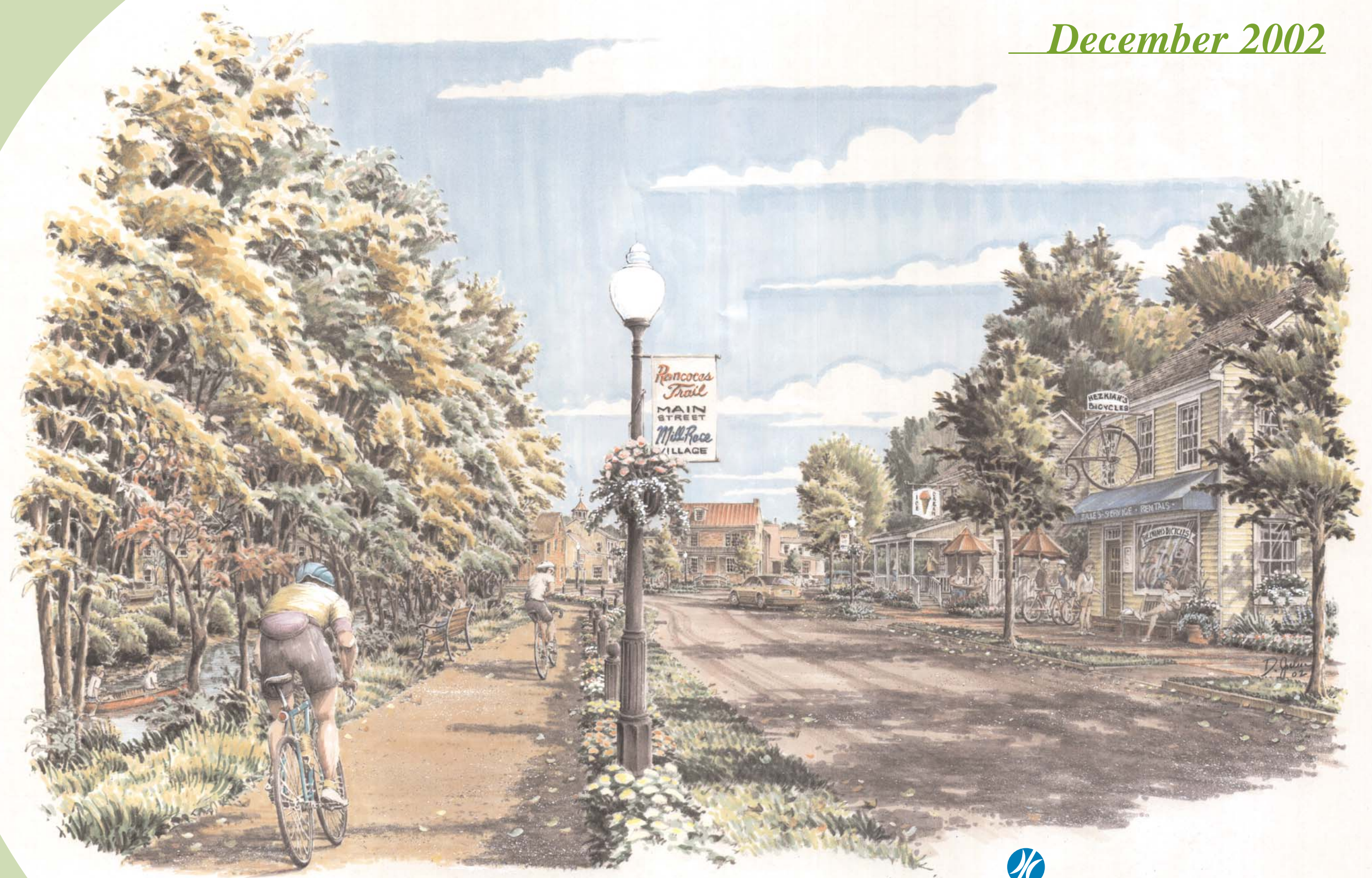


*December 2002*



Delaware Valley Regional Planning Commission

*Rancocas Main Branches Greenway Plan*







December 2002



Delaware Valley Regional Planning Commission



*Rancocas Main Branches Greenway Plan*



**T**his project was made possible through DVRPC and a grant from the William Penn Foundation. The environmental commissions of Medford, Evesham, and Voorhees townships also contributed funds to have the study area extended to the Barton's Run Tributary. DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

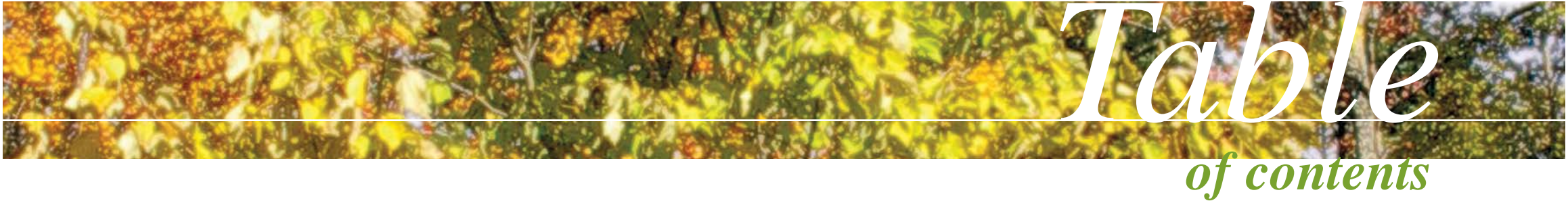
Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high-priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.

Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.





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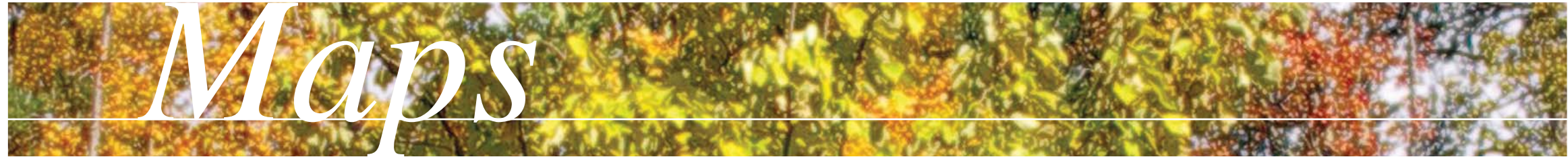


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# *Executive Summary*

*Executive Summary*







**“The most successful greenways almost always begin with two key elements: an outstanding natural feature and committed visionary leadership.”<sup>1</sup>**

The Rancocas Greenway is no exception. The Rancocas is a prominent natural, cultural, scenic, and recreational resource that ties many South Jersey communities together. Recognizing this, two organizations, the Rancocas Conservancy and the Burlington County Office of Resource Conservation began conceiving the idea of a Rancocas Greenway back in the early 1990's. Now, ten years later, this document, the second Rancocas Greenway plan, is being released, building on the momentum of the 1,000+ acres along the Rancocas that have already been protected as part of the greenway. The goal, over time, is to protect the entire stream corridor and to invite people to enjoy the creek by canoeing, hiking or biking along trails, picnicking at new parks, and visiting the charming, historic villages that straddle the Rancocas.

How will this happen? Why should this happen? And, who needs to do what to make it happen? This document, the Rancocas Creek Main Branches Greenway Plan provides many of the answers. However, the hard work, making it happen, has yet to come. To create the vision of a preserved stream corridor – complete with scenic views, trails, canoeing, parks, a healthy ecosystem, and vibrant, fun-to-visit historic villages – all 11 study area municipalities, Burlington County, the Rancocas Conservancy, and residents will have to work together to implement the recommendations.

Below, the four main issues of the study are outlined, followed by the major recommended actions that, if implemented, will serve to address them. In addition, it is hoped that the process of compiling this report, which involved numerous meetings and conversations with the public and public officials, as well as the plan itself, have raised awareness and added concern for the environmental, recreational and quality-of-life issues facing the Rancocas, and that residents,

associations and local officials are inspired to seek creative and cooperative solutions to creating the Rancocas Main Branches Greenway.

**I. ISSUE:** Of the 1400 streamside parcels along the Main Stem and Main Branches of the Rancocas, about half are considered already developed, 20% are permanently protected, and 30% remain undeveloped and unprotected. Of these remaining undeveloped properties, Burlington County and the study area municipalities have already targeted 25% of the parcels for preservation through existing open space plans and programs. Additional protection strategies are needed for the approximately 325 untargeted parcels in order to formalize and complete the Rancocas greenway from the Pinelands borders and beyond to the Rancocas's mouth at the Delaware River.

#### Recommended Actions

- 1. Burlington County, the Rancocas Conservancy and the municipalities should follow the Conservation Package to preserve the riparian buffer along the creek.**
- 2. Municipalities should adopt stream-corridor protection ordinances that require development and disturbances to be set back from the stream's banks.**
- 3. Municipalities should adopt steep slope ordinances which limit disturbances on areas classified as steep, typically starting at 8% gradient.**
- 4. Municipalities should adopt open space ordinances that require the preservation of at least 50% of a tract as open space.**
- 5. Municipalities should adopt Official Greenway Maps to facilitate protection of the greenway.**

**II. ISSUE:** Creek-related recreational opportunities, including trails and canoeing, need enhancement to better instill appreciation and stewardship, along with enjoyment of the creek.

<sup>1</sup>-Loring LaB. Schwarz, Editor, and Charles A. Flink, and Robert M. Searns, authors, "Greenways - A Guide to Planning, Design and Development," The Conservation Fund, Island Press: Washington DC, 1993, page 1.



### Recommended Actions

**1. Burlington County, Mt. Holly, Lumberton, and Medford** should work together to create the Mt. Holly to Medford rail-to-trail.

**2. Medford and Evesham** should work with the New Jersey Department of Transportation to create a trail within the wide right-of-way along Route 70 between Medford Village and Marlton.

**3. Burlington County** should open at least one canoe livery at either Smithville or the new Winzinger Tract county park, and/or the county should consider acquiring Hack's Canoe in Mt. Holly.

**4. Municipalities and the Rancocas State Park** should promote canoeing by formalizing canoe launch sites with improved signage and access.

**III. ISSUE:** With its large state park and growing county park system, burgeoning canoe and trail opportunities, and over 200 historic and archaeological sites and districts, the Rancocas Valley offers a multitude of natural and historic treasures to enjoy. However, many of these features are unknown, underdeveloped, not accessible, and/or not coordinated or linked with surrounding resources. Further developing the natural, historic and recreational resources of the area with an environmental and historical education component could result in eco-tourism for the Rancocas Valley. Eco-tourism, in this context, is defined as a responsible way for local and regional visitors to enjoy the Rancocas that also contributes to the conservation of the stream valley and to the well-being of the historic villages and historic Mt. Holly.

### Recommended Actions

**1. Burlington County** should work with the private sector consortium of businesses that produced the website [www.rancocasvalley.com](http://www.rancocasvalley.com) to develop and market a thematic and interpretative signage system for the Rancocas.

**2. Burlington County** should develop a brochure and website mapping the Rancocas for canoeing, complete with location of access points, facilities, gage stations, safety tips, and points of interest.

**3. Burlington County, the Rancocas Conservancy, the Education and Outreach Committee of Watershed Management Area 19, area municipalities and the private sector** should work together to develop and distribute educational materials and programs about the Rancocas natural and built environment.

**4. Municipalities** should utilize all historic preservation planning tools available, such as establishing historical commissions, compiling historic resource inventories, enacting local historic districts in their zoning codes, and requiring Historic Impact Statements in subdivision and land development applications.

**IV. ISSUE:** The creation and maintenance of the Rancocas Greenway, including protecting a continuous riparian buffer, expanding the trail network across municipal boundaries, and promoting eco-tourism will require intermunicipal and interagency cooperation and coordination.

### Recommended Action

**1. Burlington County** should convene meetings of county, municipal, Rancocas Conservancy staff and other stakeholders interested in formalizing the Rancocas Greenway project.









# 1

## *Chapter* Introduction





## Background

**T**he Rancocas Creek has many faces: it is open, wide, and visibly tidal to some communities; it is slow and meandering to others; it is narrow, forested, and secluded to yet others. The creek's headwaters start in the boggy areas of New Jersey's Pinelands, reaching from areas as spread out and diverse as Fort Dix in Plumsted Township, Ocean County to a planned residential community in Voorhees Township, Camden County. However, the largest bulk of the watershed lies within Burlington County. The creek travels from these remote headwaters through Pinelands-protected areas, cranberry bogs, and agricultural lands to reach the fringe of suburbia at the border of the Pinelands boundary. From the subdivisions and shopping centers of the suburbs, the creek travels further into urbanized areas until it spills into the Delaware River at Riverside, one of the densest communities in Burlington County. Along the way, the Rancocas Creek is a reappearing focal point in many of the towns and villages, especially Mt. Holly, the county seat, as well as Pemberton Borough, Vincentown, Medford and Lumberton. Throughout its varied journey, the Rancocas generates a common feeling of fondness, excitement of possibilities, and desire to protect the life of the creek among all the communities it touches.

Recognizing the Rancocas as a natural, recreational, and scenic resource that ties so many communities together, two organizations, the Rancocas Conservancy and the Burlington County Office of Resource Conservation (formerly Office of Land Use), began conceiving the idea of a Rancocas Greenway back in the early 1990's. The Delaware Valley Regional Planning Commission (DVRPC) was engaged to conduct a greenway plan for the Main Stem of the Rancocas, which was completed in 1996. Later in the decade, through the leadership of the Rancocas Conservancy, in partnership with Burlington County, DVRPC was again engaged to extend the greenway planning effort along the Main Branches to the border with the Pinelands. The plan's purpose is to preserve a green buffer along the Rancocas to preserve water quality and habitat; to provide recreational opportunities linked to the water to instill appreciation of the creek as a resource; to

facilitate communication, cooperation, and coordination among and between the municipalities that share this resource; and to promote eco-tourism in the Rancocas Valley as a further means to protect the creek and to restore and invest in its historic villages.

Fortunately, one-third of the creekside study area (or 20% of the total number of parcels) is already largely preserved as parkland, preserved farms, or through conservation easements. About one-fifth of the land (or half the number of parcels) is considered developed, typically as residential, but also as commercial and industrial. Many of the municipalities in the study area have conducted open space plans and have identified streamside lands for preservation. In addition, Burlington County has a strong open space preservation program, and has also identified streamside lands targeted for preservation. Formal establishment of a greenway along the entire creek study area would ensure the creek's protection for generations to come.

In addition to protecting the creekside lands, there are many opportunities to enhance recreation and enjoyment of the creek, and to consequently boost appreciation and stewardship of the corridor. Trail, canoeing, and linking-historic-places opportunities abound. A thematic and interpretative signage program is needed to direct people, to explain the significance of sites, and to create a unifying image for the area.

## Why a Greenway?

But why a greenway along the Rancocas? A greenway is like a ribbon of open space linking natural, cultural, and recreational resources together. Due to its linear nature, a greenway corridor passes through a variety of communities, connecting people to open space. It is the perfect response to preserve what is special about the Rancocas. A greenway established along the Rancocas can provide many benefits. It can preserve the environmental features in the area, and thereby provide natural protection from flooding, improve water quality and provide a hospitable corridor for wildlife migration. It can offer scenic relief from the urban landscape, preserve the integrity of historic sites and nostalgic places, and



enhance people's enjoyment of the creek. As the common thread tying municipalities together, it can also improve intermunicipal communication and cooperation. In addition to these benefits, a greenway can raise individual property values as well.

Although it may sound like a tall order, a greenway implemented with community support really can provide all the benefits mentioned above. Realization of some of the benefits may be subtle, such as improved water quality over time. Other benefits are intrinsic, such as the protection of certain rare or endangered species. Still others may be taken for granted, such as a lack of flooding. Yet all these benefits can be generated from implementing the primary intent of the greenway: to create and maintain a clean, green, open space buffer along both sides of the Rancocas Creek.

## Study Area

The study area for the Rancocas Creek - Main Branches Greenway reaches from distant towns and headwaters along the three Main Branches downstream to the Rancocas Creek State Park, where the branches meet to form the Main Stem. The study end points are Pemberton Borough at the Pinelands border on the North Branch, Vincentown at the Pinelands border on the South Branch, and a headwaters area in Voorhees Township along the Barton's Run tributary of the Southwest Branch. This area covers portions of 11 municipalities: Pemberton Borough and Township, Eastampton, Mount Holly, Westampton, Hainesport, Lumberton, Southampton, Medford, Evesham and Voorhees townships. The study area generally extends between the creek and the first parallel street, and, when combined with the Main Stem study area, includes almost 2,000 individual parcels and 15,000 acres of streamside land. To simplify mapping so many parcels, groups of parcels that appeared already developed and uniform in size were grouped together and assigned a new unique identification number for future reference. This process reduced the number of parcels along the Main Stem to 300 and within the Main Branches study area to about 1,100; still a large number but more manageable than before.

## Study Purpose in Regional Context

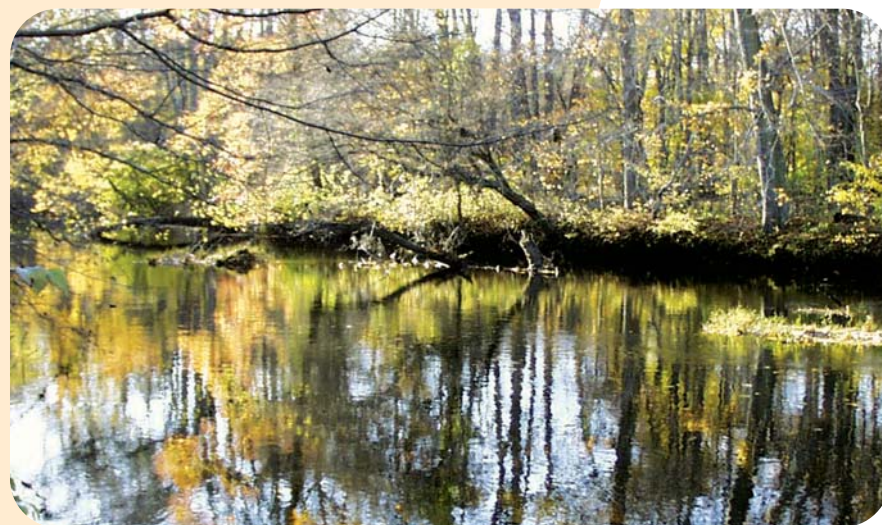
The Rancocas Main Branches Greenway Plan is a follow-up study to the Open Space Element of Horizons 2025, DVRPC's long-range land use plan. The open space element within the plan identified areas throughout the region, such as the Rancocas Creek and other environmentally sensitive stream corridors, proposed for open-space preservation to provide both natural resource protection and recreational opportunities. Although the nine-county region covered in the DVRPC plan contains more than 1.5 million acres of open space, only about 275,000 acres are currently protected as public parks. The Year 2025 Proposed Open Space Network (see Map 1 on page 5) presents a proposed open-space network sufficient in area to meet the region's recreational needs through the year 2025 and beyond. It also designates for protection woodlands and upland habitat areas that provide an environment for plants and animals; and the river and stream corridors and wetlands that supply clean water for drinking and habitat for fish, plants and other wildlife. This and other DVRPC greenway implementation plans are intended to be "how-to" guides, containing the necessary database of information, analysis, community input, recommendations, and designated responsible parties to translate the broad goal of preserving open space into concrete implementation strategies.

## Relationship to State, County and Local Plans

The Rancocas watershed is 360 square miles, and is the largest in south and central New Jersey. It is also known as Watershed Management Area 19 (WMA 19) in the New Jersey Department of Environmental Protection's (NJDEP) watershed management areas. A separate watershed management study for Area 19 led by NJDEP and Burlington County Department of Resource Conservation has been ongoing since 1998 and is addressing water quality, water supply, education and outreach, and open space issues.







*By focusing on protecting the riparian buffer and enhancing creek-related recreation, this plan is consistent with the objectives of the NJDEP WMA 19 process.*

*The intent of the Rancocas Creek Main Branches Greenway Plan is also consistent with and supported by the 2001 New Jersey State Development and Redevelopment Plan; the 1994 New Jersey Open Space and Outdoor Recreation Plan; and the Burlington County Open Space Strategic Plan of 1996. For example, in the State Development and Redevelopment Plan, proposed planning goals and strategies reflected in the Rancocas Creek Greenway Plan include conserving the state's natural resources and preserving and enhancing areas with historic, cultural, scenic, open space and recreational value by using collaborative planning, design, investment and management techniques. In the 1994 State Open Space and Outdoor Recreation Plan, one of the primary objectives is to preserve sufficient open space for current and future public use and to utilize the environmental protection amenities of open space to protect important natural and historical resources for the maintenance and enhancement of the quality of life in New Jersey. It is also the specific policy of the State of New Jersey to establish a greenway network through cooperative regional initiatives with local governments and nonprofit land trusts and by legislative, planning and financial efforts.*

*County efforts also support preservation of the Rancocas Creek. Burlington County voters approved raising the county open space tax from two cents to four cents per \$100 of assessed value, which is expected to generate about \$10.2 million annually for open space acquisition and development of recreation facilities. The goals of the Rancocas Creek Greenway Plan – namely to preserve the environmentally sensitive stream corridor and to provide recreational opportunities such as trails, boat launches, and fishing spots that are compatible with the natural values of the greenway – are supported by the goals and objectives of the Burlington County Open Space Strategic Plan.*

*In addition, the Burlington County Parks Department is currently developing a county-wide park and open space master plan. The goals of the plan are: to create a county park system to provide diverse,*

*passive recreation opportunities for all Burlington County residents; to conserve and protect the county's significant environmental and natural resources; and to protect and advance the character, culture, and heritage of Burlington County. DVRPC has participated in the county's park planning process and the county park plan and Rancocas Greenway plan reinforce each other. The Rancocas Greenway plan is also largely consistent with municipal master plans and open space plans within the study area, however, there are some cases where local plans could be amended to further support the Rancocas effort. These will be discussed in more detail in Chapter 5.*

## **Greenway Planning Partners**

*The Rancocas Creek Greenway Project is a partnership between DVRPC, the Rancocas Conservancy, and the Burlington County Department of Resource Conservation, with a steering committee comprised of representatives from the 11 study-area municipalities, New Jersey Green Acres Program, New Jersey Office of Natural Lands Management, and the Burlington County Parks and Recreation Department. The project was made possible by a grant from the William Penn Foundation that was matched by DVRPC. In addition, Medford, Evesham and Voorhees Environmental Commissions contributed funds to expand the study area along the Southwest Branch into the Pinelands and to the headwaters of the Barton's Run tributary.*

## **Greenway Planning Process**

*The Rancocas Creek Greenway Project involved extensive mapping, data collection and analysis, interagency coordination and public meetings and outreach.*

### **Mapping**

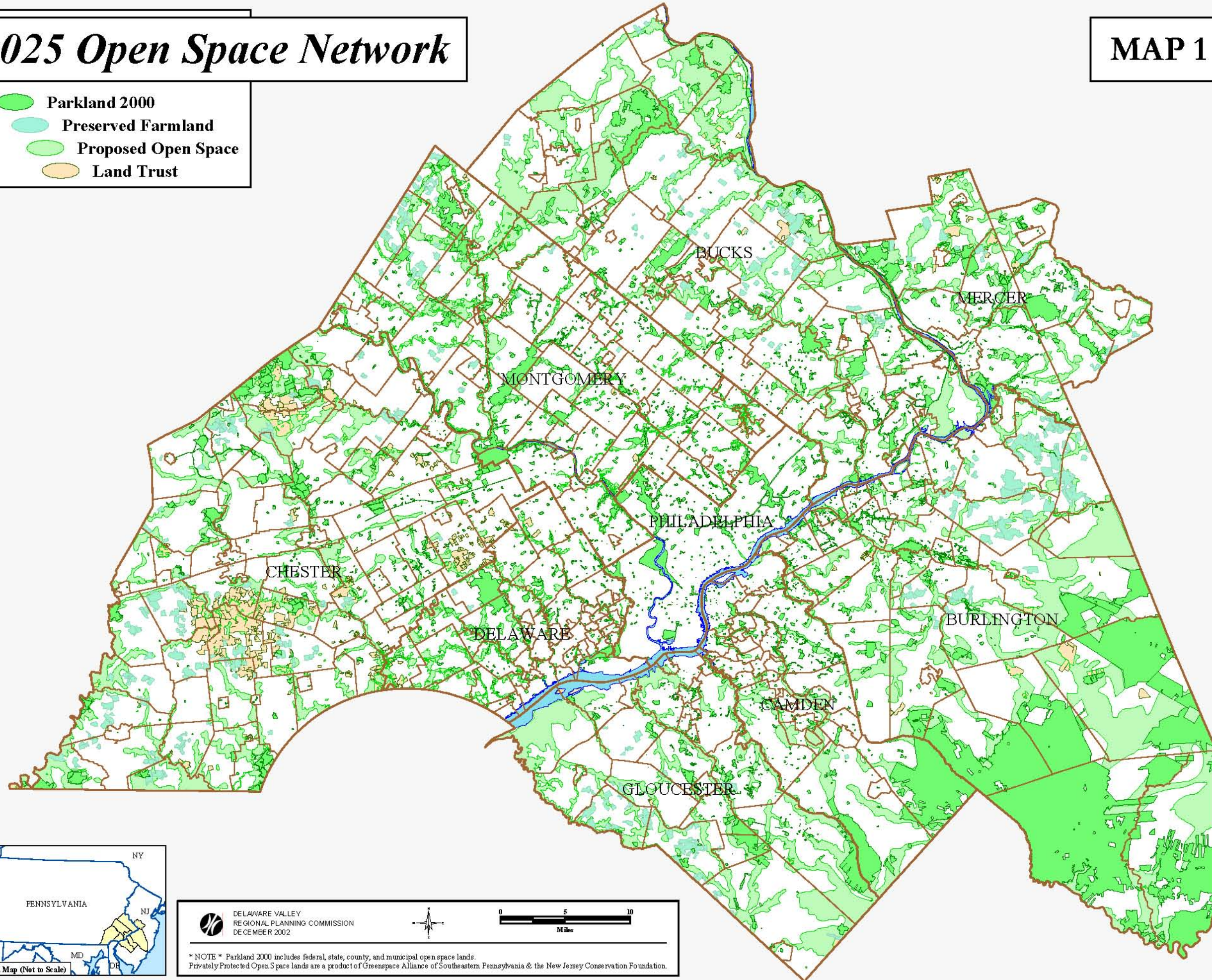
*Mapping involved creating a base map of all streamside parcels and nearby parks in the DVRPC geographic information system (GIS), and utilizing the GIS to show type of open space, protected and proposed open-space lands, environmental features,*






# 2025 Open Space Network

MAP 1

-  Parkland 2000
-  Preserved Farmland
-  Proposed Open Space
-  Land Trust



 DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
DECEMBER 2002

\* NOTE \* Parkland 2000 includes federal, state, county, and municipal open space lands.  
Privately Protected Open Space lands are a product of Greenspace Alliance of Southeastern Pennsylvania & the New Jersey Conservation Foundation.





*historic and archaeological resources, and proposed trail connections. These maps are included in the report and were critical to the planning analysis and to depicting the study area at meetings with the Rancocas community. Burlington County shared their GIS coverages of targeted farmland parcels in the Rancocas area, which are also depicted on the maps.*

#### **Data Collection and Analysis**

*Land use, environmental features, historic resources, zoning and open space plans were researched for each parcel in the area. Related data – such as water quality, endangered species, and recreational facilities – were also compiled. In addition, federal, state, and local plans, regulations, and ordinances that apply to local land use and development along the Rancocas Greenway corridor were also reviewed and assessed. This information, along with other concerns and questions posed at public meetings, was processed and interpreted in order to provide the best method for implementing a greenway along the North, South, and Southwestern Branches of the Rancocas Creek.*

#### **Interagency Coordination and Public Outreach**

*Public input from residents and coordination with municipal, county, state agencies and private organizations were important components of the plan's development. Individual introductions and information gathering sessions were made to staff and/or elected officials in each of the 11 municipalities. Three public meetings were also held at the beginning of the planning process; one on the North Branch, one on the Southwest Branch, and one at a Watershed Management Area 19 Public Advisory Committee (PAC) meeting, to present initial findings about the study area and to elicit feedback on concerns and issues from local residents and municipal officials. A second round of individual municipal meetings took place to present the preliminary recommendations, and again hear feedback. Recommendations were also presented to the public again at public forums. In addition, the steering committee met twice to guide the process. Comments from each of the meetings – as well as from numerous conversations with streamside land owners, county and municipal officials, and the other steering committee members – were incorporated into this final plan, with the intent that the plan and its recommendations represent a consensus on what needs to be done to establish a greenway along the Rancocas.*





# 2

## *Chapter*

Environmental Conditions  
and Regulations Impacting  
the Rancocas Greenway







## *Environmental Features and the Rancocas Ecosystem*

**T**he Rancocas Creek Watershed (Management Area 19) is the largest watershed in south-central New Jersey, and is comprised of the North Branch, South Branch, Southwest Branch and Main Stem of the Rancocas Creek. Portions of Burlington, Camden, and Ocean counties, and approximately 25 municipalities, are included in this management area which covers 360 square miles, and reaches deep into the Pinelands. See Map 2 on following page. Over 40% of Area 19 is covered by forest, 30% is developed land and 17% devoted to agricultural use including cranberry cultivation.

