

Menlo and Lenape Parks

Master Site Plan

Perkasie Borough, Pennsylvania

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DRAFT
MAY 2016
SC# 15066.10

MENLO & LENAPE PARKS
MASTER SITE DEVELOPMENT PLAN

MENLO & LENAPE PARKS MASTER SITE DEVELOPMENT PLAN

DRAFT

PREPARED FOR:

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Perkasie, Pennsylvania 18944

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PERKASIE BOROUGH BUCKS COUNTY

CHAPTER 1: PROJECT INTRODUCTION

Menlo & Lenape Parks

Perkasie Borough, located in Upper Bucks County, is a community with a vibrant downtown comprised of residential and commercial uses, single and multi-family residential neighborhoods and a renowned and regionally popular parks and recreation system. Two facets of this park system are the adjoining Menlo and Lenape Parks, located in the center of the Borough. Menlo Park was established in 1891 to provide amusements, including a carousel, casino and a toboggan run, to area residents. Lenape Park was developed in the 1930s, with funds and assistance from the federal government through the Works Progress Administration, by local citizens who wanted to introduce public recreation in this valley of the Northeast Branch of the Perkiomen Creek. Over the next 70 years, Menlo and Lenape Parks evolved to provide facilities for the popular recreational activities of the day, from boating, fishing and

pleasure strolling in their early days to baseball and biking / jogging paths that remain perennially favorite pastimes to skateboarding and other currently popular activities. Throughout their history, the parks have met the recreational needs of Upper Bucks residents and have become local treasures.

In 2014, Perkasie Borough applied for and received a DCNR grant to prepare a master plan, to update Menlo and Lenape Parks. This plan is the result of collaboration between the public, study committee, Borough staff, consultants, and the Borough Council. This document outlines the planning process and provides a master vision for the future of the parks.

Master Plan Goals & Objectives

The goal of the Menlo & Lenape Parks Master Site Development Plan is to develop a site plan that focuses on active and passive recreation and fits within the context of the Borough's overall park system and its relationship with neighboring park systems. The plan will position Menlo & Lenape Parks

GOALS & OBJECTIVES

- Provide a holistic overview of the active and passive facilities of the parks
- Systematic analysis of the natural systems of the parks
- Delineate the parks' wetlands and establish buffers
- Identify park improvements and connections based on analysis and public feedback
- Incorporate sustainable design elements throughout the project tasks
- Identify potential sources of development funding

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to be a holistic, complimentary and connecting park to adjoining Lake Lenape Park in Sellersville. An emphasis on preserving the natural site systems and wildlife habitat, and providing safe accessibility to the site are also seen as key to the future success of the Parks.

The goals and objectives of the Menlo & Lenape Parks Master Site Development Plan are outlined in the box on the preceding page.

Regional Context

Perkasie Borough is located in Upper Bucks County and is situated about midway between Center City Philadelphia and Allentown. The 2.4-square-mile borough abuts Sellersville Borough and the townships of East Rockhill, Hilltown and West Rockhill. A major ridge parallels most of the length of the East Branch Perkiomen Creek, forming a steep natural barrier and the northern boundary of the Borough. The East Branch Perkiomen Creek bisects the Borough and acts as the spine of the regional greenway network.

No major transportation routes pass directly through Perkasie, but the Borough is in close proximity to the Pennsylvania Turnpike Northeast Extension (I-476) and PA Route 309. Figure 1.1 shows Perkasie in its regional context.

Municipal Parks and Recreation System

Perkasie Borough's park and open space resources include vacant, agricultural, and park / recreational land uses. Proactive planning and acquisition by Borough officials has helped to protect extensive areas of park and open space resources, including those lands containing sensitive natural resources.

Three separate public parks and a playground

totaling 81.9 acres are owned and maintained by the Borough. Kulp Memorial Park encompasses about 11 acres and contains various active and passive recreational facilities. Lenape Park is the largest of the three, encompassing 67.9 acres and containing various active and passive recreational facilities,

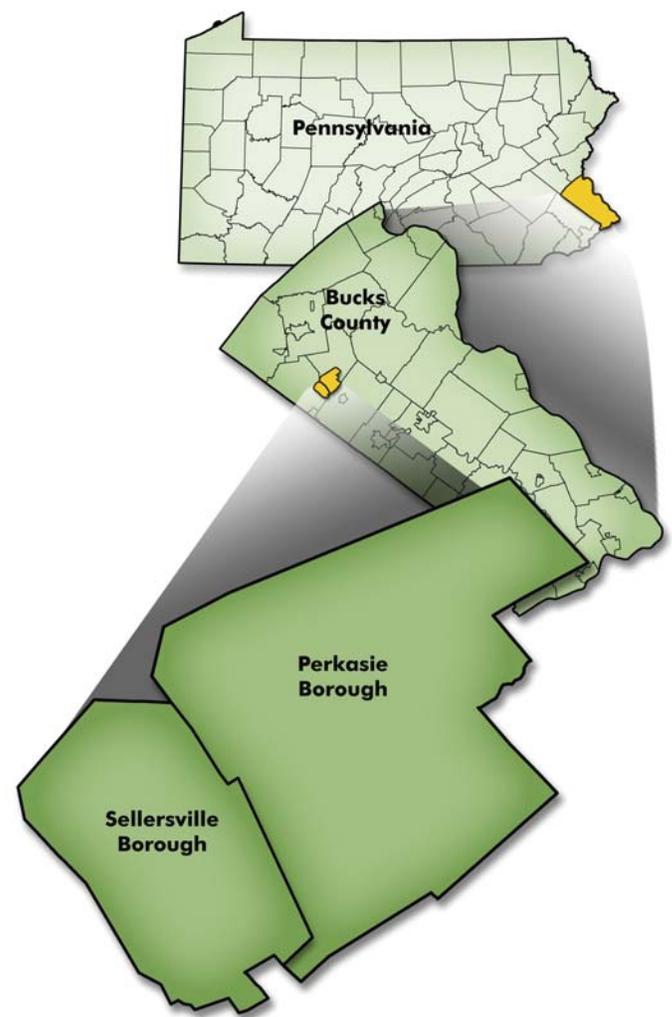


Figure 1.1 Regional Location Map

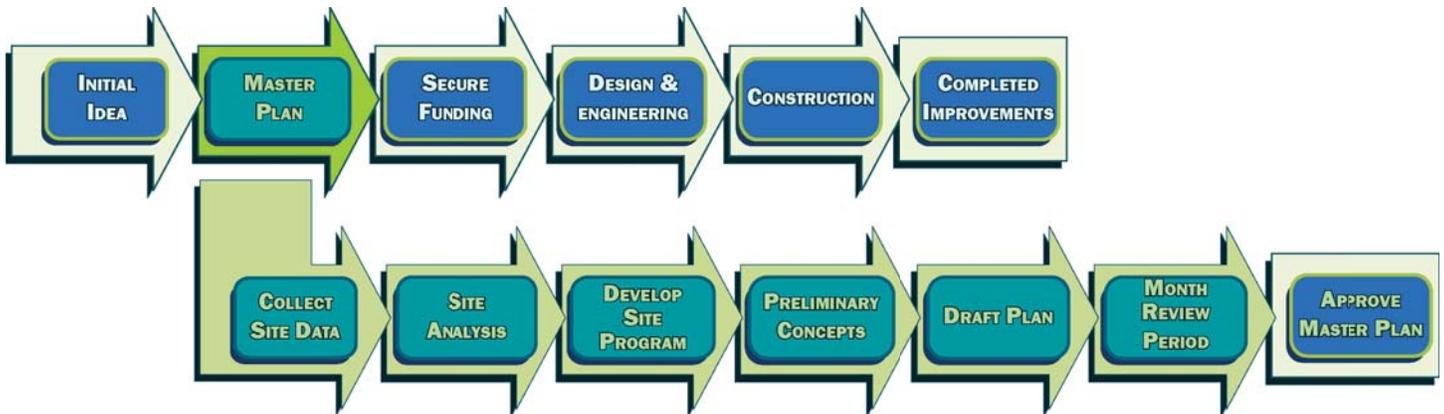


Figure 1.2 Master Plan Planning Process

including a skate park, dog park and beach volleyball court. Menlo Park is located on the same tax parcel as Lenape Park and contains various active and passive recreational facilities, including the Perkasio Carousel and the Menlo Aquatic Center. The Borough’s playground, East Spruce Street Playground, is located along Spruce Street / Pleasant Spring Creek and contains children’s playground equipment on a 3-acre lot.

Also within the Borough, the two stream corridors have been designated as greenways – East Branch Perkiomen Creek and Pleasant Spring Creek. The Borough’s parks and playground are located along these greenways.

Demographics

According to the 2014 American Community Survey 5-Year Estimate, there were 8,511 people living within Perkasio’s 2.4-square miles. Like other surrounding suburban communities, Perkasio experienced population growth nearly every decade over the past 80 years as more people moved out of the city and inner ring suburbs to new housing stock being built in the outer suburbs. Perkasio saw its greatest growth during the decade between 1980 and 1990 when the Borough gained 2,637 residents

for a total of 7,878 residents.

The median age in the Borough has been gradually rising, from 31.6 in 1990 to 34.9 in 2000, to 41.7 in 2014.

97.7 percent of Perkasio residents identify themselves as white. As more minorities have moved to the suburbs for newer housing and education for school-age children, the number of Borough residents who consider themselves nonwhite has increased in both number and percentage of total population over the past 20 years.

The number of households in Perkasio totaled 3,285 in 2014, and 65.1 percent (2,140) of these households were family households. About 34 percent of family households included children under the age of 18, down from 56.6 percent in 2000. The average household size of owner-occupied units in 2014 was 2.91 persons, down from 3.02 in 2000.

The Master Planning Process

Figure 1.2 illustrates Master Planning as an early step in the process of constructing a new open space facility. The Master Plan Study was undertaken to develop a consensus for improvements and facilities

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to be included at Menlo & Lenape Parks. The master plan provides estimates of probable costs of development and outlines a strategy for phasing improvements and matching phases with potential funding sources. The master plan will serve as a guidance document for moving forward and is intended to be flexible enough to allow for the plan to adapt to future desires and needs of Borough residents.

Following the completion of the Master Plan the next steps toward implementation are to identify and acquire funding for a phase of improvements. Once funding is secured, detail design and engineering can commence to develop construction documents. Construction documents will be publicly bid and a

contract awarded for construction of the improvements. A master plan is typically implemented through a series of phases, dependent on funding over a period of years. In the case of Menlo and Lenape Parks, the timing for implementation will depend on future funding and awarded grant applications over an estimated ten-year period or longer.

Public Participation Process

In early 2015, Perkasio Borough selected Simone Collins Landscape Architecture (SC) and Barton & Loguidice, D.P.C. to lead the master planning and public participation process for Menlo and Lenape Parks. A Project Study Committee (PSC) comprised of residents and staff advised the master plan

TABLE 1.1 PROJECT SCHEDULE

November 12, 2015	Committee Meeting #1	Background and Startup
January 12, 2016	Public Meeting #1	Park Programming
February 2, 2016	Senior Citizen Stakeholders	Programming Feedback
February 16, 2016	Committee Meeting #2	Park Plan Concepts Review
February 23, 2016	Public Meeting #2	Park Plan Concepts Review
March 8, 2016	Student/Community Stakeholders	Programming Feedback
March 22, 2016	Municipal/Administrative Stakeholders	Programming Feedback
March 29, 2016	Committee Meeting #3	Draft Plan Review
April 5, 2016	Public Meeting #3	Draft Plan Review
May 17, 2016	Committee Meeting #4	Final Plan Review
May 24, 2016	Public Meeting #4	Final Plan Presentation

Note: A committee meeting was scheduled for January 5, 2016 but was cancelled due to inclement weather. Materials relating to park programming were emailed to the PSC for review.

consultants. The project team worked with Borough Staff and the PSC to tailor the public participation process to the project needs so that community input becomes the basis for a successful master plan.

The public participation process for Menlo and Lenape Parks included four (4) public meetings, four (4) study committee meetings and three (3) stakeholder meetings. Six (6) “key” person interviews were also conducted. Table 1.1 lists the meetings schedule for the project. Meeting notes and attendance sheets for each meeting can be found in the appendix of this report.

The first committee and public meetings focused on collecting information and discussing the overall goals for the Parks. A brief presentation reviewing the site’s features through photographs and analysis mapping was made to familiarize everyone with the particulars of the Parks. The presentation was followed by a brainstorming session where participants were asked for their ideas and visions for the Parks. A web-based opinion survey, open from January to April 2016, was also used to determine opinions for the park.

These meetings were followed by a second committee and public meeting to review initial site concept ideas. The public was invited to provide their feedback on what they liked or did not like about the two site concepts. A third public and PSC meeting were held to review the draft master plan. A month long public review period was held prior to the fourth PSC meeting where final plan revisions based on public and DCNR input was reviewed. The final master plan was presented at the fourth public meeting in late May 2016.

Data Collection and Methodology

Elements for the mapping analysis and report were compiled using the best available information including: Geographic Information System (GIS) data, tax maps, aerial photography, and information gathered from previous and ongoing planning efforts. Information was derived from multiple sources and methods including reports and documents provided by Perkasio and Sellersville Boroughs, GIS information provided by the Commonwealth of Pennsylvania and Perkasio Borough, field reconnaissance, public meetings and key person interviews.



PERKASIE BOROUGH BUCKS COUNTY

CHAPTER 2: SITE INVENTORY & ANALYSIS

General Parks Description

Menlo and Lenape Park are a combined 67.9 acre of park space that lie adjacent to one another and are located between the Sellersville Borough and Perkasio Borough boundary lines. Lenape Park adjoins Lake Lenape Park in Sellersville. Within Perkasio Borough, the two stream corridors – East Branch Perkiomen Creek and Pleasant Spring Creek— have been designated as greenways, and Menlo and Lenape Parks are located along these greenways.

Lenape Park, located on the northwest and southeastern side of the East Branch Perkiomen Creek on the corner of Constitution Avenue (to the south) and Walnut Street (to the north), comprises most of the park acreage and contains a variety of active and passive recreational facilities.

To the west, the contiguous Lenape/Lake Lenape Park extends to North Main Street and the center of Sellersville. To the south, a combination of single-family, commercial, industrial and institutional properties along East Park and Constitutional Avenue border the Park. To the east, the Park is bordered by West Walnut Street and single and multi-family residences. To the north, the Park is bordered by South 4th Street, Arthur Avenue, West Park Avenue, South 3rd Street and single-family residences.

A major wetland lies in the center of Lenape Park and helps to store water during storm events and is also a habitat to different plant and animal species. Riparian woodlands are found along the East Branch Perkiomen Creek, especially where the corridor traverses Lenape Park, and to a lesser extent along

its tributaries. The park system contains other inherent natural resources including small streams, floodplains and steep slopes that border the northeast portion of the park.

