



Lower Saucon Township

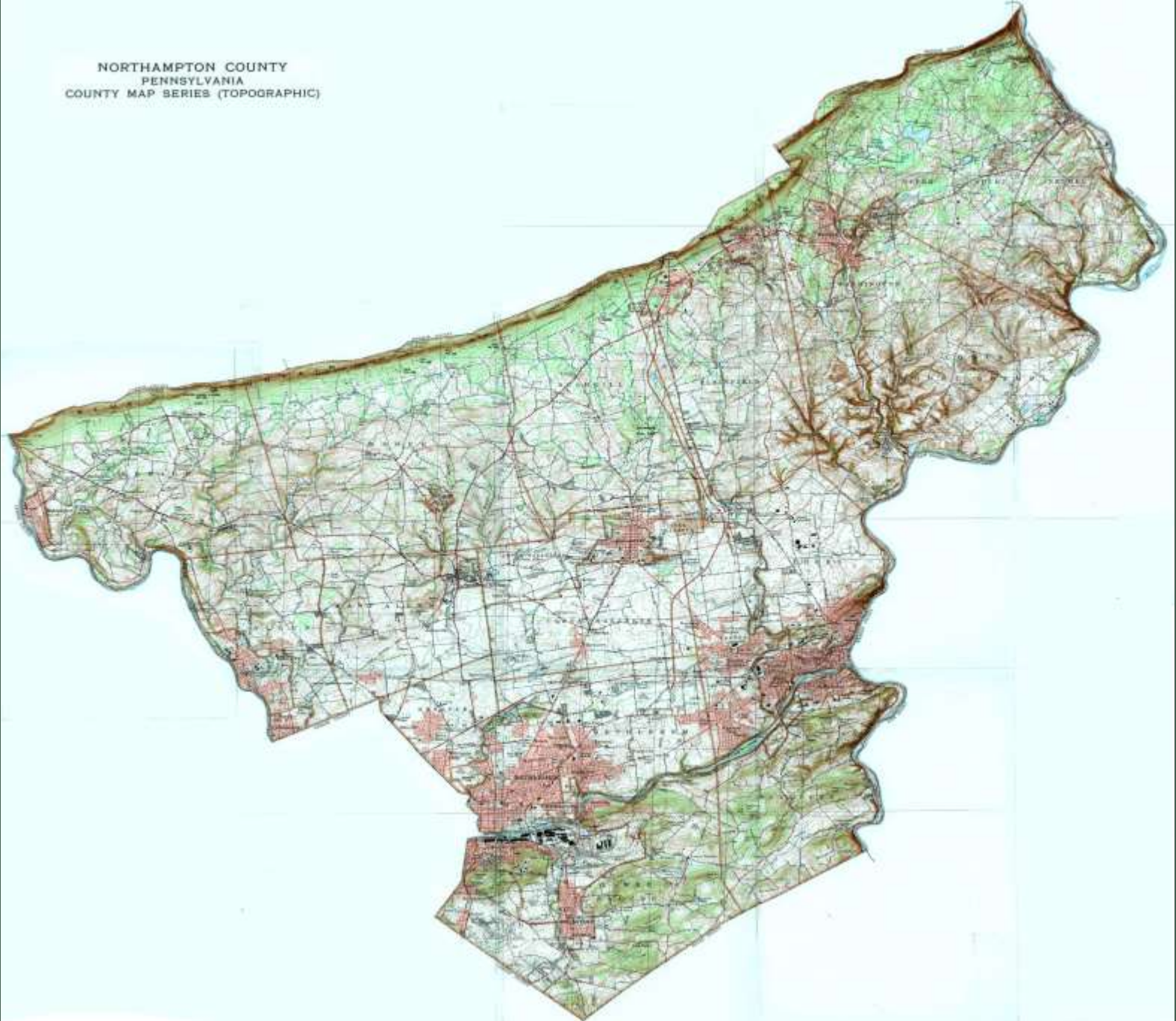
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incorporated 1743

Parks & Stormwater Management



NORTHAMPTON COUNTY
PENNSYLVANIA
COUNTY MAP SERIES (TOPOGRAPHIC)