A watershed as large as the Rancocas encompasses many different types of very important ecosystems. The Rancocas watershed is home to a variety of plant and animal species, wetland varieties, various types of streams with their own ecology, woodland areas, and many other environmentally important areas. All of these areas are, in some way, linked to the health of the Rancocas Creek and its watershed. Disturbances or destruction of any part of this greater ecosystem threatens the health and production of the entire region. Development and urban sprawl have caused a great deal of damage to New Jersey's natural environment, including the Rancocas watershed. The following is a more detailed description of the natural processes at work in and around the Rancocas Creek ecosystem.

## *Water Quality and Supply*

Water is one of, if not the most, important resources on the planet. By looking at any map of the globe, one can see that the vast majority (75%) of the Earth's surface is covered by water. This great preponderance of water has led to the evolution of earth systems that depend on water for their continued existence.

The most useful form of water (for most organisms) is freshwater. Freshwater not only serves as a source of drinking water to humans and other animals, but it also is very often the limiting factor in plant production. However, freshwater makes up only 3%




of all of the water body sources on the planet. The increasing demand placed on this limited resource through increasing populations and increasing development pose a great risk to the Earth's freshwater supply.

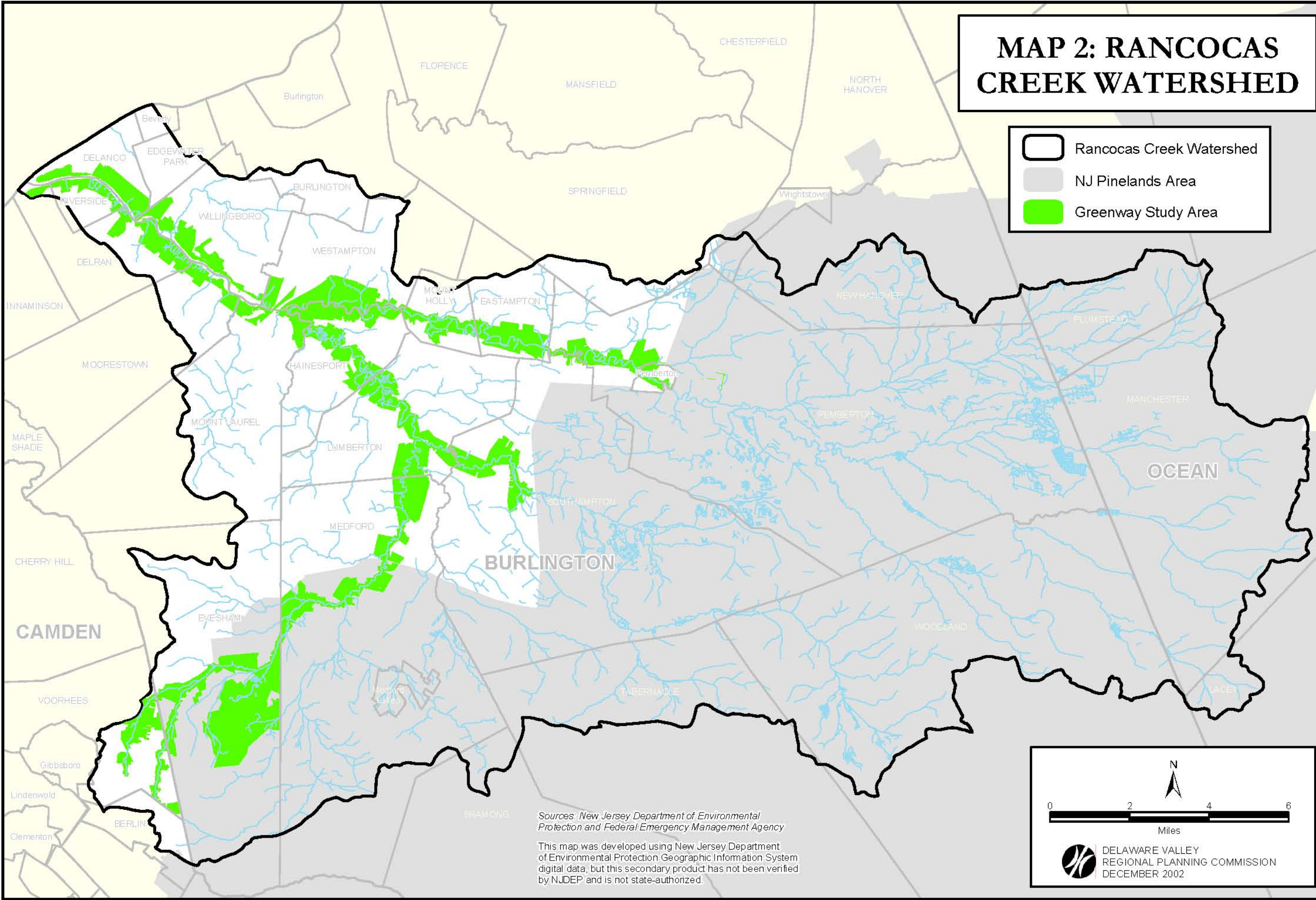
Under undeveloped conditions, water will go through the hydrologic cycle in order to replenish its supplies on or in the ground. When this happens, surface water is evaporated into the air then returned back to the surface or groundwater supplies through condensation and precipitation. Increased levels of pollution have begun to limit the amount of water that is considered safe for various activities (e.g. drinking water supply, swimming, and fish habitat). Added to this decreased availability of clean freshwater supplies are the effects of increased development in areas that have been, historically, undeveloped. Increased development severely impedes the replenishment of groundwater supplies, because water cannot penetrate pavement. Therefore, groundwater supplies (the source of drinking water for many municipalities and the source of water for many other water bodies) are shrinking while overland flow, or runoff, is increasing. The end results are less access to water and dirtier water – both of which increasingly limit our ability to use freshwater and an ecosystem's ability to survive.

Considering what has just been described, the water quality of the Rancocas Creek and its tributaries is very important to the people and wildlife in the region surrounding it. There are two main types of pollution that affect the Rancocas Creek – point source and nonpoint source. Point source pollution is probably the most obvious to most people. Point source pollution is pollution that originates from the individual "pipe." This just means that there is one point of origin for this type of pollution. Examples of this would be sewage treatment plants or other industries that discharge effluent directly into a stream or other water body. Nonpoint source pollution is a little more difficult to identify. Nonpoint source pollution is pollution that flows either over or under the ground surface to the water supply through a few or many "pipes." The most important examples here are agricultural runoff from farms and (sub)urban stormwater runoff. All of these forms of runoff (ranging from pesticides in the grass or on crops to leaky oil tanks in cars) occur when rainfall washes the pollutants from whatever surface they



# MAP 2: RANCOCAS CREEK WATERSHED

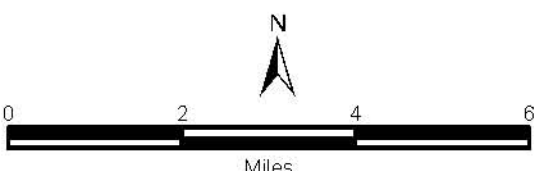
-  Rancocas Creek Watershed
-  NJ Pinelands Area
-  Greenway Study Area




Sources: New Jersey Department of Environmental Protection and Federal Emergency Management Agency

This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.

N



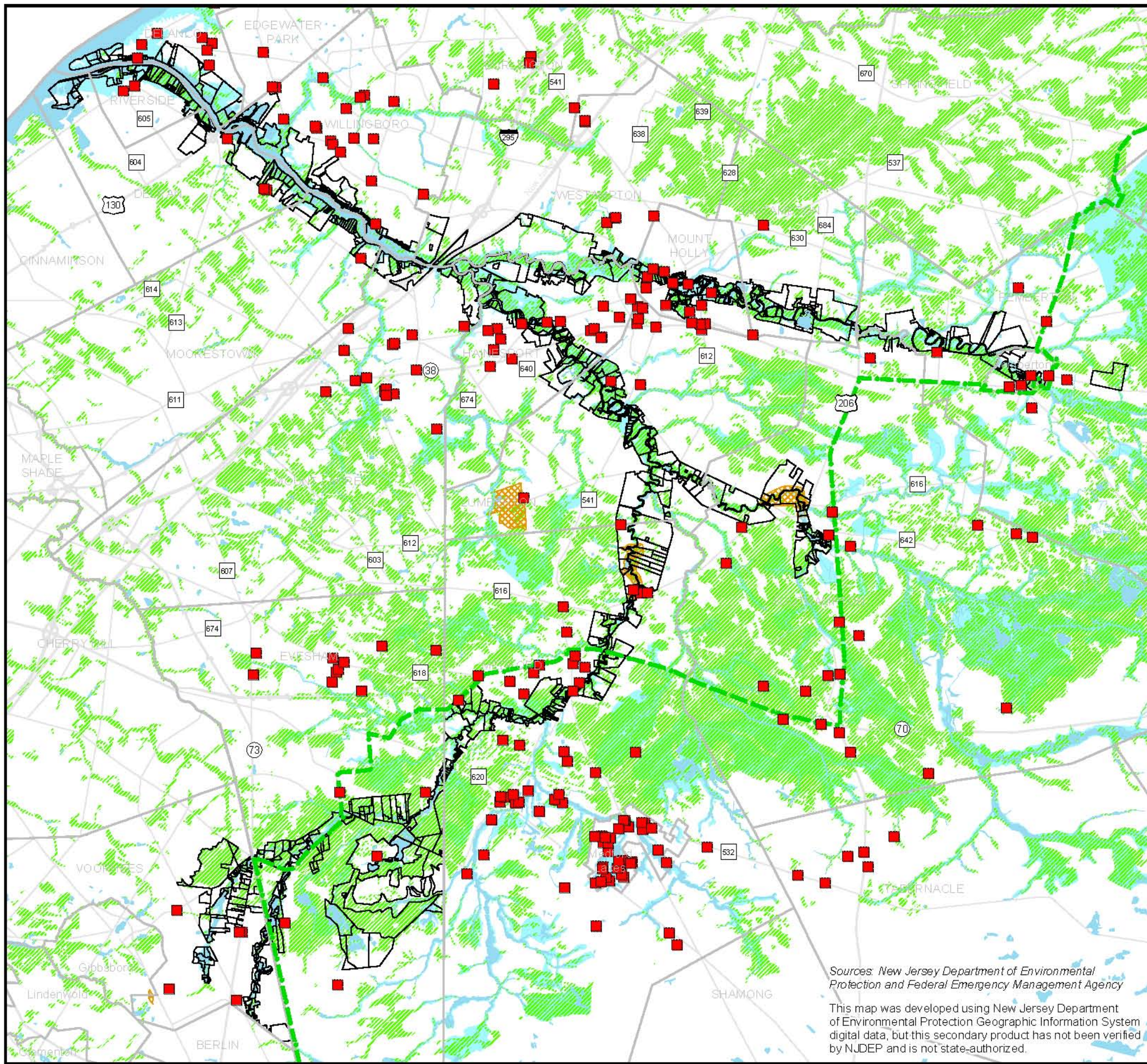
0 2 4 6  
Miles



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
DECEMBER 2002



# MAP 3: RANCOCAS CREEK GREENWAY ENVIRONMENTAL FEATURES



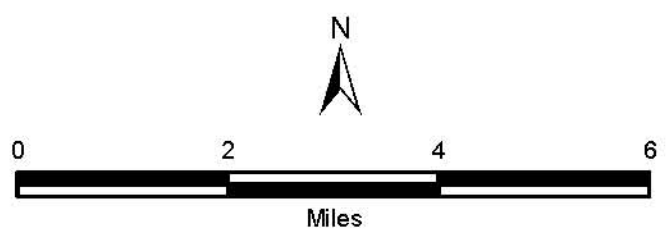
## ENVIRONMENTAL FEATURES

- Known Contaminated Site\*
- - - Pinelands Boundary
- Natural Heritage Priority Site
- Flood Plain
- Wetlands
- Wetlands and Flood Plain

## BASE MAP

- Road
- ~ Stream
- County Boundary
- Municipal Boundary

\* Sites where contamination of soil or groundwater has been identified or suspected. May include sites where remediation is either underway, required but not yet initiated, or completed.



Sources: New Jersey Department of Environmental Protection and Federal Emergency Management Agency  
 This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized.



were on over the ground surface, through the watershed, and, finally, into the stream. Normally, wetland areas or seepage of the runoff to the soil would serve to clean up and filter many of these pollutants. However, increased development, in the form of urban sprawl, has negated these natural functions by destroying wetlands and placing impervious surfaces over other areas where water used to seep down through the soils, filter out its pollutants, and recharge the groundwater supply.

The Rancocas Creek's water quality is regarded by the New Jersey Department of Environmental Protection as threatened – as are all waterways in the State – due to the level of development, the population density, the economic pressures for development, the intensity of land use, and the ubiquitous nature of nonpoint source pollution. The most common water quality problems affecting the Rancocas Creek include total and fecal coliform bacteria, nutrients, depressed dissolved-oxygen levels, pH fluctuations, siltation, road salts, and oil and grease. Nonpoint sources include stormwater outfalls, construction, urban and agricultural runoff, land disposal practices, and marinas. (NJ Water Quality Inventory Report, 1994 and 1996)

New Jersey Department of Environmental Protection monitors and assesses water quality for aquatic life use support and for primary contact use support (swimming). The general trend found in the Rancocas Creek watershed is decreased water quality downstream from the creek's sources. This is understandable because more pollution is picked up by the creek as it moves downstream. The NJDEP studies (found at: [http://www.state.nj.dep.us/dep/dsr/watershed/area\\_19.pdf](http://www.state.nj.dep.us/dep/dsr/watershed/area_19.pdf)) show the following results:

- When viewed as Pinelands waters, the North and South Branches of the Rancocas represent conditions reflective of moderately disturbed and disturbed Pinelands waters, respectively.
- From the perspective of FW2-Nontrout waters, the North Branch represents good conditions with acceptable nutrient levels and relatively good sanitary quality. However, the North Branch does experience chronic exceedances of copper, lead, and, occasionally, zinc. These conditions are similar to those observed in studies conducted from 1986-1990.

- The South Branch Rancocas represents fair conditions as an FW2-Nontrout water. Inorganic nitrogen levels are considered acceptable, but total phosphorus is mildly elevated. Sanitary quality, though, is very good. Diurnal (night and day) shifts in dissolved-oxygen levels are depressed, placing a heavy stress on aquatic life. The South Branch also experiences exceedances of copper and lead due to an acidic environment. These conditions are also similar to studies conducted from 1986-1990.
- Highly fluctuating levels of dissolved-oxygen content are mainly a result of sediment loading rather than point-source pollution.
- Nonpoint source pollution is the principle source of pollution to the Rancocas Creek stream system. Agricultural and suburban runoff is responsible for the pH, bacteria, and nutrient concentrations that are higher than natural background levels. Significant development pressures will only serve to further stress the streams in the Rancocas Creek watershed.
- The Upper North Branch is polluted by nonpoint sources such as: dairy farms, croplands, road and housing construction, road salting, urban surfaces, and storm sewers.
- Fisheries in the lower reaches of the North Branch are considered threatened by runoff from housing construction, road maintenance, croplands, and the subsurface infiltration of septic wastes. A landfill in Pemberton is also considered to be a threat to water quality.
- The Upper South Branch Rancocas is suspected of suffering water quality degradation from sod farm runoff, road and housing construction, urban surface runoff, and septic tank leachate. A landfill in Lumberton is also suspected of affecting local water quality.
- The Lower South Branch receives nonpoint source pollution from housing construction, urban surfaces, croplands, septic systems, and surface mining activities. These sources are believed to have resulted in past fish kills in this waterway.
- Many of the tributaries to the branches of Rancocas Creek also suffer from nonpoint source pollution which eventually runs in to the creek itself.







- The fish population of Cranberry Branch, a tributary to the North Branch is threatened by subsurface infiltration of septic wastes, cropland runoff, and local housing construction.
- Friendship Creek, Mason Creek, and Mill Creek are all impacted by road and highway runoff. Friendship Creek is further impacted by a local sanitary landfill, while Mill Creek is suspected of being affected by urban runoff.

NJDEP also uses bacterial and macroinvertebrate monitoring techniques to designate a waterway's usability. Bacterial monitoring at McDonald's Branch, the North Branch Rancocas at Pemberton, and the South Branch Rancocas at Vincentown all fully support primary contact (swimming) recreation. Macroinvertebrate assessments indicate that the upper portions of the North Branch Rancocas fully support the "aquatic life support" designated use.

Macroinvertebrates are those organisms living in a stream that do not have a backbone and are visible to the eye. Most of these organisms spend part or all of their life cycles in the benthic region of the stream (the deepest few inches of the stream). A few examples of macroinvertebrates are crayfish, diatoms, and insect larvae. Macroinvertebrates are very useful for assessing water quality because they cannot move around much, and therefore, cannot escape from

changes in water quality. When pollution enters a stream, these communities are among the most adversely affected, so they serve as great resources to assess the quality of the water in the stream. Macroinvertebrates take a very long time to recover from such pollution influxes, so the quality of a stream can be assessed by measuring the number, type, and density of macroinvertebrate species present within the stream.

The lower reach of the North Branch, along with some of the North Branch tributaries, only partially support the aquatic life support designated use. The South Branch also partially supports the use, with significant portions not supporting the use. Full support is very limited within the South Branch watershed.

Both the main stem and main branches of the Rancocas Creek outside of the border of the Pinelands are classified FW2 – NT, meaning fresh water non-trout surface water that has not been designated to be maintained in its natural state of quality for posterity. Sections of the Rancocas within the border of the Pinelands and in Lebanon State Forest are classified PL and FW1, respectively, and are afforded greater protections. These designations will dictate the types of land use that can be developed within certain sections of the watershed.

## *Physical/Chemical Water Quality Assessment*

<i>Location: North Branch Rancocas Creek at Pemberton</i>	
<i>Dissolved Oxygen:</i>	Acceptable.
<i>Temperature:</i>	Acceptable.
<i>Nutrients:</i>	When viewed as FW2-Nontrout waters, inorganic nitrogen and total phosphorous are both acceptable, with median values of 0.145 and 0.035 mg/l, respectively. From a Pinelands waters perspective, inorganic and organic nitrogen, and total phosphorous are all at levels characteristic of moderately disturbed Pinelands waters (Zampella, 1992).
<i>Bacteria:</i>	Very mildly elevated bacterial levels were recorded at this location. The geometric mean was 22 MPN/100 ml and 10% of samples exceeded the 400/100ml criterion.
<i>pH and Conductivity:</i>	The median pH and conductivity reflect moderately disturbed Pinelands waters (Zampella 1992).
<i>Heavy Metals:</i>	Heavy metals violations were frequent in these acidic waters. Three of five copper samples exceeded both the acute and chronic criteria. Of five lead samples, four exceeded both the chronic and acute criteria, while the fifth exceeded the chronic criterion. One violation of the acute and chronic criteria for zinc was recorded (out of five samples).



**Location: South Branch Rancocas Creek at Vincentown**

<b>Dissolved Oxygen:</b>	Daytime levels all lie within the FW2-NT criterion; however, warm weather levels are relatively low, suggesting stressful conditions at night.
<b>Temperature:</b>	Although in-stream temperatures do not exceed the criterion for FW2-NT waters, they nonetheless tend to run warm in the summer at this location.
<b>Nutrients:</b>	When viewed as FW2-Nontrout waters, inorganic nitrogen is acceptable and total phosphorous is mildly elevated, with median values of 0.55 and 0.11 mg/l, respectively. From a Pinelands waters perspective: inorganic and organic nitrogen, and total phosphorous are all at levels characteristic of disturbed Pinelands waters (Zampella, 1992).
<b>Bacteria:</b>	Sanitary quality is very good at this location. The geometric mean was 61 MPN/100 ml and only 5% of samples exceeded the 400 MPN/100ml criterion.
<b>pH and Conductivity:</b>	The median pH and conductivity reflect conditions observed in disturbed Pinelands waters (Zampella 1992).
<b>Heavy Metals:</b>	The low hardness recorded in these acidic waters renders the metals criteria very restrictive. As a result, one of four copper samples exceeded the chronic criterion for aquatic life support. Additionally, of four lead samples, all exceeded the chronic criterion, again for aquatic life support.



**Location: McDonalds Branch in Lebanon State Forest**

<b>Dissolved Oxygen:</b>	Very depressed, more than half the samples below 4 mg/l.
<b>Temperature:</b>	Acceptable.
<b>Nutrients:</b>	The median inorganic nitrogen (NO <sub>2</sub> + NO <sub>3</sub> ), organic nitrogen, and total phosphorus are all characteristic of undisturbed Pinelands waters (Zampella 1992) and are consistent with levels observed between 1975 and 1986 (Zampella 1994).

**Biological Water Quality Assessment**

Management Area	Watershed Site ID	Water Body	Location	Municipality	Sample Date	Biological Impairment Rating
19	56	AN0143	Rancocas Ck N Br blw Hanover Lk	Hanover Furnace	Feb 23, 1993	nonimpaired
19	56	AN0149	Rancocas Ck N Br Main St	Pemberton	Jan 26, 1993	nonimpaired
19	56	AN0149	Rancocas Ck N Br Main St	Pemberton	Jul 9, 1993	nonimpaired
19	56	AN0149	Rancocas Ck N Br Main St	Pemberton	Oct 18, 1993	nonimpaired
19	56	AN0149	Rancocas Ck N Br Main St	Pemberton	Apr 13, 1994	moderately impaired
19	56	AN0151	Rancocas Ck N Br Pine St Pk	Mt Holly	Jan 26, 1993	moderately impaired
19	58	AN0156	Rancocas Ck S Br Buddtown	Beaverville Rd nr Retreat	Mar 2, 1993	severely impaired
19	58	AN0161	Rancocas Ck S Br Mt Holly	Eayrestown Rd Eayrestown	Apr 14, 1993	moderately impaired
19	58	AN0162	Rancocas Ck SW	Elmwood Rd Evesham Twp	Apr 14, 1993	severely impaired
19	58	AN0169	Rancocas Ck SW Rt 70	Medford	Apr 14, 1993	moderately impaired

(Source: "Watershed Management Area 19: Rancocas Creek Drainage" found at [http://www.state.nj.us/deplsdtr/watershed/area\\_19.pdf](http://www.state.nj.us/deplsdtr/watershed/area_19.pdf))





Water quality, for now, seems to be improving within the watershed. However, the area is also anticipated to undergo a growth spurt in the near future. New development increases stormwater runoff, sedimentation, and other nonpoint source pollution in the watershed, which eventually reaches the Creek. **New development may also threaten and stress the floodplains and freshwater wetlands, whose function in filtering out pollutants before they reach the stream becomes even more paramount. Protecting these features from encroachment and limiting nonpoint source pollution is therefore imperative to improving water quality in the Creek.**

## The Ecology of Floodplains

Virtually all of the riverfront properties along Rancocas Creek reside in the floodplain. A floodplain is considered the area that would be flooded by a 100-year flood, or a flood that has the statistical probability of occurring every 100 years (FEMA). A flood of this magnitude can occur at any given time, however. Therefore, it is imperative to understand the importance of floodplains in the Rancocas Creek watershed. See Map 3 on page 10.

Left untouched, floodplains serve many vital functions and perform many environmental services:

- **Water Quality:** Located between waterways and adjacent lands with extensive human use, floodplains serve to filter out excess nutrients in groundwater through vegetative uptake and rhizofiltration (microbes that live on root systems break down nutrients) before they reach streams and rivers. High nutrient loads on streams will negatively affect water quality. **Narrow greenways, coupled with heavily developed edge communities with high levels of pollution, may render filtering of runoff and sediment loads inefficient and futile.**
- **Prevention of Erosion:** Microtopography, vegetation, and natural ground coverings (e.g. leaves and logs) form a physical screen for materials moving downslope. This allows pollution to be filtered out of surface water before it has a chance to cover streambeds or fill in reservoirs. Erosion shrinks the size of the floodplain and causes sedimentation downstream.

- **Stream Morphology and Hydrology:** Floodplains help maintain natural surface water levels within a stream while also maintaining natural rates of flow. This is done by stabilizing streambanks and providing for a diversity of natural stream structures (e.g. pools and riffles).

Bank erosion and sedimentation change the natural geomorphology of streams. Bank erosion is normally caused by clearing trees and other vegetation from the stream bank for purposes of agriculture or development. This results in a loss of very important habitats (e.g. many fish species spawn near the roots of stream bank trees) and increased sedimentation downstream. Sedimentation and siltation downstream prevent sunlight from reaching aquatic plants, thus limiting photosynthesis (plants use solar energy to produce energy and biomass). This does great damage to the base of the watershed's food web. These are only a few of the many negative effects of land clearing, erosion, and sedimentation.

- **Flood Mitigation:** A wide floodplain provides areas for water storage during flooding events. Wide natural corridors allow flood waters to spread out and move more slowly. Narrow areas cause an increase in flow velocity and erosion rates through an increase in peak flow runoff. **Development in floodplain areas and streambanks causes an increase in costly flood damage (and, possibly, a loss of life) and an increase in costly flood mitigation projects (e.g. channelization and dredging).**

- **Stream Ecology:** Streams and greenways are important ecological resources for many plants, animals, and microbes. Wetland areas provide the key habitat in riparian and upland zone ecosystems. These areas provide a home and a source of food not only to the flora and fauna living on the land but also to the species living in the stream itself. Terrestrial plant species provide valuable food sources, in the form of detritus (dead organic matter such as leaves and twigs), to the microbes that reside in the stream. These microbes then serve as a food source to macroinvertebrates (insects and small crustaceans) which make up the base of the stream and riparian zone food chain. **Development along streambanks clears out all of this vegetation, thus eliminating the source of detritus for microbes. This, effectively, destroys the basis of the food chain and hurts all flora and fauna that rely on this food chain.** Greenways that are a part of a floodplain and riparian



zone also serve to direct species migration along the stream corridor, effectively serving as an important conduit for migratory species. Riparian zones also serve as a natural air conditioner for the local environment. Trees along streambanks cool the air passively by providing shade and actively through evapotranspiration. This not only makes for a more comfortable recreational environment, but it also is important to species dependent upon the aquatic environment. For example, cooler streams are much better breeding grounds for many fish species, such as trout. Riparian buffers are also natural air scrubbers, filtering out harmful particulate matter and cleaning up the air for breathing at the same time (*Ecology of Greenways and Greenways: A Guide to Planning, Design, and Development*).

## Local Land Use Ordinances Related to Greenways and Stream Corridors

To determine the role that land use planning and regulations could play in creating the Rancocas Greenway, an "audit" of the study-area municipalities' use of open space and natural resource protection tools was undertaken. The following 11 techniques were reviewed, and the results of the audit are shown in the table on page 16.

**Environmental Resource Inventory (ERI):** is a compilation of text and mapped information about the natural resource characteristics and environmental features of a municipality. An ERI identifies critical natural resources and provides a policy basis for the development of resource protection ordinances.

**Open Space Plan:** is a comprehensive document that serves as a guide for open space protection and preservation in a municipality. An open space plan examines a community's needs and goals, analyzes preserved and unpreserved open spaces, and lays out a set of priorities and strategies for preservation.

**Dedicated Open Space Tax or Bond:** provides dedicated funds for local open space initiatives. Combined with county and state funding programs, locally funded open space programs promote preservation by leveraging limited funding available.

**Floodplain Management:** regulates development activities in the 100-year floodplain. They typically limit nearly all new forms of residential, commercial and industrial construction in the floodplain.

**Stream Corridor Protection Ordinances:** ensure that vegetated riparian buffers are maintained by requiring development to be set back from stream banks, floodplains and wetland areas and by limiting the use and intensity of activities within the corridor. Buffer widths typically range from 25 to 300 feet, depending on the community's goals.

**Wetlands Mapping:** by requiring wetlands mapping as part of the site plan submission requirements, municipalities can determine where wetlands may be threatened by inappropriate development, and can request site plan changes as appropriate. Although the NJDEP regulates development on wetlands, locally reviewing impacts on wetlands can result in more thorough and comprehensive protection of wetlands.

**Steep Slope Ordinances:** regulate development on areas of steep slope, with 8% typically the minimum gradient classified as steep.

**Open Space/Cluster Development Ordinance:** enables developers to increase densities on one portion of a tract in return for preserving open space on another portion of a tract. This audit considered ordinances that require the preservation of at least 50% of a given tract as open space.

**Agricultural Zoning:** is a technique that allows municipalities to protect their rural and agricultural areas by establishing large minimum lot sizes. This audit considered municipalities with agricultural zoning districts with 10-20 acre minimum lot sizes and those with 20 acre or larger minimum lot sizes.

**Transfer of Development Rights (TDR) Ordinances:** allows municipalities to preserve rural and natural features while protecting property rights and allowing some growth. A TDR program takes development that would normally occur in rural areas (sending areas) and transfers it to other parts of a municipality where growth is more acceptable (receiving areas). Currently, state legislation only permits TDR programs in Burlington County, but there are legislative efforts underway to enable TDRs across the state.





