, or change were determined, leading to an objective basis for the identification of opportunities and constraints on the site. Due to the diversity of habitats on site, as shown in the Habitat Units Map, and the use of the site for passive and active recreation, separate maps were produced to display the Habitat Opportunities and Constraints and the Recreation Opportunities and Constraints.

Identifying opportunities and constraints based on the existing site features and conditions, combined with the identification of the desired program elements for the site, allows for the formation of conceptual design alternatives and initiates the decision making process.

Both Opportunities and Constraints maps build on the Composite Sensitivity map developed in the site analysis. The *Habitat* Opportunities and Constraints map considers the relative sensitivity of different areas of the site for meeting habitat conservation and enhancement goals, including the designation of buffer areas as well as an area to encourage the highest level of bird species diversity. The *Recreation* Opportunities and Constraints map considers the possible recreation goals for specific areas of the site and highlights possible



Composite Sensitivity



Habitat Opportunities and Constraints



areas for development of program elements and recreational activities on site. Additionally, the Recreation Opportunities and Constraints map highlights current use areas that may conflict with the most sensitive habitat areas, such as several existing roads and scenic overlook areas.

**Recreation Opportunities and Constraints**

## **3.0 PROGRAM**

The use program for the park was determined based on input from the community gained through a user survey, personal interviews, and public workshops. The process revealed a wide range of interests ranging from pure preservation to a balance of preservation and recreation. The program outlined below includes a reasonable range of activities that could be accommodated on the site while preserving the vast majority of its most sensitive areas.

### **3.1 COMMUNITY CENTER**

The Community Center could include at a minimum meeting rooms and a large “commons room” for multipurpose use, as well as a kitchen, bathrooms, and storage space. The adaptive re-use of the Mayview Dairy Barn should be considered in the development of plans for the Community Center. Further evaluation of this program should be done in concert with potential funding partner(s).

### **3.2 RECREATION CENTER**

Due to structural and spatial requirements, The Recreation Center could be a new structure on site with two full size side-by-side basketball courts with a “competition” court lengthwise, flanked by retractable seating, a wrestling/exercise room, and locker rooms. Further evaluation of this program should be done in concert with potential funding partner(s).

### **3.3 OUTDOOR POOL**

A new community swimming pool could offer eight 25 meter lanes, low- and mid-height diving boards and a children’s swimming area/baby pool. A recent trend in public pool design termed “family aquatic centers” includes water slide(s), zero-depth (sloped) entry, and spray fountains all of which have proved to create a higher level of use and return on investment than the basic amenities. A bathhouse for the pool, with changing rooms, an office/admissions area, utility room, and equipment storage space, could be a separate structure or located in the Recreation Center.

### **3.4 ENVIRONMENTAL EDUCATION CENTER**

The nature center would be an educational facility located on a level area between two swales leading to the Chartiers Creek. The center would be designed using principles of “green architecture,” and could include a

classroom, theater, office space, and laboratory space. Further evaluation of this program should be done in concert with potential funding partner(s).

### **3.5 ACTIVE RECREATION**

#### **Multipurpose fields**

A large unprogrammed field area, approximately the size of two soccer fields would be evenly graded and drained to accommodate a variety of outdoor sports, including soccer, football, and baseball. The fields would not be striped for any one sport, nor would they be designed with any fixed equipment (such as goalposts or nets).

#### **Multi-Use (Bicycle) Trail**

A multi-use trail would be paved and accommodate both walkers and bicyclists, and would require a minimum 8-foot width. The trail would require signs or striping to indicate bike/pedestrian zones and sight distance/vegetation clearing to meet safety standards.

#### **Pet Exercise Area (Dog Run)**

A pet exercise area made up of 7-8 acres would have an unobtrusive perimeter fence or barrier to allow dogs to run free in a controlled area.

### **3.6 PASSIVE RECREATION**

Trails throughout the Park site should offer a variety of trail length options for walks of different durations and level of difficulty. ADA (disabled-accessible) paths should be provided within the site. Walking trails could combine with other site trails to link key habitat areas and restoration areas into an "eco-tour" of the site. Trails would be designed in a hierarchy from paved to wood chip trails depending on their proximity to sensitive habitats.

### **3.7 GATHERING AREAS**

A Public Lawn of 12-13 acres and would be a level area of groomed lawn for unprogrammed use such as frisbee and picnicking, and possible occasional community gatherings.

### **3.8 COMMUNITY GARDENS**

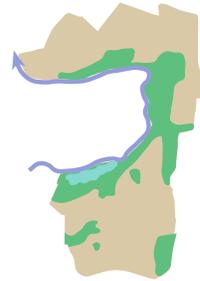
The Community Gardens would be located on a south facing area with a moderate slope. The garden area should provide potable water for irrigation to several faucet locations and should be designed to accommodate vehicle access to garden plots. The gardens should be buffered from adjacent uses, removed from active use areas, and screened from adjacent residences.

## 4.0 MASTER PLAN CONCEPT

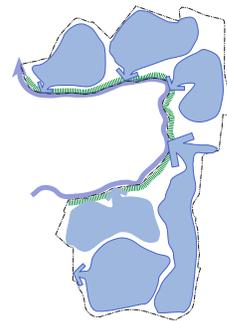
### 4.1 PRINCIPLES

The planning and design of the park was informed by a series of guiding principles derived from the findings of the site analysis and community involvement process. These principles comprise the core of the master plan and are the touchstones for determining the physical form the park will take on.

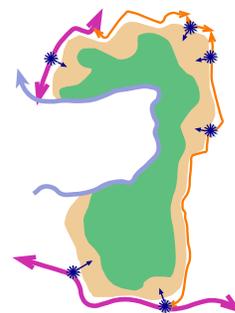
- **Preserve sensitive habitats.** The park is blessed by an extraordinarily diverse range of topography, vegetation, and water resources. Together these systems form specific habitats for most of the native flora and fauna indigenous to the region.