Lower Saucon Parks - Pennsylvania Highlands

The Pennsylvania Highlands



★ Woodland Hills Preserve Location

Maps By: The Appalachian Mountain Club

Natural Resource Inventory

1. Black River Corridor
2. Cooks Creek Headwaters
3. Crestline Road Ravine
4. East Branch Saucon Creek
5. Granite Hill
6. Kohlberg Hill
7. Lehigh River Corridor
8. Saucon Creek Corridor
9. Silver Creek Wetlands
10. Svoneberg Hill



PA Highlands
Northampton
Hills

Polk Valley Park

48.5 acre *Park opened Spring 2008*

3 Multi-purpose fields/

2 Little League sized baseball fields

Paved walking/biking trails – Pervious Pavement

Grass trails through naturalized areas

1 acre dog park



Polk Valley Park



Polk Valley Park



Polk Valley Park



Polk Valley Park

- Wildlife found in the park several years after implementing naturalization projects



Great Spangled Fritillary



Banded Hairstreaks on Milkweed



Eight Spotted Forester Moth on Indian Hemp



Tiger Swallowtail on Milkweed



Indigo Bunting

Photos Courtesy of Carol Mebus



Boucher & James, Inc.
CONSULTING ENGINEERS

Lower Saucon Township Pest Management Policy

Organic Pest Management & Integrated Pest Management



Polk Valley Park

Polk Valley Park Lower Saucon Township, Northampton County

Site Photos



Site Context

Polk Valley Park was once slated for a 155 home development; instead approximately 48 acres were donated by the property owner to the Township for the purposes of a community park. In 2008 an additional 11 acres were added. Large areas of steep slopes, woodlands, wetlands, floodplains, a stream corridor and riparian corridor are located on the site. Polk Valley Park serves as an example of native landscaping, sustainability, environmental stewardship and education.

Project Overview

Engineering for the site began in 2002. In 2005 construction began, which included ballfields, driveways, parking areas, and original stormwater management systems. Shortly after this time, the Township decided to focus on creating a more sustainable park focusing on native landscaping and environmental stewardship. The Park opened in 2008 and includes three soccer fields, two baseball fields, 1.25 miles of pervious walking trails, more than 1 mile of mown trails through meadows, woodland buffer areas and preserved wetlands, a naturalized stormwater management area, native landscaping, and a one acre dog park. Enhancements which include a naturalized meadow and educational components are planned for the near future.

Sustainable Practices

Water- Groundwater infiltration is promoted through the use of porous concrete for all walking trails, pervious paving in the parking area, naturalized basins, inlets and swales through the use of native trees, shrubs, plant plugs and seed mixes. Native seed mixes have been planted in areas of steep slopes to stabilize soils and reduce erosion.

Natural Landscaping- Turf grass areas have been limited to playing fields. Meadow and buffer areas were enlarged and enhanced with native trees, shrubs, herbaceous plantings and seed mixes containing wildflowers and warm season grasses to improve habitat for wildlife and to improve biodiversity, to expand wildlife corridors, and improve water quality. The woodland buffer areas included the documentation and eradication of invasive species, and resulted in the formation of a policy regarding the removal of invasive species within naturalized areas and parks as part of the Township's Park Maintenance Policy.

Materials Selection and Construction- Large boulders uncovered on site were used to mark mown trails throughout the site. Fencing on site was constructed of non-pressure treated lumber to reduce chemicals on site. All areas disturbed as part of construction were stabilized, restored and planted with native material.

Connecting People to Nature- A walking path connecting the Park with the nearby Saucon Valley High School complex and additional walkways connecting nearby neighborhoods invite people to the site. Numerous natural areas throughout the park provide areas for play within a natural environment, and provide "educational moments" for students. Signage explains the naturalized areas and future improvements will include educational components.

Sustainable Practices Cont.

Operations and Maintenance- Athletic fields and their immediate perimeter and trail edges are the only areas mown on a traditional schedule. Meadows and basin areas are mown at most 1 to 2 times per year. Lighting is not provided on the site. An Integrated Pest Management System has been implemented at the site, which reduces the need for chemical pesticides, and is healthier for the park users and environment. Mulch is not installed around trees and shrubs, reducing the need for this resource and the cost and financial expense from installing it.

Environmental Stewardship Messaging- Signage regarding naturalized areas has been installed throughout the park. Information regarding park maintenance, the Township Integrated Pest Management Policy and procedures, invasive species, composting, and maintenance of natural areas, among other topics are all provided on the Township website. In the Park Maintenance Policy, which is located under the Parks and Recreation section of the website,

Information provided by: Jack Calabali, Lower Saucon Township Manager (2012)



Project Partners/ Consultants

Houcher & Imrey, Inc.