**Municipal Environmental Protection Ordinances**

Municipality	ERI	Open Space Plan	Floodplain Ordinance	Stream Buffer Ordinance	Wetland Mapping	Steep Slope Ordinance	TDR	Cluster Ordinance (> 50% OS)	Ag Zoning (> 50% OS)	EIS	Open Space Tax or Bond
Eastampton											
Evesham											
Hainesport											
Lumberton											
Medford											
Mount Holly											
Pemberton Borough											
Pemberton Twp.											
Southampton											
Voorhees											
Westampton											

- Municipality uses natural resource protection technique
- Planning technique applies within the portion of the municipality that lies within the Pinelands Boundary
- Municipality has a 50 foot setback requirement for all development adjacent to the waterways shown on zoning map, but does not have a comprehensive Stream Corridor Protection Ordinance



## Assessment:

The study-area municipalities are currently using a variety of local regulatory techniques to preserve the significant environmental features within their boundaries. Almost all the communities employ floodplain management ordinances and wetlands mapping as a site plan submission requirement. Most municipalities have an ERI and Open Space Plan, and Lumberton is currently preparing an Open Space Plan. Only Voorhees Township has any ordinance language resembling a stream corridor protection ordinance - Section 131-11 of their code states "Unless otherwise specified and indicated on the Zoning Map, no structure shall be erected on land which is less than 4 feet above the normal or average level of any adjacent running stream, lake or body of water, including tidewaters, nor closer than 50 feet to such stream, lake or body of water, whichever conditions shall impose the greater requirements." This zoning language appears to have the effect of a stream corridor protection ordinance requiring a minimum setback of 50 feet, however, because it is a small section somewhat buried in the code, it may not be as well understood, or even known, than if the language was a larger, separate chapter that referred to their ERI.

None of the municipalities have steep slope ordinances, probably due to the relatively flat terrain found in South Jersey. However, there are significantly large sections of the study area, especially on the North Branch, that actually have severely steep slopes in excess of 25%, namely the Rancocas Valley area of Eastampton and eastern Mt. Holly, and portions of Pemberton Township and Borough. Other ordinances that are not well utilized in the study area are effective Open Space/Cluster Development Ordinances (with over 50% open space requirements), Transfer of Development Rights and Effective Agricultural Zoning, outside the Pinelands Management Area. Since it may be cost prohibitive to protect all the greenway lands identified for preservation through fee simple acquisitions or even conservation easements, municipalities should consider using land use tools such as the above ordinances to help protect environmentally sensitive lands. Examples of these ordinances can be viewed on DVRPC's website at [www.dvrpc.org/planning/openspace.htm](http://www.dvrpc.org/planning/openspace.htm). On a positive note, eight (8) of the eleven (11) communities have

adopted locally funded open space programs to ensure a dedicated source of money to acquire open space.

Another tool that can assist townships in protecting significant lands through the land development approval process is an Official Greenway Map. An analysis of the study area municipalities showed only Lumberton and Hainesport townships to have Official Maps. However, according to interviews with township officials, neither township's official map was used in the development process to preserve open space. Official maps for open space and greenways are largely misunderstood and therefore quite underutilized, even though they are expressly authorized by the New Jersey Municipal Land Use Law in Article 5 - The Official Map, and Article 6, Section 40:55D-44 - Reservation of Public Areas. One municipality that has taken advantage of the tool is Washington Township in Gloucester County, which adopted an Official Greenway Map that facilitated the dedication of several hundred acres of streamside land throughout the township.

## Official Greenway Map

An official greenway map is essentially an ordinance, in map form, adopted by the municipality, that designates existing and proposed areas for open space protection. By identifying these areas on an official map, the municipality is announcing its intentions to preserve these areas for flood control, streambank stabilization, provision of wildlife habitat, and/or recreational facilities. Once adopted, the official greenway map gives notice to property owners and developers of the municipality's intentions, but does not, in and of itself, serve to acquire the land for public purposes.

The official map usually comes into play at the time a land development or subdivision is proposed. The municipality then has the option, for up to one year after final plan approval, to negotiate various ways to keep the land open. Types of preservation agreements that may be pursued include fee simple acquisition, purchase of easement, bargain sale and property donation. However, unless otherwise agreed upon, the law specifically states that the property owner is entitled to full market compensation.







## State Regulations Impacting Greenways

### Floodplain Management

Development in flood hazard areas (defined as 25% greater than 100-year floodplain delineation) along the Rancocas is subject to review and permitting by the NJDEP and by the municipality where there are local floodplain ordinances in effect. The state issues waterfront development permits for stream encroachments provided that the proposed development meets specific criteria, such as not obstructing stream flow and adequately complying with stormwater runoff and water quality regulations. Most of the communities along the Rancocas Creek have also issued their own floodplain management ordinances for this task. Communities with their own ordinances have advantages over localities that rely solely on state review in that they can more closely control the type of development they will accept in the fragile flood-hazard area. These municipalities can also guide development plans during the site plan review process to match local environmental goals that may go above and beyond the minimum required by the state in these fragile ecosystems.

### Freshwater Wetlands

(The following is an excerpt from the NJDEP Freshwater Wetlands Rules Fact Sheet Overview regarding the definition, importance, and very brief history of rules regarding wetlands.)

*What are Wetlands?* Wetlands are commonly referred to as swamps, marshes, or bogs. However, many wetlands in New Jersey are forested and do not fit the classic picture of a swamp or marsh. Previously misunderstood as wastelands, wetlands are now being recognized for their vital ecological and socioeconomic contributions.

*What's So Good about Wetlands?* Many of us grew up thinking wetlands should be drained for farming or filled in for development. But wetlands contribute to the social, economic, and environmental health of our nation in many ways:

- Wetlands protect drinking water by filtering out chemicals, pollutants, and sediments that would otherwise clog and contaminate our waters.

- Wetlands soak up runoff from heavy rains and snow melts, providing natural flood control.
- Wetlands release stored flood waters during droughts.
- Wetlands provide critical habitats for a major portion of the State's fish and wildlife, including endangered, commercial and recreational species.
- Wetlands provide high-quality open space for recreation and tourism.

Many of these values were not widely appreciated until the 1970s and 1980s. By then, more than half of the nation's wetlands were destroyed. The New Jersey freshwater wetlands program protects freshwater wetlands, and upland areas up to within 150 feet (or 300 feet in the Pinelands) of wetlands (sometimes called "buffers"), from development that will impair the wetlands' ability to provide the values listed above. Misunderstood as wastelands, wetlands are now being recognized for their vital ecological and socioeconomic contributions.

### Freshwater Wetlands Rules – A Brief History in New Jersey

The Freshwater Wetlands Protection Act rules, N.J.A.C. 7:7A, were first adopted in June 1988, in response to the 1987 enactment of the New Jersey Freshwater Wetlands Protection Act (FWPA), N.J.S.A. 13:9B-1 et seq. Additional provisions governing transition areas were adopted in July of 1989. On March 2, 1994, the Department assumed responsibility in most of New Jersey for the Federal wetlands permitting program, also known as the "Federal 404 program" because it stems from section 404(g) of the Federal Clean Water Act, 33 U.S.C. §§ 1251 et seq. The Federal 404 program had previously been administered in New Jersey by the U.S. Army Corps of Engineers (ACOE). The United States Environmental Protection Agency (EPA) oversees the Department's wetlands program in accordance with the Federal Clean Water Act and a Memorandum of Agreement between the Department and EPA.

While New Jersey's freshwater wetlands program operates in place of the Federal 404 program throughout most of the State, the ACOE has retained responsibility for the Federal 404 program in certain



waters in New Jersey. These are all interstate and navigable waters (including adjacent wetlands), and areas under the jurisdiction of the Hackensack Meadowlands Development Commission. Projects in these "non-delegable" waters remain subject to ACOE jurisdiction as well as to the state wetlands program. Thus, activities in these waters may require both a Federal 404 permit from the ACOE and a state permit under this chapter. This is the first re-adoption of these rules since New Jersey assumed the Federal 404 program. Therefore, the proposal reflects changes in the program necessitated by assumption of the Federal 404 program. (courtesy of NJDEP web page: [http://www.state.nj.us/dep/landuse/announce/fww\\_pro\\_p/WETSUMM.HTM](http://www.state.nj.us/dep/landuse/announce/fww_pro_p/WETSUMM.HTM))

#### **Proposed Rules Governing Freshwater Wetlands in New Jersey**

The proposed changes to the rules governing freshwater wetlands in New Jersey seek to clarify and reorganize present wetlands rules. The goal of the new regulations is to make it easier for the public and private sectors to navigate through the wetlands rules and to make the rules user-friendly. Sections of the proposed regulations have been reorganized so that sections that have been found to relate to one another are situated near each other in the rule book. Many of the rules have been more clearly defined and outlined to make it easier to understand for the private developer or land owner.

Also, the new rules seek to make sure that other New Jersey State laws are not in conflict with the freshwater wetlands laws. An example would be contradictory laws regarding pesticide spraying in wetlands in utility right-of-ways. Currently, the freshwater wetlands rules call for their own permit for spraying, while the newly proposed rules allow the NJDEP's Pesticide Control Program to issue the only permits regarding spraying of pesticides.

The new rules also encourage and support redevelopment on abandoned sites such as brownfields. For example: "the proposed re-adoption includes an amendment to the redevelopment waiver at proposed N.J.A.C. 7:7A-6.3(f), which allows redevelopment on a transition area that is significantly disturbed so that it is not functioning as a transition area. Thus, an area that is not covered

with impervious surfaces might be eligible for a redevelopment waiver if this threshold is met." Other provisions relate to development in other disturbed areas and impoundments.

For a complete discussion of the newly proposed rules regarding New Jersey's freshwater wetlands, please refer to the August 7, 2000, New Jersey Register: Freshwater Wetlands Protection Act Rules Proposed Re-adoption with Amendments for the official final text of the proposal. This can also be found on the NJDEP web page at: <http://www.state.nj.us/dep/legal/fwwrule/fwwrule.htm>

## Stormwater Management

Stormwater management is one of the most important issues facing New Jersey watersheds today. Stormwater runoff is the water that literally "runs off" of property when it rains or snows. It does not have to go into a sewer. It may just go into the street or into a nearby stream as "nonpoint source" pollution. Increased development and the high percentages of impervious surfaces that result from this development are rapidly increasing the volume of stormwater runoff into local lakes, rivers, and streams.

Effective stormwater management, then, is important to prevent the loss and degradation of these water bodies. Stormwater management is useful in that it lessens peak-flow flooding and that it acts to decrease the amount of runoff pollutants reaching the waterway. Stormwater management systems (e.g. catch basins and drainage ponds) serve to reduce the volume of peak flow runoff and to partially treat the pollutants taken up into the water while flowing over the land. The normal goal for peak flow levels is that of the peak flow that occurred before development took place. There may be several problems with this strategy. When looking at the hydrograph for peak flow at pre-development, post-development, and post-development with stormwater management controls in place, the problem becomes much clearer. Without stormwater controls in place, a post-development area will have much higher peak flow volumes and rates due to the inability of the soil and flora to intercept the runoff because of the high degree of impervious surfaces. Basically, more water will flow overland rather than being soaked up by the sponge-

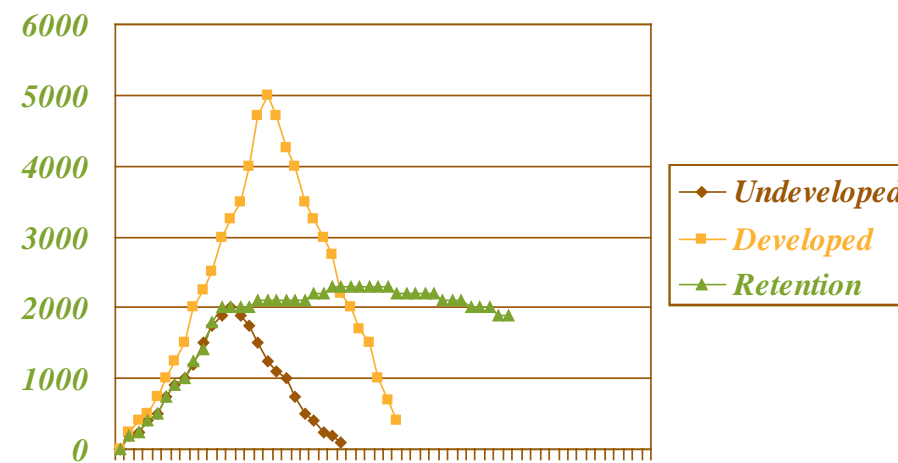






like properties of the soil. Stormwater management controls alter the naturally occurring hydrograph in a different, yet just as important manner. Peak flows for pre-development and post-development stormwater management control systems are set to be the same. However, the duration that this peak flow is maintained is significantly longer for post-development controlled areas. The effects of this are such that upstream and downstream areas are at peak flow at the same time rather than at different times as is the case in pre-development areas. Although the peak flooding at a given point is decreased, basin-wide flooding is increased overall. Unnatural, long-term flooding events can lead to overly anaerobic (devoid of oxygen) environments that will kill many of the native plant species and can allow pollutants to be released from plant and soil matter back into the waterway defeating much of the purpose of stormwater management. As mentioned earlier, floodplain and wetland areas maintained along a waterway can serve to mitigate these problems.

The following graph is a hypothetical depiction of different flow rates for undeveloped, developed, and developed with stormwater controls areas. The y-axis is flow in cubic feet per second and the x-axis is some interval of time (e.g. 4 hour intervals).



To comprehensively address these issues, NJDEP has drafted amendments to the Stormwater Management Rules that specify technical standards for stormwater runoff water quality and quantity, and that establish criteria for watershed control of stormwater runoff from new and existing development. The basic premise behind the amendments is that watershed-

based planning and program implementation for stormwater runoff control – which moves beyond site-by-site calculations after land development projects are proposed and implemented – can more effectively manage runoff quantity and water quality at lower total cost. (NJDEP Watershed Focus, Winter 1996)

In addition to these rules, NJDEP also published a Nonpoint Source Pollution Best Management Practices Manual to serve as a guide for nonpoint source pollution and stormwater management. The manual demonstrates how to integrate nonpoint source pollution and stormwater management control practices into the development planning process, such as demonstrating how to apply pollution prevention techniques during the site design stage of a development. The manual primarily presents guidance directed toward new development and redevelopment, but some of the procedures can also be applied to existing developments. For example, in heavily urbanized areas, litter often washes down catch basins and ends up in streams; and sediments, oil, grease, and other pollutants that run off roadways and parking lots end up becoming even more concentrated when they are collected in storm drains and discharged to streams. To remedy these circumstances, new catch-basin gratings should be installed whenever streets are resurfaced or new streets are constructed; and street sweeping or vacuuming programs should be established and especially utilized after snowmelts in the spring to pick up sand, other grit and accumulated pollutants.

With the issuance of the new watershed-based Stormwater Management Rules and the Best Management Practices Manual, the stage is set to develop a stormwater management plan for the Rancocas (Watershed Management Area 19). The County Soil Conservation District has compiled runoff and release data from all the projects they have reviewed since 1976. This data can be used to help develop the watershed based plan. Once this plan is developed and adopted, all municipal plans and ordinances are expected to comply with the new standards. In the meantime, the Soil Conservation District is conducting a subwatershed stormwater management study of Mason's Creek, which flows into the South Branch at the border of Hainesport and Mt. Laurel townships.



## ***Best Management Practices to Effectively Control Stormwater Runoff Quality and Quantity***

*Any watershed-based stormwater management plan should stress the following features of stormwater management planning:*

- 1. Prevent stormwater runoff through innovative planning and site design techniques*
- 2. Guide development to be compatible with the natural features of the site*
- 3. Manage the inevitable runoff to meet water quantity and quality goals*
- 4. Select, design and maintain stormwater facilities properly*
- 5. Prevent pollution before it is created by limiting use of pesticides and fertilizers in the landscape and finding alternatives to road salts for deicing purposes. Periodic street vacuuming can help reduce inevitably created pollution before it reaches streams*
- 6. Retrofit developed areas to better control runoff quantity and quality. For example, extend the detention time of a basin to increase its solids settling capability and coordinate the timing of the outflow with other basins in the watershed to prevent downstream flooding; and install modified catch-basin grating to reduce litter reaching streams whenever streets are resurfaced or new streets are constructed*

*SOURCE: Stormwater and NPS Pollution Best Management Practices Manual, NJDEP, 1994*

## ***EPA Phase II Stormwater Requirements***

*All of the municipalities within the study area except Southampton, Pemberton Borough and Pemberton Township (which were not referenced in a list of municipalities which fell within the urbanized area*

*boundary as determined by the Bureau of Census, although these municipalities should confirm their status) will have to comply with the EPA Stormwater Phase II Final Rule. This rule, which will be implemented by the NJDEP, will require operators of certain small municipal separate storm sewer systems (MS4s) to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage because their storm water discharges are considered "point sources" of pollution. All point sources, unlike nonpoint sources such as agricultural runoff, are required under the Clean Water Act to be covered by federally enforceable NPDES permits.*

*The permit application will require regulated small MS4s to submit in their Notice of Intent or individual permit application the following information:*

- A.** *Best Management Practices required for each of 6 minimum control measures:*
  - 1.** *Public education and outreach on stormwater impacts*
  - 2.** *Public participation/involvement*
  - 3.** *Illicit discharge detection and elimination*
  - 4.** *Construction site stormwater runoff control*
  - 5.** *Post-construction stormwater management in new development/redevelopment*
  - 6.** *Pollution prevention/good housekeeping for municipal operations*
- B.** *Measurable goals for each minimum control measure*
- C.** *Estimated months and years in which actions to implement each measure will be undertaken including interim milestones and frequency, and*
- D.** *The person/persons responsible for implementing or coordinating the stormwater program.*

*The NJDEP will issue general permits for regulated small MS4s by December 9, 2002, and operators of "automatically designated" regulated small MS4s must submit their permit applications within 90 days of permit issuance, no later than March 10, 2003; operators of regulated small MS4s designated by NJDEP must submit permit applications within 180 days of notice. Stormwater management programs will need to be fully developed and implemented by the end of the first permit term, typically a 5 year period. Source: [www.epa.gov/owm/sw/phase2](http://www.epa.gov/owm/sw/phase2)*

*Another issue with stormwater management is how to fund capital improvements needed to fix runoff problems in existing developed areas. One solution*





that has become prevalent in the Midwest, and is more recently being adopted in the eastern United States, is the establishment of a stormwater utility.

## *A New Idea - Stormwater Utility*

*A stormwater utility funds local stormwater management programs through monthly or quarterly user-charges assessed on all property within a watershed. The user-charge is based on each parcel's contribution of stormwater flow to the local drainage system. The user-charge would cover local costs for operation and maintenance, basin planning, facility construction, and program administration, similar to user-charges for other public utilities. Advantages of a stormwater utility include a stable, dedicated funding source for the proper planning, design, construction, operation, and maintenance of stormwater facilities; ability to use this funding source as leverage for bond issues to finance large-scale capital improvements; and an equitable user fee based on runoff contribution rather than property value. Disadvantages include expensive start-up costs in determining parcel-based user fees, and public reluctance to what may be perceived as a new tax. In addition, establishing a stormwater utility in New Jersey would require state enabling legislation. The impetus for this possibility may come from the NJDEP watershed studies presently being conducted throughout the state, especially if finding a new technique for funding management of stormwater arises as a major issue.*

## *Wastewater Management*

*Improperly treated wastewater discharged into a stream can be a major source of pollution. The NJDEP administers New Jersey Pollutant Discharge Elimination System (NJPDES), which regulates facilities and activities discharging or releasing pollutants into the surface and/or groundwater in the state.*

*NJDEP is currently undertaking a major initiative to update and improve the NJPDES program. In concurrence with the stormwater management watershed approach, the main focus of the NJPDES program improvement is a move to a watershed cycle*

*for the issuance of discharge-to-surface water permits. The watershed approach is intended to be a comprehensive program of planning, monitoring, modeling, total maximum daily load (TMDL) development and permitting, integrating both point and nonpoint source pollution controls, and public outreach. These proposals were still under review at the time of this publication. (NJ Water Quality Inventory, 1998)*

*According to the NJDEP, there are approximately 16 discharge permit holders along the Rancocas Creek. The majority of these dischargers are townships and private sewer companies, so the majority of discharge is related to public sewer and water releases. There are 4 discharge permit holders on each the North Branch Rancocas Creek, the South Branch Rancocas Creek, and the main stem Rancocas Creek. There are also 2 discharge permit holders on the Southwest Branch Rancocas Creek and one each on Kendles Run and an unnamed tributary to the Main Stem. There are also a number of groundwater quality testing wells in every township. These wells are owned and operated by various public, semi-public, and private agencies. (United States Geological Survey, Water Resources of New Jersey - <http://nj.usgs.gov/>)*

*The general assessment for point source pollution in the Rancocas Creek is that the North and South Branches suffer from low to moderate amounts of water pollution as a result from this and other types of pollution. No facilities were reported to be under NJDEP enforcement action as of Fall 2000. The conclusions reached, based on biological integrity studies, is that the principal sources of oxygen demand were more from sediment loading than from point source inputs. Other water quality indicators such as excessive nutrients, elevated algae production, and highly fluctuating diurnal dissolved oxygen concentrations point towards a combination of nonpoint and point source influences. Landfills, urban runoff, and septic systems are suspected to be the main culprits for lowered water quality in Pemberton, Lumberton, and the area near the lower South Branch. (NJ State Water Quality Inventory Report 1998, [http://www.state.nj.us/dep/dsr/watershed/area\\_19.pdf](http://www.state.nj.us/dep/dsr/watershed/area_19.pdf))*





Permit Number	Facility Name	Stream Segment	City
0004731	Elizabethtown Water Co.-Green St WTP	North Branch	Mount Holly
0005509	Sybron Chemicals, Inc	North Branch	Pemberton Township
0021326	Medford Lakes Borough	South Branch	Medford Lakes
0022438	Helen Fort Middle School	Unnamed trib to North Branch	Pemberton Township
0022519	Riverside STP	Main Stem	Riverside Township
0023361	Willingboro MUA	Main Stem	Willingboro Township
0023507	Delran Sewerage Authority	Main Stem	Delran Township
0023736	Pinelands Sewer Company	South Branch	Southampton Township
0024015	Mount Holly SA	North Branch	Mt. Holly Township
0024031	Evesham Twp. MUA – Elmwood	South Branch	Evesham Township.
0024821	Pemberton Twp. MUA	North Branch	Pemberton Township
0025178	Mt. Laurel Twp. MUA – Hartford	Main Stem	Mt. Laurel
0026832	Medford Twp. STP	South Branch	Medford Township
0028665	Mobile Estates of Southampton	South Branch	Southampton Township
0029548	Hartford Road WTP	Kendles Run	Moorestown
0128031	Bell Atlantic – Voorhees	Southwest Branch	Voorhees

(Source: NJDEP Bureau of Point Source Permitting)

## Toxic Discharges

Up until 1991, the NJDEP maintained a program assessing waters where toxic discharges from point sources were suspected. These assessments are now supplemented with current fish-tissue surveys and instream biological community assessments. Neither the Rancocas Creek nor any of the lakes in the study area were identified in the program as having experienced violations, and the fish in the creek were not cited as containing PCBs. (NJ Water Quality Inventory, 1994)

The "Toxic Fish Alert for the Delaware Estuary and Nearby Waters" prepared by the Delaware Riverkeeper Network, also did not specifically list the Rancocas as containing toxic fish. It did, however, list species including American eel, white perch, catfish, largemouth bass, chain pickerel, and bluefish in the main stem of the Delaware River that should not be eaten or should be limited to no more than one meal a week due to high concentrations of mercury, PCBs,

chlordan, and/or dioxin. Due to the tides (the Delaware is still tidal at the point that the Rancocas runs into it), these fish may also possibly be found in the Rancocas main stem, so the same advisories would apply. It would be wise to contact local fish and game experts to get the most up-to-date information on fish toxicity before consuming the listed fish.

## Endangered Wildlife and Habitat

Data from the Natural Heritage Program at the NJDEP indicates records for 27 occurrences of rare species that may be on or in the immediate vicinity of the study area, and 4 priority sites for natural diversity in the state are located within or near the study area. See Map 3 on page 10. Of the rare species recordings, 8 were vertebrates, one was an invertebrate, and the remainder were vascular plants. Some of the rare species recorded include Cooper's hawk, bog turtle, timber rattlesnake, bobolink, Pine barrens treefrog, eastern mud salamander, barred owl,





*swamp pink, Parker's pipewort, stiff dogwood, and spring evens. The biodiversity ranks of the 4 priority sites include B2 - an excellent occurrence of federally listed plant species in vigorous condition, B4 - occurrence of a federally listed threatened plant species impacted by stormwater flow, and B5 - one species of plant of special concern.*

*One animal and two plants are ranked G3, meaning they are globally rare and vulnerable to extinction, and all of the species recorded are considered endangered at the state level, meaning their prospects for survival within the state are in immediate danger, requiring immediate assistance or extinction will probably follow. The primary reason for most of these species' pending demise is destruction of habitat from encroaching development.*

*About 216 other rare species and natural communities have also been recorded by the state's Natural Heritage Program to survive at various locations within Burlington County. Because the Rancocas Creek is the largest watershed in the county, many of these county-recorded species may depend on the Rancocas Creek area for food, migration and nesting habitat. Streamside residents can help provide habitat for wildlife by planting native species whenever possible, which also tend to be less invasive.*







# 3

## *Chapter*

### Park and Recreation Resources







**P**art of the purpose of the Rancocas Creek Greenway Plan for the Main Branches is to promote recreational use of the creek to instill appreciation of the creek as a resource, which is expected to lead to better stewardship. Promoting recreational use first involves assessing current recreational facilities and activities, and then recommending areas for enhancements. Improvements could be in the form of additional parkland, better access, improved physical facilities, and additional programming for creek related recreational activities. See Map 4 - Type of Open Space, on page 31, for a regional picture of parkland in the greenway area.

## Inventory of Protected Open Spaces

### State Parks

**Rancocas Creek State Park**, over 1,200 acres at the confluence of the North and South Branches, anchors the western boundary of the Main Branches study area. The park currently leases land in Westampton Township to the Powhatan Indians of the Delaware Valley, the New Jersey Audubon Nature Society, Camp Melpine, and to other nonprofit groups such as a group that flies model airplanes on a large field within the park. The Audubon Society maintains a nature trail and runs educational programs. The Powhatan Indians run occasional festivals open to the public. Camp Melpine runs a small day camp for special needs children. The park also has informal trails (some are dirt roads) in Westampton and Hainesport townships, and some sites that can be used for canoe launches, none of which are well marked or used. In Mt. Laurel, (outside the Main Branches study area) the state leases land to the Township for active recreational ballfields.

### County Parks

The other major park along the Rancocas is **Smithville County Park** on the North Branch in Eastampton Township. Smithville has a fascinating history as an industrial village (see *History of Settlements along the Rancocas*, page 47). The site was purchased in 1975 as the county's first park, and includes the Mansion, the Annex, and the village, all of which are listed on the New Jersey and National Registers of Historic Places. Today, the park serves

as the crown jewel of Burlington County's parks, and annual county festivals and canoe excursions are held at the park. In addition, self-guided walking tours of the surrounding village and scheduled tours of the Mansion and Smithville Complex are available. In the last 2 years, the county open space program has been tapped to expand the county holdings around Smithville to ensure that it is preserved in its agrarian context. To date, two farms on the north side of the original park, totaling more than 170 acres, have been purchased by the county and will be developed with trails, picnic tables and a nature observation area, which will all be accessible to people disembarking from canoe trips up or down the Rancocas. In addition, park plans for Smithville include restoring worker housing and converting the factory into a museum and visitor center.

In Hainesport Township, the county recently purchased the **Winzinger Tract**, a 130 acre former sand/gravel mining site that is on the south side of the North Branch from the state park lands. The site has a lot of trails from its mining days and the county parks department is working on a park plan emphasizing passive recreation, such as picnic tables, in a natural setting. The existing trails will be connected to other local trails and a canoe launch site will be provided. In the future, the county may provide a canoe livery.

Although not within the Main Branches Greenway study area, Burlington County has purchased several other properties on the Main Stem of the Rancocas Creek. The Pennington Farm, in Delanco Township, is being developed into a county park. The 180 acre farm was purchased by the county in the late 1990's and plans are to return part of it to its natural state with successional fields and reforestation. A trail network and playing fields will be developed on part of the site. Across the creek in Delran Township, the county purchased the 120 acre Anderson Farm to the east of Route 130, and 55 acre Amico Island at the mouth of the creek. The county is currently leasing Anderson for continued orchard use, and Amico Island provides passive use recreational access at the mouth of the Delaware River. Upstream in Moorestown Township, the county purchased the +/- 60 acre **Moriuchi Tract** for preservation and public access.



## Major Municipal Parks

Almost all of the 11 study area municipalities have at least some municipal parkland along the Rancocas Main Branches. Below, local parks are described by municipality, followed by municipal maps depicting type of open space ownership, as well as historic sites, which are discussed in Chapter 4.

**Westampton:** Most of the township's creekside land is also state parkland, but there is a small, low-density residential area between the state park's eastern boundary and Mt. Holly. Within this area the township owns a block of small parcels on Church Street, not quite adjacent to the creek. These parcels are not developed or marked as municipal parkland, but, due to their proximity to the creek, the state park and the Timbuctoo historic cemetery (see page 48), these lands could be expanded and made into a cultural and recreational amenity.

**Mount Holly:** The county seat has a number of municipal parks along the Rancocas including Mill Dam Park, Monroe Street Park, Island Creek Park, and Iron Works Park. These parks have a variety of amenities including active and passive recreational facilities.

**Eastampton:** Smithville County Park occupies about one-third of the creekside frontage in Eastampton. The remainder of creekside land is primarily low density residential in the area known as Rancocas Valley. Municipal parkland is found north of Smithville within residential neighborhoods.

**Pemberton Township:** There are no municipal parks along the creek within the study area of Pemberton Township, but the township owns the rail-to-trail between Birmingham and Pemberton Borough.