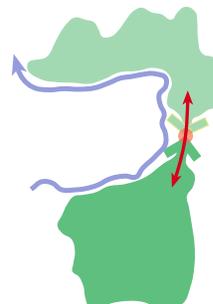
- **Improve water quality.** Stretched along the Chartiers Creek, the park can act as a giant filter for urban stormwater runoff from adjacent development. Water quality is a major issue nationwide, and the actions taken in the park specific to Chartiers Creek will aid the ongoing efforts to improve water quality in the Creek.

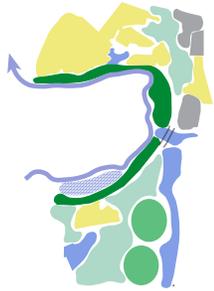


- **Limit vehicular access to the perimeter of the site to preserve the interior.** Provide access to the park, but in a way that does not trammel the very resource being preserved.

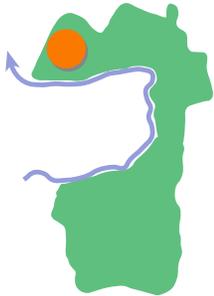


- **Link Boyce and Mayview properties.** The two properties are separated by a deep ravine that effectively severs the expanse of the entire 475 acres. By linking north and south the public can better experience the total park.

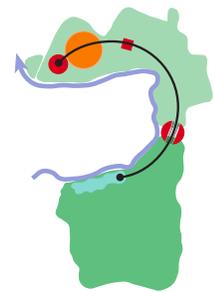




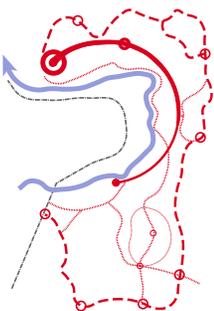
- **Define and enhance spatial areas.** Diversity of habitat is paralleled by diversity of space on the park, ranging from hilltops to the creek valley, from flat meadows to precipitous slopes. The changing spatial experience of passing through and among these spaces makes the park seem much larger, and greatly adds to its worth.



- **Limit active recreation to the north area of the site.** To retain the largest reasonable area for preservation of wildlife habitat, limit intensive human activity and vehicular access as much as possible to the north of the site which is less constrained by the presence of sensitive natural resources.



- **Connect major habitats, program features and key adjacent uses.** A fully developed network of pedestrian and bicycle access to and within the park will enable the community to fully appreciate the park and will distribute impact of use more evenly.



- **Improve pedestrian access by developing trail links from the community to the key areas within the Park.** Getting people to the park conveniently with the least amount of disturbance to the park requires excellent connections to the planned sidewalk and bicycle paths planned by the Township. More people reaching the park on foot and by bike mean less traffic in the adjoining neighborhoods and less impact on the park.

#### 4.2 MASTER PLAN CONCEPT

The Conceptual Master Plan was formulated based on input received from the community and park board about the alternative concept plans. The Conceptual Master Plan illustrates the principles described above and shows the proposed location of the program elements.

## 5.0 THE MASTER PLAN

Boyce Mayview Park will include a balance of active and passive recreation, and natural resource preservation. 86% (approximately 409 acres) of the site will be devoted to environmental preservation and enhancement with mostly passive recreation. Limited active recreational development on 14% (approximately 66 acres) of the site will be in the newly-designated Mayview Commons at the north end of the Mayview property barn complex.

Boyce Mayview Park will be easily accessible and usable by all Township residents by all modes of transportation, age or physical ability. It is linked by path system to the Township bicycle and pedestrian walkway system, surrounding residential neighborhoods and schools, adjacent Morton and Baker Parks and a potential spur connection to the Montour rail-to-trail system. Within the park, all major facilities are interconnected with paths. A 3500 foot Arc Walk connects Mayview and Boyce parcels via a bridge across the central ravine, providing an ADA accessible path, and accommodating occasional maintenance, service and emergency vehicles. The Arc Walk extends from the Commons to the PennDOT wetlands, connecting the public lawn, ball fields, nature center, habitat areas, wetland and creek. Vehicular access by way of bus or car is provided to the north via Mayview Road, to the south via Boyce Road, and along the Morton Road side of the park via the contiguous park and school facilities' parking lots.

Boyce Mayview Park balances the community's needs for passive, nature oriented activities with limited recreational activities. The predominant use of the park is for passive nature oriented activities served by trails, overlooks and seating areas. The trails thread through open meadows and forests, and through existing high value habitats and restoration areas.

Active uses are clustered in the Mayview Commons, a group of buildings and open spaces around the Mayview dairy barn in the northwest of the site. The Commons is conceived as a "village center" of uses around green space comparable to a New England town common. With a long history of productive uses that included both farming and coal mining, the park's past private and institutional farming use is expressed in a contemporary theme of productive, sustainable development.

Boyce Mayview Park, as befits its importance in the Township, offers more than active and passive recreation. Environmental preservation and recreation are placed in the context of a larger message of sustainable development and community. This message is presented through the inclusion of a Environmental Education Center providing an opportunity for

an environmental educational program, through community gardens, and the community composting/recycling facility.

## **5.1 SUSTAINABLE DESIGN**

“Sustainability” is generally defined as the wise use of natural and man-made resources to ensure the most benefit from the least destruction or depletion of finite resources. The following is only a brief list of the many sustainability principles that should be considered when siting the program elements on the Boyce Mayview Park site:

### **Planning and Programming**

- Use park as a demonstration for the ecological and educational merits of a fully integrated sustainable design program
- Combine community-oriented programs where possible:
- Recycling, Composting, Gardening
- Township tree nursery
- Locate facilities near road access where feasible

### **Engineering**

- Use pervious surfaces where possible to minimize runoff (stabilized lawn, gravel, porous pavement)
- De-silt and filter runoff before discharging into natural drainage ways
- Groundwater recharge of stormwater runoff
- Use on-site septic system and/or composting toilets for normal sanitary flow, and rental units for peak flow periods

### **Architecture**

- Re-use existing structures where feasible
- Design to minimize energy costs
- Consider earth-sheltered “green” design to integrate new structures with the site

### **Landscape**

- Use low maintenance, drought tolerant plants
- Use recycled materials
- Locate plantings to shade from summer sun and buffer from winter winds

### **Implementation**

- Limit construction impacts by close management of project areas and access.