The East Branch greenway, which runs through Lenape Park, is located along the floodplains of an existing creek and is intended to function as an open space corridor that protects the inherent natural resources along this watercourse and provides access for trails.

Buildings and Structures

Lenape Park includes three (3) pavilions, one (1) skate park, one (1) wooden stage, six (6) picnic tables, fifteen (15) park benches, two (2) little league baseball fields, two (2) softball/baseball fields and one (1) playground.

Menlo Park includes the Perkasio Carousel, the Menlo Aquatic Center Bath House and Snack Bar Building, one (1) competition pool, one (1) leisure pool, one (1) baby pool, two (2) pavilions, thirteen (13) picnic tables, two (2) stationary charcoal grills, three (3) park benches and one (1) children's playground.

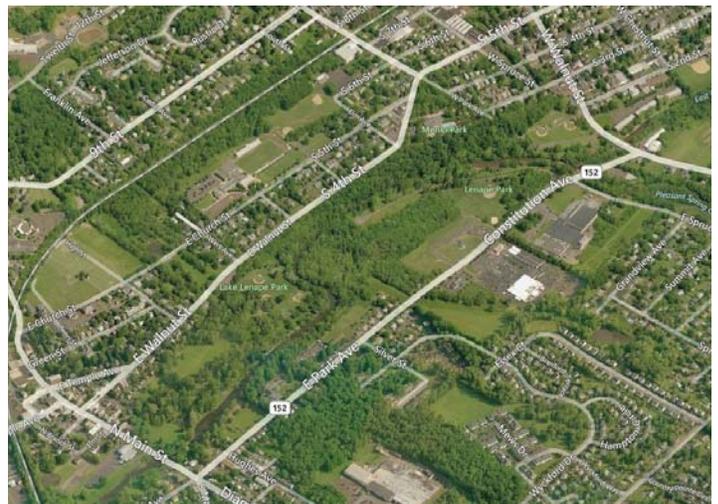


Figure 2.1 Aerial of Menlo, Lenape and Lake Lenape Parks

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Perkasie has one site listed on the National Register of Historic Places—the South Perkasie Covered Bridge (Figure 2.2). Built in 1832, the South Perkasie Covered Bridge once spanned Pleasant Spring Creek. Since 1958 the bridge has been located in Lenape Park and has been maintained by the Perkasie Historical Society.

The Perkasie Carousel, located in Menlo Park, is an important historical landmark in the Borough. The carousel was purchased in 1951 as a replacement for a carousel built in 1891. The Carousel is housed

in a building built in 1895 and is operated and maintained by the Perkasie Historical Society.

The Menlo Aquatic Center includes a facility building, 25-yard competition style pool with eight lanes, drop slide, rock wall, diving boards, leisure pool, whirlpool, activity pool for kids and tot pool for toddlers.

Lake Lenape Park in Sellersville includes a Veterans Memorial Monument, one (1) modern wooden bridge, one (1) metal pedestrian bridge, one (1) stone dam, scout cabin, two (2) concrete dams, and four (4) ballfields.



Figure 2.2 South Perkasie Covered Bridge

History

The rich tradition of Menlo and Lenape Parks began in the late 19th Century when three individuals wanted to provide recreational activities and create an amusement destination for people in the region in the process. In 1891, they established the Menlo Park Association and purchased 5 acres in Perkasio and leased the water rights through to Sellersville from the Charles D. Everhart estate. This was important because it allowed park patrons to go boating and swimming in the creek. From the former milldam in Sellersville back to Perkasio, the creek was wider and became known as Lake Lenape, where people rented boats for leisurely rides.

By the next year, a canvas-topped carousel was in place, and over the years, additional improvements were added, including a toboggan run in 1894. This was constructed on a grade down the hillside and had tracks over half a mile long. Cars on the track would carry six people at a time down the run for a two-minute ride.

The increased popularity of Menlo Park led the Quakertown Traction and Inland Traction Companies, that ran a streetcar line from Philadelphia to Lansdale, to build a trolley line to the Park in 1899. In 1902, that company's successor, the Philadelphia and Lehigh Traction Company, purchased the Park and continued to add to the facilities, including a casino building in 1907. This structure housed a roller rink, four bowling alleys, an ice cream parlor, soda fountain and "moving picture" hall. No gambling took place inside the casino despite its name and today the site is the home of the Samuel Pierce Library. In 1926, the Park was purchased by Henry Wilson who continued to add to the Park, including a Whip ride and dance hall.

It was around this time that local residents wanted to

see more public recreational opportunities become available. With lands already set aside for new park space in Sellersville, some Perkasio groups pursued efforts that would extend this park space into the Borough, and in 1935, 32 acres of Menlo Park was purchased from Henry Wilson by the Bucks County Commissioners and Perkasio Borough Council. Timing was also fortuitous as the federal New Deal program, which provided jobs for millions of Americans, was beginning to take effect. One of the programs, the Works Progress Administration, provided funding and labor to build the new Lake Lenape Park facilities, and with their help, the Park was dedicated in 1937. One of the highlights of the WPA work was the construction of twin bridges over an island in the East Branch. The twin suspension bridges were built and completed in 1938, and the styles of the bridges are based on Prussian engineer John Roebling's design. Roebling was also the designer of the Brooklyn Bridge.

Over the succeeding decades, Menlo and Lenape Parks experienced change and expansion. By 1939, a concrete swimming pool replaced the existing swimming hole at Menlo and in 1951, the original carousel was replaced. Menlo Park itself was



Menlo Park toboggan tracks

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purchased by Perkasio Borough in 1955. Lenape and Lake Lenape Parks also expanded in the decades after their dedication as additional acres were acquired or gifted and newer facilities, like ball fields, pavilions and paths were added. The successor to the Philadelphia and Lehigh Traction Company, Lehigh Valley Transit, abandoned its trolley line, which had become known as the Liberty Bell Route, along the northwest side of the Park in 1951. This became the Lenape Park Bike Path.

Lenape Park features the South Perkasio Bridge, a historic bridge situated near the intersection of Constitution Avenue and Walnut Street, that is on the National Register of Historic Places (NRHP). The NRHP is the official list of the nation's cultural resources, providing recognition that buildings or districts have historic, architectural, or archeological significance.

The South Perkasio Bridge was placed on the register in 1980. Built in 1832, it is the oldest covered bridge in Bucks County, and is believed to have served as a model for a type of truss bridge used in other parts of the county. Through efforts led by the Perkasio Historical Society, the bridge was saved from demolition and moved from the other side of Pleasant Spring Creek to its present location in



Picnic benches along the East Branch Perkiomen Creek

Lenape Park in 1958.

Today, Menlo, Lenape and Lake Lenape Parks are a reflection of the recreational heritage of the area and their ties to community, industry and transportation. The Parks offered new recreational opportunities and a chance to enjoy nature close to home for people who were starting to obtain more free time as technical achievements made labor and processing more streamlined. Industries tied to recreation also found a home in Perkasio as the Borough was home to a manufacturing company that created baseballs for the MLB from 1920 to 1950. New transportation lines, like the Liberty Bell Route, were introduced which brought people from other communities to Perkasio for leisure and amusement. The impacts of these Parks to the local community and their contribution to the early 20th Century movements to develop recreational and natural resources in Pennsylvania has made Menlo, Lenape and Lake Lenape Parks eligible for listing in the NRHP by the state Bureau for Historic Preservation.

Zoning

Menlo and Lenape Parks are zoned R-1B. The



Boating on Lake Lenape

purpose of this residential district is to retain the low-density residential character as it now exists, provide for the protection of natural resources, the preservation of permanent open space, and limit the percentages of impervious surface.

Parcels to the north of Lenape Park along South 4th Street are zoned R-1A with the same intent as R-1B. Parcels along the southern edge of Lenape Park on the other side of Constitution Avenue are zoned C-2, I-1 and I-2. C-2 is the General Commercial District and provides for a wide variety of retail and personal service business uses in areas where these uses already exist. I-1 is the Planned Industrial District, which provides for the requirements of modern industrial development appropriate in selected areas and I-2 is the Light Industrial District, which provides for a greater variety of industrial development, including office, retail and personal service uses.

Access

In Menlo Park, a one-way vehicular drive is accessed from Arthur Avenue. The drive runs through a paved parking area with bays on both sides adjacent to the Menlo Aquatics Center and exits onto West Park Avenue. In Lenape Park, a two-way vehicular drive enters along West Walnut Street and leads to two ball fields and a dead end at a walking / biking path.

Another entry drive is located along Constitution Avenue at East Spruce Street. This location includes two one-way entries into the Park, separated by the turtle monument in a planted island. This allows for two separate entrances into the Park, and drivers traveling southbound can turn right at Spruce Street while drivers traveling north can turn left at midblock. The paved drive travels through the Park, adjacent to parking, a ball field, and an intersection with another drive, and terminates at the entrance to a Borough maintenance / storage area. A two-way entry is

located along Constitution Avenue opposite the entrance to the Landis supermarket. The paved drive leads to the dog park, a large parking lot, skate park, pavilion and a walking path.

Three access points provide vehicular entry into Lake Lenape Park: a one-way loop next to the Pennsylvania National Guard Armory on Constitution Avenue; a one-lane path on East Walnut Street that leads to the Boy Scouts cabin; and a two-way path on East Walnut that leads to the ball fields. Parking lots include: three (3) lots that provide sixty (60) spaces in Lenape Park, one (1) lot that provides fifty-five (55) spaces in Menlo Park and two (2) lots that provide twenty (20) spaces in Lake Lenape Park. Figure 2.3 shows vehicular and pedestrian access along with other existing site conditions in the site base map.

Pedestrian Circulation

There are many existing pathways and trails within the park system that provide opportunities for walking, jogging and biking. These trails are relatively wide and are not difficult to traverse. In Menlo, a short path bisects the tip of the Park while in Lenape Park, an extensive trail system traverses the breadth of the Park from Walnut Street to Main Street in Sellersville.

An 8-foot wide trail runs along the northern edge of the East Branch in Lenape Park and connects to the path adapted from the old Liberty Bell trolley alignment that runs along the northern edge of the Park.

Another trail runs along the south side of the East Branch and loop trails in Lake Lenape Park bring users to ball fields and the Veterans memorial. Pedestrian entrance points are found along all sides of the parks and sidewalks allow residents of the nearby neighborhoods easy walking access to the parks. However, sidewalks are absent along long

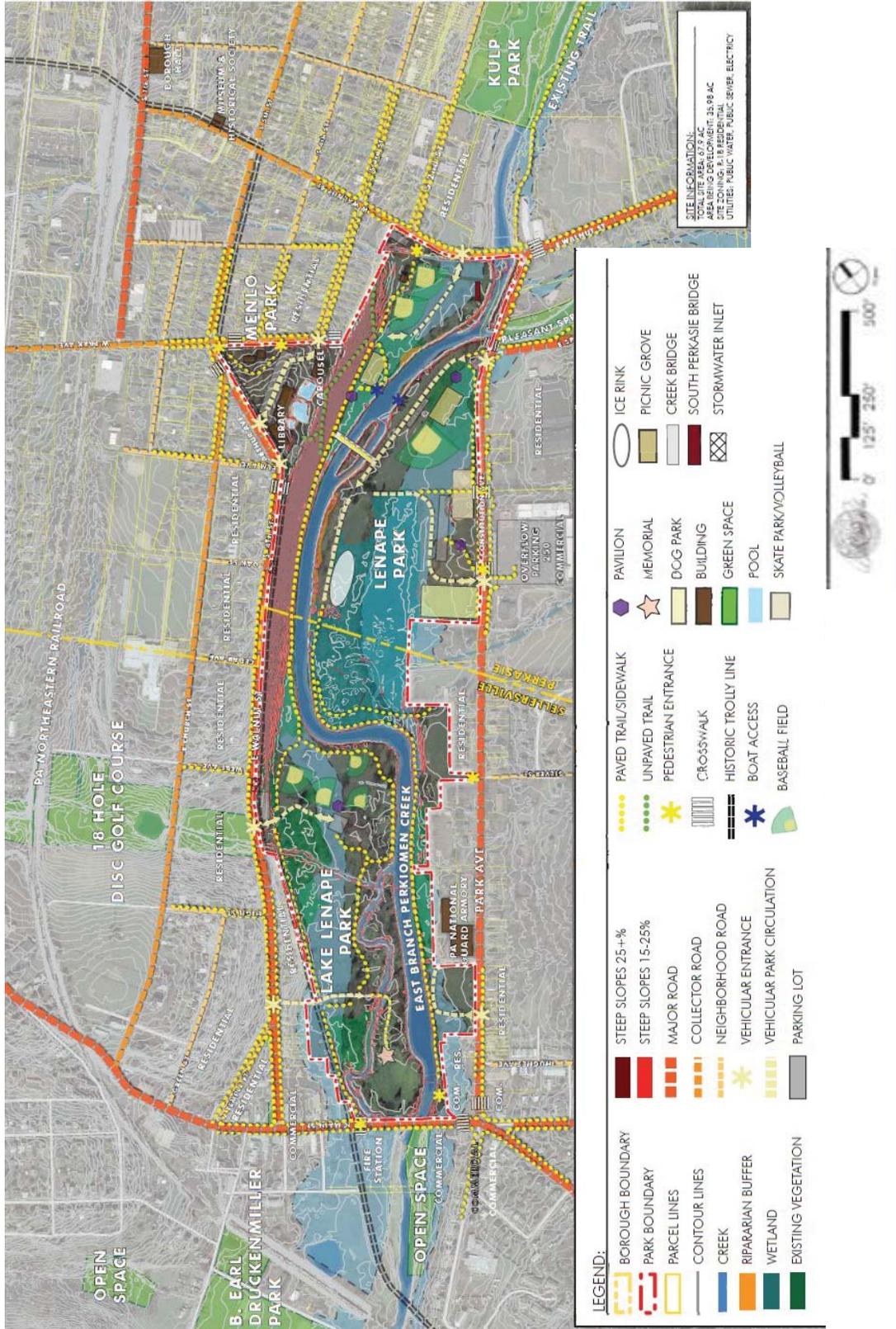


Figure 2.3 Site Base Map / Composite Analysis Map

stretches on the busiest side of the parks, Park and Constitution Avenues.

Infrastructure / Utilities

Menlo and Lenape Parks are well connected to the public utility infrastructure. The site has access to public water, public sewer, and electricity. Power is provided by the Perkasio Electric Department. The Borough is only one of thirty-five communities in the state to own their own electric utility.

Geology and Soils

Menlo and Lenape Parks fall within the Gettysburg-Newark Lowland Section Piedmont Province of Pennsylvania. This region is characterized by red sedimentary rock and a landscape of rolling hills and valleys. The main origin material consists of fluvial erosion with some peri-glacial mass wasting.