**Pemberton Borough:** The borough owns 2 pieces of land straddling the creek on Hanover Street. A township firehouse was recently constructed on the east-side property.

**Hainesport:** Besides the state park and the county's Winzinger tract, the township owns several small lots on the North Branch. They are not marked or used as municipal land.

**Lumberton:** The township and the school board each own one unimproved parcel, adjacent to each other,

on the South Branch near Hainesport. There is little-to-no public access to the Rancocas in Lumberton.

**Southampton:** The township has one park, in Vincentown, called Vincentown Mill Pond on the Rancocas. The park surrounds a lake with open fields, park benches, and some walkways.

**Medford:** Medford's main municipal park on the creek is known as Medford Park. The township also owns numerous other small creekside parcels that are primarily not developed as parks.

**Evesham:** The township owns Evans Mill Pond Park, located on Barton's Run tributary to the Southwest Branch, just south of where the tributary branches off.

**Voorhees:** The township owns Lions Lake Park and an adjacent girls' softball field on Barton's Run tributary, accessed from Dutchtown Road off Route 73.

## Privately Protected Lands

In addition to the state, county and municipal parks and land holdings, there are a number of privately protected lands within the study area:

**Pemberton Borough:** The Rancocas Conservancy holds title to 2 parcels totaling about 50 acres on the south side of the North Branch within the borough. These parcels are managed by the conservancy and are left in their natural state for conservation purposes.

**Medford:** About 9 small creekside parcels are privately held by homeowner associations. The long-term protection status of these parcels is unclear without reading each of their deeds. To be permanently protected, a conservation easement, rather than just a deed restriction, is required.

**Voorhees:** Voorhees has almost 15 parcels owned by homeowner associations located on the 2 headwater areas of Barton's Run. The long-term protection status of these is also unclear without investigating their deeds for conservation easements rather than just deed restrictions.

**Hainesport:** The Water's Edge development on the South Branch adjacent to Lumberton has homeowner association land on the creekside half of the property. The long-term protection status of this land is also unclear without reading the deed.







## Preserved Farmland

**Southampton:** Southampton Township, a largely agricultural community, has the largest amount of preserved and pending acquisition farmland in the study area. About 410 acres are permanently preserved and almost 600 acres are pending acquisition or on the top 30 list within the study area.

**Medford:** The township has one 73 acre permanently preserved farm on the Southwest Branch. Medford has other permanently preserved farms, but they are not within the study area.

Areas like the Rancocas Creek State Park, Smithville County Park, and Medford Park not only provide natural area protection and recreational opportunities on their own, but, as part of the greenway, they are like anchors. These large open spaces become the resources that the rest of the greenway serves to link. For example, with respect to providing a hospitable corridor for wildlife, the greenway open space buffer along the creek provides the migratory corridor and the anchors provide the stopping grounds. In addition, the presence of large publicly owned lands ensures that significant open spaces will remain in an otherwise suburbanizing environment.

## Quantitative Parcel Assessment of Protected Lands

Of the 1,400 parcels in the Rancocas Greenway study area, 263 are currently protected as parkland, preserved farms, or through conservation easements or deed restrictions, and about 650 are developed parcels. Approximately 450 parcels remain. To conserve the natural and recreational values of the Rancocas Creek, these 450 parcels should be protected through some means. Chapter 5 - The Conservation Package and Opportunities for Trail Connections on page 53 recommends options on conserving these lands. Options range from providing good stewardship information to interested streamside landowners, to strengthening land use regulations, to seeking conservation easements, to acquisition. All acquisition and easement efforts should be voluntary, and occur piecemeal, over time, as opportunities with willing landowners arise.

## Trails in the Rancocas Valley

There are numerous trails and bikeways in the vicinity of the study area, and ongoing plans for new trails. See Map 16 - Proposed Trail Connections, on page 43. The existing trail network consists of the Birmingham to Pemberton rail-to-trail project in Pemberton Township, a short trail system within Smithville Park, a limited trail and unpaved roadway system (that could be used as a trail) within the Rancocas State Park, and a pathway system at Medford Leas and Medford Park.

### Proposed and Planned Trails

Burlington County is developing a plan, referred to as the Rancocas Greenway Trail, to link the Delaware River with Smithville and eventually with Lebanon State Forest. As part of this plan, Burlington County and the Mt. Holly Municipal Utility Authority are working on a 4 mile rail-trail connection between Birmingham and Mt. Holly, which would terminate at Island Creek Park. This portion is well underway and is expected to open in the next few years. From the eastern end point of the Pemberton Rail-Trail, Pemberton Township is working to extend the rail-trail another 5 miles to Wrightstown. From there, the rail-trail would link to the proposed Juliustown to Kinkora Rail Trail, which would connect with both the Delaware River Heritage Trail (a planned loop trail from Trenton to Palmyra, and Tacony to Morrisville, using existing Delaware River bridges for crossings and also connecting with the East Coast Greenway - Maine to Florida designated trail route) and the Cape May to High Point Trail (an on- and off-road trail connection crossing New Jersey from its southeastern most point at Cape May to its northwestern most point, High Point). Looking southeast from the existing Pemberton Trail, Pemberton Township is also working on the Pemberton to New Lisbon Trail, linking the existing rail trail with New Lisbon and eventually Lebanon State Forest. At the southwestern end of the study area, Medford and Evesham have extensive bike plans that are primarily on-road. These bike routes have potential to connect with the proposed River to Bay Greenway, a project proposed by the Trust for Public Land that would connect the Delaware River and Barnegat Bay.



**Rancocas Main Branches Greenway Proposed Trails**

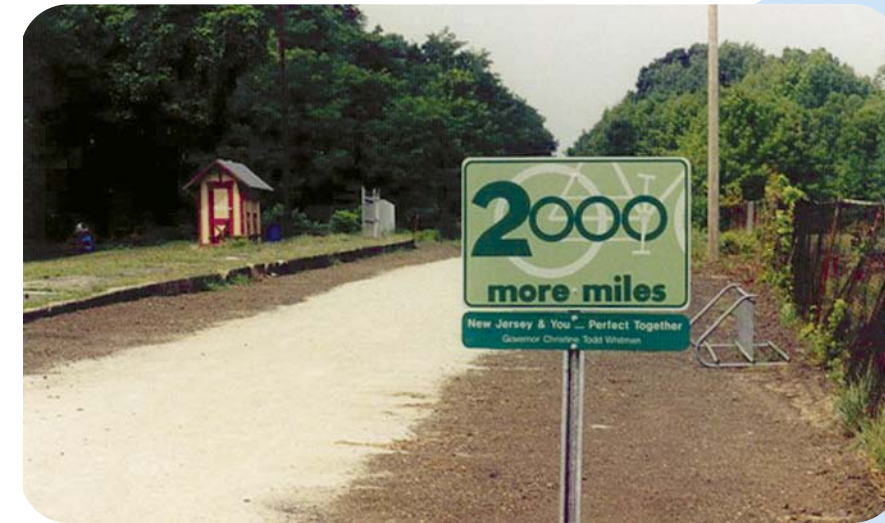
The current and planned trail network in and around the Rancocas is impressive, but there are two major trail gaps that, if connected, would provide a continuous off-road trail experience linking all of the Main Branches and most of its historic villages. The first gap is between Mt. Holly and Medford which could be connected through the largely intact right-of-way of the old Mt. Holly to Medford Rail Line. Since converting this abandoned ROW to a trail would involve cooperation and coordination between Mt. Holly, Lumberton and Medford, the county should facilitate the process by starting with an initial meeting to bring the parties together. This rail-trail project could ultimately connect the county seat, village of Lumberton, Kirby's Mill and village of Medford, providing a fantastic trip through Burlington County history and commerce. From Medford, the second gap is to Marlton. Here, a straight connection appears feasible along the wide right-of-way of Route 70, which New Jersey Department of Transportation has studied and is drafting policy to maintain the right-of-way for public uses. Medford and Evesham townships should meet to coordinate and facilitate this project. Since both Medford and Evesham townships already have extensive on-road bike networks, this project would further expand bike travel in the area and offer an off-road alternative.

**Fishing Along the Rancocas Main Branches**

According to the New Jersey Division of Fish, Game and Wildlife's Freshwater Fish Management Database, the Rancocas Creek throughout its entire length is very productive and contains a large diversity of fishes. Anadromous species (fish that swim upstream from the sea to breed) such as alewife, herring, blueback herring, American shad and striped bass use the Rancocas for spawning. An excellent largemouth bass and black crappie fishery also exist throughout its length. The quantity of forage fishes along the Rancocas could be characterized as exorbitant. The forage consists of white suckers, silvery minnows, and river herring. In 1989, the division stocked hybrid tiger muskie fingerlings in an attempt to develop an additional

fishery. These stockings are now being evaluated to determine their success. In addition, trout were stocked in the Main Stem in 1988 and 1989, and have been stocked in the Southwest Branch every year since 1991.

Creating a greenway along the Rancocas will ensure a hospitable and healthy habitat for fish in the future. The addition of more public lands, fishing docks, where appropriate, and improved on-site signage and website information that informs the public of good fishing points, would allow more people to enjoy and appreciate this activity on the Rancocas.



**Fish Found in the Rancocas Creek**

Main Stem	North Branch	South Branch
American Eel	Largemouth Bass	Largemouth Bass
Largemouth Bass	Striped Bass	Striped Bass
Smallmouth Bass	Bluegill	Bluegill
Striped Bass	Brown Bullhead	Yellow Bullhead
Bluegill	Common Carp	Common Carp
Brown Bullhead	Channel Catfish	Channel Catfish
Common Carp	White Catfish	White Catfish
White Catfish	Creek Chubsucker	Creek Chubsucker
Creek Chubsucker	Black Crappie	Black Crappie
Blueback Herring	Swamp Darter	American Eel
Banded Killfish	American Eel	Banded Killfish
White Perch	Goldfish	Silvery Minnow
Gizzard Shad	Banded Killfish	White Perch
White Sucker	Silvery Minnow	Yellow Perch
Golden Shiner	Tiger Muskellunge	Chain Pickerel
Satinfish Shiner	White Perch	Pumpkinseed
Spottail Shiner	Yellow Perch	Gizzard Shad
White Sucker	Satinfish Shiner	
Pumpkinseed	Spottail Shiner	
Silvery Minnow	White Sucker	
	Redbreast Sunfish	

Source: NJ Division of Fish, Game and Wildlife, electrofishing data from various years between 1972 and 1998





## Canoeing the Rancocas

Many outdoor enthusiasts have canoed the Rancocas and reported it to be a fun, scenic and worthwhile trip. A 1992 book titled *Garden State Canoeing - A Paddler's Guide to New Jersey*, by Edward Gertler, gives trip descriptions for sections of the North, South and Southwest Branches of the Rancocas. The North Branch from Pemberton to Mt. Holly is noted as not as scenic as the upstream section between Pemberton and Browns Mills. The author is downright disparaging of the passage through Ewansville, which is described as full of bulkhead banks, trash and a bountiful display of plastic lanterns, signs, and tacky lawn ornaments. Smithville is described as a pleasant interlude from the blight. Passage through Mt. Holly is largely through channelized concrete walls, sluice gates and weirs, offering few glimpses of the historic town. Unfortunately, noise from the New Jersey Turnpike is reported to significantly reduce the appeal of canoeing through the Rancocas State Park.

According to Gertler, the South Branch never experienced the popularity of the North Branch, probably because no one sawed it out and kept it easily canoeable. The upper part of the South Branch, above Vincentown, is described as a terrible, tangled swamp of thorns, brush and fallen trees, until it opens up into farmland closer to Vincentown. After the Mill Pond in Vincentown, much of the passage is wooded and undeveloped, with 30 foot beech-covered bluffs gracing many bends. The stretch through Lumberton is described as disappointing due to suburban development and noise from highway traffic.

Gertler describes the Southwest Branch, putting in the creek in Medford at Route 541, as a good alternative to the South Branch (although Gertler says it would be even nicer if someone were to saw it out). Except for the house-lined banks of the pond above Kirby's Mill, the setting is mostly natural, flanked by high banks, until reaching the village of Lumberton.

## Tips on Canoeing the Rancocas

**Best Times:** High water is generally from November through April.

**USGS Gauging Stations:** Route 530 bridge in Browns Mills - levels above 5.6 feet are fine; Route 530 bridge in Pemberton, levels above 1.6 feet are fine; above Vincentown at Route 641 bridge, levels above 2.7 feet are fine; Route 541 bridge in Medford, levels above 3.8 feet are needed.

**Obstacles and Hazards:** There are numerous dams, weirs, sluice-gates, low bridges and strainers, not to mention the hazards of motor boats along stretches near the Main Stem, and poison ivy growing on liftover trees on the South Branch.

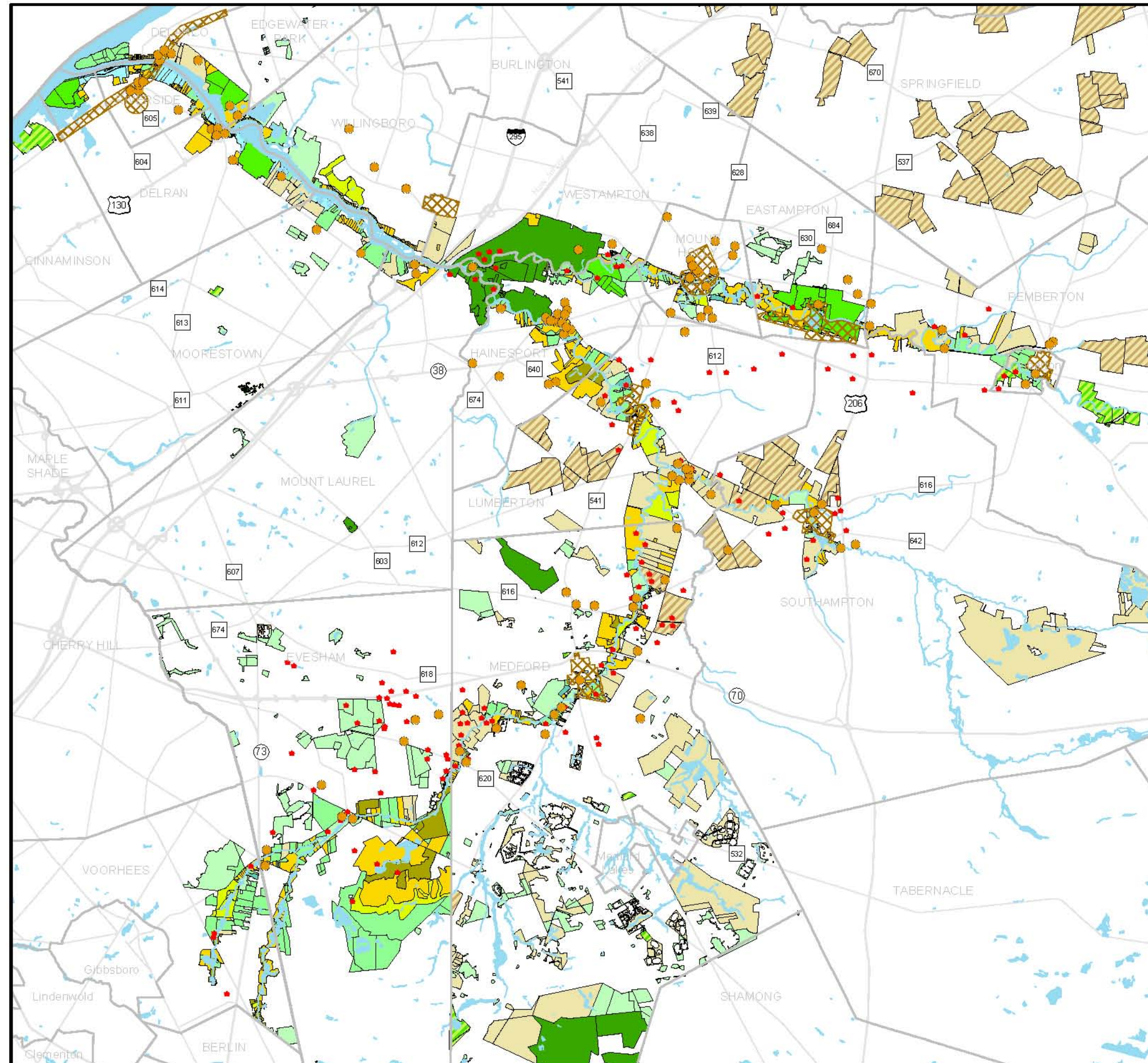
*Source: Edward Gertler, Garden State Canoeing - A Paddler's Guide to New Jersey, The Seneca Press: Silver Spring, MD, 1992.*

Current canoe launch sites, which are largely informal places that are suitable to launch a canoe into the creek, are shown on Map 18 on page 56. Only one of these sites is a commercial livery - Clark's Canoe Rental in Pemberton Borough. Another commercial canoe livery, Hacks, used to operate in Mt. Holly, but has been closed down. Except for the canoe portage sign at Smithville and Clark's sign in Pemberton, no canoeing signs were seen anywhere along the Rancocas Main Branches. People who canoe the creek apparently need to know by word of mouth or from scoping out the area where they can launch their canoes. Because canoeing the Rancocas would likely lead to increased appreciation and stewardship of the creek, both Burlington County and the municipalities should consider ways to facilitate this passive recreational activity. For example, the county could provide canoe rentals at Smithville or the new Winzinger Park, or it could even look into acquiring Hacks Canoe in Mt. Holly to resurrect canoeing in the county seat. In addition, improved signage indicating canoe launch areas at the state park, county parks, and most creekside municipal parks would encourage more people to seek out this recreational activity. Furthermore, the county should develop a brochure and a webpage for canoeing the Rancocas, complete with maps of access points, facilities, gage stations, safety tips and points of interest.



# MAP 4: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

N

0      2      4      6

Miles

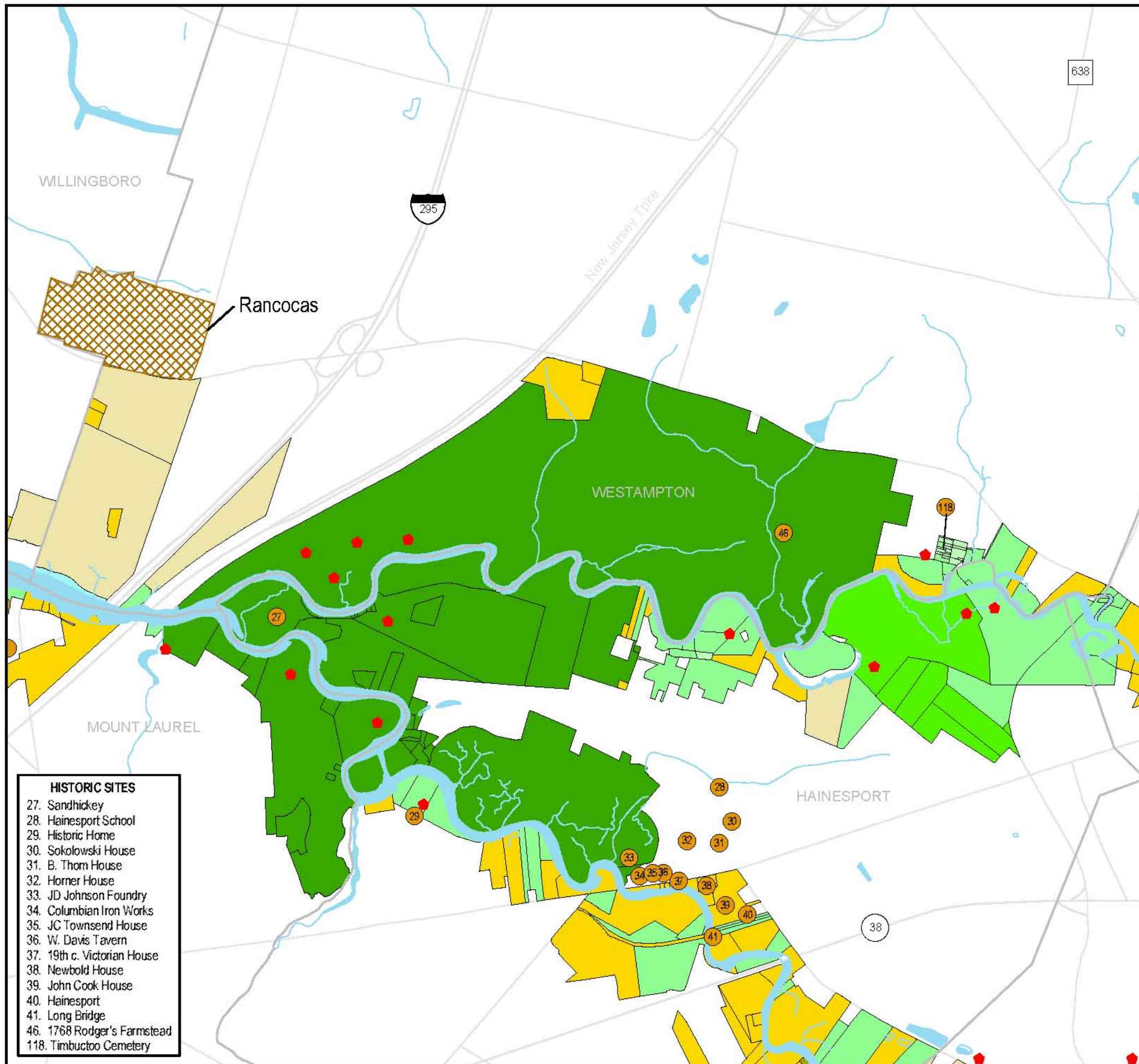
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# MAP 5: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### WESTAMPTON TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**  
 Location

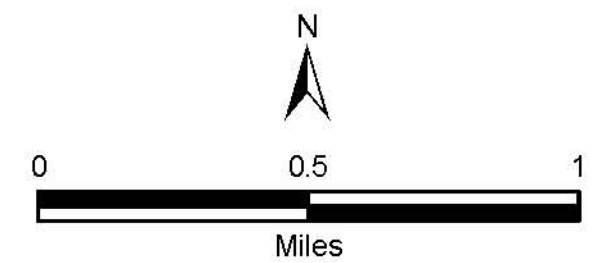
**HISTORIC DISTRICT**  
 Boundary

**ARCHEOLOGY SITE**  
 Location

**BASE MAP**

Road	Stream
County Boundary	Municipal Boundary

- HISTORIC SITES**
- 27. Sandhickey
  - 28. Hainesport School
  - 29. Historic Home
  - 30. Sokolowski House
  - 31. B. Thom House
  - 32. Horner House
  - 33. JD Johnson Foundry
  - 34. Columbian Iron Works
  - 35. JC Townsend House
  - 36. W. Davis Tavern
  - 37. 19th c. Victorian House
  - 38. Newbold House
  - 39. John Cook House
  - 40. Hainesport
  - 41. Long Bridge
  - 46. 1768 Rodger's Farmstead
  - 118. Timbuctoo Cemetery



















# MAP 6: RANCOCAS CREEK GREENWAY


## TYPE OF OPEN SPACE

### MOUNT HOLLY TOWNSHIP


**TYPE OF OPEN SPACE**

 State Owned	 School Board Owned
 County Owned	 Private Open Space: Camp, Cemetery, Golf Course
 Municipally Owned	 Farmland
 Preserved Farmland	 Vacant
 Land Trust	 Developed
 Conservation Easement	 Tidal / Marshland
 Homeowner Association Land	 Water


**HISTORIC SITE**

 Location


**HISTORIC DISTRICT**


 Boundary


**ARCHEOLOGY SITE**


 Location

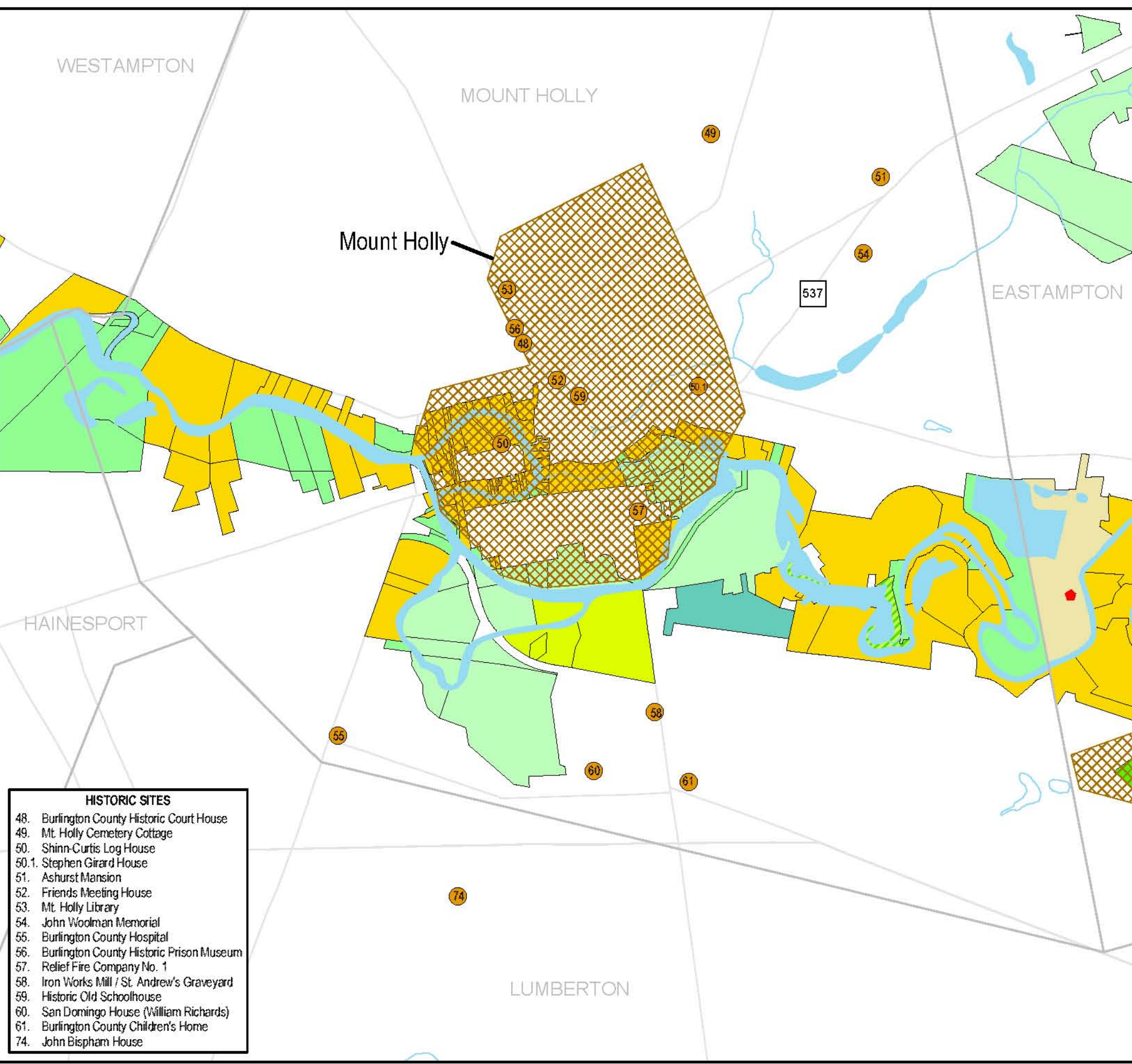
**BASE MAP**

 Road

 Stream


 County Boundary

 Municipal Boundary




- HISTORIC SITES**
- 48. Burlington County Historic Court House
  - 49. Mt. Holly Cemetery Cottage
  - 50. Shinn-Curtis Log House
  - 50.1. Stephen Girard House
  - 51. Ashurst Mansion
  - 52. Friends Meeting House
  - 53. Mt. Holly Library
  - 54. John Woolman Memorial
  - 55. Burlington County Hospital
  - 56. Burlington County Historic Prison Museum
  - 57. Relief Fire Company No. 1
  - 58. Iron Works Mill / St. Andrew's Graveyard
  - 59. Historic Old Schoolhouse
  - 60. San Domingo House (William Richards)
  - 61. Burlington County Children's Home
  - 74. John Bispham House