Saucon Rail Trail



A photograph of a natural landscape featuring a field of green grass and pink flowers in the foreground, with a dense line of trees in the background under a clear blue sky. The image is overlaid with a semi-transparent dark green filter.

Woodland Hills Preserve

- A Case Study



Woodland Hills Preserve

Lower Saucon Township, Northampton County

Woodland Hills Preserve is a 148-acre former golf course which was acquired by the Township in 2014 with Open Space funds, along with financial assistance from Northampton County and the Commonwealth of Pennsylvania (DCNR).

The preserve, like other Township parks, is open from dawn until dusk. Permitted activities include hiking on marked trails, birdwatching, fishing in ponds, cross country skiing, and dog-walking (leash required.) Prohibited at the site are motorized vehicles, hunting, and horseback riding.





Woodland Hills History

- 1930s to 1960s - land use was farmland/agriculture
- 1965-2010 it was the site of the Woodland Hills Country Club (18 hole golf course, pavilions, clubhouse, parking, etc.)
- 2006 to 2010 – 52-lot residential subdivision proposed by owner
- August 2014 - LST Council voted to purchase the property with Twp. Open Space funds and grants from Northampton County and PA DCNR
- 2015 - LST Council designated Woodland Hills Preserve as a Township owned open space parcel - for passive recreation and for SWM mitigation for properties located downstream on the East Branch of the Saucon Creek. Intent was to keep it passive and to preserve the land in a natural state. Enjoyment for residents, habitat, water quality, and reduce sedimentation in the watershed.



Woodland Hills

- 2014-2015, LST subdivided off the portion of the land that contained the clubhouse and parking area and then sold it.
- Many of the original cart paths remain on the site.
- LST created a series of mown trails and the Boy Scouts created trail markings.
- LST created a stone parking area and ADA parking.
- LST initiated a naturalized maintenance program for the preserve and has significantly reduced the mowing, which has decreased the sedimentation and improved water quality to the creek.



Club House and Parking Lot



Before
(April 1993)