There are two types of underlying bedrock geology found in Perkasio Borough and both are found within Menlo and Lenape Parks. The dominant bedrock for the Borough and site is Brunswick Formation (Trb). Along the northern and southern borders of Perkasio and along Menlo Park, linear bands of Locketong formation (Trl) are found.

Brunswick Formation is moderately weather resistant, creating landscapes of broad shallow valleys and low hills. The rock is composed of mudstone, siltstone, and shale and is typically soft and grayish-red to reddish-brown.

Locketong Formation is likewise moderately resistant to weathering and creates landscapes of medium relief with rolling hills. The rock is composed of argillite with a thin bed of black shale and is predominantly dark-gray to black.

The geology of a site affects development capacity, stormwater runoff, wastewater facility siting, and

potential for soil erosion. The park geology is reflected in its steep slope topography. The majority of the steep slopes in Perkasio Borough occur along its northernmost boundary paralleling Ridge Road. There are other smaller concentrations of steep slopes in the area of Menlo and Lenape Parks and along some of the banks of the East Branch Perkiomen and Pleasant Spring Creeks.

The Perkasio Zoning Ordinance limits the disturbance of slopes of 8 percent or greater by controlling lot sizes, amount of disturbance, and types of activities. Development on steep slopes increases the chances for erosion by moving the topsoil and established groundcover. Erosion produces sediment that pollutes surface water, and over time, narrows stream channels that can increase the chance for flooding.

The following soils can be found on the site: Bowmansville – Knauers silt loams, 0 to 3 percent slopes; Croton silt loam, 0 to 3 percent slopes; Penn-Klinesville channery silt loams, 8 to 15 percent slopes; Rowland silt loam, 0 to 3 percent slopes; Urban land-Abbottstown complex, 0 to 3 percent slopes. (Figure 2.4, Soils Map).

Bo - Bowmansville–Knauers silt loams, 0 to 3 percent slopes: The Bowmansville series are found through the middle of the Parks and consists of very deep, poorly drained soils. They formed in recent alluvial deposits derived from upland soil materials weathered from dolerite or basalt. They are found on floodplains with smooth slopes of 0 to 3 percent. Thickness ranges from 18 to 59 inches and the depth to bedrock is more than 6 feet. These soils are poorly drained and somewhat poorly drained. Surface water ponds and runoff is very high.

Ro – Rowland silt loam, 0 to 3 percent slopes: Consists of very deep, moderately well and

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somewhat poorly drained soils formed in alluvial sediments weathered from red and brown shale, sandstone, and conglomerate. Slopes range from 0 to 3 percent. Saturated hydraulic conductivity is moderately high to high above about 40 inches and high in the underlying stratified sand and gravel.

PkC – Penn-Klinesville channery silt loams, 8 to 15 percent slopes: Consists of shallow, somewhat excessively drained soils formed in residuum derived from red shale, siltstone, slate, and fine-grained sandstone. They are on dissected uplands. Slopes range from 3 to 80 percent. Saturated hydraulic conductivity is high. Runoff is medium to very rapid. Saturated hydraulic conductivity is high.

CwA – Croton silt loam, 0 to 3 percent slopes: Croton series consists of deep poorly drained soils on

uplands. They formed in medium textured materials mainly over sandstone, siltstone, or shale. Slopes are 0 to 8 percent. Mean annual precipitation ranges from 40 to 48 inches. Mean annual air temperature ranges from 50 to 55 degrees F. Croton soils are on nearly level and sloping upland flats or in depressions. Slopes are 0 to 8 percent.

UgB—Urban land-Abbottstown complex, 0 to 3 percent slopes: Consists of deep and very deep, somewhat poorly drained soils. They formed in residuum from acid red shale, siltstone and sandstone. They are on concave upland slopes of 0 to 15 percent. Saturated hydraulic conductivity is moderately low to moderately high above the fragipan and moderately low in and below the fragipan. Mean annual precipitation is 46 inches. Mean annual temperature is 52 degrees F.

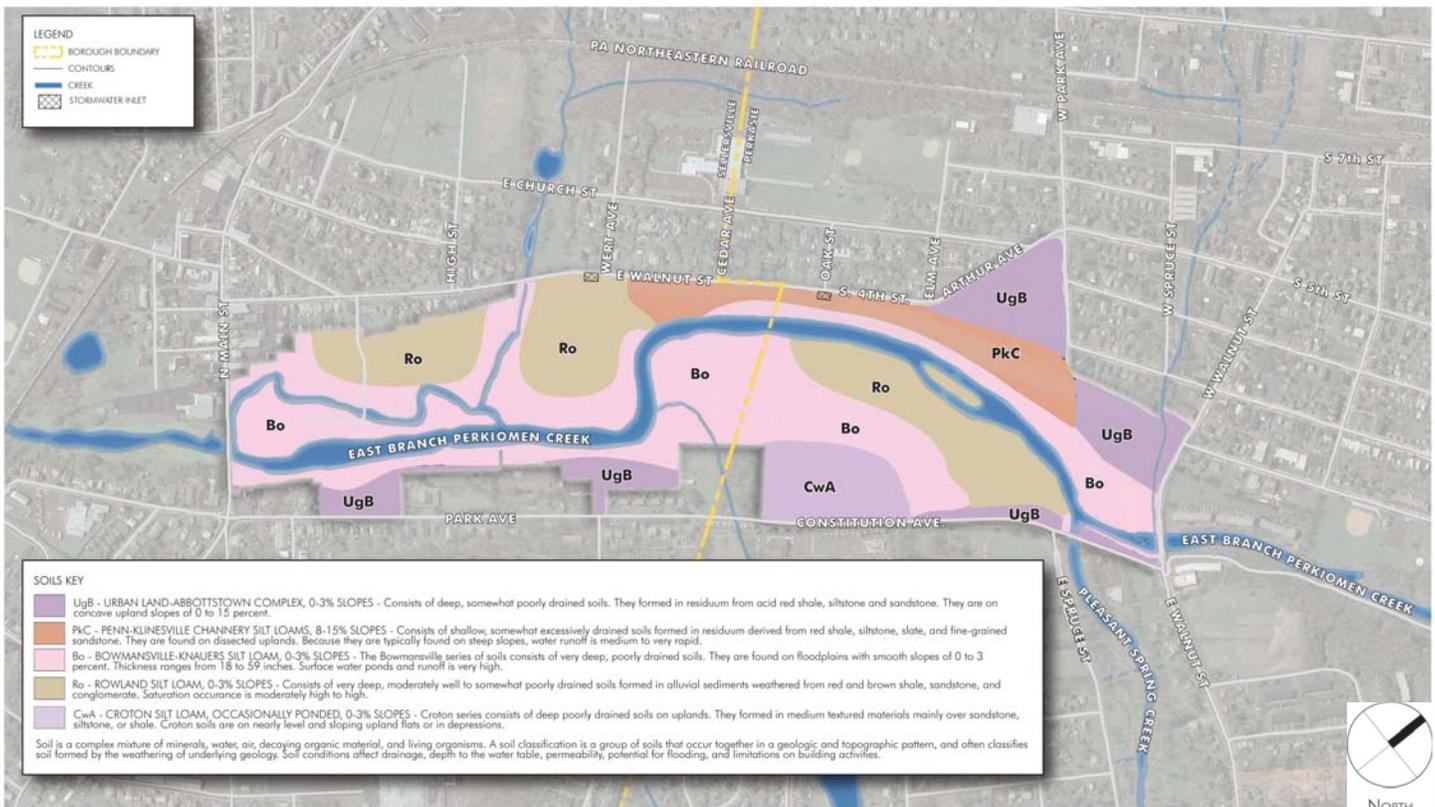


Figure 2.4 Soils Map

Topography

The site topography is typical of the Gettysburg-Newark Lowland Section Piedmont Province with the characteristic shallow stream valley, however it does not exemplify gentle rolling hills as a trait of this geology. The site steeply slopes from the high point in Menlo Park to the south towards the low point of the site in the bottom of the East Branch (See Figure 2.5). The site ranges in elevation from 280' to 400' above sea level with slopes ranging from 2 to over 25 percent. The site does contain areas of steep slope (greater than 15%) in the area north of the East Branch, below Menlo Park. There is a 70 foot elevation change between the lower end in Lenape Park and the higher end near the pool in Menlo. Most of the site is a gentle valley running between both sides of the East Branch. Most of Menlo Park is slightly steeper, but still a gentle slope (See Figure

2.6).

The direction of a slope face, or slope “aspect”, can inform design decisions such as what plant material will thrive or where the best shady spot is on a hot summer day. There is a distinct separation in the direction of slopes at Menlo and Lenape Parks created by the steep slope below Menlo. The upper end of the site slopes generally face south and southeast towards the East Branch. Variances in the overall slope aspects are seen along the lower valley south of the East Branch. The majority of Lenape Park south of the East Branch faces southeast and northwest towards the central valley. Optimal solar orientation occurs along the steep slope below Menlo because of the south facing hillside (See Figure 2.7).

Hydrology & Floodplains

The entire park site, along with the whole of Perkasia

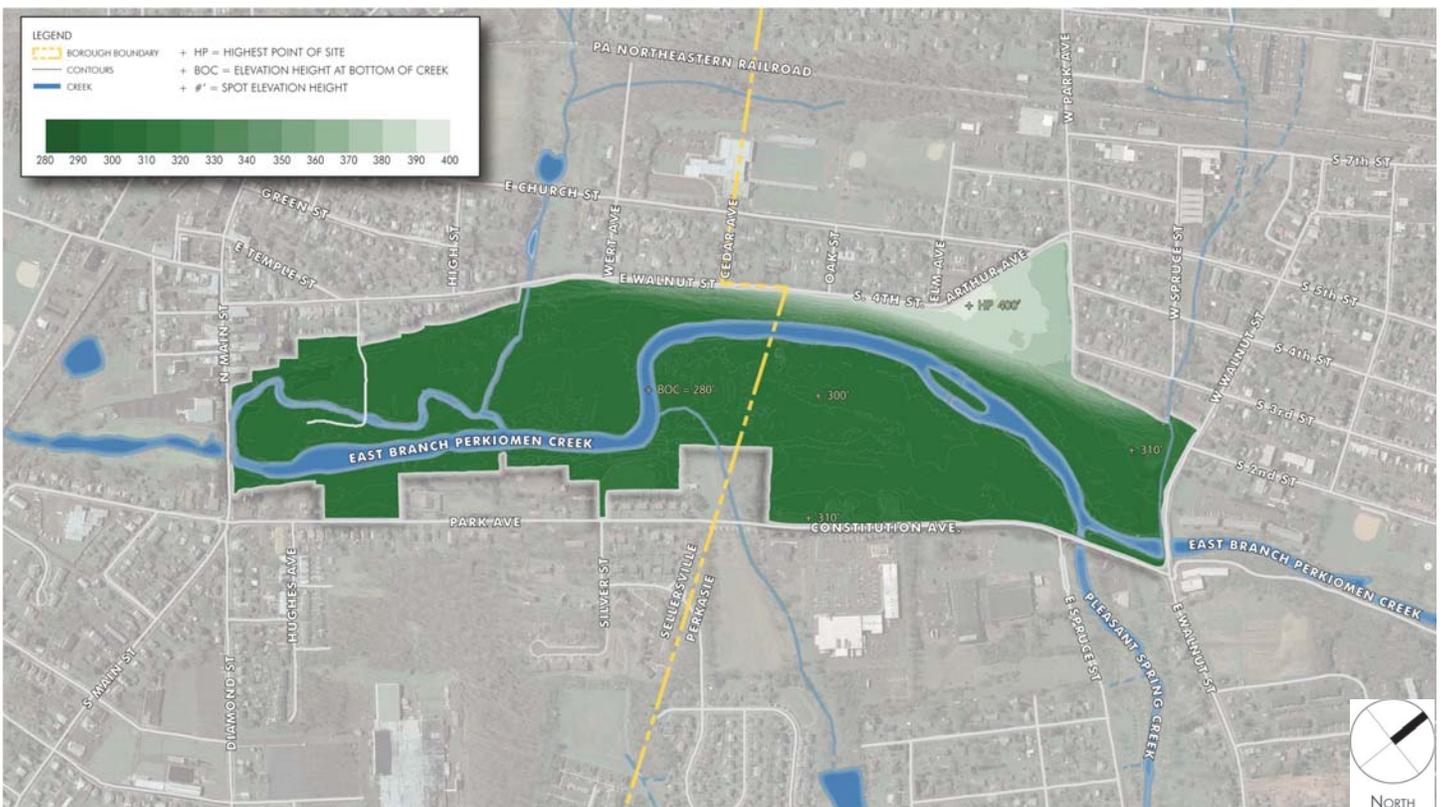


Figure 2.5 Elevation Map

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and Sellersville Boroughs, are located within the East Branch Perkiomen Primary Watershed. The East Branch Perkiomen is a 24.5 mile long tributary to the Perkiomen Creek which flows into the Schuylkill River and is part of the Schuylkill Watershed. The East Branch is an “Approved Trout Water”, and is stocked with trout each year by the Pennsylvania Fish & Boat Commission. Within the park site, the East Branch enters Lake Lenape Park on the south side, curves northward as it enters Lenape Park and turns northeast as it leaves the park at Walnut Street and Constitution Avenue. Two unnamed tributaries meet the East Branch within Lake Lenape Park, entering from the vicinity of Main Street and Walnut Street. In Lenape Park, Pleasant Spring Creek meets the East Branch at Constitution Avenue.

Chapter 93 of The Pennsylvania Code provides

designated uses for Waters of the Commonwealth. The entire East Branch Perkiomen Creek, including the main stem and its tributaries, is designated as Trout-Stocked Fishery – Migratory Fishes (TSF-MF). This designation corresponds to particular water quality and biological standards associated with this category of water resource.