N



0      0.25      0.5      0.75



Miles



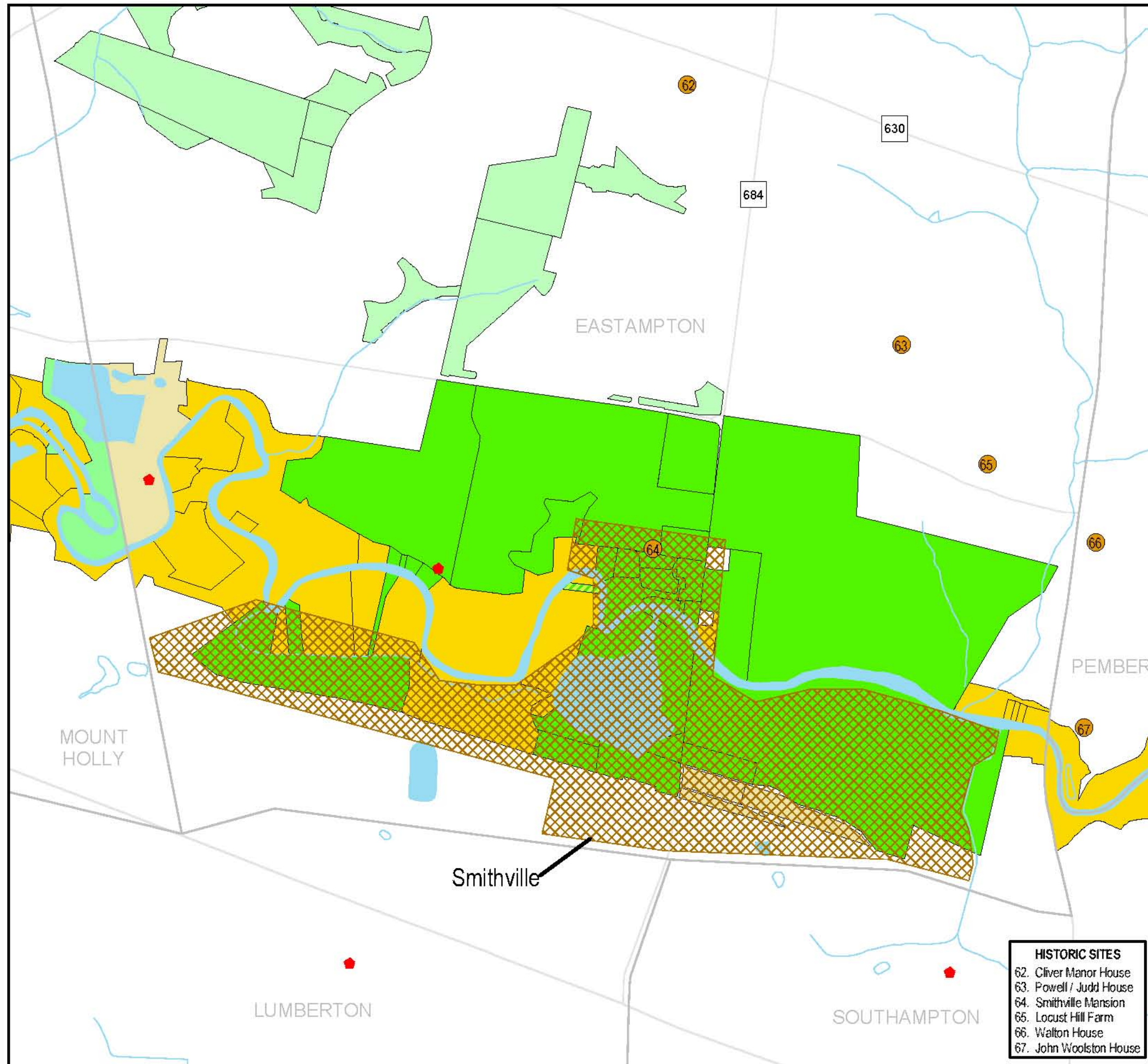
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# MAP 7: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### EASTAMPTON TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 62. Cliver Manor House
  - 63. Powell / Judd House
  - 64. Smithville Mansion
  - 65. Locust Hill Farm
  - 66. Walton House
  - 67. John Woolston House

0 0.25 0.5 0.75

Miles

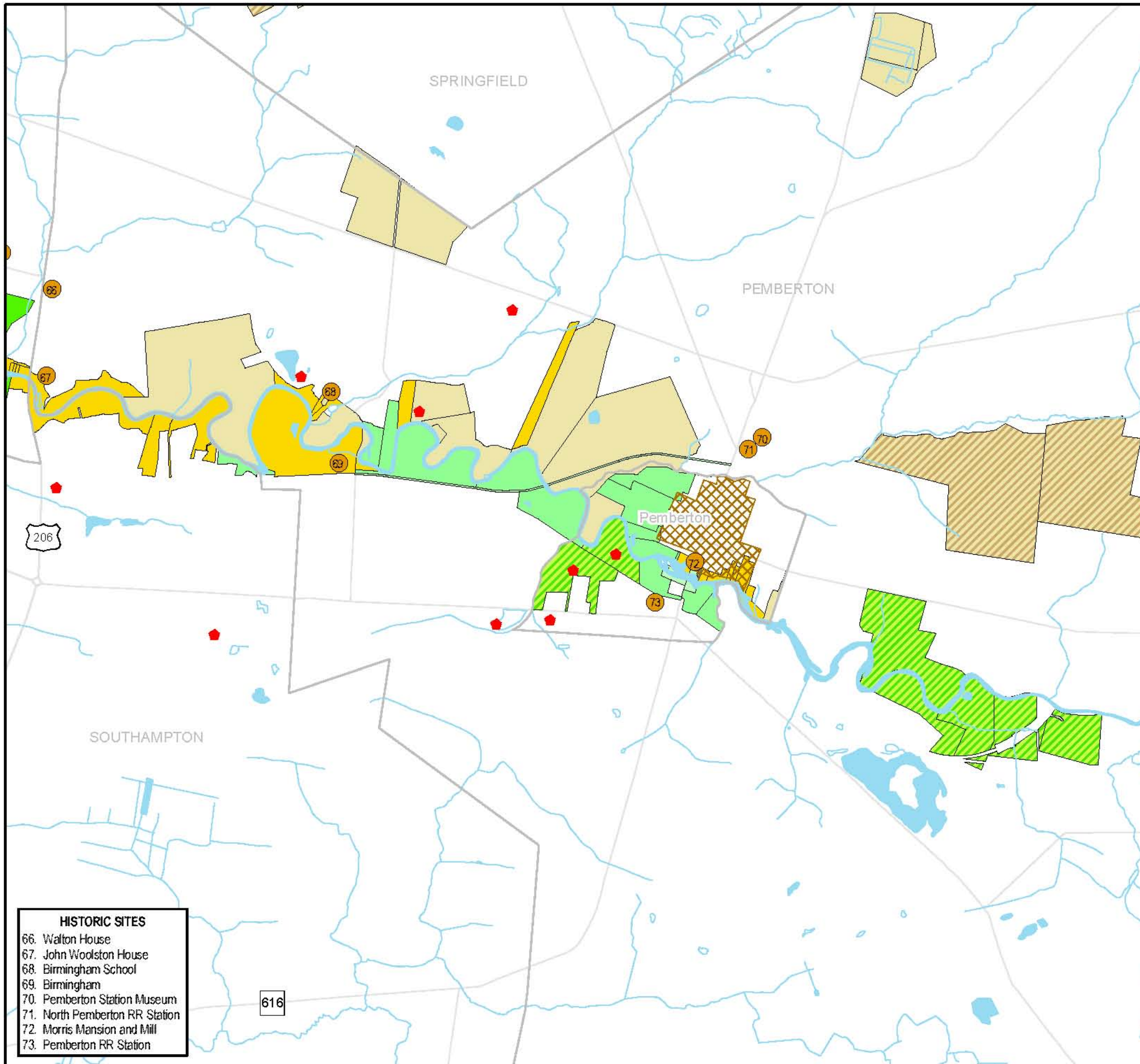
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DECEMBER 2002



# MAP 8: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### PEMBERTON TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 66. Walton House
  - 67. John Woolston House
  - 68. Birmingham School
  - 69. Birmingham
  - 70. Pemberton Station Museum
  - 71. North Pemberton RR Station
  - 72. Morris Mansion and Mill
  - 73. Pemberton RR Station

N

0      0.5      1      1.5

Miles

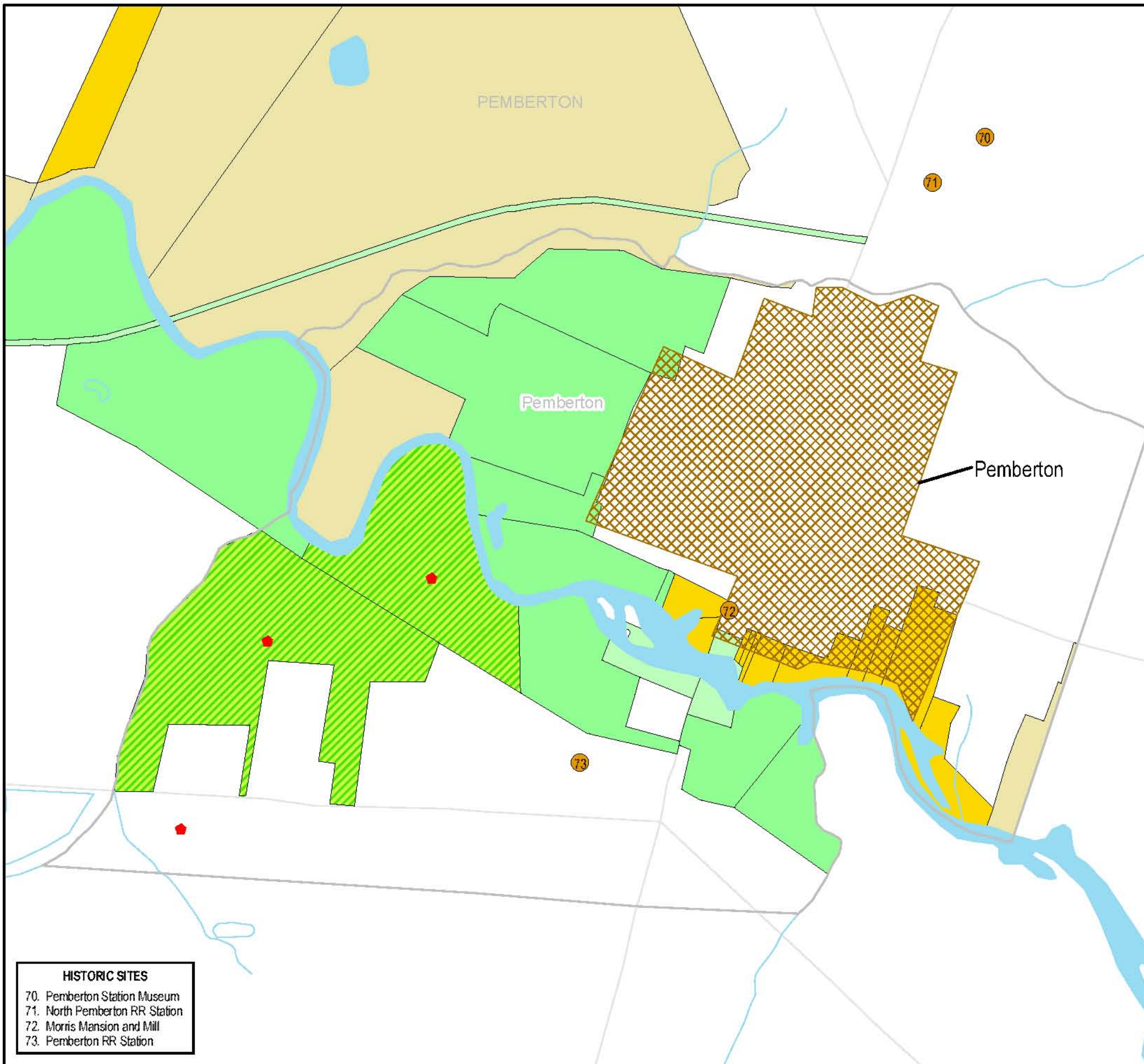
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REGIONAL PLANNING COMMISSION  
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# MAP 9: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### PEMBERTON BOROUGH



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 70. Pemberton Station Museum
  - 71. North Pemberton RR Station
  - 72. Morris Mansion and Mill
  - 73. Pemberton RR Station

N

0      0.125      0.25      0.375

Miles

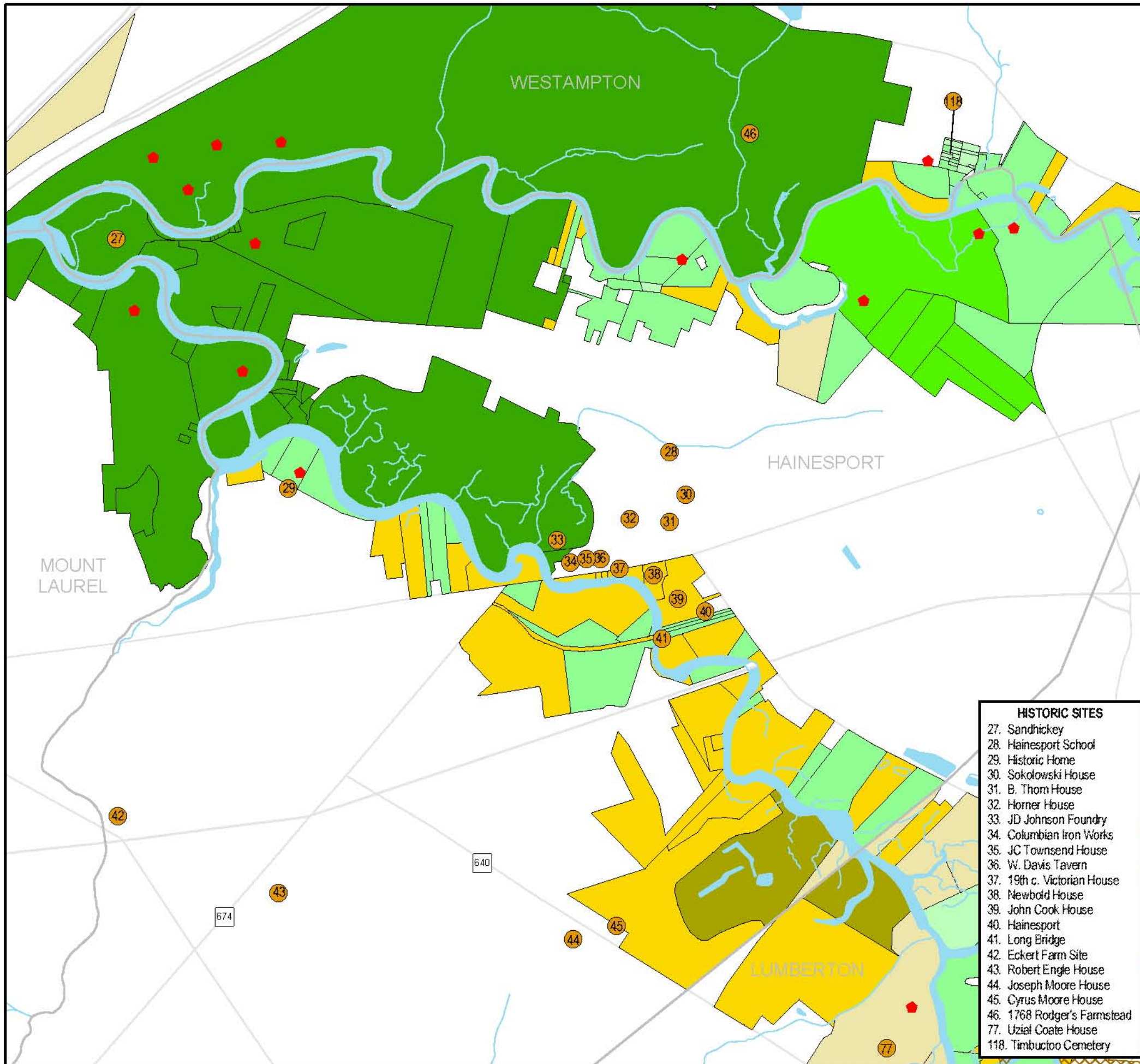
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REGIONAL PLANNING COMMISSION  
DECEMBER 2002



# MAP 10: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### HAINESPORT TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 27. Sandhickey
  - 28. Hainesport School
  - 29. Historic Home
  - 30. Sokolowski House
  - 31. B. Thom House
  - 32. Horner House
  - 33. JD Johnson Foundry
  - 34. Columbian Iron Works
  - 35. JC Townsend House
  - 36. W. Davis Tavern
  - 37. 19th c. Victorian House
  - 38. Newbold House
  - 39. John Cook House
  - 40. Hainesport
  - 41. Long Bridge
  - 42. Eckert Farm Site
  - 43. Robert Engle House
  - 44. Joseph Moore House
  - 45. Cyrus Moore House
  - 46. 1768 Rodger's Farmstead
  - 77. Uzial Coate House
  - 118. Timbuctoo Cemetery

N

0                      0.5                      1

Miles

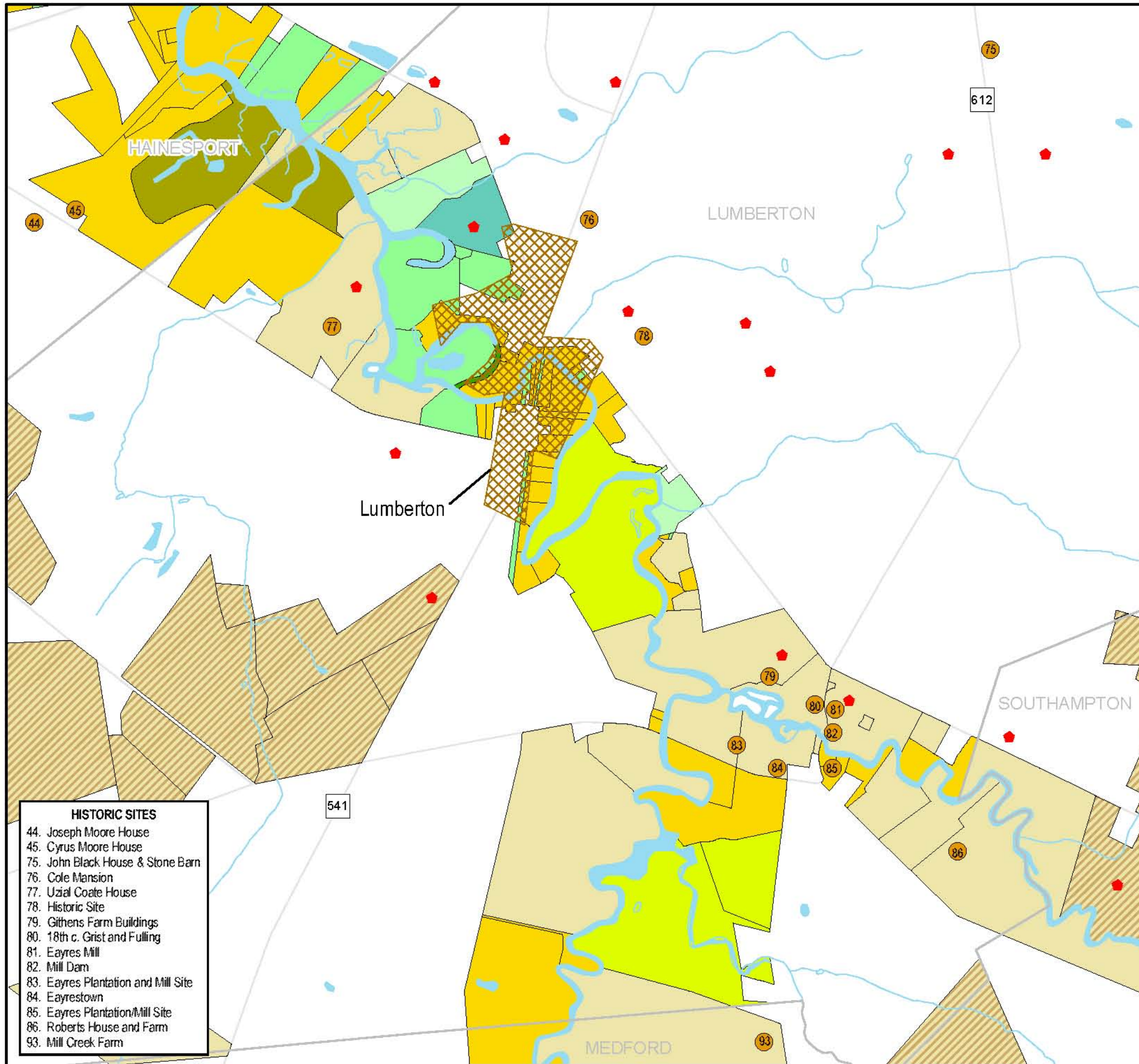
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# MAP 11: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### LUMBERTON TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 44. Joseph Moore House
  - 45. Cyrus Moore House
  - 75. John Black House & Stone Barn
  - 76. Cole Mansion
  - 77. Uzial Coate House
  - 78. Historic Site
  - 79. Githens Farm Buildings
  - 80. 18th c. Grist and Fulling
  - 81. Eayres Mill
  - 82. Mill Dam
  - 83. Eayres Plantation and Mill Site
  - 84. Eayrestown
  - 85. Eayres Plantation/Mill Site
  - 86. Roberts House and Farm
  - 93. Mill Creek Farm

N

0      0.5      1

Miles

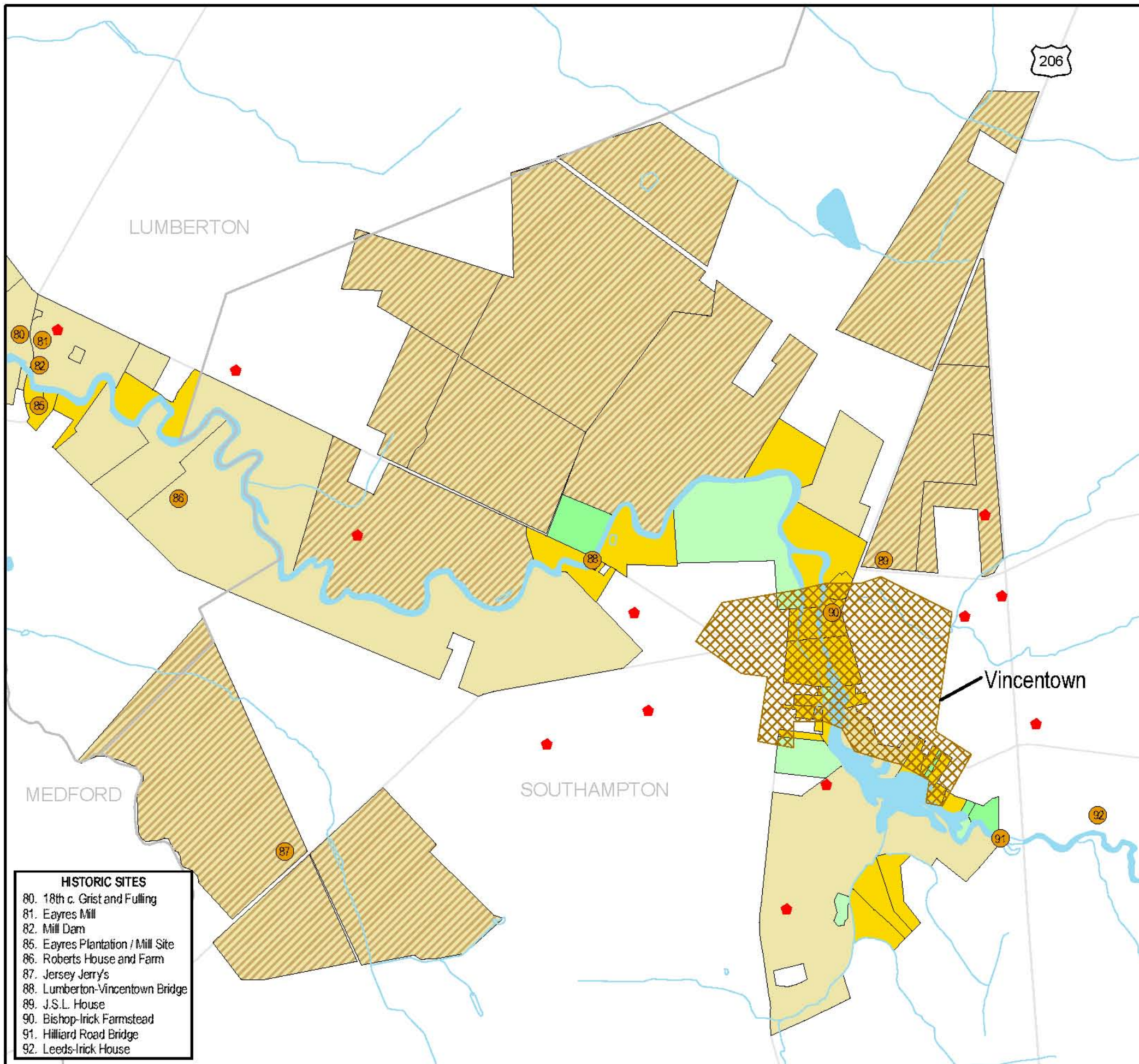
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# MAP 12: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### SOUTHAMPTON TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 80. 18th c. Grist and Fulling
  - 81. Eayres Mill
  - 82. Mill Dam
  - 85. Eayres Plantation / Mill Site
  - 86. Roberts House and Farm
  - 87. Jersey Jerry's
  - 88. Lumberton-Vincentown Bridge
  - 89. J.S.L. House
  - 90. Bishop-Irick Farmstead
  - 91. Hilliard Road Bridge
  - 92. Leeds-Irick House

N

0                      0.5                      1

Miles

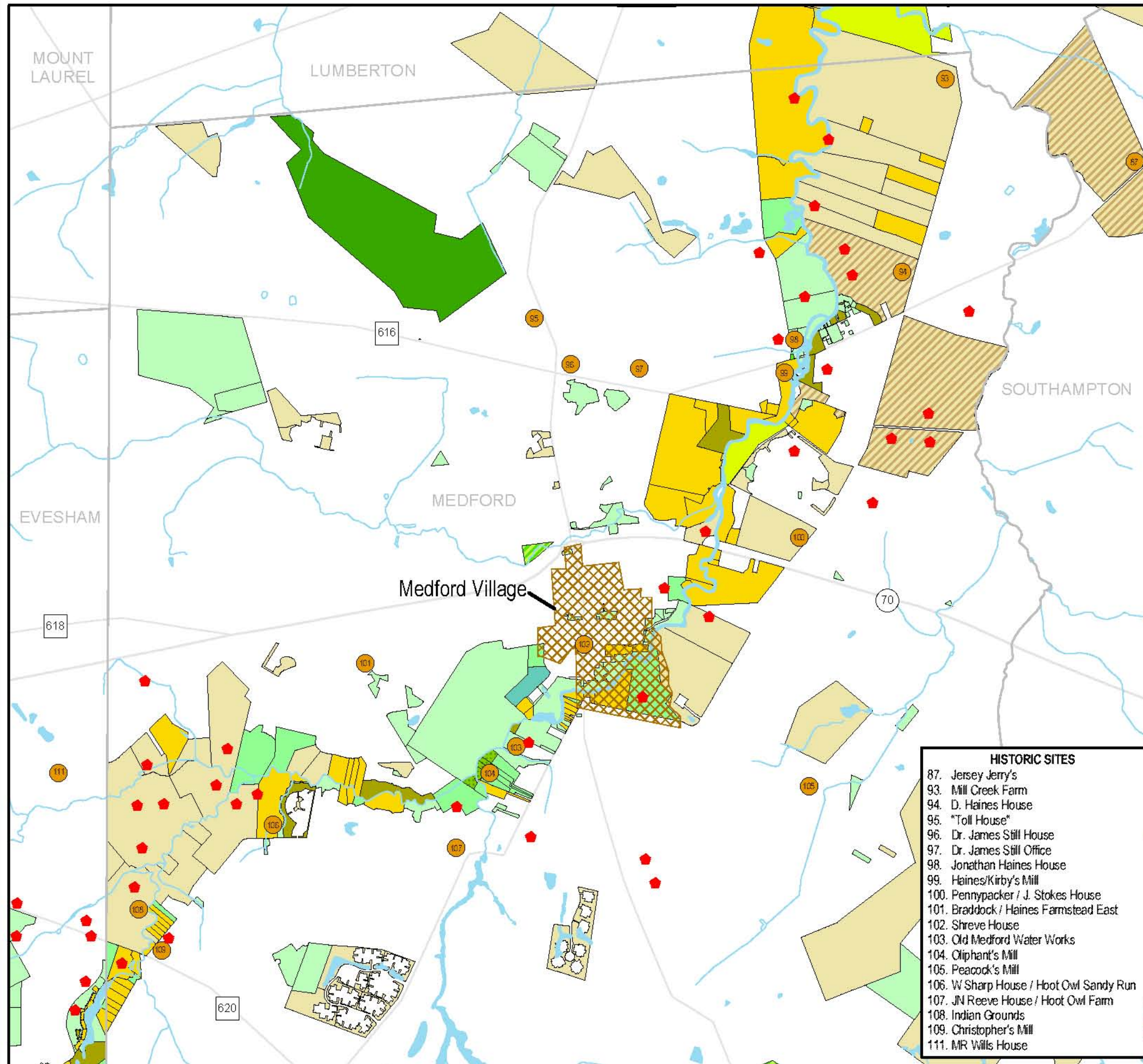
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DECEMBER 2002



# MAP 13: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### MEDFORD TOWNSHIP



**TYPE OF OPEN SPACE**

State Owned	School Board Owned
County Owned	Private Open Space: Camp, Cemetery, Golf Course
Municipally Owned	Farmland
Preserved Farmland	Vacant
Land Trust	Developed
Conservation Easement	Tidal / Marshland
Homeowner Association Land	Water

**HISTORIC SITE**

Location

**HISTORIC DISTRICT**

Boundary

**ARCHEOLOGY SITE**

Location

**BASE MAP**

Road

Stream

County Boundary

Municipal Boundary

- HISTORIC SITES**
- 87. Jersey Jerry's
  - 93. Mill Creek Farm
  - 94. D. Haines House
  - 95. "Toll House"
  - 96. Dr. James Still House
  - 97. Dr. James Still Office
  - 98. Jonathan Haines House
  - 99. Haines/Kirby's Mill
  - 100. Pennypacker / J. Stokes House
  - 101. Braddock / Haines Farmstead East
  - 102. Shreve House
  - 103. Old Medford Water Works
  - 104. Oliphant's Mill
  - 105. Peacock's Mill
  - 106. W Sharp House / Hoot Owl Sandy Run
  - 107. JN Reeve House / Hoot Owl Farm
  - 108. Indian Grounds
  - 109. Christopher's Mill
  - 111. MR Wills House