## **THE PRINCIPLES OF SUSTAINABILITY**

*Sustainability does not require a loss in the quality of life, but does require a change in mind-set, a change in values toward less consumptive lifestyles. These changes must embrace global interdependence, environmental stewardship, social responsibility, and economic viability.*

*Sustainable design must use an alternative approach to traditional design that incorporates these changes in mind-set. The new design approach must recognize the impacts of every design choice on the natural and cultural resources of the local, regional, and global environments.*

*A model of the new design principles necessary for sustainability is exemplified by the "Hanover Principles" or "Bill of Rights for the Planet," developed by William McDonough Architects for EXPO 2000 to be held in Hannover, Germany.*

- 1. Insist on the right of humanity and nature to co-exist in a healthy, supportive, diverse, and sustainable condition.*
- 2. Recognize Interdependence. The elements of human design interact with and depend on the natural world, with broad and diverse implications at every scale. Expand design considerations to recognizing even distant effects.*
- 3. Respect relationships between spirit and matter. Consider all aspects of human settlement including community, dwelling, industry, and trade in terms of existing and evolving connections between spiritual and material consciousness.*
- 4. Accept responsibility for the consequences of design decisions upon human well-being, the viability of natural systems, and their right to co-exist.*
- 5. Create safe objects of long-term value. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creations of products, processes, or standards.*
- 6. Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems in which there is no waste.*
- 7. Rely on natural energy flows. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.*
- 8. Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not an inconvenience to be evaded or controlled.*
- 9. Seek constant improvements by sharing knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers, and users to link long-term sustainable considerations with ethical responsibility, and reestablish the integral relationship between natural processes and human activity.*

*(source: [Guiding Principles of Sustainable Design](#), National Park Service, U. S. Department of Interior, September 1993)*

## Management

- Reduce intensive landscape maintenance by using native materials
- Use long lasting, durable materials to extend lifecycle costs
- Use low impact “best management practices” for site maintenance

## 5.2 HABITAT CONSERVATION AND ENHANCEMENT

### Conservation Areas

- Protect from disturbance and development
- Buffer from active use areas
- Encourage forest regeneration by controlling deer browse
- Encourage growth of native plant materials and control spread of exotic species

### Enhancement Areas

- Allow natural succession to occur in several open areas
- Encourage the expansion of higher quality habitats by planting enhancement areas with representative native vegetation
- Link habitat corridors
- Articulate woodland edge to foster diversity

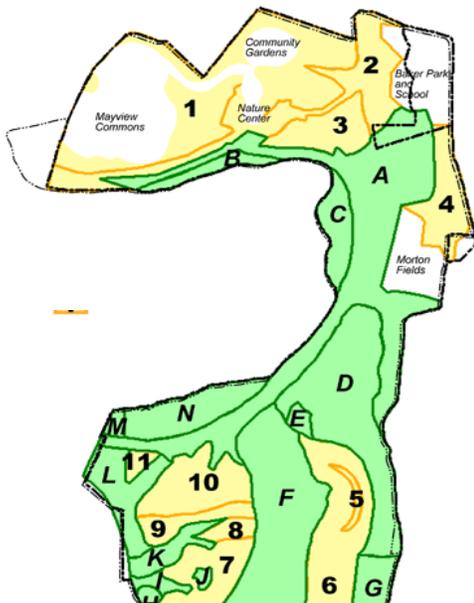
## 5.3 PARK GATEWAYS AND ACCESS

The plan includes access along the periphery of the park at the following points: Mayview Gateway (primary access to the Commons), Baker Gateway, Morton Gateway, School Gateway, Boyce Gateway, Boyce Station Gateway, Montour Gateway. These locations allow for distribution of access rather than concentration.

The township should proactively represent the park interests in coordinating engineering work on Boyce Road that may be considered by PennDOT in the future (i.e., straightening). Additionally, the Township should carefully study the proposed Boyce/Morton Road intersection improvement to find a least impact solution for the park. The current plan shown in the UStC traffic component of the comprehensive plan shows a configuration that would be severely detrimental to the park. Alternative alignments exist and should be explored.

## 5.4 MAYVIEW COMMONS DEVELOPMENT

The Mayview Commons is a “village center” of new and existing buildings, set within abundant open space of both programmed and unprogrammed green space. It will establish a strong sense of community set within the



**Habitat Conservation and Enhancement Areas**

*Plan View of Mayview Commons Development*



context of nature, providing both a link to the site's past agricultural use, and its future intended use as a place for Upper St. Clair residents to gather and recreate.

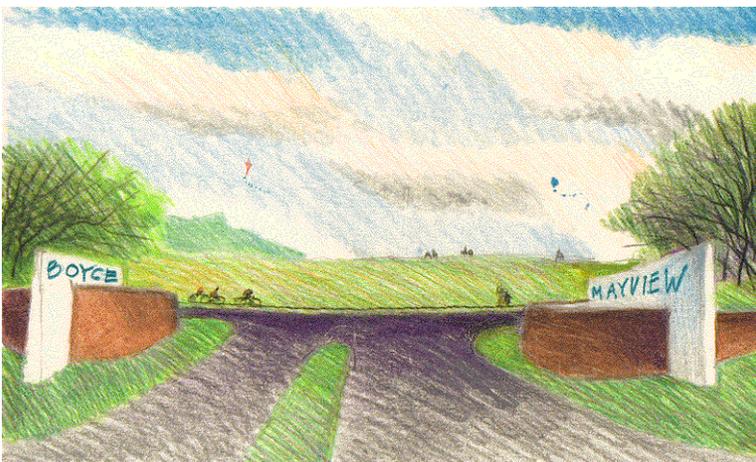
The Commons could be an attractive venue for seasonal festivals and major communal activities such as the 4<sup>th</sup> of July fireworks. The remainder of the park will remain in passive recreation use.