A significant portion of Lenape Park is located within the 100-year floodplain of the East Branch. This designation simply indicates that area of land adjacent to the Creek that would be inundated during a 100-year flood (or more accurately, a flood with a 1% chance of occurring in a given year). Functional (i.e. unaltered and undeveloped) floodplains provide a range of important benefits, most notably by lowering flood elevations and flood velocities, both of which ultimately translate to reduced downstream

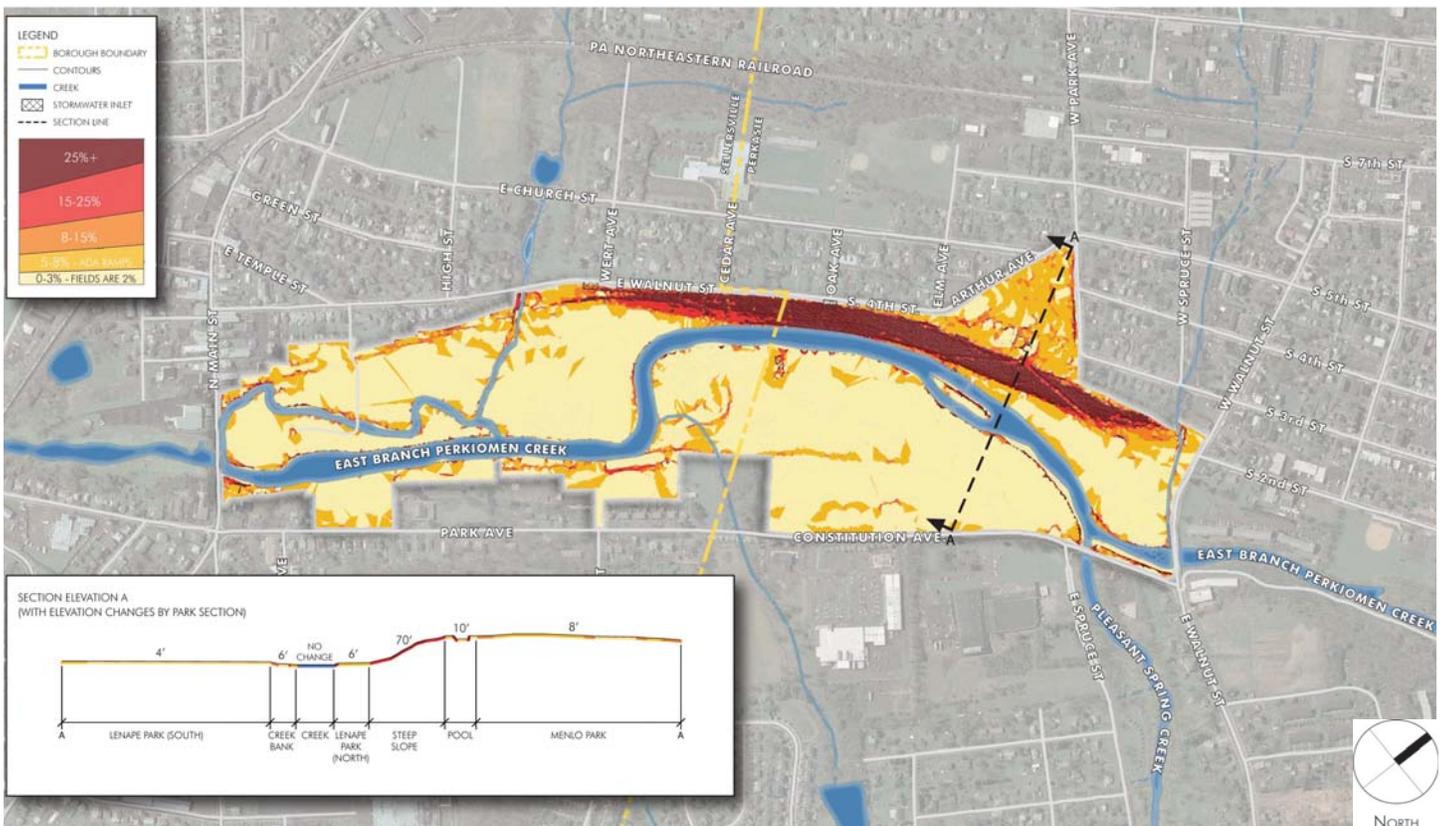


Figure 2.6 Slope Analysis Map

damages associated with a given flood event. Various local, state, and federal regulations govern development within floodplains, including the placement of structural elements that may represent obstruction to flood waters. Prior to implementation, written certification should be obtained verifying that the proposed development / construction plans for the park are compliant with prevailing local floodplain management ordinances.

Wetlands

A large wetland complex occupies the western portion of Lenape Park. Within this complex, areas of forested, scrub / shrub, open water and emergent wetlands exist. Jurisdictional wetlands areas are comprised of poorly-drained hydric soils that are inundated or saturated for at least a portion of the

growing season and support specific types of vegetation capable of thriving in anaerobic conditions. These valuable areas play an important role in mitigating floods by storing stormwater and filtering out nutrients and waste. They also provide groundwater recharge and serve as valuable habitats for a wide array of plant and animal species, including many which may be threatened or endangered. In Pennsylvania, jurisdictional wetlands are regulated by the Department of Environmental Protection (DEP) through the Pennsylvania Code Chapter 105 Wetlands & Waterways Program, as well as federally by the US Army Corps of Engineers (ACOE). Authorization (permitting) is required from both agencies prior to engaging in any activity which results in disturbance to, or placement of fill within wetlands, regardless of the size or extent of the disturbance or fill. At the local municipal level, the

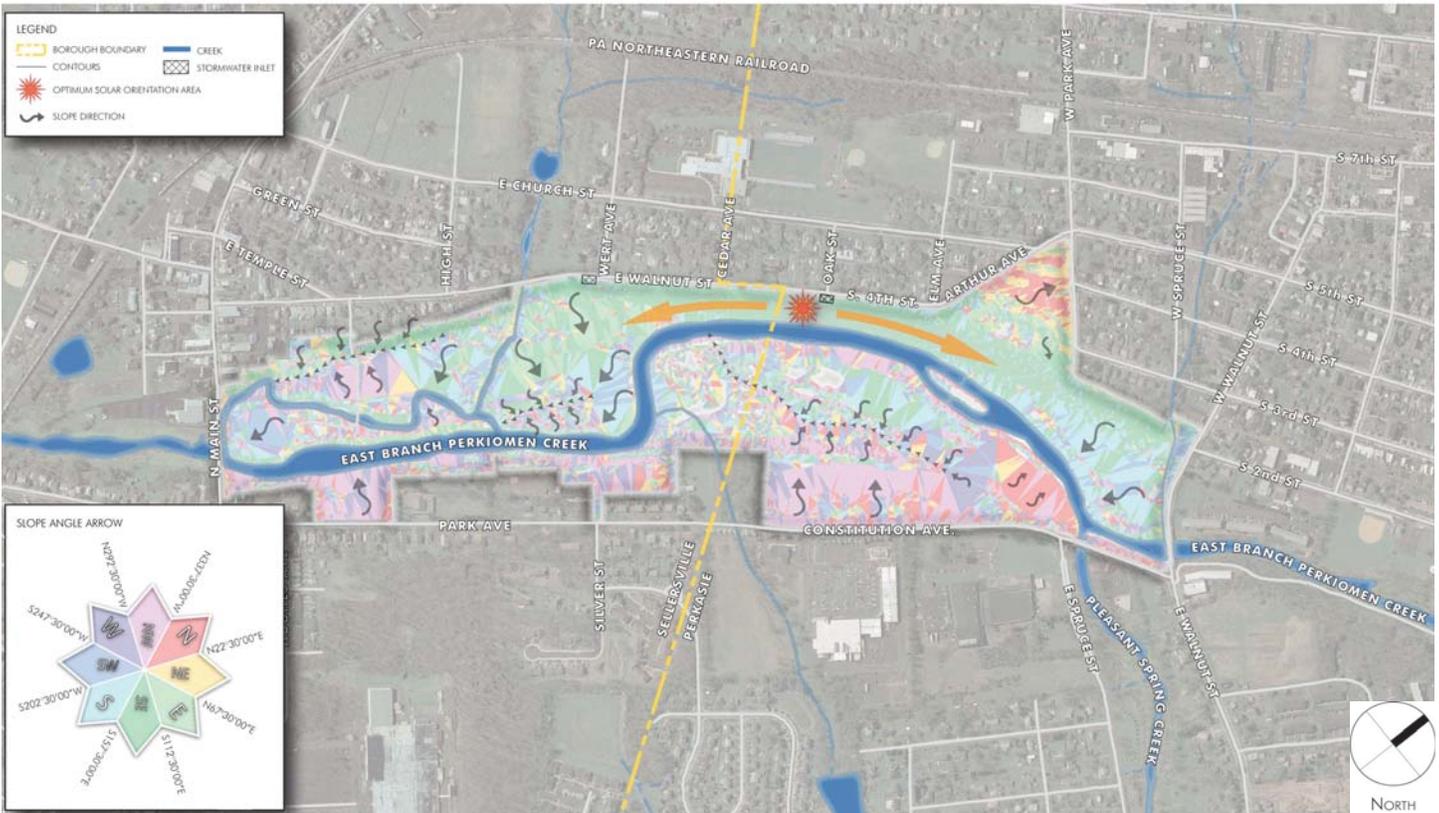


Figure 2.7 Slope Aspect Map

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Perkasie Zoning Ordinance requires that all wetlands be preserved as open space and that no disturbance shall occur without required authorizations (permits) DEP and ACOE. In addition, the ordinance also requires protection of a 100-foot buffer extending outward from the limits of wetland vegetation. Within this buffer, 80 percent of natural cover must be maintained as permanent, vegetated open space. Figure 2.8 shows the location and types of wetlands located within the Parks. A formal wetland delineation report has been prepared in conjunction with the Parks Master Plan, providing detailed information describing the location, extent, and character of jurisdictional wetland resources within the park boundaries.

As introduced above, the existing wetland complex within Lenape Park is comprised of forested, scrub /

shrub, open water (lacustrine), and emergent wetlands. Collectively, the wetland area is categorized as a red maple-black gum palustrine forest. This type of system is commonly found on saturated soils in basins, hillsides, and floodplain edges. The overstory is dominated by red maple and black gum. Other tree species represented in the wetland are scarlet oak and swamp white oak. The understory is comprised of alder, dogwood, skunk cabbage, rushes, creeping jenny and sensitive fern. The entire wetland is located within a depressional (concave) basin landform, which promotes the seasonal storage of water which supports the conditions indicative of wetland communities.

Small pockets (or “islands”) of upland are present within the broader wetland complex. These are localized areas of higher ground within the basin with



Figure 2.8 Hydrology Map



Steep slope as seen from the East Branch

improved soil drainage, supporting upland trees, shrubs, and herbaceous plants similar to those occurring in the upland forested portions of the Parks.

Upland Forest Resources

Much of the undeveloped portion of Menlo and Lenape Parks is occupied by climax (mature) upland forest. Overstory trees represented in this forested setting include red oak, red maple, scarlet oak, black cherry, chestnut oak, sycamore, hop-hornbeam and shagbark hickory. As is typical of the mature forest, the understory is fairly sparse. Understory species present include the seedlings and sapling of the tree species listed above, as well as scattered flowering dogwood, witch-hazel, spicebush and red mulberry. The existing forested setting provides some habitat value, as well as a source of food for wildlife in the form of hard mast (chiefly acorns and hickory nuts).

In addition to the occurrence of non-native species such as mulberry in the upland forest, invasive species are problematic in this portion of the park. In particular, monocultures of invasive Japanese stiltgrass occur in large stands along the periphery of

the upland forest, in areas along the paved walking path between the forest and the Creek.

Riparian Buffers

Riparian buffers are vegetated zones immediately adjacent to the stream. Healthy riparian buffers are highly beneficial transitional areas (or ecotones) between aquatic (stream) and terrestrial (land) communities. Riparian buffers shade the stream, and contribute the organic material (fallen leaves and woody debris) that comprises the foundation for the instream food web. Riparian buffers play a key role in improving water quality by acting as filters that partially protect a stream from the impact of adjacent land uses, particularly in developed settings. Healthy riparian buffers are comprised of diverse native vegetation that can stabilize streambanks and reduce flood velocity. This diversity of plant communities provides a wide array of wildlife habitats and food sources. Unfortunately, the existing riparian buffers within the Parks are currently of insufficient width and diversity to provide these benefits

Within the Parks, the existing riparian buffers along the East Branch range from <6 feet to 15 feet in width. These buffers are dominated by red maple, green ash, American hornbeam, scarlet oak, sycamore, and red mulberry. Poison ivy is present in large stands along the stream's edge. In several areas, the riparian buffer is routinely mowed right to the top edge of the streambank, despite the presence of signage identifying the area as a "No-Mow Zone" intended to promote the growth and vigor of the vegetated buffer.

Wildlife

Wildlife present within the park is typical of developed/suburban areas of Southeast Pennsylvania. Mammals known to occupy the park

(based on sightings, tracks, or observations in the field) include whitetail deer, common skunk, raccoon, cottontail rabbit, and gray squirrel. A variety of songbirds can be found in the wetland, upland, and developed portions of the Parks. Wood frogs inhabit the wetland complex, and some unique species of amphibians likely found within that portion of Lenape Park includes the northern tree frog, spotted salamander and marbled salamander.

The slow-flowing portion of the East Branch within the Parks is heavily utilized by both migrant and resident waterfowl. Mallards and Canada geese are the two most common species, although it is likely the site is utilized by a more diverse variety of waterfowl during the spring and fall migration periods.

A Pennsylvania Natural Diversity Inventory (PNDI) search was conducted for the Menlo and Lenape Parks site. PNDI Records indicate that there are no potential impacts for the site and no further reviews of the project by the U.S. Fish and Wildlife Service, Pennsylvania Game Commission, Pennsylvania Fish & Boat Commission, or Pennsylvania Department of Conservation and Natural Resources will be required as the project moves forward. Results of the PNDI screening, conducted in February 2016, are valid for two years. Should implementation of elements of this Parks Plan (or any other development activities) occur beyond February 2018, an updated PNDI review would be required to accompany the necessary permit application(s) supporting that work.

Opportunities and Constraints

Because of the steep slope south of Menlo and the presence of the wetlands in the middle of the site, opportunities for new development and redevelopment are restricted to pockets where existing facilities exist.

One opportunity is that the Parks have an existing active user group. This existing user group can be tapped to help enforce rules, maintain existing and proposed trails, and protect Park resources.

The Park context, surrounded by residences and businesses, is both an opportunity and a constraint. Opportunities include new connections and crosswalks can be made into the surrounding neighborhoods to provide residents and workers with foot or bike access. Noise and traffic from the roadways can be mitigated by providing additional buffering along the heavily traveled roads and by locating trails away from the roads.

The topography and water courses within the Park provide opportunities to create dramatic vistas, and the opportunity to preserve and enhance the variety of habitats; creating the potential for the site to act as both a recreational facility, and plant and wildlife habitat. These same features also create constraints and care should be taken to respect steep slopes, floodplains, and wetland areas.

Many trails already exist in Menlo and Lenape Parks. Sustainable existing trails should be maintained and enhanced for use by visitors. New trails should connect new facilities to existing facilities, trails and parking.

The space around the historic covered bridge should also be seen as an opportunity to create a focal point at this intersection and bring new attention to this local resource with a connecting loop trail segment that runs through it.