N

0      0.5      1      1.5

Miles

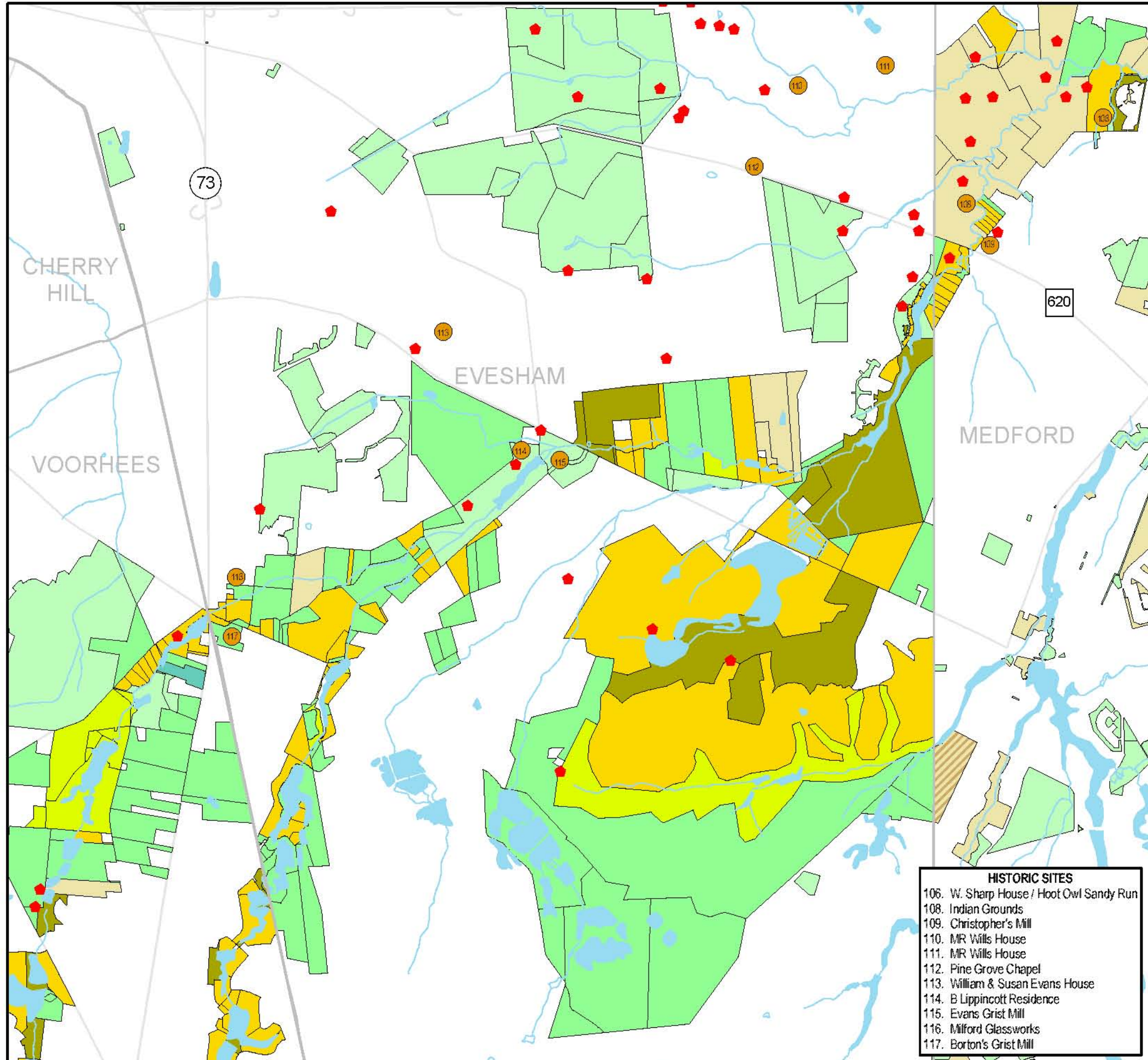
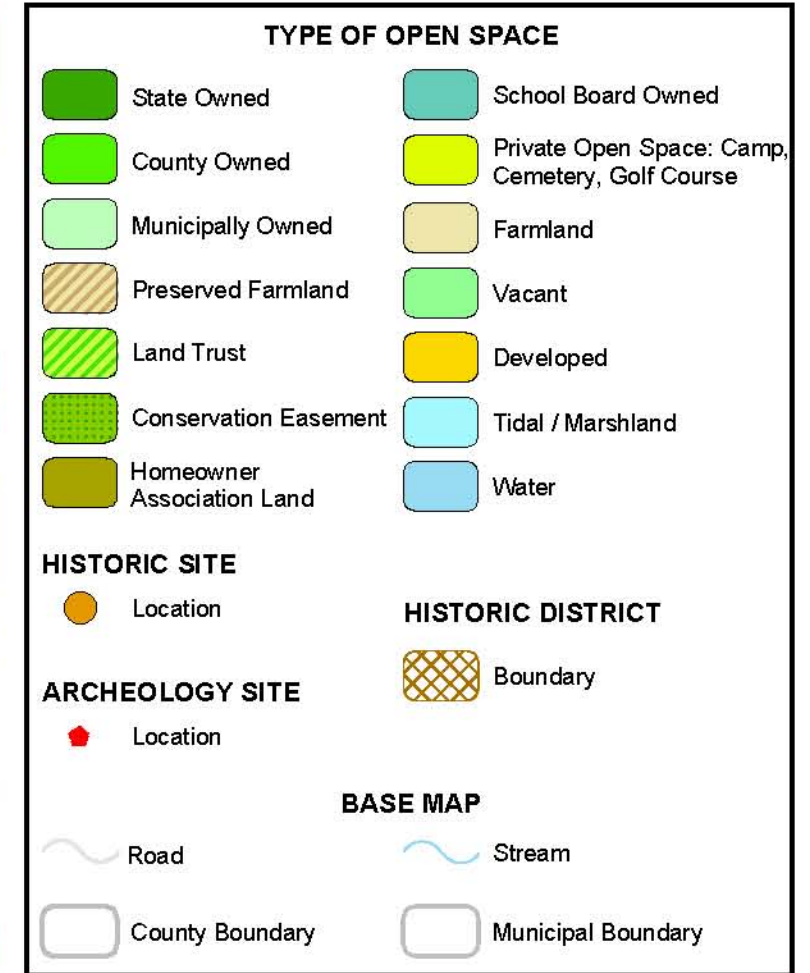
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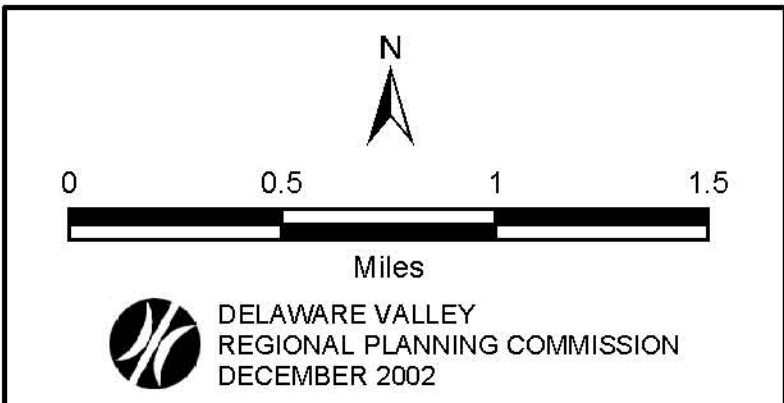
# MAP 14: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### EVESHAM TOWNSHIP



- HISTORIC SITES**
- 106. W. Sharp House / Hoot Owl Sandy Run
  - 108. Indian Grounds
  - 109. Christopher's Mill
  - 110. MR Wills House
  - 111. MR Wills House
  - 112. Pine Grove Chapel
  - 113. William & Susan Evans House
  - 114. B Lippincott Residence
  - 115. Evans Crist Mill
  - 116. Milford Glassworks
  - 117. Borton's Grist Mill

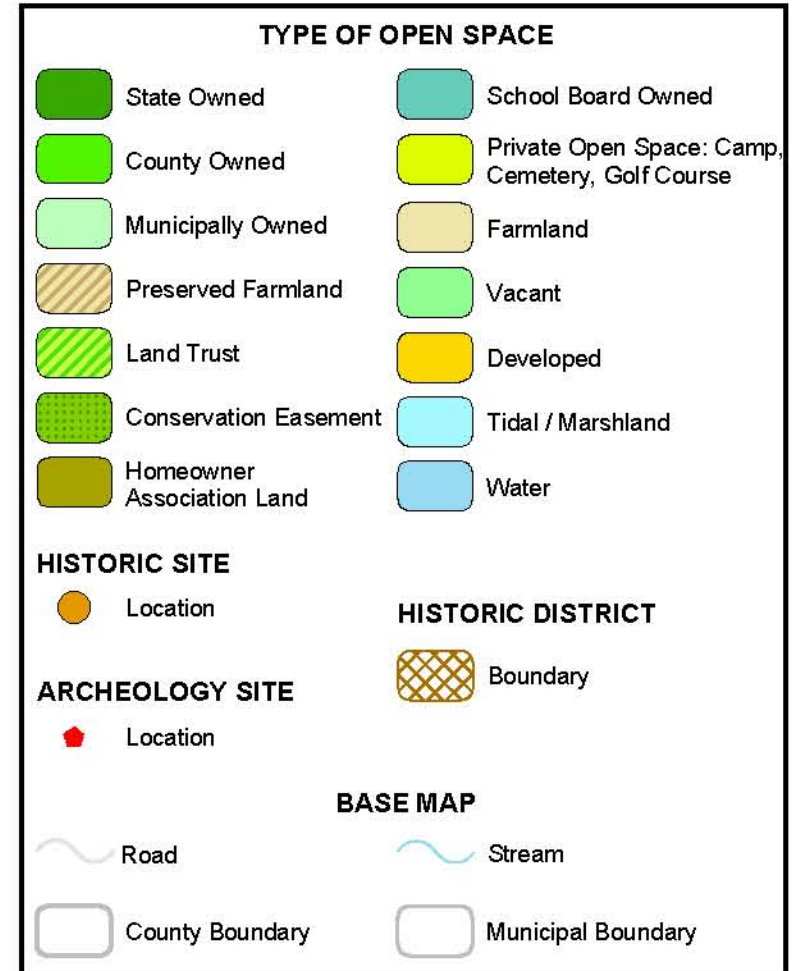
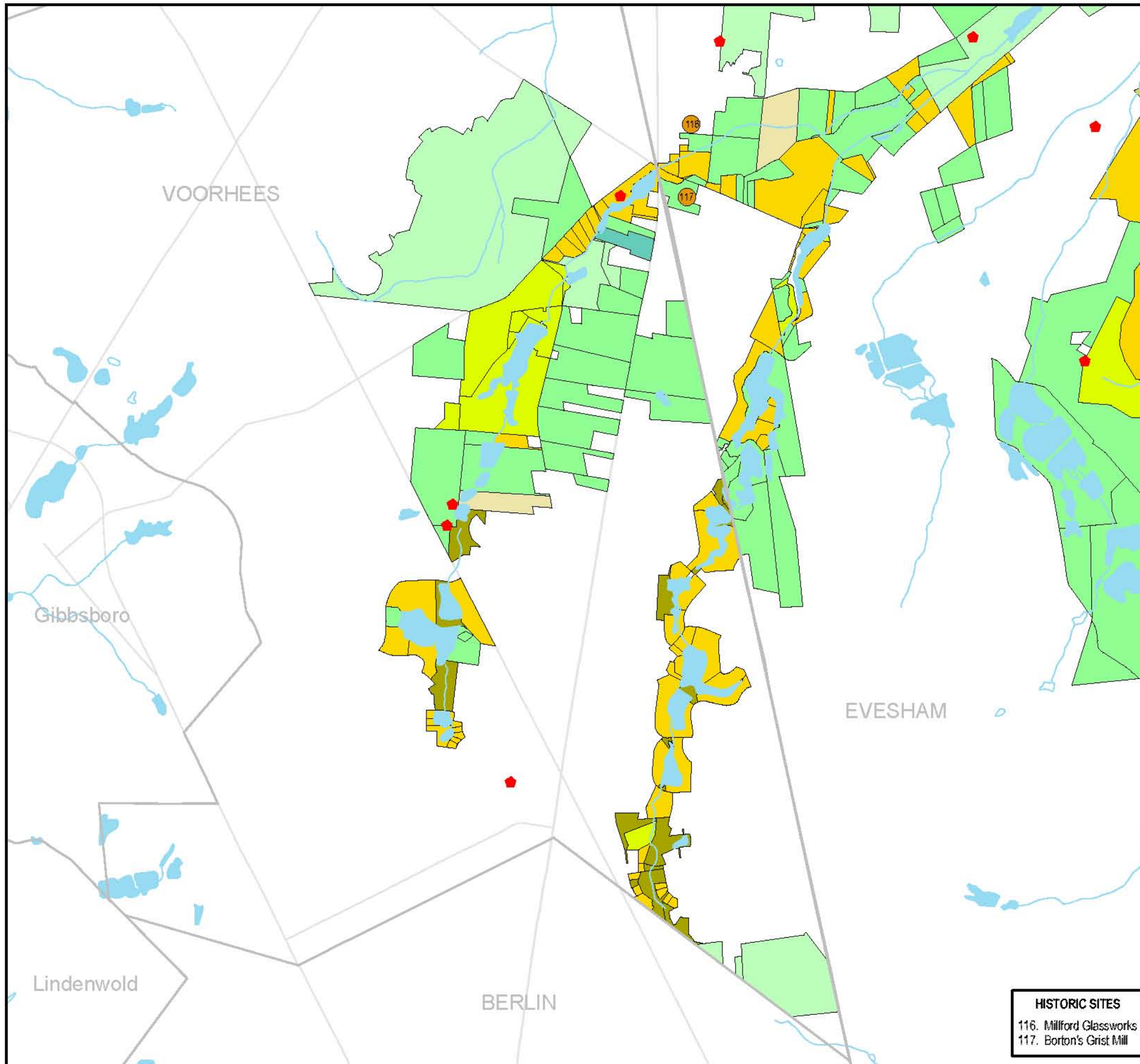




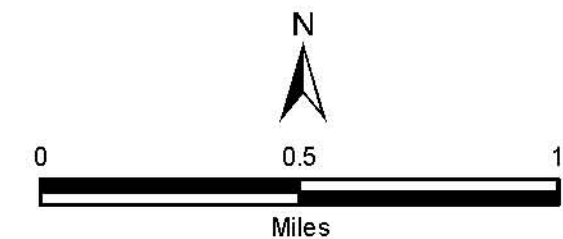
# MAP 15: RANCOCAS CREEK GREENWAY

## TYPE OF OPEN SPACE

### VOORHEES TOWNSHIP



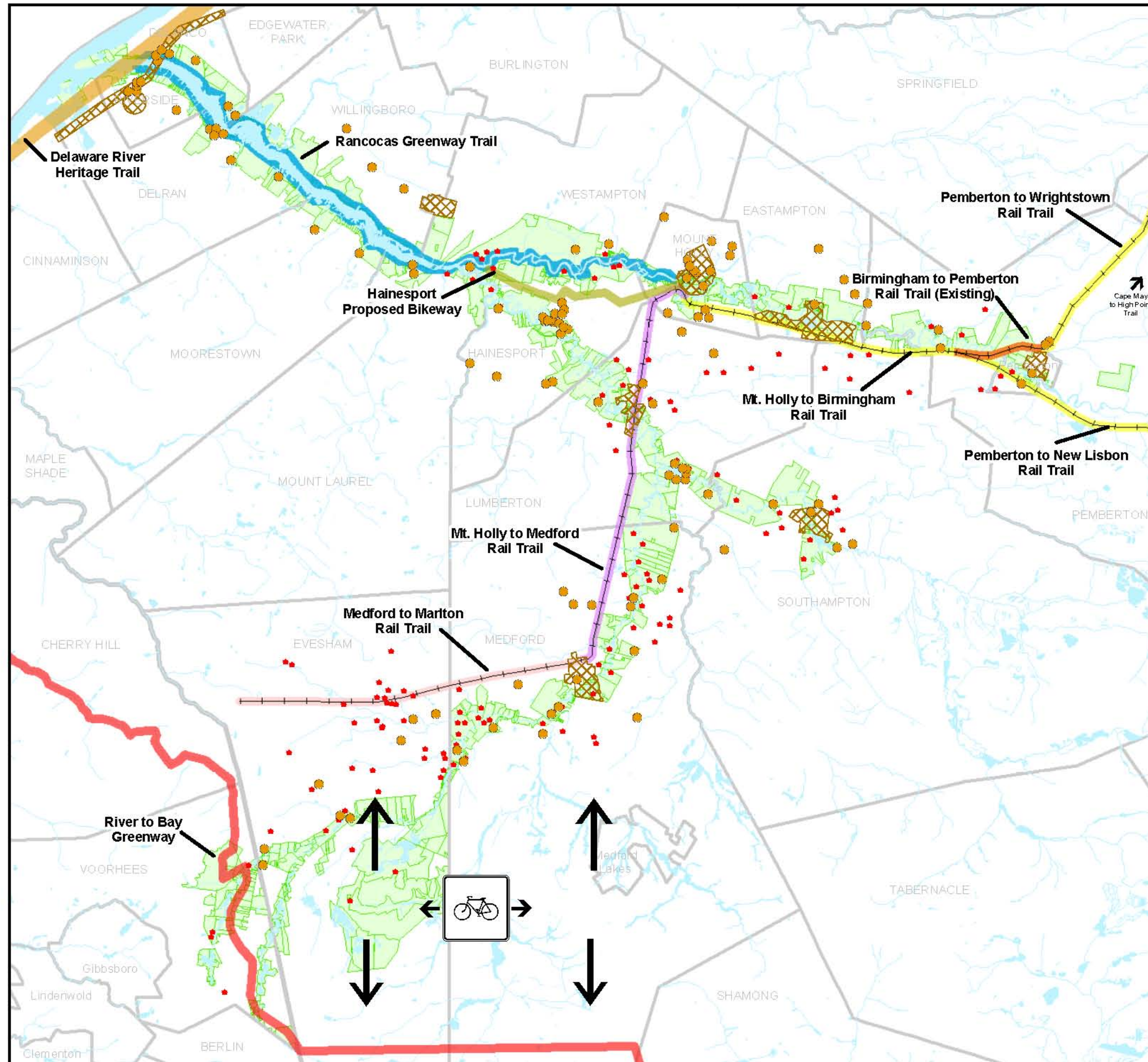
**HISTORIC SITES**  
 116. Millford Glassworks  
 117. Borton's Grist Mill



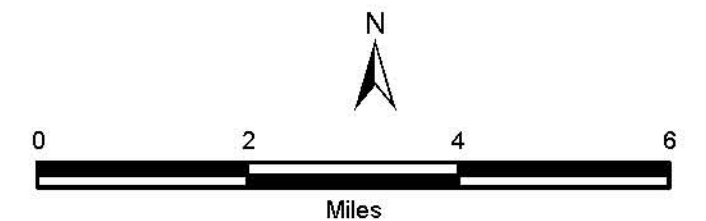
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# MAP 16: RANCOCAS CREEK GREENWAY PROPOSED TRAIL CONNECTIONS

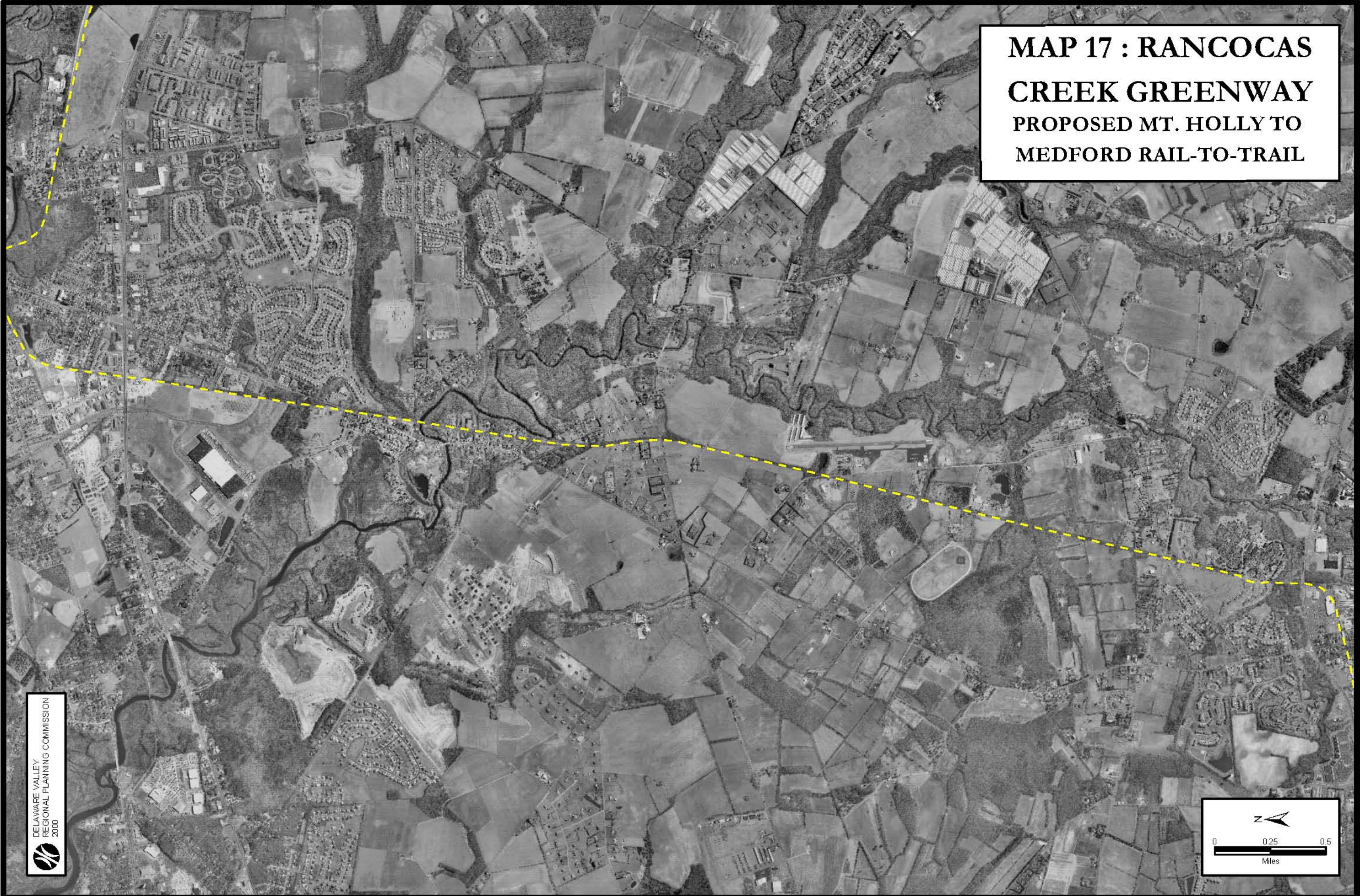


- Archeology Site
- Historic Site
- Stream
- On-Road Bike Path Area
- Historic District
- Municipal Boundary
- County Boundary

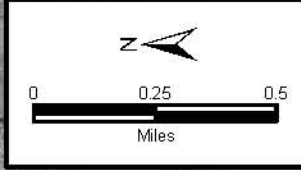




**MAP 17 : RANCOCAS  
CREEK GREENWAY  
PROPOSED MT. HOLLY TO  
MEDFORD RAIL-TO-TRAIL**



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000







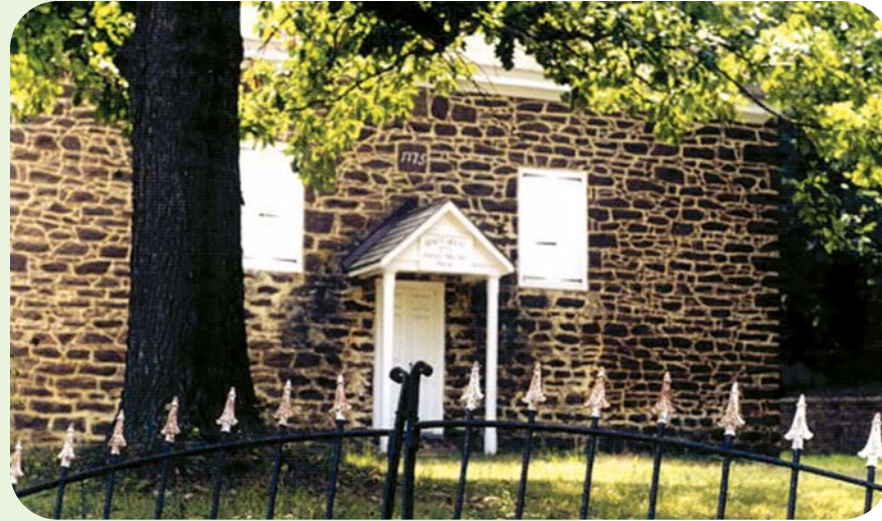
# 4

# Chapter

## History and Historic Resources







**T**he Rancocas Valley is steeped in history, with over 130 historic sites and districts, a number of which have been placed on the state and national registers of historic places, and about 100 known or suspected sites of archaeological remains. (See Map 4 on page 31 for a regional picture of the greenway and its historic sites, and see Maps 5 through 15, pages 32-42, for municipal scale maps identifying historic sites. A table referencing the numbered sites identified on the municipal maps is on page 51). Celebrating these places, by preserving them, interpreting them, linking them, and publicizing them will bring more people to appreciate and support the special character of the Rancocas. In addition, promoting reinvestment in historic, mixed-use walkable Rancocas towns also promotes Smart Growth objectives in the broader Rancocas community. The following pages summarize the vernacular history of the Rancocas.

## A Brief History of Settlements Along the Rancocas

Human habitation in the area of the Rancocas Creek goes back thousands of years, but the history of permanent settlement is considerably more recent. The Lenape, the Native American group encountered by early European explorers and settlers in southern New Jersey, were principally nomadic, as had been the more ancient Native American groups who lived in the area before them. Although the Lenape often founded temporary villages, few records of these remain, and this history of settlements along the Rancocas will cover only towns and villages founded after the arrival of European settlers in the early seventeenth century. Nevertheless, note the abundance of known or suspected archaeological sites on the map on page 31. Professionally excavating and interpreting these sites would add significantly to understanding the region's past.

One of the most important factors in the prosperity of villages along the Rancocas was transportation. Early on, nearly all settlements were founded very close to the creek, as it was the only transportation route in roadless southern New Jersey. Later, during the mid-nineteenth century, the railroad replaced the creek in importance, and those towns that were able to obtain

railroad stations flourished, while those that were not fell into decline. With the later rise of the automobile, many of these railroad-based towns also declined. As the following histories of individual settlements will show, transportation has had a major impact on the fascinating history of the Rancocas Creek area.

## Main Stem Settlements

**Bridgeboro:** Located near the mouth of the Rancocas, where the present-day Burlington Pike (Route 130) crosses the creek in Delran Township, Bridgeboro was one of the earliest settlements in the area. The construction of Burlington Pike was authorized in 1748, and a ferry over the creek in Bridgeboro was initiated in the same year. This provided the impetus for the development of the village, with the first tavern established in 1749. Bridgeboro remained small, despite its prime location along a major early road, and numbered just a few dwellings by the time it acquired its own post office in 1849. Bridgeboro Historic District is listed in the New Jersey Register of Historic Places, and extends south from the Rancocas along Bridgeboro Road (Route 613) for about a quarter-mile.

**Centerton:** The village of Centerton, located in Mount Laurel Township near to where I-295 crosses the creek, was not established until around 1832. Like Bridgeboro, construction of transportation infrastructure, in this case a bridge over the Rancocas, sparked the development of the village. In 1870, a phosphorus plant called the Rancocas Chemical Works was founded about one-half mile upstream from the village, in a place that was since named Texas, apparently because of its relative inaccessibility and remoteness. This plant employed more than 75 men and produced the first phosphorus manufactured in the United States, but was not successful and was converted to other uses within a few years. Throughout its early history, Centerton was a popular summertime tourist destination for Philadelphians, as were many other villages along the Rancocas. Unfortunately, few of Centerton's historic structures or original character remain.

**Riverside:** The present-day Riverside Township was first laid out around 1850. In its early days, the town prospered as a tourist destination and manufacturing center, specializing in food processing, canning, and glass production. The Philadelphia Watch Case



Company (later renamed the Keystone Watch Case Company) moved to Riverside in 1902, brought by wealthy industrialist Theophilus Zurburgg, and became the town's leading industry. However, the company ended its operations during the 1950s, and, like many industrial towns, Riverside's population and employment bases suffered declines due to suburban growth over the last few decades. The Riverside Historic District is listed in the New Jersey Register of Historic Places.

## ***North Branch Settlements***

**Mount Holly:** The town of Mount Holly, now the seat of Burlington County, was originally founded between 1680 and 1700 at the limit of navigability on the North Branch of the Rancocas. In its early years it was sometimes called Bridgetown after the large number of bridges that were built nearby, which were necessary because of the winding path of the creek. Mount Holly was an important center of industry and trade, and an iron works located within the town was used to supply the colonial army during the Revolution, but it was destroyed when the British occupied Mount Holly in 1778. Other industries, powered by water from the Rancocas, also sprang up in Mount Holly during its early years, and it still had thriving industry by the mid-nineteenth century. The town was able to maintain its importance by being among the first in Burlington County to have a railroad station.