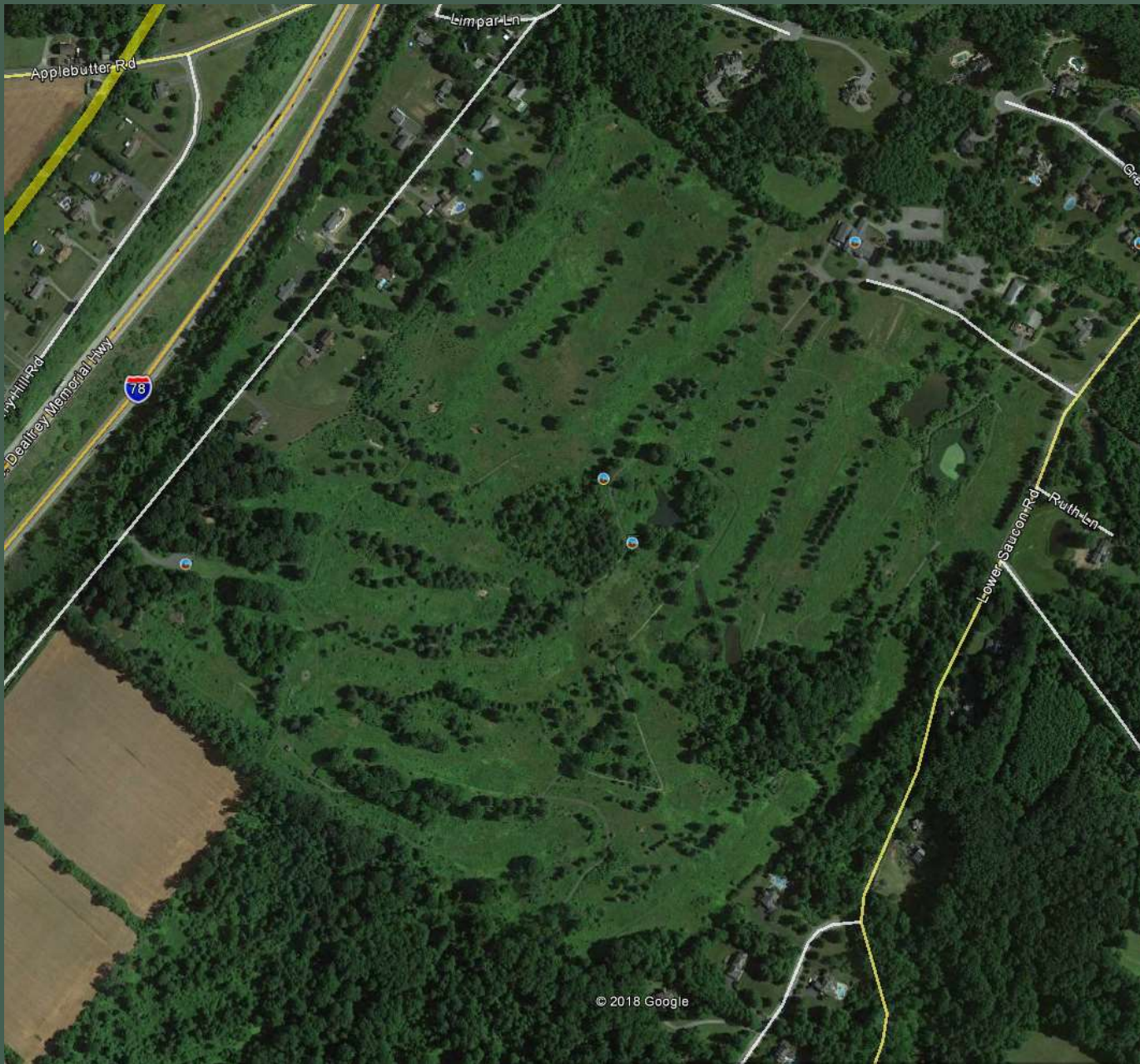


Aerial image from Google Earth



After

(June 2018)



Aerial image from Google Earth



Woodland Hills – Public Education



Photo from The Morning Call





Sustainable Maintenance Program

- Limit mowing
 - Meadow areas 1-2 times per year
 - Trails edges
 - Saves \$\$\$ - labor, fuel, equipment use
 - DCNR mowing calculator
- Provide native plantings
 - Provide shade for uses and habitat for wildlife
 - Need less care and water
 - Saves \$\$\$ - labor, water



Sustainable Maintenance Program

- Use an Integrated Pest Management System (IPM)
 - Reduce need for chemical pesticides
 - Healthier for park users and environment
 - Saves \$\$\$ - labor, materials
- Naturalize Existing SWM areas
 - Basins
 - Swales
- Implement proposed future phases
 - Additional native plantings
 - Wildflower meadow
 - Streambank restoration
 - Riparian corridor plantings
 - Reduce area of turf grasses



Before

(Nov. 2006)



After
(In Process)

(July, 2015)
(July, 2018)



Naturalizing for Wildlife

Wildlife recently spotted in the preserve:



Recently Completed Projects:

2016 - Woodland Hills Preserve Management Plan (prepared by B&J) was adopted by LST and the Twp. immediately started to implement the plan.

Reforestation and Riparian Buffer Plantings

- The combination of containerized trees and whips creates an efficient growth pattern to reforest the gaps between wooded areas created by the fairways
- As the reforestation plantings grow in, these areas will create richer habitats for wildlife on the property



Recently Completed Projects:

ADA Access

ADA fishing
and
viewing access
for pond



ADA trail

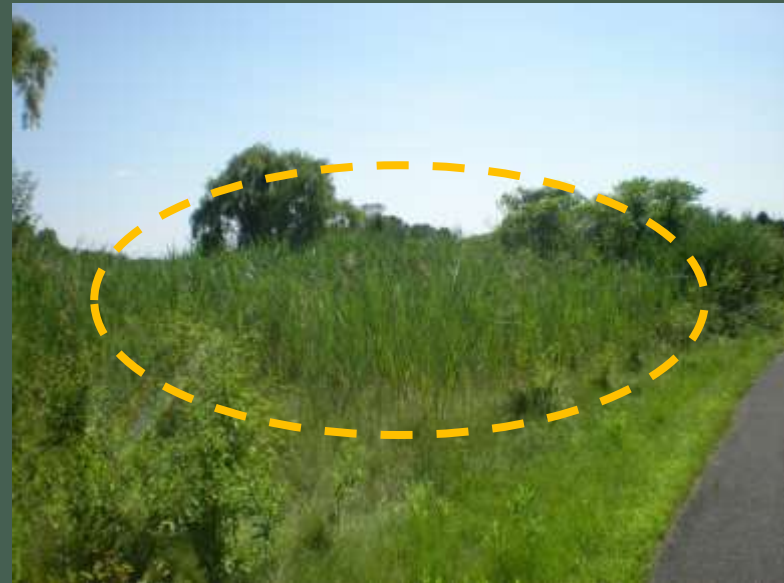


Future Management Strategies

- Implement additional stabilization and rehabilitation work on tributaries and ponds
- Implement additional invasive species monitoring and management techniques focusing on difficult species such as:
 - Phragmites
 - Purple Loosestrife
 - Burning Bush
 - Russian Olive



Purple Loosestrife



Phragmites



<http://164.156.186.112/DCNR/brc/grants/greening/greencostbenefit/index.htm>

Compare current and future practices

[Back](#) [Save the Results](#) [Save As](#)

Summary Results

	Mowed Area	Mowing Hours	Fuel Use	Fuel Costs
Current Practices	3.0 acres	16 hours	30 GGE*	\$ 57
Future Practices	3.0 acres	16 hours	30 GGE*	\$ -
Savings	0 acres	0 hours	0 GGE*	\$ 57

Current Mowing Practices

You must enter the acres mowed in the yellow cell below. All other inputs are optional. Default data are provided where possible.

General Information

How large is the area that you mow? acres [Click to restore default data and settings.](#)

How frequently do you mow the lawn? Once every... days

How many weeks long is the mowing season? weeks

How many mowers do you have? One mower Several mowers

Single Mower Information

How large is the mower's deck? inches

What's the mower's horsepower (hp)? hp

What type of fuel does the mower use?

What's the average fuel cost? \$/gallon
Don't know? Here's the average: 3.37 \$/gallon

How fast do you go when you're mowing the lawn? mph

Irrigation Information (Optional)

What percent of the lawn is irrigated routinely? % acres
(None, low flow)

How often do you irrigate? times per season
Learn more

How much water do you use? inch(es) per irrigation cycle
Don't know? Here's the average: 1 inch per irrigation cycle

Future Mowing Practices

Save time, money and reduce the environmental impact by...

Mowing less area.

Mowing less often.

Changing the type of mower used.

Irrigating less.

Click the buttons to the right to access information on best practices in these areas.

Native Vegetation

Greening

Mower Maintenance

Mowing Practices

Store this scenario

Want to store the above scenario to review later? To do so, provide a name for the scenario below and click the "Store Scenario" button. Doing so will store the values you've entered above as a scenario that you can recall later. This is an optional feature that allows you to store multiple scenarios in the Mowing Calculator without creating multiple files. To recall the scenario, go to the Recall a Scenario section below.

Please note: storing a scenario does not save the file. To save the file, click the "Save File" button in the header of this sheet.

Enter a name for the scenario:

 [Store Scenario](#)

Please use default unit/number only.



- LEGEND**
- PROPERTY BOUNDARY
 - BUILDING
 - ADJACENT PROPERTIES
 - EDGE OF PROPERTY
 - EDGE OF FOREST
 - WATER BODIES
 - STREAMS
 - ARTLANDS
 - 100 YEAR FLOODPLAIN BOUNDARY
 - BRIDGES AND ROADWAYS
 - TRAILS
 - ADJACENT TRAILS
 - ATALE TO TRAIL SPARKING LOT
 - VEGETATION
 - SOIL PAVING SPACES
 - SEASONAL TREES
 - PERENNIAL TREES
 - SHRUBS
 - WOODLANDS
 - SOIL VEGETATION
 - COMMUNITY GARDENS FACILITIES
 - ATALE TO FUTURE FACILITIES
 - DRIVEWAYS
 - NATURAL PLAY AREAS AND POND SPACES
 - NATURALISED RESTORED AREAS
 - WARM SEASON GRASS MEADOWS
 - PLANTED STORMWATER MANAGEMENT FACILITIES
 - BEST MANAGEMENT PRACTICE PLAN ELEMENTS
 - 1
 - 2

Total Site Area: 421.72 ACRES



PENNSYLVANIA'S INTERACTIVE SUSTAINABLE
PARK DESIGN MODEL
GREEN AND PLAYFUL RECREATION

http://www.gis.dcnr.state.pa.us/parkmodel/model_MainMap.html

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