One opportunity that exists for communities with historic infrastructure is converting unused or underused rail tracks to trails through a rails-to-trails or railbanking project. Rails-to-trails are paths created from former rail lines and railbanking is an agreement between a rail company and trail agency

where the agency can buy or lease an unused line for trail use until the rail company decides to reestablish rail service. A section of the former Bethlehem Branch of the North Pennsylvania Railroad, which runs from Lansdale to Quakertown, is located north of the Parks above Pennridge South Middle School. This line is owned by SEPTA and is currently leased to East Penn Railroad for their freight operations. SEPTA would like to see passenger rail service reestablished in the Pennridge area so a rail conversion is not considered an option here. However, other communities near Perkasio, like Richland Township, are pursuing rail conversions to connect to points north and existing trails.

The two bridges on either side of Lake Lenape / Lenape Park that cross the East Branch, at Main Street in Sellersville and Walnut Street in Perkasio, do not adequately serve the current needs of the Boroughs and are scheduled to be replaced.

The replacement project for the Main Street Bridge is managed by PennDOT and will include roadway approach reconstruction and minor widening on the downstream side. The project scope at the time of this study also includes the removal of the metal stairs that lead down to Lake Lenape Park and

flattening out the slope to allow for a walkable path to the Park. The elimination of the steps as a pedestrian facility in this location should be considered a loss of an existing transportation resource and an unacceptable negative impact from the proposed PennDOT bridge project. Sellersville Borough should renegotiate this element with PennDOT. This project is expected to begin construction in summer 2017.

The Walnut Street Bridge project is managed by Bucks County and will replace the current bridge with a wider structure that allows for one lane in each direction along with a painted median island. The new bridge will also have sidewalks on both sides, with the west side sidewalk providing access to Lenape Park. Currently, there is only one sidewalk along the existing bridge, on the east side, so an additional sidewalk will allow for convenient access to the Park, complimented by signal improvements at Walnut and Constitution Avenue. This project is expected to begin construction in spring 2018. Both projects are currently undergoing preliminary design.

The timing for the projects is fortuitous as opportunities exist to work with PennDOT, Bucks County and the Boroughs to coordinate Park access



Main Street bridge in Sellersville



Walnut Street bridge in Perkasio

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points, materials selection and the development of the construction plan to ensure minimal effect on the Parks.

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PERKASIE BOROUGH BUCKS COUNTY

CHAPTER 3: MASTER SITE PLAN

Anticipated Level of Uses

Menlo and Lenape Parks are designed as an active and passive park system. Passive uses tend to draw a smaller number of users when compared to active uses. It is expected that the Parks will experience increased usage due to new facilities and improved connections. Since the Parks are popular with organized sports teams and frequent users who feel a sense of ownership, it is expected that these users will remain the 'eyes and ears' of the Parks, keeping the Boroughs aware of issues in the Parks.

Design Considerations

Below is a listing of major design considerations that are either mandated or are a goal identified through the public participation process. These may include:

Site Covenants

The site, specifically Lenape / Lake Lenape Park, was deeded with the understanding that it would be used for park purposes forever. This restriction has the effect of a covenant running in perpetuity with the land and is binding upon the owner(s) of the property and upon all subsequent owners, successors, and assigns.

Land Development and Borough Planning

Park and trail design are not specifically addressed in municipal ordinances. The Borough will have to decide which, if any, provisions from local requirements will be applied to this project.

The Borough Comprehensive Plan and Open Space Plan were reviewed. The trail network and improvement recommendations from the plans were considered in the preparation of this plan.

ADA Accessibility

Public recreation improvements must be designed in accordance with the most recent edition of the ADA Accessibility Guidelines for Buildings and Facilities. The most recent version of the ADA Accessibility Guidelines for Buildings and Facilities can be found at: <http://www.ada.gov>.

Additional guidelines have been developed to provide guidance for outdoor recreation facilities including trails. These guidelines can be found at: <http://www.access-board.gov/guidelines-and-standards/recreation-facilities>

Trail Facilities

One of the key opportunities for Menlo & Lenape Parks is the formalization of existing trails within the site. It will be critical to consider how the trails function both within the site and as part of a greater Borough and Regional trail system. There are many resources that address safety, aesthetics, and accessibility of trails. These include:

Guide for Development of Bicycle Facilities, American Association of State Highway and Transportation Officials (AASHTO), 1999

Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails, Rails to Trails Conservancy (RTC), 1993

Statewide Bicycle & Pedestrian Master Plan, Bicycling & Walking in Pennsylvania- A Contract for the 21st Century: Bicycle Guidelines, Commonwealth of Pennsylvania Department of Transportation, 1996

Native Plant Material & Invasive Plant

Removal

The use of native plants supports the vision of

enhancing the natural systems within the Parks. The planting design for the Parks should include canopy and understory tree groves; shrub and herbaceous plant understory; and meadow reestablishment. Habitat restoration in some areas of the site should include native plant buffers and screen plantings. Native plant materials can create an attractive landscape that will help reduce long-term maintenance costs. Native plants are generally resistant to most pests and diseases and require little or no irrigation or fertilizers. In addition to the above benefits, native plants provide food and habitat for indigenous fauna. Deer-resistant species should be selected.

Disturbed land often enables invasive plant materials to establish more easily on a site. The Borough can initiate a program of invasive plant removals within the Parks and seek to replant these areas with native plants. In addition the Borough can work with neighboring properties to develop management plans for the hedgerows, including the removal of invasive species. This is a labor intensive task, ideally suited for volunteers, including school or scout groups. Within the Parks boundaries, invasive species such as multiflora rose, tartarian honeysuckle, and Japanese stiltgrass are locally abundant.

Sustainable Materials

Choices in site materials have the potential to affect the health of a project sites ecosystem as well as the larger environment as a whole. Every material has a life cycle: raw materials / natural resources, products manufactured, and delivery for use. Closer consideration of the sustainability of a materials life cycle can have far reaching benefits. Sustainable material practices include (SITES, 2014):

- Re-use of existing site materials.

- Purchase local and sustainably-produced plants and materials.
- Consider the full life cycle of materials, consider the end life of a product can it be deconstructed and reused.
- Work towards zero net waste in demolition, construction, and management.
- Reduce urban heat island effect through selection of plant materials and lighter reflective colors.

Best Management Practices (BMPs)

Developed by the Pennsylvania Department of Environmental Protection (PA DEP), Pennsylvania Handbook of Best Management Practices for Developing Areas offers numerous solutions for handling on-site stormwater. Best Management Practices (BMPs) applicable to this Park include: protect and restore riparian / forest buffers; protect / utilize natural stormwater flow runoff direction; habitat restoration; soil amendments; native tree planting; berms that help detain and infiltrate stormwater; rain gardens; bio-swales; and the use of porous surfaces in the parking areas, or trails. These facilities require site-specific soil tests to determine site suitability and the infiltration rates of the existing soils.

Incorporation of these BMPs into the Parks Master Site Plan will have a direct positive impact on preserving and enhancing water quality. Depending on the type and extent of development activities implemented, stormwater BMPs may be required to satisfy permit (legal) requirements authorizing the work. The opportunity for education exists through the placement of interpretive signage to educate Parks visitors about watershed water quality and how BMP's can positively impact all sites.

Construction Permits

The Borough regulates all construction, including earth grading activities. Certain projects require Grading Permits. Projects entailing 5,000 square feet or greater require an approved Erosion & Sedimentation Control Plan. The development of the Parks must conform to the municipal permits and land development process application process. Necessary permits and approvals for regulated earth disturbance activities from the Bucks County Conservation District or appropriate PA DEP regional office must be secured by the Borough.

Construction projects that involve the disturbance of more than one acre of earth will require a National Pollutant Discharge Elimination System (NPDES) permit. The permit is a federal requirement that is administered at the state level with the overall goal to improve water quality.

The permit plans are divided into two (2) parts. All project phases must comply with the stipulations of PA Code Chapter 102, Erosion and Sediment Control and are reviewed and approved by the local Conservation District. The Erosion & Sedimentation Pollution Control plans (ESPC) are to be implemented by the contractor throughout construction until the site is stabilized by permanent plant growth. A second part of the NPDES permitting process is proposed stormwater management areas. The Post Construction Stormwater Control Plans (PCSC) are designed to manage stormwater for the 2-year storm event with the goal of infiltrating it into the ground. BMP facilities are to be constructed during the project and maintained by the site owner for the life of the improvement.

In some cases, local conservation districts will waive NPDES requirements for trail projects that disturb slightly more than 1 acre of land. Conservation

districts usually wish to review the project development plan, even if it will be constructed in phases. The Menlo & Lenape Parks Master Plan identifies general types and locations of BMP facilities that may be required to secure required permits.

The Master Plan proposes the development of a boardwalk trail and an improved footpath network through portions of the jurisdictional wetland complex located in Lenape Park. These activities will require the Borough to apply for and obtain permits from PA DEP and ACOE authorizing these activities and associated placement of fill within the wetland, prior to implementing these aspects of work. This type of authorization is typically obtained through a Joint Permit Application (JPA), which allows for simultaneous and coordinated review of the application by both agencies. Typically, impacts to wetlands exceeding 0.05 acre require mitigation through PA DEP. The federal (ACOE) threshold triggering mitigation varies, and is typically determined on a case-by-case basis by ACOE after considering the type of project, extent of impacts, quality of wetland resource impacted, etc. Mitigation is frequently required at a ratio that exceeds a 1:1 match. As such, any impacts proposed within the wetland boundary should be carefully considered and minimized to the extent possible. Consultation with DEP and ACOE may allow for authorization for certain types of activities within the jurisdictional wetland, and is strongly suggested prior to proceeding with plans for development in these areas. Furthermore, any impacts to the 100-foot wide buffer surrounding the wetland must comply with local Borough ordinances.

The Sustainable Sites Initiative (SITES)

The Borough commitment to the environment and the strong public support to conserve and restore



Pavilion in Menlo Park

natural systems within the Parks may warrant consideration of the SITES program to provide additional design guidelines that support the goals for the Parks.

The SITES criteria promote sustainable land development and management practices for sites with and without buildings. SITES standards are for sustainable site development practices and are often overlooked by 'green' building standards. SITES rates projects based on management of site hydrology systems, soils, plants, material selection, and human health and wellbeing. The U.S. Green Building Council (USGBC), a SITES stakeholder, plans to incorporate SITES into future LEED requirements. Additional information can be found at <http://www.sustainablesites.org>

Public Consensus

Many ideas were expressed at the early public meetings about improvements on the park site. The general consensus was to make the parks usable, accessible and safe through recreational upgrades and improved vehicular and pedestrian circulation, while preserving the important natural and historic

elements of the Parks. The residents of Perkasio understand that the Parks are home to cultural resources, like the Roebling bridges and covered bridge, and the wetlands and creek greenway, also create a natural corridor and habitat for diverse species. The objective of the plan is to propose a system that respects the present conditions of the Parks while continuing to make them popular and contributing resources to community life.

Perkasio experienced considerable rapid growth over the past two decades and the preservation of large areas of natural land within the context of parks or new developments will become invaluable to its future residents. People understand that in addition to active recreation sites, access to nature is equally or more important. Adults and children of all ages need to be able to walk through fields and woods; to dip their fingers into streams and ponds; and connect with nature. The Menlo & Lenape Parks Master Plan is intended to offer these opportunities.

Early in the public process four major themes emerged to guide the development of the Parks Master Plan.

1. Protect and enhance the natural systems and



Pool area in Menlo Park

habitat of the site.

All design decisions should protect and improve on the project goals. The plan should preserve and enhance ecological systems; diversify habitat; and enhance water quality. The site design should help to educate visitors about the importance of their experience in the Parks.

2. Upgrade athletic fields and the trail network and improve pedestrian and vehicular circulation.

The Master Plan should seek to show material and design upgrades to the various ball fields, where appropriate, including possible realignments of fields. The Plan should also show where trails might be improved or better connected with each other and to new and existing facilities. Appropriate trail surfacing will enhance the user experience by providing a comfortable, safe and stable trail structure.

The Plan should also identify ways in which pedestrian and vehicles can better access the park system through additional entryways, direct paths or wide two-way entry drives that will make access easier and more convenient.

3. Connect the site to nearby neighborhoods and community resources and provide a platform for a regional trail network.

Because of the scale of the park system and its position between two municipalities, the existing paths within the Parks can be enhanced to become the nexus of a regional trail system that can tie into adjacent neighborhoods via local sidewalks and community resources, like other parks, using the existing creek greenways. The Parks can also take advantage of new sidewalks that will become available when a new residential

development across from the Parks and new bridges on Main Street and Walnut Street at the East Branch are completed.

4. Introduce new recreational facilities while continuing to preserve the cultural heritage of the Parks.

The Parks should build on local events, like Community Day, and introduce a venue for performances that is easily accessible and ties into other park facilities. The Master Plan should also call attention to historic elements, like the covered bridge, and accentuate their presence through landscaping, lighting and ADA accessibility. The Plan should also account for historic and popular uses, like fishing and boating, that made the Parks a regional destination in their early years.

Preliminary Concept Plans

Based on feedback from the first public and committee meetings, two concepts were developed that incorporated these four themes (See Figures 3.1 and 3.2). The plans were presented to the PSC and public, and the comments regarding the plans informed the development of a draft Master Site Plan.

The Menlo & Lenape Parks concepts focus on introducing an amphitheater, or bandshell, within the park as a performance space and gathering place; relocating specific recreational facilities to better take advantage of location, terrain and drainage; adding or improving pavilions; improving parking areas; and adding new pathways.

Concept 1 illustrates 30 new parking spaces in Menlo Park; a relocated sand volleyball court adjacent to the ice hockey rink that is filled every winter when conditions are appropriate; a proposed



Figure 3.1 Menlo & Lenape Parks Concept Plan 1



Figure 3.2 Menlo & Lenape Parks Concept Plan 2

playground and amphitheater on the south side of the East Branch; a proposed pavilion and restroom adjacent to the amphitheater; 55-65 additional parking spaces on the south side; a reoriented ball field; 30-45 additional parking spaces next to the pavilion plaza; an improved skate park; improved parking on the north side of the creek adjacent to the ball fields with 30 delineated spaces; and 15 additional spaces in the lot off of Walnut Street. New pathways are proposed through the covered bridge and next to the north side fields; entering from the turtle monument and crossing the proposed amphitheater to the Sellersville side; and near the pavilion plaza forming a short walking half-loop.

Some of the differences highlighted in Concept 2 include a proposed amphitheater on the north side of the East Branch; a relocated dog park on the north side of the wetlands; 15 new parking spaces adjacent to the dog park; an expanded pavilion plaza; proposed skate rink in the location of the existing dog park; and proposed boardwalk running through the wetland area. In addition to the boardwalk, new pathways are proposed through the north side amphitheater connecting it with the covered bridge; a path continuing from the Roebling bridges down to the parking behind the pavilion; a path behind the proposed dog park; and new paths from the expanded pavilion plaza.

Public Reaction to the Preliminary Plan

The concept plans were well received by the committee and public and the following recommendations were made to the consultants by the committee and the public.