Components of the Commons discussed below are:

- Community Center
- Recreation Center
- Pool
- Commons Plaza
- Public Lawn
- Multipurpose Field
- Dog Run Area
- Access Road and Parking
- Buffer Planting
- Arc Walk

### **Mayview Commons Site Plan**

The Commons is accessed from Mayview Road at a point several hundred feet uphill (north) of the present driveway aligned with the existing driveway to the abandoned pool and golf complex.. The relocated driveway will afford a spectacular panoramic view across the fields for motorists entering the site, immediately exposing visitors to the broad meadows of the Mayview Commons. The new entry location allows traffic bound separately for the Environmental Education Center and Commons to split and move north or south. This will allow Environmental Education Center visitors to avoid the parking and drop-off areas for the Commons, which may be busy at times.



*Plan view and sketch of entry drive to the Mayview Commons Development*



Improvements to Mayview Road such as widening for turning lanes, signs, lights, and drainage improvements will be necessary.

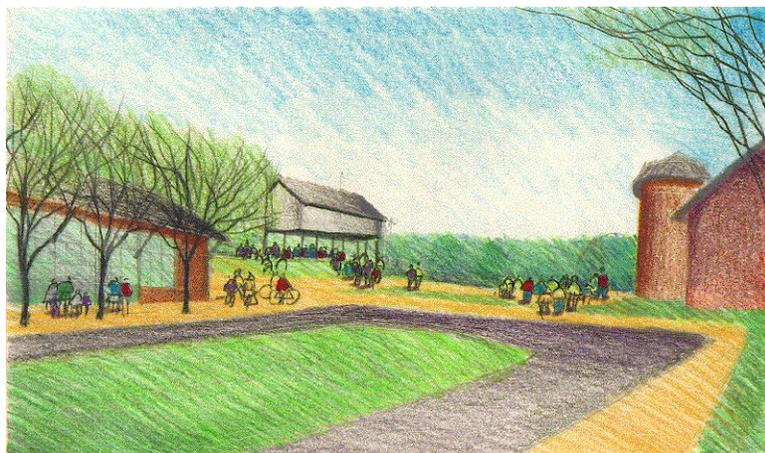
After the entry, traffic bound for the community and recreation centers proceeds south along the driveway past the parking lots and recreation center driveway to the Commons plaza, around which are located the new recreation center and pool, community center, and picnic pavilion. Visitor drop-offs are provided at the upper level of the recreation center driveway, and at the main level of the plaza.

The plaza between the existing barns serves as a welcoming orientation space and a place for small and mid sized gatherings. Entrances to the main buildings are located on the plaza, making it a natural gathering place and focal point.

The sloping terrain allows the Commons to be designed in three terraced levels, providing visual interest and taking advantage of the grade differential to reduce the appearance of bulky building masses. From the top down, the upper level would include the second floor of the recreation center, the picnic pavilion, both of which would face east, opening out to the public lawn. The main or intermediate level would be the plaza level, which would allow access to the first floor of the recreation center and the upper floor of the community center in the Mayview dairy barn. The lower level would allow access from the milking wings of the Mayview Community Center barn to the barn courtyard.

For the purposes of the master plan, a unifying circular geometry has been superimposed on the Commons building complex, signifying *community* and a commitment to a unified design appearance allowing variety within an overall framework.

*Plan view and sketch of Mayview Commons Development*



### **Community Center**

A major component of Mayview Commons is the Community Center with a central gathering hall, meeting/exercise rooms, kitchen and space for township recreation staff/site manager offices, and additional rooms for storage and utility use.

The existing Mayview Dairy Barn will be studied further to determine its suitability to house the community center. This decision is based on the knowledge that renovating the existing building could cost as least as much as building a new facility. WRT recommends that the added benefit of preserving the barn as an attractive and unusual relic of the former agricultural use of the site outweighs the advantages of building a new structure.

### **Recreation Center**

Because of the large spaces that need to be accommodated without intervening walls and columns, the Recreation Center would be housed in a new structure separate from the Community Center but adjacent to the plaza. The new structure would house two basketball courts, changing rooms, wrestling rooms and support uses. It is assumed at this time that the two structures would not be connected, although that could be accommodated if important to the program. Although this type of municipal recreation and community center is economically placed under one roof, the potential for reuse of the existing farm structures and the compelling image of dispersed farm buildings around a central open space provides justification for separate community and recreation centers. Further detail on programming will be possible once the approximate level of expenditure is committed and the funding participants are known.

The upper level would open onto the lawn and pool area and the lower level would open onto and be accessible from the plaza. The recreation center will be designed to be compatible with the existing structures. With the possibility of two levels, the footprint could be consolidated and earthwork costs reduced.

### **Pool**

The proposed pool complex would include a 25 meter pool with eight lanes and a diving "ell," middle depth pool, and toddler pool. Possible additional features common to a recent successful trend called "family aquatic centers" could include "zero depth" pool entries, sliding boards, lights, and spray features. The pool complex would be served by a bathhouse with bathrooms, showers, changing areas, lockers, office, control station, and pump/storage rooms. Site features around the pool would include a paved apron area,



*Plan view and sketch of Mayview Commons Development and swimming pool*



lawn area, seating, lighting, and an aesthetically attractive fence/wall system. The possibility of an indoor-outdoor pool, a seasonally covered pool, or some such architecturally- integrated complex is under consideration.

#### **Picnic Pavilion**

The existing wooden barn should be studied in detail to consider its reuse as a picnic pavilion to accommodate large gatherings. The existing space between the two barns, as well as the spaces among the outbuildings is an important part of the spatial character of the commons.