John Woolman, best known as an avid abolitionist, and referred to as "Mount Holly's best-known citizen throughout Christendom" in the Historic Mount Holly brochure, lived in the town for many years. A memorial to his life and deeds can be found at the John Woolman House, a locally designated historic landmark. The town also claims the oldest continuously active volunteer fire company in the United States, the Relief Fire Company, operating since its founding in 1752. The Mount Holly Historic District is listed in both the New Jersey and the National Register of Historic Places, and contains twelve buildings listed individually in the National Register.

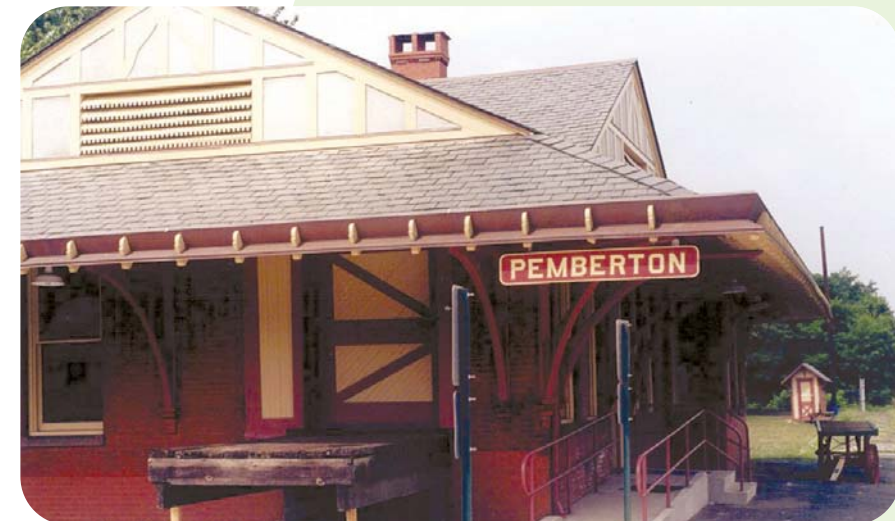
**Pemberton:** The Borough of Pemberton was founded around 1700, though the actual date is a matter of dispute. By 1752, the village, located far upstream the North Branch, was still fairly small and undeveloped, but contained the first Baptist church in

Burlington County. Most of Pemberton's inhabitants were not Quakers, in sharp contrast to most early villages along the Rancocas, but instead Methodists and Baptists. By the mid-nineteenth century the village had grown to include about 100 dwellings and a fair amount of industry, and was rapidly growing and thriving, even though it was not accessible by sizable boats. A railroad line was soon constructed through the town, further adding to its prosperity, which continued until other forms of transportation became dominant. Pemberton Historic District is listed in both the New Jersey and the National Register of Historic Places.

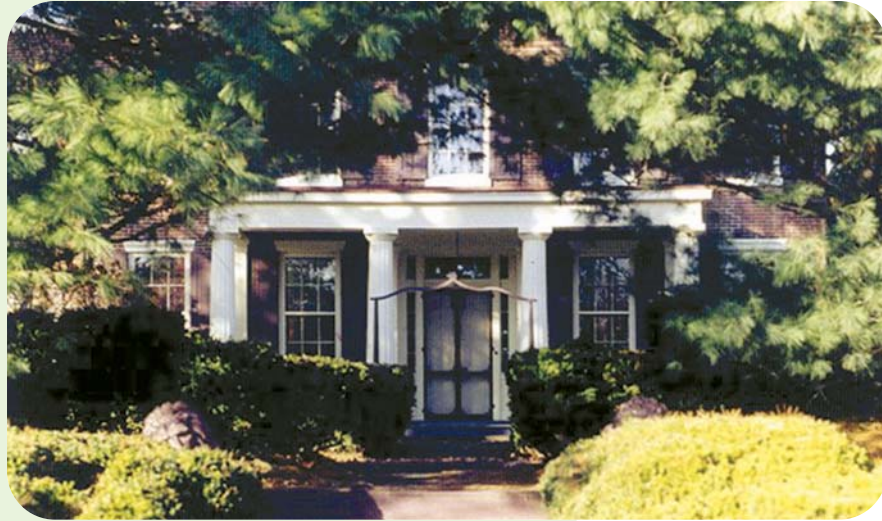
**Rancocas:** The village of Rancocas, located in present-day Westampton Township about a half mile north of the creek, was founded during the 1830s, although there had been a Quaker meeting house in the area since the early eighteenth century. The development of the village was spurred by the laying out of a road in 1831, as well as the construction of a bridge at Centerton in 1832, which made the village more accessible. However, Rancocas never became especially prosperous, partly because it was not located on the creek or on any early rail lines.

Although not an economic center, Rancocas did have a number of active literary societies, which were common among Quakers. The most famous of these, the Rancocas Lyceum, was founded in 1871, and attracted educated people for miles around to its weekly events, which included readings, recitations, and debates. The debates were the most popular of its activities, often exceeding the capacity of the small schoolhouse in which the society was housed, so the members of the Lyceum constructed a large debate hall that could seat 500. This building is still standing, and has since been used as the town hall and fire station. Rancocas Historic Village is listed in both the New Jersey and the National Register of Historic Places.

**Smithville:** The village of Smithville, formerly known as Shreveville, was founded in about 1780 with the construction of a dam across the creek, followed by a mill and a few houses. It became the site for a large textile factory in 1831 that employed about 175 people and was owned by Jonathan and Samuel Shreve, after whom the village was originally named. The textile factory failed during the 1850s, and Shreveville was mostly abandoned.







The village received its current name from H.B. Smith, a machinery production entrepreneur, who came to live in Smithville in 1865, along with a longtime mistress from Lowell named Agnes Gilkerson. He ran for Congress in 1878, using outlandish campaign tactics – he traveled in a carriage pulled by a moose, accompanied by the former Vice President of the Confederacy and the H.B. Smith Military Band – and created such an unforgettable spectacle that he was victorious. After the death of Agnes, Smith commissioned a lifelike marble statue of her, and did not long outlive her. His wife and son appeared in Smithville shortly after his death, contested his will (in which they had received no inheritance), smashed the marble statue of Agnes into pieces, and scattered the fragments along the Rancocas.



Despite the prosperity created by industries founded by Smith, including a factory that produced woodworking machines and one that produced the famous "Star" bicycle, production nearly ceased during the Great Depression, and the local economy never really recovered. However, due to its fascinating history, the village is now the crown jewel of the Burlington County park system. Smithville Historic Village is listed in both the New Jersey and the National Register of Historic Places.

**Timbuctoo:** The vanished village of Timbuctoo was located about one mile downstream from Mount Holly. This village, which was home to a community of freed slaves, was founded between the late eighteenth and early nineteenth centuries. Named after the city of Timbuktu in present-day Mali, this village may have been the only black settlement in the United States named after an African city. An account of the town's armed uprising to prevent the capture by a southern bounty hunter and sympathetic local whites of Perry Simmons, a fugitive slave residing in Timbuctoo, was told in the *New Jersey Mirror*, a local newspaper. Although it flourished during the nineteenth century with as many as 125 residents, a school, and an AME Zion Church, all that remains is a cemetery on Church Street containing the graves of black Civil War veterans.

**Willingboro:** What is today known as Willingboro was sparsely populated through the early twentieth century, remaining agricultural and undeveloped as late as 1950. During the 1950s, though, it was purchased by William Levitt and used as a site for

one of his Levittowns. Its population rose from about 850 in 1950 to 43,400 in 1970 – a more than 50-fold increase in just twenty years. The name of the township was at one point changed to Levittown, but was soon after changed back to Willingboro. *The Levittowners*, a major work on the history and sociology of the suburbs, was written by urban sociologist Herbert Gans after several years of residence in Willingboro Township in the late 1950's to early 60's.

## South Branch Settlements

**Eayrestown:** The village of Eayrestown was located about two miles south of Lumberton, along Eayrestown Road (Route 612), but it has largely disappeared. Founded by Richard Eayres, for whom the village is named, in the late seventeenth century, Eayrestown was the first substantial settlement along the south branch of the Rancocas. It soon came to include sawmills, gristmills, and a carousel popular among tourists from Philadelphia. Over the years, this village's function as a center of commerce began to be replaced by Lumberton, and it faded into insignificance. Although little exists of Eayrestown today, some historic properties can still be found in its immediate area.

**Hainesport:** Originally named Long Bridge, after a bridge that once spanned the creek nearby, the village of Hainesport received its later name from Barclay Haines, an important Quaker landowner in the area. A minor skirmish in the Revolutionary War occurred in the Hainesport area, a record of which has been found in the journal of a British general's secretary: "At a small distance from this town a bridge was broken down by the Rebels, which then when our people were repairing, were fired on by those villains from the house, two of whom were taken, three killed, and the other two ran into the cellar and fastened it, so that we were obliged to burn the house and consume them in it." In later years, some industry developed in Hainesport, but it never experienced the same level of prosperity as some of its neighbors. While Hainesport does not have a designated historic district, a very large number of historic properties exist in the village, mostly along Marne Highway (Route 537) on the east side of the Rancocas.





**Lumberton:** For many years, the village of Lumberton, located to the north of the creek along Route 541, was the most important site of trade along the south branch of the Rancocas. Despite this, by the Revolution it only consisted of ten to fifteen houses and possibly a tavern, strung along the course of an old Indian trail. During this period, it was primarily a shipping point, from which boats carrying produce and other goods sailed to nearby urban areas. The most important product was lumber, the source of its name. Its development as a manufacturing center began in 1800, and it was soon producing such varied products as glass, sailboats and shoes. Within a few decades, it had grown to nearly 50 dwellings, and had swallowed up the nearby villages of Eayrestown and Fostertown.

The prosperity of Lumberton, made possible by its location at the southern extreme of the navigable portion of the creek, continued until railroad transportation became dominant. In an effort to remain competitive, villages along the Rancocas began to use steamboats for trade and transport, both along the river and with larger cities. One of these steamboats, the Barclay, was constructed in Lumberton in 1849; unfortunately, this mode of transport was short-lived, and the Barclay went out of service in 1870 and was not replaced.

One of the village's more interesting natives was Johnson Oatman Jr., born near Lumberton in 1856. During his life, he worked as a Methodist preacher, an insurance salesman, and a songwriter, more or less simultaneously. He traveled through Burlington County, "writing insurance coverage on the one hand and marriage certificates on the other," and his talent for writing hymns won him widespread recognition. Lumberton Historic District is listed in the New Jersey Register of Historic Places, and contains a large number of historic properties.

**Medford:** The village of Medford, along the south branch of the Rancocas near where it is crossed by Route 541, was settled in the late seventeenth century by relatives of the founder of Hainesport. A mill complex known as Haines Mill, and later renamed Kirby's Mill, was built in 1773, and consisted of a sawmill, gristmill, and small dam. This mill continued in operation for nearly 200 years, and was, near the end of this period, the last functioning commercial mill in New Jersey.

Medford "began to resemble a village" by 1767, consisting of a few houses strung along the old Shamong Trail. About a mile southeast of the village lay the home of Adonijah Peacock, who manufactured gunpowder for Washington's armies during the Revolutionary War. In 1777, an accident at his house caused an explosion so powerful that, according to a local man's diary, "it was said that the Roof of the house was blown off and very much Shattered to pieces with the Blast of the powder. (Report heard for ten miles around.)" Adonijah Peacock was killed in the explosion, and is buried nearby.

The village developed further through the 1780s because of nearby furnaces and foundries, as well as a nail factory, which according to local legend produced the first cut nails in the entire United States. It finally received its current name in 1820, when a resident (supposedly the nail manufacturer himself) was favorably impressed during a visit to Medford, Massachusetts. Unlike most villages along the Rancocas, the advent of the railroad brought greater prosperity to Medford than ever before. The village was located far upstream, on a branch of the Rancocas that was not navigable, and never had relied on the water for transportation or trade. Thus, the addition of a rail line in 1869 brought the village into its heyday, allowing Medford to support a large glass factory and several sawmills and gristmills. These prospered for decades, until the rise of the automobile caused railroad service to decline. Many historic structures exist in Medford Village Historic District, which is listed in the New Jersey Register of Historic Places.

**Vincentown:** This village, along the southwest branch of the Rancocas, is named after Vincent Leeds, a plantation owner who lived there in the mid-eighteenth century. A Presbyterian church was constructed in the area in 1774 by noted missionary John Brainerd, and a Quaker meeting house was built in 1782. It was still a small village around the time of the Revolution, but had grown to much greater size by 1844, by which time it had a population of about 600 people and a fair amount of industry. An important later development in the history of Vincentown was its connection to the railroad, which occurred in 1864. The railroad, part of the Camden and Burlington Railroad Company, was used for shipping produce to larger urban







markets, and provided transportation for those residents of Vincentown who worked outside the town. Vincentown Historic Village is listed in both the New Jersey and the National Register of Historic Places.

## Preserving Historic Resources

The previous narrative describes some of the fascinating history that has taken place over the last several hundred years along the Rancocas, and the accompanying maps show the locations of some of the most important historic resources and suspected archaeological remains that help tell the stories of the past. However, the mere existence of these places, as well as preserving them in their historical context, should not be taken for granted. In fact, many historic structures have been either demolished to make room for newer buildings, have fallen into disrepair due to lack of maintenance and investment, or still stand but have lost their integrity due to inappropriate alterations and/or inappropriate surrounding development. Similarly, many potentially significant archaeological artifacts may never be excavated and interpreted because they have been paved over.

Yet, it is largely the historic structures in their landscape (whether that be an urban historic district, historic mill village, or farm buildings in their agrarian setting) that provide the Rancocas Valley with its unique character and identity. Combined with opportunities for trails, canoeing, and just enjoying waterfront access, historic preservation efforts along the Rancocas are extremely important to maintaining the area's unique identity, attracting people, boosting community pride, and stimulating greater interest and investment in these areas.

There are various mechanisms to enhance historic preservation from the federal down to the local level. At the federal level, placing sites and districts on the National Register of Historic Places affords them added consideration in the planning for federally assisted projects, and makes properties eligible for certain tax benefits and grant programs. It does not, however, prevent properties from being altered or demolished. Local historic districts, on the other hand, can be created by municipalities to preserve significant historic sites by regulating the erection, alteration, restoration, and demolition of buildings within the historic district. Historical Commissions

are government bodies that oversee historic preservation planning and decision making in their community, and the establishment of these commissions is typically the first step in implementing local preservation efforts.

A number of the municipalities in the study area have completed historic inventories that document the location and significance of historic resources, and some communities have gone further in establishing historical commissions, enacting local historic preservation districts, and even in incorporating Historic Impact Statements or other similar site plan submission procedures that require development applicants to show the proposed subdivision or land development's impact on historic resources. These local land use regulations can (and should) also apply to the protection of archaeological remains, for which the Rancocas Valley remains an untapped reservoir.

## Incorporating Historic Resources into the Rancocas Greenway and Creating the Greenway's Identity

Considering the multitude of historic places straddling the Rancocas, the time is ripe to weave these resources together with trail, canoeing and related recreational opportunities, to create a new, compelling identity for the Rancocas Valley. This idea has been started by a consortium of businesses that have joined together to create a website, [www.rancocasvalley.com](http://www.rancocasvalley.com) that features background on the area, 20 attractions, lodging, shopping and dining information, an events calendar, map, and links. The website and a printed brochure are excellent mechanisms to start creating an identity for the Rancocas. To further forward this idea, two types of signage systems are also needed. First is a thematic signage system that gives unique identity to the Rancocas. The Brandywine Battlefield signs in Delaware and Chester counties, Pennsylvania are an example of this. Second is an interpretative signage system that explains the history of the places and reveals the legends that took place there, to make self-guided tours or spontaneous visits to places more meaningful. The state's historic markers are an example of this, but the Rancocas interpretative signs should have their own vernacular character.





<i>No.</i>	<i>Site Name</i>	<i>Municipality</i>	<i>No.</i>	<i>Site Name</i>	<i>Municipality</i>	<i>No.</i>	<i>Site Name</i>	<i>Municipality</i>
1	J Newton House	Delanco	41	Long Bridge	Hainesport	80	18th century Grist and Fulling Mill	Lumberton
2	Delanco Presbyterian Church	Delanco	42	Eckert Farm Site	Hainesport	81	Eayres Mill	Lumberton
3	A.L. Newton Farm Complex	Delanco	43	Robert Engle House	Hainesport	82	Mill Dam	Lumberton
4	Rancocas Creek RR Bridge	Delanco	44	Joseph Moore House	Hainesport	83	Eayres Plantation and Mill Site	Lumberton
5	Phila Watch Case Building	Riverside	45	Cyrus Moore House	Hainesport	84	Eayrestown	Lumberton
6	Riverside Metal Company	Riverside	46	1768 Rodger's Farmstead	Westampton	85	Eayres Plantation/Mill Site	Lumberton
7	Riverside RR Station	Riverside	47	#605 Route 541	Mt Holly	86	Roberts House and Farm	Lumberton
8	Taubel Knitting Mill	Riverside	48	Burlington County Historic Courthouse	Mt Holly	87	Jersey Jerry's	Southampton
9	Haines Brothers Flour Mill	Riverside	49	Mt Holly Cemetery Cottage	Mt Holly	88	Lumberton-Vincentown Bridge	Southampton
10	Russ Farm	Delanco	50	Shinn-Curtis Log House	Mt Holly	89	J.S.L. House	Southampton
11	Bramall House	Riverside	50.1	Stephen Girard House	Mt Holly	90	Bishop-Irick Farmstead	Southampton
12	Holiday Lake Archaeological Site	Delanco	51	Ashurst Mansion	Mt Holly	91	Hilliard Rd Bridge	Southampton
13	Dahmer / Beier Archaeological Site	Delanco	52	Friends Meeting House	Mt Holly	92	Leeds-Irick House	Southampton
14	West Bridgeboro St Site	Delran	53	Mt Holly Library	Mt Holly	93	Mill Creek Farm	Medford
15	Sabino Archaeological Site	Delran	54	John Woolman Memorial	Mt Holly	94	D Haines House	Medford
16	Siris Archaeological Site	Delran	55	Burlington County Hospital	Mt Holly	95	"Toll House"	Medford
17	Fortnum Motors	Delran	56	Burlington County Historic Prison	Mt Holly	96	Dr. James Still House	Medford
18	Victorian House	Delran	57	Relief Fire Company No. 1	Mt Holly	97	Dr Still Office	Medford
19	Delran Archaeological Site	Delran	58	Iron Works Mill / St Andrew's Graveyard	Mt Holly	98	Jonathan Haines House	Medford
20	Schoolhouse	Willingboro	59	Historic Old Schoolhouse	Mt Holly	99	Haines/Kirby's Mill	Medford
21	Schoolhouse	Willingboro	60	San Domingo House (William Richards)	Mt Holly	100	Pennypacker / J Stokes House	Medford
22	Charles Stokes House	Willingboro	61	Burlington County Children's Home	Mt Holly	101	Braddock / Haines Farmstead East	Medford
23	Ivins Conover Farm	Moorestown	62	Cliver Manor House	Eastampton	102	Shreve House	Medford
24	S Little House	Moorestown	63	Powell / Judd House	Eastampton	103	Old Medford Water Works	Medford
25	Centerton	Mt. Laurel	64	Smithville Mansion	Eastampton	104	Oliphant's Mill	Medford
26	Bashbe Johnson House	Mt Laurel	65	Locust Hill Farm	Pemberton T	105	Peacock's Mill	Medford
27	Sandhickey	Hainesport	66	Walton House	Eastampton	106	W Sharp House / Hoot Owl Sandy Run	Medford
28	Hainesport School	Hainesport	67	John Woolston House	Pemberton T	107	JN Reeve House / Hoot Owl Farm	Medford
29	Historic Home	Hainesport	68	Birmingham School	Pemberton T	108	Indian Grounds	Medford
30	Sokolowski House	Hainesport	69	Birmingham	Pemberton T	109	Christopher's Mill	Medford
31	B Thom House	Hainesport	70	Pemberton Station Museum	Pemberton T	110	MR Wills House	Evesham
32	Horner House	Hainesport	71	North Pemberton RR Station	Pemberton T	111	MR Wills House	Evesham
33	JD Johnson Foundry	Hainesport	72	Morris Mansion and Mill	Pemberton B	112	Pine Grove Chapel	Evesham
34	Columbian Iron Works	Hainesport	73	Pemberton RR Station	Pemberton B	113	William and Susan Evans House	Evesham
35	JC Townsend House	Hainesport	74	John Bispham House	Lumberton	114	B Lippincott residence	Evesham
36	W Davis Tavern	Hainesport	75	John Black House and Stone Barn	Lumberton	115	Evans Grist Mill	Evesham
37	19th c. Victorian House	Hainesport	76	Cole Mansion	Lumberton	116	Milford Glassworks	Evesham
38	Newbold House	Hainesport	77	Uzial Coate House	Lumberton	117	Borton's Grist Mill	Evesham
39	John Cook House	Hainesport	78	North West	Lumberton	118	Timbuctoo Cemetery	Westampton
40	Hainesport	Hainesport	79	Githens Farm Buildings	Lumberton			









# 5

## Chapter

### Recommendations For The Greenway

*Conservation Package and Enjoyment  
of Place Recommendations*







## Conservation Rationale

**T**his plan recommends that a vegetated, green buffer be maintained on both sides of the Rancocas Creek for water quality protection, flood control, wildlife habitat and recreational opportunities. Although a good portion of the streamside land is in public ownership, and zoning and environmental regulations limit development along the creek on privately owned streamside land, the greenway plan's goal is to preserve the riparian buffer in perpetuity by formalizing riparian corridor protection at the local level through stronger land use regulations where needed, and by using conservation easements and acquisition, where appropriate. Conservation easements and/or acquisition of sensitive streamside land is ultimately preferred for several reasons. First, zoning and environmental regulations can change over time; they may not provide sufficient protection from inappropriate development, and they may not always be enforced. Adding another layer of protection, through a conservation easement or acquisition of the land by a land trust or government entity, is not subject to changing regulations and lasts forever.

## Enjoyment of Place Rationale

In addition to the formal preservation of the creek buffer, this plan recommends that additional trails and canoe launches, and a thematic and interpretative signage system be installed. Enhancing people's access to and enjoyment of the Rancocas and its historic towns is expected to instill familiarity and appreciation, and therefore stewardship and responsible development of the creek and its historic towns.

The report cover shows an artist's rendering of what Mill Race Village in Mt. Holly could look like if the greenway recommendations are implemented. The picture shows people enjoying the creek by canoeing, biking on the parallel trail, and resting on creekside benches. Across the street, renovated historic homes serve as an ice cream parlor and bicycle shop. The background shows the Relief Fire House (the oldest volunteer fire house in America), symbolizing the wealth of historic sites in Mt. Holly to visit. The scene is comfortable, fun and inviting, demonstrating how a clean and accessible creek can attract people and result in economic benefits for the community. This scene is

based on existing resources in Mt. Holly, but it could also be realized in any of the other historic villages criss-crossing the Rancocas.

## Process and Players

All 11 municipalities, Burlington County, the Rancocas Conservancy, and NJDEP Green Acres can play an active role in formalizing the Rancocas Main Branches Greenway. Representatives of these groups should continue to meet periodically to communicate about their recent planning and conservation efforts, and to strategize about forming the greenway. The Burlington County Department of Resource Conservation has expressed interest in coordinating the effort.

There are numerous ways land can be acquired or eased. In some cases the land development or subdivision approval process triggers negotiations, in other cases the municipality, county or land trust may approach the landowner and negotiate an agreement to conserve the property. The following lists and describes conservation options.

## Conservation Options

**1. Conservation Easement** - a legal instrument by which a landowner limits, without relinquishing ownership, the development potential of property which has significant natural resources, open space or habitat value, and grants the right to conserve those values. A conservation easement goes with the land - all subsequent owners are bound by the restrictions, which are recorded with the deed and filed at the County Records Office. The land remains in private property, but the organization to which the land is eased, whether a private land trust or government agency, is responsible for monitoring compliance with the deed restrictions with current and future property owners. A conservation easement with public access allows people to enter the area for recreation. According to the NJ Landowners Liability Clause, landowners are released from liability so long as no fee is charged and the landowner does not willingly cause or ignore a hazardous situation. A conservation easement can substantially reduce the value of the property for real estate tax purposes and inheritance tax purposes, often enabling the land to remain in the family rather than be sold to pay inheritance taxes.



**2. Fee Simple Acquisition** - a government entity and/or land trust buys the land and becomes the owner. If sold at less than fair market value, the sale can provide tax benefits to the landowner.

**3. Bargain Sale** - a sale to a land trust or other qualified entity at less than fair market value. The difference between the sale price and the appraised fair market value qualifies as a tax deductible, charitable contribution.

**4. Installment Sale** - a mechanism by which the income from the sale of a property is spread over several years in order to help reduce capital gains taxes.

**5. Donation** - an outright gift, with or without charitable intent, for no financial remuneration. However, the value of the land given can serve as a tax deduction.

**6. Reserved Life Estate or Remainder Interest** - land is transferred to a land trust immediately, but the owner reserves the use of the property for his or her lifetime. This permits the landowner to continue to live on the property and receive an income tax benefit during his or her lifetime. It can also benefit future generations by removing the value of the property from the estate, reducing inheritance taxes.

**7. Bequest** - the landowner conveys the deed of the property to a land trust at the time of his or her death. This removes the property from the estate for inheritance tax purposes. Including a conservation easement ensures that the property will be permanently protected.

Source: Adapted from Greenways, winter 1999 newsletter of the D and R Greenway Inc. from an article written by Linda Mead, and from "It's No Longer Greek to Me- Land Conservation Terms Made Easy," a flyer put out by D and R Greenway, Inc.

## ***Municipal Open Space Plans and Conservation Package***

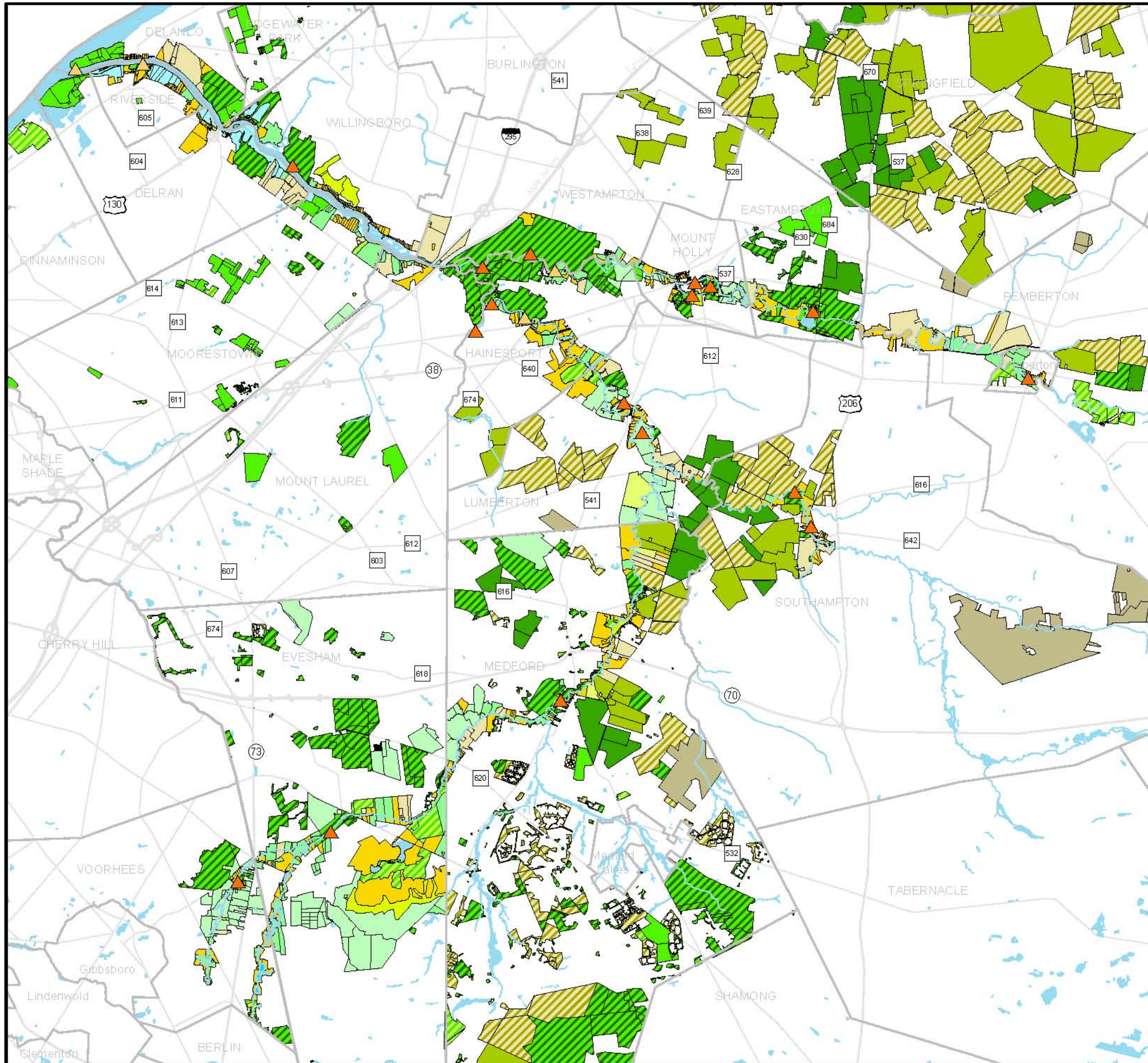
Since the start of the Rancocas Main Branches Greenway Plan, many of the municipalities in the study area have conducted their own Open Space Plans. These plans are parcel specific, municipal-wide efforts to detail which properties that community wishes to preserve in the future. Having an adopted Open Space and Recreation Plan, combined with a dedicated open space tax or bond, makes municipalities eligible for the Green Acres Planning Incentive Program, which offers a 50%, rather than 25%, grant toward open space acquisitions.