- Bandshell/Amphitheater
 - There is no need to accommodate parking at capacity as people can park in the nearby shopping center, shuttle in or walk from the

neighborhoods.

- If this is located on the south side, use the outfield as a spectator area.
- Utilize perimeter trails.
- Dog Park
 - Ensure parking is available as people usually drive to the dog park.
 - Will public awareness be reduced if it's relocated to the rear?
 - Account for water, especially if consideration is made to move it closer to the East Branch, as the park tends to become a mud pit.
 - Keep it visible and transparent.
- Skate Park
 - Keep it as more of a "plaza" and not confined like a court.
 - Seniors enjoy watching their grandkids skate so maintain its visibility.
 - Use durable and vandal proof materials.
- Park Access
 - Improve the crossing at Walnut and Constitution.
 - Ensure there's stormwater mitigation at the new bridge on Walnut Street.
 - Is there adequate headroom for a trail path under the bridge?
 - Trails should connect to downtown Perkasie where a potential bike share station could be installed.
 - Encourage continued access to the Veterans Memorial from the new Main Street Bridge.
 - Extend a trail network past the firehouse in Sellersville and new residential developments.
 - Provide for additional ADA parking.
- Covered Bridge and Historic Resources
 - Make it part of a trail system.
 - Landscape around the bridge.
 - Pursue a restoration grant.

- Stream and Stream Access
 - Use trails as laid out by buffers to avoid wetlands.
 - Perform remediation on steep stream banks.
 - If the East Branch dam is removed, re-establish a natural character.
 - Stream bank restoration and a trail spur could happen at Pleasant Spring.
 - Identify and add fishing locations.
 - Account for the shallowness of the East Branch on the Perkasio side.
- Other Facilities & Activities
 - Avoid overdevelopment as Kulp Park's facilities are nearby.
 - Possibly expand disc golf into Lenape Park from Druckenmiller Park in Sellersville.
 - Is there potential for trail connections through the National Guard armory property?
 - The sand volleyball court is infrequently used.
 - Introduce additional ADA accessible components, like ramps and benches.
 - Work with the Borough to implement free wifi.
 - Introduce interpretive environmental plantings.
- Best Management Practices (BMP) along the curb on 4th Street and next to the entrance off of Park Avenue to manage stormwater runoff.
- New pathways that traverse the Park and provide for recreation and access to site amenities.
- A new plaza adjacent to the historic carousel.
- Lenape Park
 - Enlarged dog park in order to provide additional space and conform to design guidelines.
 - Improved picnic pavilion by the main entrance with landscaping and new walkways.
 - Re-oriented baseball field to take advantage of a north-facing batter's box.
 - New Little League field.
 - Amphitheater on the north side of the East Branch.
 - ADA accessible fishing dock south of the amphitheater.
 - Stormwater BMPs along the tributary adjacent to Walnut Street; adjacent to the proposed fishing dock; south of the East Branch below the island; and north of the wetlands.
 - Improved and new parking within the Park.
 - New pathways that traverse the Park and provide for recreation and access to site amenities, including a proposed boardwalk through the wetlands and connections from the new Walnut Street Bridge from the sidewalk into the Park as well as below the bridge to the multi-family residences on the opposite side.
 - Roundabouts on both sides of the East Branch that will improve vehicular circulation, control speed and allow for passenger pick-up and drop-off.

Preferred Master Site Plan

The Menlo & Lenape Parks Master Plan synthesizes public input in a plan that takes full advantage of the Parks' potential while preserving the natural and historic heritage for future generations (See Figure 3.3-3.6). The following are the primary design recommendations for the Parks.

- Menlo Park
 - Improved street parking along S. 4th Street and Arthur Avenue, including a new 13 space lot on Borough-owned property.
 - Improved and new parking within the Park proper.



Figure 3.3 Menlo & Lenape Parks Master Site Development Plan

- Lake Lenape Park
 - Trail connection adjacent to the Sellersville Firehouse that will lead to Druckenmiller Park.
 - Crosswalk on the new Main Street Bridge and new stairs and ADA ramp that lead down to the Park.
 - Stormwater BMPs adjacent to the parking lot.
 - Improved parking.
 - 8-foot wide paved trail south of the East Branch that passes by the property line and merges with a boardwalk over the wetlands.
 - Loop trail by the stairs off Main Street to the Veterans Memorial.

Park Principles and Rehabilitation Program

The following principles and recommendations for rehabilitation, in conjunction with the Master Site Plan, will help develop the long-term strategy for Menlo and Lenape Parks:

1. Ecological

1.1 Planning

- The Borough should prepare a Rivers Conservation Plan for the Perkasio / Sellersville segment of the East Branch of the Perkiomen Creek. This plan identifies important cultural, natural and recreational stream and river resources and presents recommendations to conserve, enhance and restore these waterbodies. This might be a multi-municipal plan.



Figure 3.4 Detail of Menlo Park Plan

CHAPTER 3

1.2 Floodplain

- The expanding footprint of the floodplain should be acknowledged and new development moved up and away as far as possible from the floodplain.
- Native vegetative buffers should also be added to aid in flood mitigation.

1.3 East Branch

- Decide on the future options and implications of the Lake Lenape dam in Sellersville. This should be a collaboration project between Sellersville and Perkasie.
- Restore / protect streambanks with vegetative and green structural stabilization.
- Remove / repair old remnant structures.
- Improve aquatic habitat using sustainable scientific stream design.

1.4 Tributaries

- Confirm ecological easements, if any are present on the site.
- Daylight piped waterways. These are stream or tributaries that have been covered by pipe so land could be developed. These waterways, like the unnamed tributary running along Walnut Street, should be daylighted, or opened up, so they may return to a natural state.
- Naturalize encroached stream corridors.
- Add walking trails where possible, and in line with local and state regulations.
- Address local stormwater issues.

1.5 Stormwater

- Design Lenape and Menlo Parks as a stormwater system within Perkasie and Sellersville.



Figure 3.5 Detail of Lenape Park Plan

- Intercept runoff currently diverted down the north hillside.
- Create new BMPs to detain / treat stormwater at the top of the hill. This is exhibited in the BMPs proposed along South 4th Street that will capture water and channel it down the street, and prevent runoff from coursing down the hill and causing erosion.
- Capture / treat runoff from public buildings / paved surfaces.
- Stabilize / regenerate eroded hillside drainage channels.

1.6 Vegetation

- Add streamside buffer plantings as a means to introduce vegetation as well as reinforce the waterway.
- Begin a sustainable canopy replacement

program for the Parks.

The following is a list of recommendations to support expansion, enhancement and protection of wetland, riparian buffer, and upland forest resources on the site, and to promote the wildlife, education, and outreach / public involvement opportunities provided by each:

1.7 Wetlands

- Develop a low-impact interpretive trail (i.e. boardwalk) through the wetlands, consulting first with DEP and ACOE to determine the extent of allowable impacts associated with that work.
- Conduct a species inventory within the wetland complex, identifying in greater detail the existing flora and fauna residing there. Use this information to inform interpretive



Figure 3.6 Detail of Lake Lenape Park Plan

signage along the boardwalk highlighting elements of particular interest within the wetlands relating to natural resources, ecological processes, the functions and importance of wetland resources, etc. Focus on the character of the forested wetland setting, as it provides a relatively unique experience for park users.

- Develop a plan for monitoring the presence of invasive plant species within the wetland, and for removal. Multiflora rose, lesser celandine and Japanese stiltgrass are present in and around the wetland in large numbers.
- Where possible (and without incurring additional wetland impacts), orient the interpretive boardwalk to highlight areas within the wetland complex where ephemeral spring wildflowers occur in high concentrations. Trout Lilly, Spring Beauty, and Virginia bluebells occur within the bounds of this wetland.
- Where compatible with other aspects of the park plan, plant native sapling, shrub, and herbaceous / grass species around the existing wetland complex to provide transition between the wetland and developed areas of the park.

1.8 Riparian Buffers

- Establish greater buffer widths, particularly along the south (left) bank of the East Branch within Lenape Park. Buffers should extend a minimum of 30 feet in width from the top edge of the streambank, and upwards of 50 feet or more width wherever compatible with other park uses / developments. Buffers should have a non-uniform boundary at the outer edge adjoining the mowed / maintained lawn areas of the park.
- Healthy riparian buffers occur in three zones (Figure 3.7). The existing buffers on-site

should be enhanced to provide the following:

- Zone 1 occupies the immediate streambank and is comprised of grasses, sedges, herbaceous plants and shrubs adapted to frequent inundation / flood conditions. This zone provides streamside shading, streambank stabilization, and wildlife habitat.
- Zone 2 occupies the top of bank / overbank area and is comprised of more mature trees and shrubs. This zone provides shading, inputs of organic material to the stream, and wildlife habitat. A low-impact interpretive walking trail can be situated within Zone 3, with accompanying educational signage.
- Zone 3 acts as the transition zone between the Zone 2 “forest” and the maintained areas of the Park adjacent to the buffer. This zone is comprised of grasses, shrubs and seedlings, and represents an early-successional habitat. These areas are excellent for placing signage, and installing wildlife habitat elements such as nest boxes for birds in a highly-visible location for the public to enjoy.
- Protect buffers through enforcement of the “No-Mow Zone” signage already in place.
- Protect buffers by identifying dedicated



Existing creek buffer

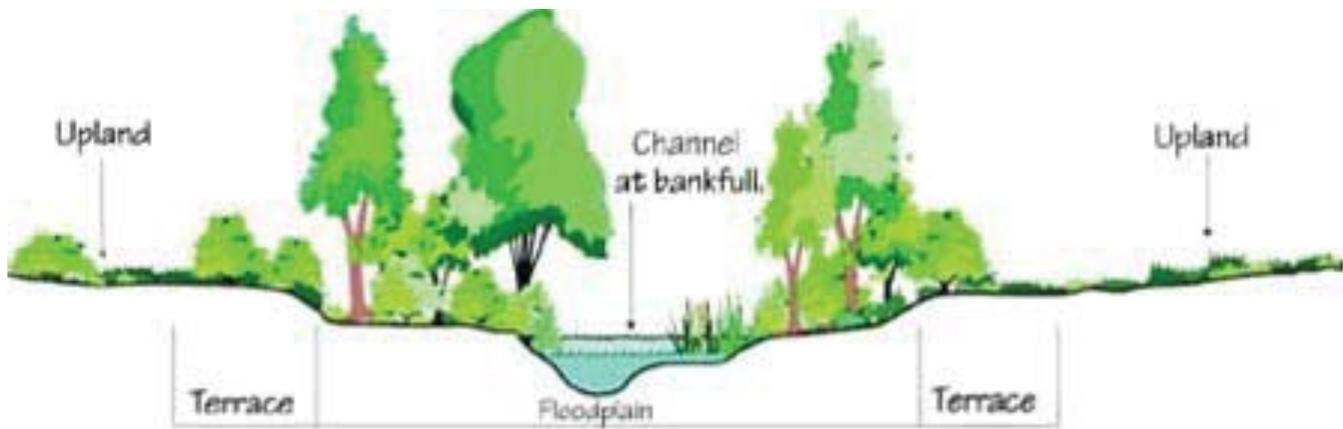


Figure 3.7 Riparian Ecosystem Cross Section-Gentle to Flat Terrain

access areas (trails) to the water's edge to reduce widespread trampling of vegetation within the buffer. This is particularly beneficial around times when the stream is stocked with trout (namely April and October).

- Protect any seedlings and shrubs that are planted with protective tubes to deter browsing by whitetail deer living in the Park.
- Develop and implement a plan for eradication of poison ivy from within the riparian buffer.
- Develop a plan for monitoring the presence of invasive plant species within the riparian buffer, and for removal. Multiflora rose and Japanese stiltgrass are already present in some areas along the stream's edge.

1.9 Upland Forests

- Develop a dedicated low-impact interpretive trail through the forested uplands to reduce off-trail traffic.
- Focus interpretive signage to highlight the ecological role of various tree species within the forest (food, wildlife habitat, forest succession, site history, etc.) The park user may only see trees, but highlighting the role that tree plays in the function of the ecosystem or the overall character of the forest through signage greatly enhances the

user's experience.

- Explore opportunities for diversification of forest cover / habitat types through selective tree removal or daylighting of portions of the forest floor. This will promote regeneration of understory species and introduce a wider range of habitats to the wooded parcel. Care should be taken in this approach, as the intended forest disturbance could promote colonization by invasive species from nearby established stands.
- Develop a plan for monitoring the presence of invasive plant species within the riparian buffer, and for removal. Multiflora rose and Japanese stiltgrass are already present in some areas within and along the forested parcel.
- Identify and protect den trees that may be utilized by nocturnal species such as raccoons, opossum or owls.

2. Recreation

2.1 Trails

- Add new sections of trails as exhibited in the Master Plan: boardwalk through the wetlands; south of the East Branch in Sellersville (asphalt where possible, design for police access); through the covered bridge (with ADA approaches) (Figure 3.8); along the

south side of East Walnut Street / South 4th Street from Sellersville to the Menlo Pool (integrated with BMPs) that can follow the route of the Liberty Bell Trolley line along the street; and a loop around the perimeter of the Sellersville memorial green and monument that connects to Main Street.

- Relocate and improve trails around the new amphitheater.
- Anticipate future plans to connect trails outside the park to the Borough center and adjacent municipalities. The Lake Lenape Master Plan presents an extension past the

firehouse to Druckenmiller Park.

2.2 Twin Bridges

- Continue the inspection / maintenance of the structures.
- Modify both bridge approaches to be ADA compliant.
- Consider formalizing a small plaza area on the island for wedding photo-ops.
- Include the island in stream bank restoration and riparian buffer planting programs.

2.3 Playfields

- Retain / improve existing playfields.



Figure 3.8 Illustrative Sketch of Covered Bridge Trail

- Plan to reorient playfields where possible.
- Retain and adjust the location of the sand volleyball court.

2.4 Skate Park

- Retain the skate park in its general location.
- Develop an improvement plan / expansion strategy in phases.
- Keep the park open and unscreened to prevent vandalism and unruly activities.

2.5 Dog Park

- Retain the park in its current location.
- Expand the area and raise the elevation of the park.
- Improve the design and add shading elements.

2.6 Ice Skating & Frisbee Golf

- Retain the ice skating area in its current

location off the Creek.

- Retain the Frisbee golf field in its current location in Sellersville.

2.7 Venues

- Build an open amphitheater as a new event space and community focal point, positioned by the Lenape hillside (Figure 3.9).
- Retain the 2 Menlo pavilions in their current location, conduct periodic structural inspections and repaint the steel roofs.
- Regrade the usable “apron” area around the Lenape “Octagon” pavilion, pave it if need be, and plant shade trees around it.
- Reconceive the Carousel entry plaza in a design that presents it as a gracious, usable public space.
- Retain other venues: the Lenape grove picnic pavilion; Boy Scout cabin; Girl Scout camping



Figure 3.9 Illustrative Sketch of Amphitheater / Bandshell

area; and Menlo Memorial as they are.