By opening the sides to the air, the currently enclosed barn will be have a dramatic, airy feel and will allow views from the Community center and plaza through the Pavilion to the public lawn beyond. The pavilion could house picnic tables, barbecue grills, a concession stand, and storage areas. Due to its large mass, it could also possibly act as a backdrop/stage for events on the public lawn.

#### **Picnic Shelters**

Picnic shelters will be located around the public lawn and multipurpose field. The shelters will have a concrete base, picnic benches and trash containers and will be located near walkways/service routes for ease of access and maintenance. Shelters will be placed so that they are close to the woods for shade and open to the lawn area for activities. WRT recommends that the shelter be designed to relate to the recreation center, and other new park structures to create a unified aesthetic image for the park.

#### **Public Lawn**

The Public Lawn will be a 2-3 acre expanse of gently sloping lawn that could accommodate large crowds during an outdoor event, or merely be a place for unprogrammed picnicking and informal play – a place to toss a frisbee, fly a kite, or lay back and watch the clouds go by. The public lawn

will be accessible from the picnic pavilion, picnic shelters, upper level of recreation center, and multipurpose fields.

**Multipurpose Field**

The Multipurpose Field will accommodate two soccer sized fields, but will not be striped for competition play, and will not have goals or seating. The multipurpose field will be accessible from the arc walk and the Environmental Education Center driveway parking lot.

**Dog Run Area**

The Dog Run will provide resident dog owners with a convenient place to allow dogs to run unleashed yet contained and separate from the sensitive habitat areas and general use areas of the Commons. The dog run would be accessible from the trail system, arc walk, and Environmental Education Center driveway.

**Commons Plaza**

The Plaza would be the focal point and gathering area of the Commons. Functioning as a village square, the plaza will be a point of arrival, orientation, and gathering. Within the plaza will be a mixture of paved areas, lawn and planted areas, trees, seating, lighting and terrace walls. Because of site drainage configuration, the plaza may also include a runnel designed as an interpretive feature conducting storm water runoff from the recreation center/parking lot to detention basins before reaching the swale leading to Chartiers creek.

**Access Road and Parking**

The site entry will include a sign, orientation map, and will provide a clear vista into the fields of the Commons. The access road will split, with the south leg leading to the Commons plaza and the north leg leading to the Environmental Education Center. The road will skirt the Commons lawns,



*Plan view and sketch of public lawn and multipurpose fields*



hugging the edge of the proposed buffer planting so that visitors are presented with a sweeping view of the Commons open space.

Parking will be arranged in terraced lots separated by planted islands. The lots will have three gradations of parking to serve the varying intensities of use responsibly without entailing the monetary and environmental expense of unnecessary impervious paving. Paved parking will be provided for most frequent use, gravel parking for weekend evening event use, stabilized grass parking for major events, and peripheral parking around the Commons lawns for occasional community-wide events such as 4th of July fireworks. To the extent possible, parking will be screened or otherwise visually minimized. The exact proportion of parking will be determined during design phases.

### **Buffer Planting**

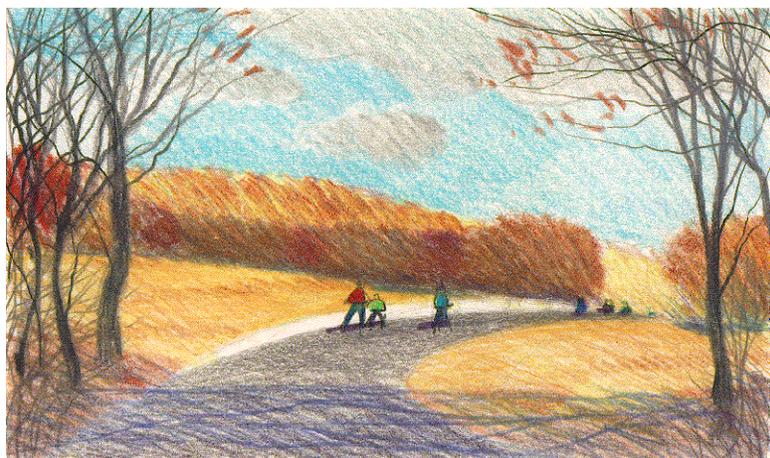
The perimeter of the Commons will be planted with a mixture of native evergreen and deciduous tree and shrubs. The buffer will extend from the entry access drive along Mayview Road, and along the rear yards of the Skyridge properties. The buffer will make a clear visual separation between public and private land, buffer from cold, strong northwest winds, and screen Mayview Road from the Commons.

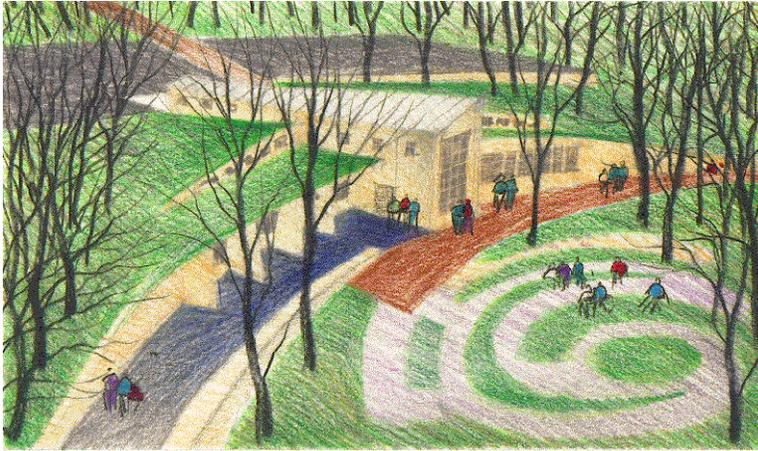
### **Arc Walk**

The Arc Walk is conceived as a way to organize circulation along the major activities, provide ADA, service, and emergency access, and to link the Mayview and Boyce parcels. The Walk, designed as an arc embracing the bowl-shaped bend of Chartiers Creek and the Mayview Hospital site, will originate in the Commons Plaza, extend through the recreation center, public lawn, Environmental Education Center, habitat areas, swales, creek slope, wetland, end at an overlook at Chartiers Creek.

The geometry of the walk will allow for a common thread among the design

*Plan view and sketch of Arc Walk*





*Plan view and sketch of Environmental Education Center*

of the new recreation center, nature center, ravine bridge, and other amenities located along the walk's length.

## **5.5 ENVIRONMENTAL EDUCATION CENTER**

The environmental education center will be located on a level area between two swales leading to the Chartiers Creek. The center will be designed using principles of "green architecture" and will be integrated into the site as much as possible.

## **5.6 COMPOST AREA**

The township compost facility will remain in its present location because of its compatibility with the park theme of communal sustainability, investment in infrastructure, its relatively low impact on the park habitat and the incompatibility with other locations in the park. To reduce the environmental and visual impact on the park, the construction debris storage yard will be removed and the area cleaned up and restored to be compatible with adjacent habitat areas. If possible, access to the facility should be relocated from the existing route that negatively impacts the ravine through which it runs. Any work undertaken by PennDOT along Boyce Road to alter the alignment would likely impact the park. The township should take such an opportunity to request that a separate driveway access be provided to the east of the current access point.

## **5.7 COMMUNITY GARDENS/ORCHARD**

The Community Gardens will be relocated from their current position on the Boyce property near the cell tower complex to a south-facing slope at the north end of the Mayview property. The placement of the gardens in the vicinity of the original Mayview fruit tree orchards and gardens will



*Plan view and sketch of Community Gardens*

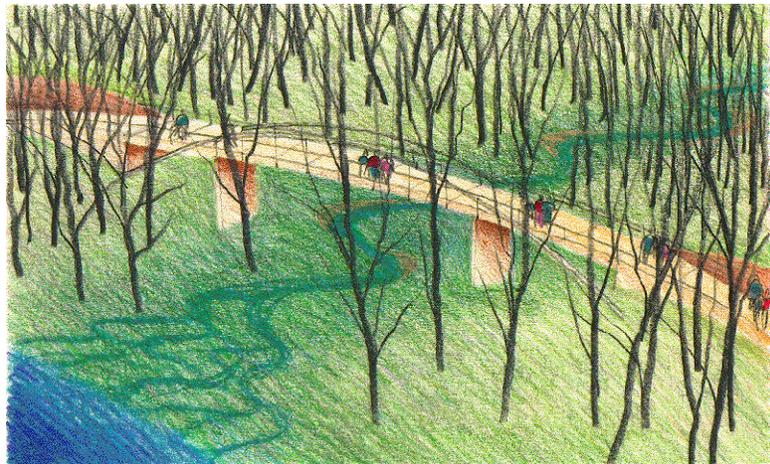


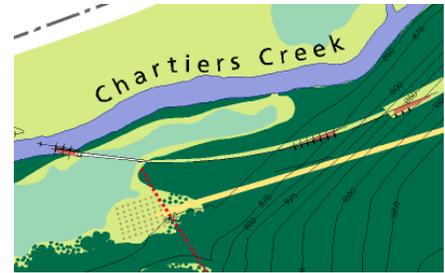
allow for the provision of irrigation water because of the proximity of the old fire water line from the Mayview Farm. Close enough to the Commons to reinforce the theme of community, yet far enough from incompatibly disruptive activities, the gardens will be near the Environmental Education Center, and will share the same driveway.

Parking for gardeners will be accommodated by several separate lanes leading to the rows of gardens. The gardens will be set within an orchard of small trees to visually and physically buffer the gardens from the access driveway and the adjacent Skyridge neighborhood. Surrounding orchards may be composed of fruit trees or non-fruiting ornamental trees depending on the interest of the gardeners and township.

Because the gardens occupy public property at the pleasure of the township, and because the appearance of the gardens is of concern to the adjacent neighbors, gardeners and township will agree on policies guiding the maintenance and care of the gardens. Such policies will include guidance on the yearly cycle of maintenance, appearance and the placement and storage of materials at the gardens.

*Plan view and sketch of Arc Walk Bridge*





*Plan view and sketch of Arc Walk*

## **5.8 TRAIL SYSTEM**

Boyce Mayview Park will be served by a network of pedestrian and bicycle trails that will provide reasonable access from the community and adjacent schools and park. Within the park, the system will provide access among the major facilities and natural areas while limiting impact on the habitat. The system will be composed of a hierarchy of trails ranging from formally-paved pedestrian walks in the Commons to wood chip paths in sensitive areas. Building on the existing path system, the new system will provide a variety of experiences for different recreational interests and abilities. Through a variety of paving materials, widths, lengths, sinuosity and gradient, paths will accommodate bicyclists, joggers, walkers, hikers, naturalists, and disabled visitors of all ages.

### **Arc Path**

The Arc Path will tangibly and dramatically connect the Mayview and Boyce parcels, providing a link among the various uses and features along its length, while creating an ADA-accessible route through the site. The Arc will create a curving “transect” from the Commons Plaza past the Public Lawn and Multipurpose Field to the Nature Center, and from there through the habitat areas. Reaching the central ravine the Arc Path will avoid impacts to the sensitive riparian habitat and cross via a specially-designed bridge to the Boyce property. From this point it will descend gently along the slope to a proposed new interpretive shelter and boardwalk at the wetlands, and creek overlook. Along its length will be opportunities for links to other paths, seating, overlooks, and interpretive opportunities. The Arc Walk will allow the existing unpaved access driveway to be removed from the relatively undisturbed mature woodland it now divides.