2.8 Fishing

- Create sustainable access areas to the East Branch edge, within a newly planted riparian buffer.
- Create an ADA accessible ramp to the water level by modifying the “Fire Pit” area (Figure 3.10).
- Develop a fishing access trail to the existing concrete “overflow” structure on the north side of the Creek.
- Develop a new south side trail segment with sustainable fishing access locations.

3. Park Infrastructure

3.1 Visibility

- Design for public observation and transparency through open designs.
- Implement defensible spaces that allow for users and officials to see what is happening

in a design that creates a sense of security.

- Position activities towards the roadways and cluster multiple activities together.
- Consider for future surveillance cameras.

3.2 Park Drives

- Plan for safety, efficiency, controlled access and environmental improvements through the use of sight distances and site geometry. Align the drives by the volleyball court and turtle monument to Perkasio Woods, the new residential development across Constitution that will be occupied by 144 new townhomes.
- Move drives away from the floodplain, where possible.
- Limit access where and when it is appropriate.
- Create vehicular turnarounds on the north and south sides.
- Use traffic calming features, such as narrow

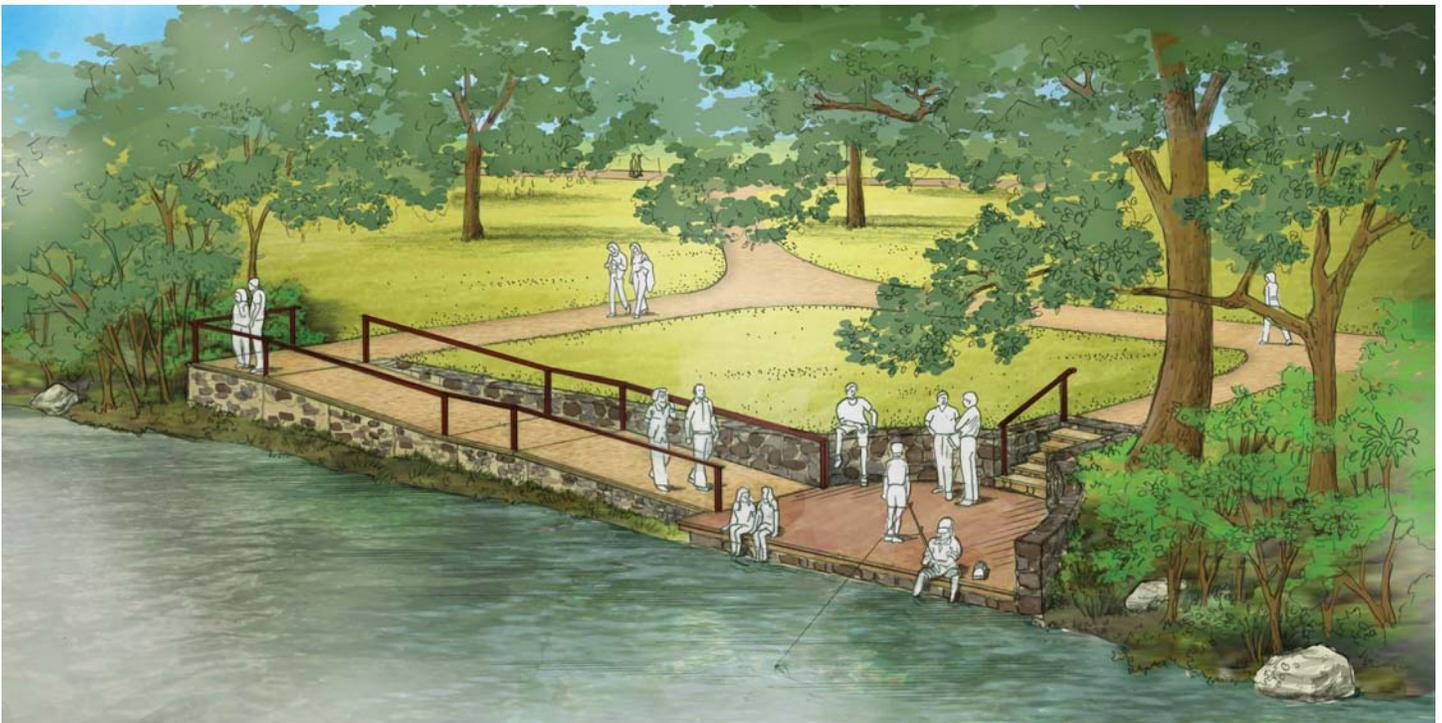


Figure 3.10 Illustrative Sketch of Creekside Fishing Area



Current parking by Walnut St. fields

cartways and short, non-linear segments.

3.3 Parking

- Formalize parking areas in all sections of the Parks.
- Formalize Menlo Park parking in the main park lot, the library lot and the lot across 4th Street from the library.
- Formalize Lenape Park parking on the north side along the cul-de-sac drive, which should be redesigned for increased capacity, and phase out the temporary parking on the grassed areas.
- Formalize Lenape Park parking on the south side via a redesigned eastern drive, a redesigned western entry drive and at the skating area. Phase out temporary parking on the grassed areas.
- Formalize Lake Lenape Park parking on the north side in the baseball lot, in grassed areas close to the baseball fields and on Walnut Street.
- Formalize Lake Lenape Park parking on the south side in the lot next to the National Guard Armory.

3.4 Restrooms

- Ensure all current and proposed restrooms

facilities are ADA compliant.

- Plan for the reconstruction of the restrooms on the north side of Lenape Park at their present location.
- Plan for the reconstruction of the restrooms on the south side of Lenape Park at a modified location.

Future

- Monitor the Sellersville National Guard Armory for any potential of future availability (options could include a community center or indoor recreation area).
- The former concrete pumphouse on the hillside in Sellersville is an attractive nuisance, and it is recommended that it be demolished.
- Daylight the creek between West Walnut Creek and West Spruce Street in Perkasio.

4. Surrounding Roadways/Bridges

4.1 Main Street Bridge over East Branch - Sellersville (Project Review)

- Conduct a full review of the PennDOT project program to ensure full coordination.
- Review right-of-way encroachments on the Park. As part of the project review process, PennDOT must follow the Section 106 process of the National Historic Preservation Act. This mandates that agencies consider the effect of projects on historic sites that are listed on the National Register of Historic Places or are eligible for it. If impacts are found, then agencies must work towards minimizing them. This process was mandated because of the proximity of the Sellersville Historic District, which is eligible, and the historic Lake Lenape / Lenape Park. In addition, Section 4(f) of the Act was also mandated, which stipulates that agencies must avoid the use of a historic site, or minimize harm to the site if there is no

alternative to its use. Due to the Section 106 and 4(f) processes, it was deemed that the park system was eligible for listing in the NRHP as a historic district by the Bureau for Historic Preservation of the Pennsylvania Historical and Museum Commission, which is the state's Historic Preservation Office. Because of this implication, potential encroachments should be reviewed to ensure there are no adverse effects on the historical park.

- If impacts to the site are present and unavoidable, ensure that the project parameters include mitigation measures that will offset the impacts. These can include a trail connection to the Veterans Memorial; stormwater BMPs; new pedestrian lighting; new plantings; and interpretive signage.
- Ensure mode integration from the sidewalk to park trail connections that emanate from existing stairs / ADA ramp on the bridge. This will extend to the Memorial and connect east to Lenape Park and an existing north trail and planned south trail and also extend west to a planned trail to Druckenmiller Park.
- Ensure the sidewalk improvements have adequate clearance geometry for fire engines coming from the fire house.
- Confirm appropriate signage and roadway markings, as well as a dedication plaque with the size, location, content, materials and date of the project.
- Confirm an appropriate crosswalk location to access the trail, ideally at mid-block.
- Confirm a parapet / safety barrier design.
- Ensure context-sensitive architectural treatments, like concrete forms, colors and other features, are present.
- Request a maintenance agreement that will handle embankment mowing and sidewalk snow plowing.

4.2 Walnut Street Bridge over East Branch - Perkasie (Project Review)

- Review right-of-way encroachments on the Park, similar to the Main Street Bridge review.
- If impacts to the site are present and unavoidable, ensure that the project parameters include mitigation measures that will offset the impacts. These can include an on-deck trail widened to 8-feet; stormwater BMPs along the small tributary; new pedestrian lighting; new plantings; and interpretive signage.
- Ensure mode integration from the sidewalk to park trail connections that emanate on the south side to a trail thru-segment under the south bridge span and to a trail that spurs to the intersection at Walnut and Constitution, for both the east and west sides of the south portal.
- Ensure the sidewalk on the west side of the deck is an 8-foot wide trail, at a minimum (reduce island width on deck if necessary).
- Confirm appropriate signage and roadway markings, as well as a dedication plaque with the size, location, content, materials and date of the project.
- Confirm an appropriate crosswalk location to access the trail. Crosswalks are needed in 2 directions across Walnut and Constitution; at the north park entrance off of Walnut; across Walnut at the Park Drive entrance to connect sidewalks on an east-west line across Walnut; and at South 2nd Street. The west side sidewalk should include an ADA crosswalk at the Park Drive entrance.
- Confirm a parapet / safety barrier design, treated the same way as in Sellersville.
- Ensure context-sensitive architectural treatments, like concrete forms, colors and other features, are present.
- Request a maintenance agreement that will

handle embankment mowing and sidewalk snow plowing.

4.3 Sidewalks

- Add a thru sidewalk along Park-Constitution Avenue, preferably on the north side, from Main Street in Sellersville to Lenape Park.
- Replace the sidewalk on the south side of Park Avenue to the Armory, and if possible, to the Landis entry drive.
- Replace the east sidewalk from Main Street to Park Avenue in Sellersville.
- Widen the northern sidewalk on the Pleasant Spring Bridge on Constitution-east of Spruce Street, by borrowing from the cartway.

4.4 Crosswalks

- Create bumpouts at the Constitution Avenue crossing at Spruce Street to connect to the Pleasant Springs Trail spur
- Improve the crosswalk at the baseball field entry along Walnut Street in Sellersville, which acts as a frisbee golf crossing.
- Modify / improve the Main Street crossing at the Sellersville fire house.

4.5 Street Parking

- Provide for street parking on the south side of East Walnut Street / South 4th Street.
- Provide for parking on the park side of Park Avenue.
- Provide for parking on the west side of West Walnut Street in Perkasio.

4.6 Stormwater BMPs

- Plan for BMPs in the following locations:
 - Along the small tributary parallel to West Walnut (incorporate with the Park parking lot)
 - In open lawn areas – parallel to West Park Avenue (east of the Carousel)
 - Along graded bench just below top of ridge (behind Carousel)

- At existing paved apron (between Carousel and Pool fence)
- In library parking area (trade 1-2 parking spaces) - collect downspouts, add rain barrels
- Lenape Park south – between Park Drive and riparian buffers
- Within Menlo Pool complex (south of paved decks, within fenced pool campus)
- Along Walnut-Fourth Streets – south side of Street (road diet, tie into storm sewers, bypass hillside outlets)
- In parking area (across from library)
- Sellersville baseball parking area (outlet to small creek)

5. Amenities

5.1 Benches and Picnic Tables

- Add strategically throughout the Parks.

5.2 Lights

- Add to the new bridges.
- Add to strategic locations throughout the Parks (amphitheater, new parking areas, Memorial).



Current intersection of Constitution Ave. at Walnut St. (no crosswalk)

5.3 Interpretive Signage

- Add signage or markers to describe the importance of site features (Site is a WPA-era project, Roebling bridges, baseball heritage, Liberty Bell trolley route, Carousel, covered bridge).

5.4 Park Signs

- Add vehicular park signs at the following locations:
 - Scout entry cabin
 - Sellersville baseball field-entry
 - Turtle monument entry
 - Menlo Park entry
 - Perkasie baseball parking-entry
 - Landis entry
 - Near the Armory entry
- Add pedestrian park signs at the following locations:
 - Main Street-at the Veterans Memorial
 - Main Street-north side trail entry
 - East Walnut Street-Frisbee golf crossing entry
 - Toboggan trail entry

5.5 Features

- Uncover the turtle monument and redesign the planted area to feature the artwork, in conjunction with the entry drive modifications.
- Identify partners for flag poles and the Memorial.
- Leave the wind turbine in its existing location.

Site Maintenance

Management of the park should be based on the needs associated with park users, re-establishing and enhancing wetlands, buffers and habitat, providing public access and building connections. Habitat management requires maintenance at key

times during the year. For example, hydrologic areas should be left undisturbed in the fall and throughout the winter to provide cover for birds and small mammals. The park should be regularly monitored in order to manage the habitat quality. As the primary improvement to the park, trail maintenance should not be deferred. The regular review and maintenance of trails will maintain a safe user environment while identifying any necessary repairs.

The following is a monthly outline of basic maintenance tasks that should be completed. The frequency (by month) of these maintenance tasks is indicated in parentheses.

January

- Inspect trails, bridges & culverts / make repairs (1)
- Snow removal for driveway, parking area, and primary loop trails (as required)
- Clean restrooms weekly (4)

February

- Inspect trails, bridges & culverts / make repairs (1)
- Signage inspection and repairs (1)
- Inspect and mechanically remove invasive plants
- Snow removal for driveway, parking area, and primary loop trails. (As required)
- Clean restrooms weekly (4)

March

- Clean restroom weekly (4)
- Inspect site trees for winter damage / perform work (1)
- Inspect trails, bridges & culverts / make repairs (1)
- Mow warm season grassed areas (1)
- First mowing of trails and shoulders (1)
- Snow removal for driveway, parking area, and

primary loop trails (as required)

- Inspect and mechanically remove invasive plants
- Inspect BMP's & remove debris as required (1)

April

- Clean restroom twice weekly (8)
- Mow lawns, trails and shoulders (2)
- Plant / replant (revegetation target areas) (1)
- Inspect trails, bridges & culverts / make repairs (1)

May

- Clean restroom twice weekly (8)
- Mow lawns, trails and shoulders (4)
- Inspect trails, bridges & culverts / make repairs (1)

June

- Clean restroom twice weekly (8)
- Mow lawns, trails and shoulders (4)
- Inspect trails, bridges & culverts / make repairs (1)

July

- Clean restroom twice weekly (8)
- Mow lawns, trails and shoulders (4)
- Inspect trails, bridges & culverts / make repairs (1)
- Inspect grassed areas for invasive plants – Mow ½ of area if required (1)

August

- Clean restroom twice weekly (8)
- Mow lawns, trails and shoulders (4)
- Inspect trails, bridges & culverts / make repairs (1)

September

- Clean restroom twice weekly (8)
- Mow lawns, trails and shoulders (4)

- Signage inspection (1)
- Inspect trails, bridges & culverts / make repairs (1)

October

- Clean restroom once weekly (4)
- Mow lawns, trails and shoulders (4)
- Inspect trails, bridges & culverts / make repairs (1)
- Inspect BMP's remove debris as required (1)

November

- Inspect trees / prune as required (1)
- Inspect trails, bridges & culverts / make repairs (1)
- Fall clean-up (1)
- Snow removal for driveway, parking area, and primary loop trails (As required)

December

- Inspect trails, bridges & culverts / make repairs (1)
- Snow removal for driveway, parking area, and primary loop trails (As required)

Safety and Crime Deterrence

The best way to deter possible crime in the Parks is by a combination of clearly advertising basic Borough park rules, regular police presence and community participation in the Parks' stewardship. The basic park rule of closing the Parks from dusk till dawn should be followed. Active observation by Parks neighbors should be encouraged and the formation of a "Friends of Menlo & Lenape Parks" would formalize this type of stewardship. Random police patrols should continue. When initial Park trail improvements are built and improvements, like the amphitheater and upgraded main pavilion, are in progress, the Borough staff and police should

maintain an active dialogue with neighbors and “Friends” so that unwanted possible activities such as littering, vandalism and underage drinking, if they occur, are immediately known and curtailed. Designing “defensible spaces” is important for all new facilities. Physical design includes visibility and openness of improvements (designing the amphitheater without a back wall, for example) and maintaining the transparency of existing facilities, like keeping the skate park in front of the Park.