The Arc will change in its appearance and construction along its length from a hard surface paved walk wide enough to accommodate crowds in

the Commons area to a narrower width and gravel surface as it enters the sensitive habitat areas. It will be carried across major swales on elevated structures and across wet areas on boardwalks.

### **Multipurpose Bike Path**

The multipurpose path will connect the park to the proposed Township trail system. Limited to a maximum of 100 feet from the boundary of the park, and designed according to safety standards for clearance and visibility, the path will allow for bicyclists to reach the Commons and to experience the more wooded natural parts of the Park without impacting the sensitive interior habitat.

### **Walkways**

Major facilities in the Commons will be connected with paved walkways.

### **Paths**

Walking paths through the areas of the site outside of the Commons will be paved with gravel or wood chips.

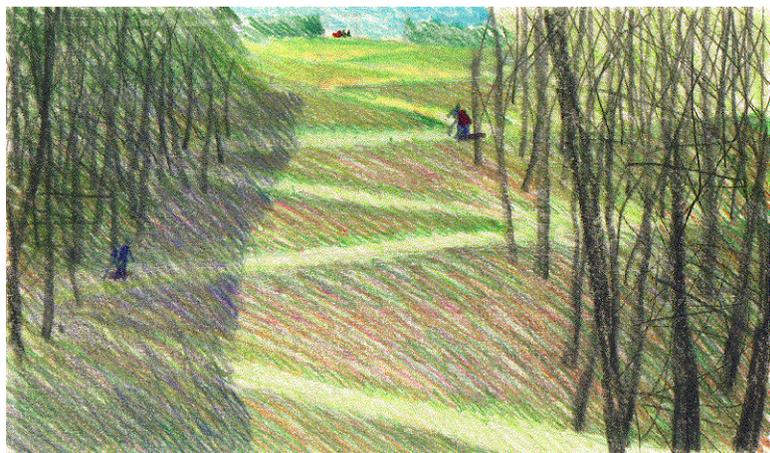
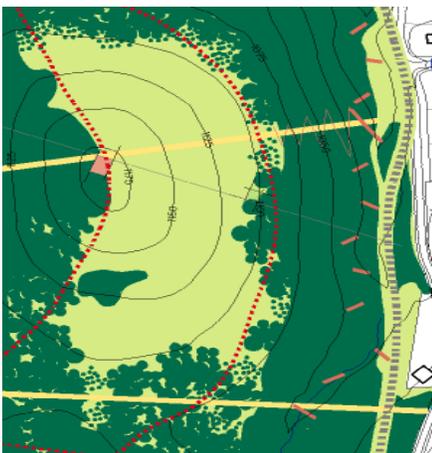
### **Hiking Trails**

The more remote and sensitive areas of the park will be impacted as little as possible. Where necessary, trails in these areas will be laid out and constructed according to low impact standards such as those used by the Appalachian Mountain Club, State or National Parks.

### **Path Nodes**

The points where pedestrians and bicyclists enter the site, places to rest, and intersections will be specially designed to accentuate the experience. *Entry points* to the park will include orientation maps and trash containers. The north hill *overlook* will include a small level paved area and informal

*Plan view and sketch of trail leading to the overlook along a utility easement.*



seating. *Intersections* at key points will include trail markers. *Seating areas* placed at logical points along paths will be oriented to the best views.

## **5.9 ENVIRONMENTAL INTERPRETIVE NODES**

Special landscape constructions will take advantage of opportunities throughout the site for the interpretation of natural forms and processes. These may range from the desired fenced deer exclusion areas to areas where bioengineering techniques are being used to restore an eroded creek bed. Each affords a chance to display the environmental restoration actions of the township as attractive educational demonstration features.

## **5.10 MAINTENANCE, SERVICE, AND EMERGENCY ACCESS**

Maintenance and service is important to the long term viability of a park. Ease of access helps to assure that trash cans are emptied and other clean up and service activities can be performed with appropriate ease. All paths in the Commons area will be designed to enable small service vehicles to traverse them. Trash and utility areas will be placed in low visibility areas. On-site storage for some maintenance equipment is recommended, especially for specialized equipment used exclusively on the park such as the drum grinder.

Within the limits of safety, the sight and sound of maintenance vehicles in the Commons is appropriate to the agriculture image of the Mayview property.

Emergency access is most important in the Commons area, and will be provided via the Mayview Road driveway. Access to the remote areas of the site is not fully possible, but the Arc Walk provides a path to much of the Mayview property, which could be connected to the wetland access drive linking to the Compost Facility access drive. WRT recommends that the Township police, fire, medical emergency, public works and park staff review the proposed plan and advise WRT if the plan meets their needs for coping with emergencies.



## **6.0 IMPLEMENTATION STRATEGY**

The first step in implementing the master plan is to agree upon and accept the facilities program for the park, with the knowledge that (1) a prioritized phasing plan can rank the order of implementation of the projects according to objective criteria listed below, and (2) the plan can be amended and priorities adjusted as funding becomes available or unavailable. The values of the community are reflected in the extent of program, level of quality, and speed of implementation of the master plan program.

Criteria for judging the prioritization of projects include cost/benefit ratio, safety, demonstrated need, positive visual impact, likely commitment of funding, public acceptance, and level of urgency of need. Examples include: cost/benefit ratio - willingness of specific demographic groups to accept the cost of other groups' high priority projects, safety- hazardous waste removal, demonstrated need - structural stabilization of barns that have been accepted as part of the plan, positive visual impact - site clean up, planting, signage, likely commitment of funding - nature center, public acceptance - a project with universal acceptance versus partial acceptance, and level of urgency of need - swimming pool construction in time for use by families with young children.

### **6.1 ESTIMATED COSTS**

The Table on the following page contains the Order of Magnitude Estimate of Probable Costs for the development of Boyce Mayview Park. The recommendations of the Plan are estimated to require between \$15 million and \$30 million in capital expenditures. The cost range for implementation of all features of the master plan is very broad at this stage because the recreation center, community center, and nature center are still variable in program, size, and level of finish. WRT has prepared a menu of items that could be implemented over a long period of time, depending on the interest and commitment of the community and available funding.

Annual operating costs are estimated at \$300 - \$400,000.

### **6.2 FUNDING SOURCES**

Funding for the park improvements will entail partnerships with public and private entities, particularly for major facilities. The Environmental Education Center could be a joint UStC/state/private partnership, and the pool and recreation center could be a partnership with neighboring communities, or

**Table: Boyce Mayview Park Order of Magnitude Estimate of Probable Costs**

<b>Boyce Mayview Park</b>		
<b>Order of Magnitude Estimate of Probable Costs</b>		
Item	Low Range (\$X,000)	High Range (\$X,000)
Site Clean-up	100	200
Hazardous Waste Removal	150	300
Habitat Enhancement	500	1000
Roads, Parking, Bridges, and Culverts	500	1000
Sanitary Sewer, Stormwater Management, Utilities	1000	1000
Community Center (in renovated Mayview Dairy Barn)	3200	10000
Recreation Center (new construction)	2000	4000
Nature Center (new construction)	2500	2500
Swimming Pool	1000	2000
Maintenance Building	50	100
Miscellaneous Site Amenities	2500	4900
Architecture/Landscape Architecture/Engineering Fees, Permit fees, Archaeology @ 10%	1500	3000
Subtotal	15000	30000
Total	\$ 15,000,000	\$ 30,000,000
Maintenance and Operating Costs (per year)	\$ 300	\$ 400

with the local YMCA. UStC's substantial bonding capacity would permit a high level of funding directly from the township. State (DCNR) and Federal grants (TEA-21) and in-kind services (US Army Corps of Engineers) are available for park improvements, infrastructure and bicycle path/sidewalk development. Additionally, volunteer labor can be used to defray the cost of labor-intensive activities. Other privately sponsored efforts such as a corporate-sponsored "Friends of Boyce Mayview Park" could be a conduit for funding from private sources.

While there is no single, clear, easy strategy to follow with regard to the raising of capital funds or Operations and Maintenance (O&M) funds for the park, the community does have a number of choices/different directions that it might take with regard to funding. The selection of the appropriate choice(s) will be a function of the community's values, needs and priorities.

### **6.3 PHASING**

#### **Implementation Priorities**

Proposed projects can be grouped into three categories: High Priority Mandatory Actions, Moderate Priority Recommended Actions, and Low Priority Discretionary Actions.

**High Priority Mandatory Actions**, including projects such as site clean up, hazardous waste removal, and structural stabilization, are the Township's responsibility to perform, based on the deed of trust for the land and the need to ensure the safety and well being of park users. These actions are high priority because they affect the health, safety and welfare of the community, and are deemed the minimal actions necessary to protect the natural and cultural resources that have been entrusted to the Township. Certain discretionary actions, such as provisions of vehicular access and trail construction, should be ranked as high priority actions as they have high utility, visibility and excellent cost-benefit ratio.

**Moderate Priority Recommended Actions** are important to the realization of the master plan. These actions must follow the high priority actions but are of sufficient importance to be committed to a finite implementation time frame, or are likely to be eligible for early funding. These actions include the major facilities whose funding is linked to other sources, and fundamental habitat enhancements.

**Low Priority Discretionary Actions** are not critical to staging or "critical mass" of the master plan, and can be phased throughout the project build-out period. These actions include the full development of the trail system and habitat enhancements

#### **6.4 REQUIRED PERMITS**

A plan for securing regulatory permitting is a necessary component of the implementation plan. The anticipated permits and approvals relative to the construction of park improvements would include: Erosion and Sedimentation Control Plan, NPDES Stormwater Permit, PA Department of Environmental Protection Planning Module for Land Development, PA Department of Transportation, Highway Occupancy Permit, Stormwater Management Planning, Waterway Obstruction and Encroachment Permit, Pennsylvania Natural Diversity Inventory Search (PNDI), and Pennsylvania Cultural Resource Notice, PA Historical and Museum Commission (PHMC).

These jurisdictional agency approvals would be in addition to required reviews and approvals by Upper St. Clair Township.



## 7.0 CONCLUSION

### **Urgency**

To ensure the safety of the community, the Township needs to act quickly to remove hazards such as the unsecured, unsupervised barn, rusted metal fences, numerous utility remnants. The barns are important structures well worth further consideration for renovation. It is imperative that they are secured and stabilized before they are further vandalized and subject to weather damage. It is worth the Township's effort to take immediate emergency action to safeguard these structures.

### **High Standard of Quality - High Standard of Living**

The Township is committed to excellence in its public facilities as is evident in its new high school and township offices. A high quality park brings quality of life maintaining the value and attractiveness of UStC as a *community of choice* among the best places to live in suburban Pittsburgh.

In implementing the vision for Boyce Mayview Park, the Township will have only one chance to "get it right" the first time. The high cost of any investment in public infrastructure dictates that the money be well spent and considered an investment rather than an expedience. As the community input had it during the meetings: "Whatever you do, make sure that it's done well." While it's typical that funds for "recreation" be the minimal amount necessary to meet the demand, today's real estate market is highly competitive and has proven that carefully considered high investment can generate returns in increased community value, both economically and intangibly in improved quality of life.

### **Competition**

With limited space available in the Township for substantial new community development other than at Boyce Mayview Park, the Township has been given a once-in-a-community opportunity to reinvent its image by positioning itself as leader in the quality of recreation in the South Hills communities. Excellence in implementation of Boyce Mayview Park could further secure the reputation for high quality public service in a time of increasing competition by neighboring communities for retention of present residents and recruitment of new residents. Several quantitative studies have proven that the value of private property in a community is stabilized or increased by the presence of high-quality open space. There is a clear benefit to the Community to have a park design that meets the standards of excellence of which Boyce Mayview is capable.