As runners and hikers enjoy the additional trails, they serve as the eyes and ears of “authority” armed with cell phones. People who engage in negative activities do not wish to be seen performing these activities and will typically go elsewhere once they are targeted for their bad behavior.

Parks users should also be encouraged to help the Borough maintain and operate the trails. When there are problems, trail users can notify the Borough about the issue. It is important that municipal office phone numbers and email addresses be posted at the Parks’ entrances, parking areas and trail connection access points as a part of Park signage.

Emergency and Maintenance Access

The existing driveway behind the Menlo Carousel and East Spruce Street will continue to serve as access for emergency and maintenance personnel. A gate at the roundabout on the south side of Lenape Park is included to allow emergency vehicle access to the Park, normally closed after hours. Multi-use trail design should accommodate an all-terrain type vehicle for emergencies or maintenance on the outside trails. Bollards, gates or other vehicular controls can be included to keep out private motor vehicles. Emergency plans should be developed for rescue situations on the trails not accessible by vehicles.



A barrier gate like this can limit access to emergency vehicles after hours (Source: ispfence)

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PERKASIE BOROUGH BUCKS COUNTY

**CHAPTER 4:
IMPLEMENTATION AND
FUNDING STRATEGY**

Project Phasing

Improvements to Menlo & Lenape Parks will most likely occur in phases, based on available funding, with multiple options for project funding. The timing and scope of the phases will be determined by the amount of future funding available and the Borough’s success with grant applications over an estimate ten-year period or longer. The phasing plan for the parcels is included to suggest potential

strategies for implementation of improvements over time (Figure 4.1).

Estimate of Probable Development Costs

A detailed estimate of probable development costs (Table 4.1) is based on the proposed improvements shown on the Master Site Plan. Unit costs were established based on construction costs for similar projects and reflect prevailing wage rates that are required for public construction projects. A detailed cost estimate is included in the appendix of this report with a summary of the improvement costs, per phase, outlined in this section.

TABLE 4.1: MENLO & LENAPE PARKS PROBABLE COST OF DEVELOPMENT

PHASE	COST
Phase 1 - Lenape Park Bandshell Area Improvements	\$ 841,000
Phase 2 - Lenape Park Pavilion Plaza Area Improvements	\$ 799,000
Phase 3 - Regional Connections	\$ 845,000
Phase 4 - Lenape Park Recreation Improvements	\$ 1,069,000
Phase 5 - Menlo Park Improvements	\$ 634,000
Phase 6 - Structure Improvements	\$ 82,000
Phase 7 - Sellersville Improvements	\$ 136,000
Total Cost of Improvements	\$ 4,406,000
Mobilization (3% of Sub Total)	\$ 132,000
Construction Surveying (2% of Sub Total)	\$ 88,000
Erosion & Sedimentation Controls (2% of Sub Total)	\$ 88,000
Construction Contingency (10% of Sub Total)	\$ 441,000
Design and Engineering (15%)	\$ 661,000
Total Project Cost	\$ 5,816,000

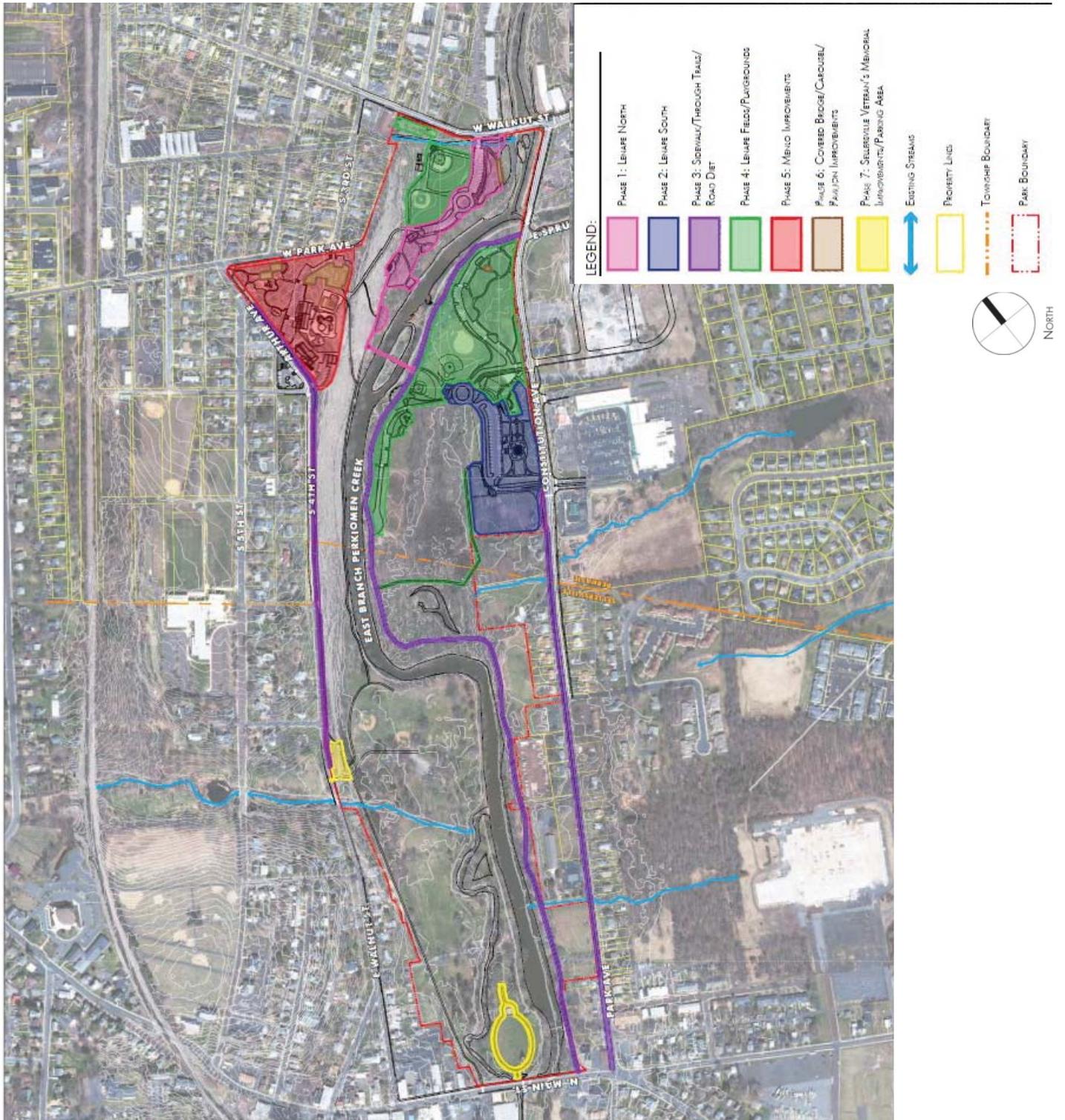


Figure 4.1 Improvements Phasing Plan

Potential Partners / Funding Sources

The following is a resource of grants, programs, funds and other sources that can assist with the financing of park design and construction. Different sources can be pursued during various phases, based on availability of funds and priorities for each year.

The Borough can also choose to incorporate concessions within the Park during games and events at the amphitheater as a means to generate revenue. These monies can help offset park maintenance costs.

PA DCNR Community Conservation Partnership Program

The PA DCNR Community Conservation Partnership Program (C2P2) provides funding for communities and nonprofit organizations to acquire, plan and implement open space, conservation and recreation resources, including trails. DCNR accepts grant applications annually-with deadlines usually in April. Projects will receive additional consideration for using “green” technology or practices. The next C2P2 application deadline will be in April, 2017. DCNR funds can be used for most park projects, and as a match to many federal funds for some trails. DCNR requires a 50-50 match (cash or in kind services) to its grant awards. The first step is to contact the DCNR regional advisor.

More information on this program can be found at the DCNR website: www.dcnr.state.pa.us/brc/

Greenways, Trails and Recreation Program (GTRP)

The Department of Community and Economic

Development (DCED) Greenways, Trails and Recreation Program (GTRP) is a program that helps fund for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects. Grant applications cannot exceed \$250,000 and require a 15% matching funds. Applications are due in June 30th for consideration in September.

More information on this program can be found at the DCED website: <http://community.newpa.com/programs/greenways-trails-and-recreation-program-grtp/>

Watershed Restoration and Protection Program (WRPP)

DCED Watershed Restoration and Protection Program is a funding program to restore, and maintain restored stream reaches impaired by the uncontrolled discharge of nonpoint source polluted runoff. Funds may be used for construction, improvement, expansion, repair, maintenance or rehabilitation of new or existing watershed protection BMPs; stream bank bio-engineering; and design services. Grant applications cannot exceed \$300,000 and require a 15% matching funds. Applications are due in June 30th for consideration in September.

More information on this program can be found at the DCED website: <http://community.newpa.com/programs/watershed-restoration-protection-program-wrpp/>

PENNVEST

Pennvest oversees the administration and finance of the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF) for the state of Pennsylvania. The CWSRF program

CHAPTER 4

provides funding to projects throughout Pennsylvania for the construction and maintenance of wastewater treatment facilities, stormwater management projects, nonpoint source pollution controls, and watershed and estuary management. The program offers low interest loans with flexible terms to assist a variety of borrowers that include local governments, municipalities, and privately owned entities and to establish partnerships to leverage other funding sources.

Additional information is available at: <http://www.pennvest.pa.gov/Pages/default.aspx#.Vcux3WfbJ9A>

Schuylkill River Restoration Fund

Administered by the Schuylkill River National and State Heritage Area, the Schuylkill River Restoration Fund is a Watershed Restoration grant program for implementation projects that will improve the quality and quantity of water in the Schuylkill River and its tributaries. In 2015 special consideration was given to the Perkiomen Watershed for projects that may include stormwater management, agricultural runoff mitigation, and pathogen remediation. Grant applications can range from \$5,000 to \$100,000 and require 25% matching funds. Applications are due in May and awarded in September.

Additional information is available at: http://www.schuylkillriver.org/Grant_Information.aspx

Schuylkill Highlands Grant Program

The Schuylkill Highlands Grant Program is a reimbursement grant program funded by the PA Department of Conservation and Natural Resources (DCNR) and administered by Natural Lands Trust and the Schuylkill River Heritage Area. The program has the dual priorities of natural resource-based conservation and nature-based tourism. The Nature

base resource conservation focus is to promote and implement projects that advance conserving and protecting the natural, cultural, historic and recreational resource areas while promoting sustainable development. Grant requests for the priorities above are not to exceed \$15,000 and require a 50% match.

Additional information is available at: http://www.schuylkillhighlands.org/partners_grants.php

Green Region PECO Open Space Program

Green Region grants are funded by PECO and administered by Natural Lands Trust. The grants can be used with other funding sources to cover a wide variety of planning and direct expenses associated with developing and implementing open space programs, including consulting fees, surveys, environmental assessments, habitat improvement, and capital improvements for passive recreation. Funding is available to municipalities in amounts up to \$10,000 and may cover up to 50% of the project cost. Grant deadlines are in March.

Environmental Education

The Pennsylvania Environmental Education Grants Program awards funding to schools, nonprofit groups and county conservation districts to develop new or expanded current environmental education programming. The funds are administered through the Pennsylvania Department of Environmental Protection for projects ranging from creative, hands-on lessons for students and teacher training programs to ecological education for community residents. Educational Resources, including exhibits, educational signage, and demonstration projects, also qualify for funding. Grant applications cannot exceed \$3,000 and no match is required, however it

is recommended. Applications are due in Dec and awarded in April.

Legislative Funding

State and federal elected officials can sometimes include items into legislation for worthy projects in their districts. A conversation between county and municipal officials and legislators is the way to begin this process. This type of funding should be targeted toward capital improvement projects.

Perkasie Borough

Some grant programs allow official services to count as a local match. It is suggested that the Borough keep a record of municipal staff and / or volunteer time spent on Menlo & Lenape Parks. Occasionally, grantors may allow time spent to date to count as part of the in-kind match for funds. This record will also demonstrate a continuing commitment by the municipality to the successful implementation of the master plan. The Borough may in some cases choose to invest municipal funds in specific aspects of the Parks development to “leverage” funding from other partners.

Grant programs that require matching funds present an opportunity for the Borough to engage in targeted fundraising efforts and to partner with other organizations.

Private Foundations

There may be regional corporations and foundations that support public works such as park development. Competition for these funds is usually brisk, but opportunities should be researched. Funding is often to non-profit organizations.

Foundations and institutions represent another potential source of funding for education-related site

improvements and programming. Grants are available to support student field trips, provide teacher training in science, and provide other educational opportunities. Education tied to research can increase the pool of potential funds. The science community and research institutions are the logical starting points for solicitation foundation funds.

Schools and Local Organizations

Local schools and sports organizations may also be of assistance in several ways. These groups might get involved with club, fundraising events, and Park cleanup days. The school faculty might incorporate the Parks into various curricula with students helping to develop and possibly maintain the Parks as part of a classroom assignment or after school club. While the amount of funds raised may be relatively small, this process builds constituents and support that is critical to the long-term success of the Parks.



PERKASIE BOROUGH BUCKS COUNTY

APPENDIX LISTING:

- SPC Meeting Notes
- Stakeholder Meeting Notes
- Public Meeting Notes
- Web-based Survey Results
- Wetland Delineation Report Draft
- Cost Estimate