**Map 18** - Protected and Proposed Open Space Lands, on page 56 identifies the protection status of all parcels in the study area. The following section is an assessment of each of the study-area municipalities' open space plan as it relates to creating the Rancocas Greenway. The assessments are followed by a matrix listing all undeveloped and unprotected parcels in the greenway study area by block and lot, land use, protection status, greenway plan recommendation, and acreage. Municipal scale maps and aerials for each of the study area municipalities are shown for reference at the end of the chapter. The width of the area proposed for protection in the tables depends on individual site characteristics, but, in general, a 300 foot wide buffer is recommended to accommodate stream buffer protection, wildlife habitat, and trails, where appropriate. Suggestions for which entity should take the lead in implementation are also offered. Where resource protection through regulation is listed as the greenway plan recommendation, the responsibility for strengthening environmental regulations through ordinances falls on the municipalities.





# MAP 18: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS



## OPEN SPACE LANDS

### Proposed : Conservation / Recreation

- County Interest
- Municipally Targeted

### Proposed : Farmland

- County Farmland Program : Pending Acquisition & Current Application
- County Farmland Program : Top 30 / Alternate List
- Municipal Program : TDR Sending Area & Local Funding
- Eight-Year Program

### Protected

- Public Lands
- Privately Protected
- Preserved Farmland

### Other

- Private Recreation
- Farmland
- Vacant
- Developed
- Tidal / Marshland
- Water

## PUBLIC ACCESS / CANOE LAUNCH SITES

- Existing
- Proposed

## BASE MAP

- Stream
- Road
- Municipal Boundary
- County Boundary



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
DECEMBER 2002



**Municipality: VOORHEES**

Greenway Parcel #	Land Use	Protection Status	Parcel ID # on Voorhees Plan	Greenway Plan Recommendation	Acres
C170-222-7.01	Golf Course	Municipally targeted	38	Municipal acquisition for park	3.656
C170-222-8	Golf Course	Municipally targeted	38	Municipal acquisition for park	40.108
C170-222-8.01	Golf Course	Municipally targeted	38	Municipal acquisition for park	49.912
C170-222-8.02	Golf Course	Municipally targeted	38	Municipal acquisition for park	0.855
C170-222-8.03	Golf Course	Municipally targeted	38	Municipal acquisition for park	2.323
C170-222-8.04	Golf Course	Municipally targeted	38	Municipal acquisition for park	8.383
C170-224-16	Golf Course	Municipally targeted	38	Municipal acquisition for park	2.012
C170-224-20	Vacant	Not Municipally targeted		Resource protection thru regulation	5.262
C170-224-6	Vacant	Municipally targeted	32	Municipal acquisition of pond half	4.293
C170-224-8	Residential	Municipally targeted	33	Municipal acquisition/easement	6.888
C170-224-8.01	Residential	Municipally targeted	34	Municipal acquisition/easement	3.616
C170-227-15	Farm field	Municipally targeted	38	Municipal acquisition for park	12.884
C170-227-19	Vacant	Municipally targeted	39	Municipal acquisition for park	28.608
C170-227-22	Vacant	Municipally targeted	38	Municipal acquisition for park	34.546
C170-227-22.01	Vacant	Municipally targeted	38	Municipal acquisition for park	3.304
C170-227-23	Vacant	Municipally targeted	40	Municipal acquisition for park	2.023
C170-230.31-47.02	Vacant	Municipally targeted	27	Resource protection thru regulation	2.335
C170-230.31-50	Vacant	Not Municipally targeted		Resource protection thru regulation	0.704
C170-230.31-51	Vacant	Not Municipally targeted		Resource protection thru regulation	18.234
C170-304.01-17	Private Recreation	Not Municipally targeted		Resource protection thru regulation	4.640
C170-UNK-C	Under Development	Municipally targeted	31	Resource protection thru regulation	20.753
C170-UNK-D	Vacant	Municipally targeted	37	Municipal acquisition for park	17.204
C170-UNK-G	Vacant	Municipally targeted	41	Municipal acquisition for park	8.002
C170-UNK-H	Vacant	Municipally targeted	45	Resource protection thru regulation	25.782
C170-UNK-I	Vacant	Municipally targeted	44	Resource protection thru regulation	19.623
C170-UNK-J	Vacant	Municipally targeted	43	Resource protection thru regulation	12.893
C170-UNK-K	Vacant	Municipally targeted	42	Resource protection thru regulation	18.205
C170-UNK-L	Vacant	Municipally targeted	47	Resource protection thru regulation	10.622
C170-UNK-M	Vacant	Municipally targeted	46	Resource protection thru regulation	3.071
C170-UNK-N	Vacant	Municipally targeted	49	Resource protection thru regulation	6.972
C170-UNK-O	Vacant	Municipally targeted	48	Resource protection thru regulation	32.655
C170-UNK-P	Vacant	Municipally targeted	50	Resource protection thru regulation	13.476

**Voorhees-** Voorhees adopted an Open Space Plan in April of 2000. The plan includes a sophisticated ranking system that takes into account environmental factors, proximity and linkage to existing open space, development pressure, availability, size, cost, practical considerations, scenic views, and historic resources. Fifty-four open space properties across the township were evaluated, and about half, 25, are in the Rancocas Greenway study area. Of the top 15 ranked properties across the township, 8 are in the study area, and one of them, the Kresson Golf property, was ranked first. The Kresson Golf course (c170-227-22.01) is a 154 acre site ranked especially high for environmental features, proximity and linkages to existing open space (Lion's Lake Park), size and scenic views. The property is part of the headwaters of the Barton's Run tributary of the Southwest Branch, and is reported to contain swamp pink. However, the property has received preliminary approval for 106 single-family units and 100 multi-family units on 77 acres of the property. Another of the high ranking properties, the boomerang shaped parcel adjacent to Lion's Lake Park, was recently acquired for a girl's softball field. The other high-ranking properties are c170-227-19, a 28 acre vacant property next to the Kresson Golf Course, and c170-227-23, a 2 acre vacant site next to the golf course.

**Evesham-** Evesham Township has an Open Space Plan that targets all the large open parcels in the study area, namely the Kings Grant/Municipal Utility Authority area, Hamilton Georgetown parcels, and Buchel property, but does not target the relatively small parcels in the 3 to 15 acre range situated on the Barton's Run tributary that feeds into the headwater area of Voorhees Township. These parcels have not been targeted for preservation by the township because they are assumed to be entirely wetlands and therefore not developable, as well as because of the township's preference to target larger blocks of open space. However, since wetlands regulations have come under fire and were recently not upheld by the US Supreme Court (*Palazzolo v. Rhode Island*, decided June 28, 2001) and because these wet headwater parcels are extremely important to the ecosystem of the Rancocas Creek, it is recommended that the township reconsider these parcels' inclusion into the township open space plan. Some of the parcels may even have tax liens, and the township should consider forgoing the back taxes for dedication to the municipality. The matrix on page 58 outlines parcel recommendations:



**Municipality: EVESHAM**

<i>Greenway Parcel #</i>	<i>Land Use</i>	<i>Protection Status</i>	<i>Greenway Plan Recommendation</i>	<i>Acres</i>
065-37-10	Farm	Not targeted	Add to Municipal Plan/acq or easement	19.434
065-38-2	Farm	Not targeted	Add to Municipal Plan/easement	32.146
065-38-2.03	Farm	Not targeted	Add to Municipal Plan/easement	6.010
065-44-8.01	Farm	Not targeted	Add to Municipal Plan/easement	13.355
065-38-5	Private Recreation	Not targeted	Add to Municipal Plan/easement	7.036
065-52.12-1	Golf Course	Not targeted	Add to Municipal Plan/easement	177.446
065-70.01-9	Private Recreation	Not targeted	Add to Municipal Plan/easement	3.328
065-71.01-1	Private Recreation	Not targeted	Add to Municipal Plan/easement	0.573
065-47-1	Vacant/MUA	Municipally targeted	Municipal Acquisition	85.058
065-52-1	Vacant/MUA	Municipally targeted	Municipal Acquisition	350.600
065-53-1	Vacant/MUA	Municipally targeted	Municipal Acquisition	18.805
065-54-1	Vacant/MUA	Municipally targeted	Municipal Acquisition	135.190
065-54-1.01	Vacant/MUA	Municipally targeted	Municipal Acquisition	15.544
065-54-2	Vacant/MUA	Municipally targeted	Municipal Acquisition	108.515
065-57-1.01	Vacant/MUA	Municipally targeted	Municipal Acquisition	13.604
065-37.01-17.06	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.783
065-37.01-21	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.986
065-37-1	Vacant	Not targeted	Add to Municipal Plan/acq or easement	23.538
065-37-1.02	Vacant	Not targeted	Add to Municipal Plan/acq or easement	6.057
065-37-1.03	Vacant	Not targeted	Add to Municipal Plan/acq or easement	6.983
065-37-1.04	Vacant	Not targeted	Add to Municipal Plan/acq or easement	5.214
065-37-1.08	Vacant	Not targeted	Add to Municipal Plan/acq or easement	11.576
065-37-11	Vacant	Not targeted	Add to Municipal Plan/acq or easement	15.225
065-37-11.02	Vacant	Not targeted	Add to Municipal Plan/acq or easement	5.306
065-37-12	Vacant	Not targeted	Add to Municipal Plan/acq or easement	1.566
065-37-14	Vacant	Not targeted	Add to Municipal Plan/acq or easement	13.636
065-37-4	Vacant	Not targeted	Add to Municipal Plan/acq or easement	6.808
065-37-4.01	Vacant	Not targeted	Add to Municipal Plan/acq or easement	1.055
065-37-8	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.636
065-37-9.02	Vacant	Not targeted	Add to Municipal Plan/acq or easement	1.380
065-38-5.01	Vacant	Not targeted	Add to Municipal Plan/easement	31.377

**Municipality: EVESHAM (cont.)**

<i>Greenway Parcel #</i>	<i>Land Use</i>	<i>Protection Status</i>	<i>Greenway Plan Recommendation</i>	<i>Acres</i>
065-38-6	Vacant	Not targeted	Add to Municipal Plan/easement	35.507
065-38-8	Vacant	Not targeted	Add to Municipal Plan/easement	11.061
065-40-3	Vacant	Not targeted	Add to Municipal Plan/acquisition	6.124
065-42-16	Vacant	Not targeted	Add to Municipal Plan/acq or easement	8.997
065-42-21	Vacant	Not targeted	Add to Municipal Plan/acq or easement	5.125
065-42-22	Vacant	Not targeted	Add to Municipal Plan/acq or easement	4.385
065-42-28	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.282
065-42-7	Vacant	Not targeted	Add to Municipal Plan/acq or easement	12.929
065-42-9	Vacant	Not targeted	Add to Municipal Plan/acq or easement	5.275
065-44.18-14.03	Vacant	Not targeted	Add to Municipal Plan/acq or easement	26.607
065-44.18-15.01	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.563
065-44.18-89	Vacant	Not targeted	Add to Municipal Plan/acq or easement	45.794
065-44.23-1.01	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.452
065-44-10	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.455
065-44-13	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.422
065-49-8	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.868
065-50.02-1	Vacant	Not targeted	Add to Municipal Plan/acq or easement	1.213
065-50.02-2	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.516
065-50.02-3	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.702
065-50.02-3.01	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.140
065-50.04-2	Vacant	Not targeted	Add to Municipal Plan/acq or easement	7.501
065-50-12	Vacant	Not targeted	Add to Municipal Plan/acq or easement	2.348
065-50-13	Vacant	Not targeted	Add to Municipal Plan/acq or easement	47.369
065-50-20	Vacant	Not targeted	Add to Municipal Plan/acq or easement	25.311
065-50-22	Vacant	Not targeted	Add to Municipal Plan/acq or easement	22.960
065-53-2	Vacant	Not targeted	Add to Municipal Plan/acquisition	15.726
065-70.01-7	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.854
065-70.01-8	Vacant	Not targeted	Add to Municipal Plan/acq or easement	3.745
065-71.01-18	Vacant	Not targeted	Add to Municipal Plan/acq or easement	1.046
065-71.01-29	Vacant	Not targeted	Add to Municipal Plan/acq or easement	0.805



**Municipality: MEDFORD**

Greenway Parcel #	Land Use	Protection Status	Parcel ID # on Medford Plan	Greenway Plan Recommendation	Acres
105-1001-1	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	7.024
105-1102-6	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	7.015
105-304-2.01	Farm	County & Municipally Targeted	10	County and/or municipal PDR	139.070
105-304-4.01	Farm	Municipally Targeted	12	Municipal PDR	23.607
105-304-4.02	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	10.610
105-304-4.03	Farm	County & Municipally Targeted	11	County and/or municipal PDR	34.186
105-304-4.04	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	25.044
105-304-4.05	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	17.439
105-304-4.06	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	23.915
105-4102-3.01	Farm	County & Municipally Targeted	32	County and/or municipal PDR	52.550
105-4102-4	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	27.553
105-805-22.02	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	7.252
105-806-4	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	36.543
105-905-1.01	Farm	Municipally Targeted	L	Municipal Acquisition or PDR	13.922
105-905-1.02	Farm	Municipally Targeted	L	Municipal Acquisition or PDR	11.364
105-905-3.03	Farm	Municipally Targeted	M	Municipal Acquisition or PDR	9.635
105-905-5	Farm	Municipally Targeted	M	Municipal Acquisition or PDR	41.784
105-907.01-10	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	38.854
105-907.01-11	Farm	Municipally Targeted	N	Municipal Acquisition or PDR	26.646
105-907.01-2	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	1.253
105-907.01-4	Farm	Municipally Targeted	K	Municipal Acquisition or PDR	43.353
105-907.01-6.01	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	27.084
105-907.01-7	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	2.643
105-907.01-9A	Farm	Municipally Targeted	K	Municipal Acquisition or PDR	73.138
105-907.01-9B	Farm	Not Targeted		Add to Municipal Plan/Acq or PDR	4.545
105-UNK-W	Farm	Municipally Targeted	K	Municipal Acquisition or PDR	4.739
105-806-1	Camp	Not Targeted		Add to Municipal Plan/Cons Easmnt	16.307
105-1001-2	Vacant	Not Targeted		Add to Municipal Plan/Acq or Ease	13.594
105-2001-17	Vacant	Not Targeted		Add to Mun. Plan/Acq/Ease/Reg	0.632
105-2401-13	Vacant	Not Targeted		Add to Mun. Plan/Acq/Ease/Reg	0.995
105-303-4	Vacant	Not Targeted		Add to Municipal Plan/Cons Easmnt	15.924
105-3201-1.02	Vacant	Not Targeted		Add to Mun. Plan/Acq/Ease/Reg	3.096

**Municipality: MEDFORD (cont.)**

Greenway Parcel #	Land Use	Protection Status	Parcel ID # on Medford Plan	Greenway Plan Recommendation	Acres
105-3201-3.03	Vacant	Not Targeted		Add to Mun. Plan/Acq/Ease/Reg	0.781
105-4102-2	Vacant	Municipally Targeted	33	Municipal Acquisition or PDR	25.493
105-4103-8	Vacant	Not Targeted		Add to Municipal Plan/Acquire	4.569
105-905-13.35	Vacant	Not Targeted		Add to Municipal Plan/Acq or Ease	17.394
105-906.01-12	Vacant	Not Targeted		Add to Municipal Plan/Acquire	4.278
105-906.01-16	Vacant	Not Targeted		Add to Municipal Plan/Acquire	2.184
105-907.01-12	Vacant	Not Targeted		Add to Municipal Plan/Acquire	4.875
105-907.01-3.06	Vacant	Not Targeted		Add to Mun. Plan/Acq/Ease/Reg	1.618
105-908-13.01	Vacant	Not Targeted		Add to Municipal Plan/Acquire	4.156
105-908-13.04	Vacant	Not Targeted		Add to Municipal Plan/Acquire	2.552
105-908-13.07	Vacant	Not Targeted		Add to Municipal Plan/Acquire	2.024
105-908-13.08	Vacant	Not Targeted		Add to Municipal Plan/Acquire	2.646
105-908-2.01	Vacant	Not Targeted		Add to Municipal Plan/Acquire	10.853

**Medford-** Medford Township also has an Open Space Plan targeting parcels for open space acquisition, farmland preservation, and a proposed greenway along the Rancocas that is consistent with the Rancocas Main Branches Greenway Plan. However, several parcels within the proposed greenway area are not specifically identified by Medford for open space or farmland preservation. The township should reconsider including these parcels in their open space plan to complete the greenway. The parcels include: several tree farms on the Barton's Run tributary entering Evesham, several vacant parcels along Barton's Run, and several farmed parcels on the Southwest Branch above the village of Medford.



**Lumberton-** Lumberton Township is working on an open space plan that targets many, but not all of the open properties along the Rancocas. In particular, certain properties on the east side of the South Branch, and all properties along the South Branch where it branches off from the Southwest Branch, are not targeted. In addition, there are at least two vacant properties that appear to be part of the old right-of-way of the Mt. Holly to Medford line that could be incorporated into the municipal and/or county open space plans.

### Municipality: LUMBERTON

Greenway Parcel #	Land Use	Protection Status	Greenway Plan Recommendation	Acres
090-21-23.01	Farm	Not targeted	Protect thru land use regs	7.124
090-21-23.15	Farm	Not targeted	Protect thru land use regs	2.447
090-21-24	Farm	Not targeted	Add to municipal plan/acq or easement	47.831
090-21-25	Farm	Not targeted	Add to municipal plan/acq or easement	16.035
090-26-1	Farm	Not targeted	Add to municipal plan/easement	4.407
090-26-3.01	Farm	Not targeted	Add to municipal plan/acq or easement	35.867
090-26-3.01a	Farm	Not targeted	Add to municipal plan/acq or easement	6.312
090-31-4.01	Farm	Municipally targeted	Acquisition or conservation easement	61.559
090-45.01-3	Farm	Not targeted	Add to municipal plan/acq or easement	19.480
090-45.01-4	Farm	Not targeted	Add to municipal plan/acq or easement	18.012
090-45.01-6	Farm	Not targeted	Add to municipal plan/acq or easement	0.564
090-46.01-1.01	Farm	Existing Dev Approval	Protect thru land use regs/easements	119.750
090-46.01-3.01	Farm	Municipally targeted	Acquisition or conservation easement	23.809
090-46-13	Farm	Municipally targeted	Acquisition or conservation easement	24.365
090-52.01-8	Farm	County Pending Acq	County PDR	17.631
090-52.01-9.01	Farm	County Pending Acq	County PDR	52.533
090-52.01-9.02	Farm	County Pending Acq	County PDR	21.989
090-52-1	Farm	Not targeted	Add to municipal plan/acq or easement	0.258
090-52-2	Farm	Not targeted	Add to municipal plan/acq or easement	28.107
090-52-7.01	Farm	Not targeted	Add to municipal plan/acq or easement	4.877
090-7-g1	Farm	Municipally targeted	Acquisition or conservation easement	22.096
090-21-15.01	Camp Worth	Municipally targeted	Acquire for township park	27.243
090-45-1.18	Camp Worth	Municipally targeted	Acquire for township park	56.444
090-46-11.04	Golf Course	Existing Dev Approval	Protect thru land use regs/easements	27.388
090-46-12.01	Golf Course	Municipally targeted	Acquisition or conservation easement	94.640
090-1.02-1	Vacant	Municipally targeted	Acquisition or conservation easement	7.156
090-13.02-3.01	Vacant	Municipally targeted	Acquisition or conservation easement	1.167
090-13.02-6	Vacant	Not targeted	Add to municipal plan/acquire for rail-trail	0.676
090-14.02-1.01	Vacant	Municipally targeted	Acquisition or conservation easement	9.942
090-21-3.02	Vacant	Not targeted	Protect thru land use regs	0.483
090-26-5	Vacant	Not targeted	Add to municipal plan/acq or easement	0.890
090-26-6	Vacant	Not targeted	Add to municipal plan/acq or easement	11.004
090-26-7	Vacant	Municipally targeted	Acquisition or conservation easement	28.057
090-27-7	Vacant	Not targeted	Add to municipal plan/acquire for rail-trail	3.096
090-9.02-1	Vacant	Municipally targeted	Acquisition or conservation easement	14.104



**Municipality: HAINESPORT**

<i>Greenway Parcel #</i>	<i>Land Use</i>	<i>Protection Status</i>	<i>Greenway Plan Recommendation</i>	<i>Acres</i>
080-100-15	Farm	Not targeted	Protect thru regs and easements	4.770
080-11-4.01	Farm	Existing Dev. Approval	Protect thru regs and easements	17.357
080-11-4	Vacant	Existing Dev. Approval	Protect thru regs and easements	11.441
080-115-3	Vacant	Not targeted	Protect thru regs	1.168
080-115-3.01	Vacant	Not targeted	Protect thru regs	1.017
080-115-3.02	Vacant	Not targeted	Protect thru regs	1.869
080-115-4.01	Vacant	Not targeted	Protect thru regs	6.455
080-120-1	Vacant	Not targeted	State or Municipal acquisition	6.354
080-120-1.01	Vacant	Not targeted	State or Municipal acquisition	6.700
080-120-1.02	Vacant	Not targeted	State or Municipal acquisition	2.999
080-12-1	Vacant	Not targeted	State or Municipal acquisition	14.003
080-121-1	Vacant	Not targeted	State or Municipal acquisition	1.829
080-121-2	Vacant	Not targeted	State or Municipal acquisition	0.197
080-121-3	Vacant	Not targeted	State or Municipal acquisition	4.969
080-26.02-20	Vacant	Municipally Targeted	Acquire for parkland	7.612
080-26-17	Vacant	Municipally Targeted	Acquire for parkland	13.000
080-26-20	Vacant	Municipally Targeted	Acquire for parkland	39.388
080-2-g1	Vacant	Not targeted	State or Municipal acquisition/or regs	2.689
080-5-4	Vacant	Not targeted	State or Municipal acquisition	2.029
080-73-10	Vacant	Not targeted	State or Municipal acquisition	1.691
080-73-4	Vacant	Not targeted	State or Municipal acquisition	3.199
080-73-9	Vacant	Not targeted	State or Municipal acquisition	6.519
080-8.01-g5	Vacant	Not targeted	Protect thru regs and easements	2.310
080-8-1	Vacant	Not targeted	State or Municipal acquisition	7.055
080-8-11	Vacant	Not targeted	State or Municipal acquisition	6.820
080-8-4	Vacant	Not targeted	State or Municipal acquisition	1.543
080-8-5	Vacant	Not targeted	State or Municipal acquisition	0.767
080-8-6	Vacant	Not targeted	State or Municipal acquisition	14.541
080-8-8	Vacant	Not targeted	State or Municipal acquisition	4.393
080-8-9	Vacant	Not targeted	State or Municipal acquisition	8.862
080-93-1	Vacant	Not targeted	Protect thru regs	1.025
080-95-1	Vacant	Not targeted	Protect thru regs and easements	3.507

**Municipality: HAINESPORT**

<i>Greenway Parcel #</i>	<i>Land Use</i>	<i>Protection Status</i>	<i>Greenway Plan Recommendation</i>	<i>Acres</i>
080-95-2	Vacant	Not targeted	Add to Municipal Plan/acq or easement	18.408
080-95-3	Vacant	Not targeted	Add to Municipal Plan/acq or easement	11.315
080-97-1.01	Vacant	Not targeted	Protect thru regs	3.154
080-97-2	Vacant	Not targeted	Protect thru regs and easements	2.738
080-98-2.01	Vacant	Not targeted	Protect thru regs	19.996
080-99-9	Vacant	Not targeted	Protect thru regs and easements	2.552

**Hainesport-** Hainesport adopted an open space plan in August 2001 that identified 10 parcels for acquisition. Three of those parcels are within the greenway study area and, if acquired, would augment the county-owned Winzinger tract, which is itself adjacent to the state park. There are also 21 other vacant parcels adjacent to the creek and adjacent, or in very close proximity to the state park, which are recommended for preservation primarily by the state, and secondarily by Hainesport Township. They are primarily recommended for state acquisition in order to add to the state park and further protect the Rancocas in this area. In addition, some of these parcels, such as Block 120 parcels 1, 1.01 and 1.02, and parcels in Block 8 could improve park access by providing good canoe launch sites or trail access.



**Westampton-** The township adopted its Open Space Plan on April 25, 2002. The adopted plan contains a map titled Open Space and Recreation Plan System Map, which identified parcels as "Possible Acquisition" and as "Rancocas Conservancy and Delaware Valley Regional Planning Commission Greenway Project - Possible Preservation Opportunities." The table at right lists the greenway parcels, how they are designated on the township's open space plan, and recommendations for their preservation.

### Municipality: WESTAMPTON

Greenway Parcel #	Land Use	Protection Status	Greenway Plan Recommendation	Acres
190-201-1	Farm	Identified as Pres. Opportunity	Conservation easement w/ Ran Cons	102.373
190-202-1	Farm	Not targeted	Easement w/ Twp or Rancocas Cons	32.602
190-202-1.01	Vacant/tidal	Identified as Pres. Opportunity	State acquisition: Tidelands Bureau	2.656
190-604-1	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	7.016
190-604-27	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	0.896
190-604-28	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	0.181
190-604-29	Vacant	Identified as Pres. Opportunity	Municipal acquisition	0.572
190-604-31	Vacant	Identified as Pres. Opportunity	Municipal acquisition	0.145
190-604-38	Vacant	Identified as Pres. Opportunity	Municipal acquisition	0.258
190-701-1	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	1.103
190-701-16	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	0.351
190-701-17	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	10.755
190-701-2	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	0.774
190-701-25	Vacant	Identified as Pres. Opportunity	Municipal or state acquisition	3.537



**Municipality: MOUNT HOLLY**

Greenway Parcel #	Land Use	Protection Status	Greenway Plan Recommendation	Acres
120-116-2	Cemetery	Considered quasi-public	Maintain as cemetery	13.729
120-116-3	Cemetery	Considered quasi-public	Maintain as cemetery	4.347
120-116-4	Cemetery	Considered quasi-public	Maintain as cemetery	0.727
120-73-1	Cemetery	Considered quasi-public	Maintain as cemetery	2.288
120-115-1	Vacant	Proposed Open Space in MP	Municipal acquisition	1.579
120-115-60.08	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	0.202
120-115-76.01	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	1.560
120-133-2	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	3.067
120-133-3	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	1.138
120-133-3	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	0.281
120-133-4	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	0.792
120-134-13	Vacant	Proposed Open Space in MP	County acquisition/easement	6.181
120-134-8.01	Vacant	Not identified in Master Plan	Protect 8.01a: creek half	1.114
120-134-8.01a	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	2.723
120-134-9.01	Vacant	Not identified in Master Plan	Protect 9.01a: creek half	0.911
120-134-9.01a	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	3.094
120-137.01-1	Vacant	County interest	County acquisition/easement	3.200
120-137-1	Vacant	County interest	County acquisition/easement	5.206
120-137-1a	Vacant	County interest	County acquisition/easement	12.527
120-35-g11	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	1.397
120-40-56	Vacant	Not identified in Master Plan	County or Mun acq/easement	1.974
120-40-56.01	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	0.302
120-70-1	Vacant	Not identified in Master Plan	Study for trail feasibility	0.084
120-70-15	Vacant	Not identified in Master Plan	Study for trail feasibility	0.641
120-70-16	Vacant	Not identified in Master Plan	Study for trail feasibility	0.172
120-71-1	Vacant	Not identified in Master Plan	Study for trail feasibility	1.117
120-76-13	Vacant	Not identified in Master Plan	Study for trail feasibility	0.208
120-76-14	Vacant	Not identified in Master Plan	Study for trail feasibility	0.151
120-76-8	Vacant	Not identified in Master Plan	Study for trail feasibility	0.218
120-76-9.01	Vacant	Not identified in Master Plan	Study for trail feasibility	0.219
120-79-4	Vacant	Not identified in Master Plan	Study for trail feasibility	0.239
120-79-6	Vacant	Not identified in Master Plan	Study for trail feasibility	0.198

**Municipality: MOUNT HOLLY (cont.)**

Greenway Parcel #	Land Use	Protection Status	Greenway Plan Recommendation	Acres
120-83-15	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	0.114
120-87-1	Vacant	Not identified in Master Plan	Protect w/Easement or Regs	0.146
120-87-8.01	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	0.489
120-94-58	Vacant	Proposed Open Space in MP	County acquisition/easement	16.049
120-98-7.01	Vacant	Proposed Open Space in MP	Protect w/Easement or Regs	0.526

**Mt. Holly-** *Mt. Holly Township is a historic community that has served as Burlington County's core since its inception. The township has a considerable network of parks, with a large number of them located along the Rancocas. The township does not have a separate Open Space Plan, but the Master Plan Update of 1999 addresses open space in the Land Use Element. The land use plan shows most vacant land along the Rancocas as proposed for parks and open space. The accompanying table gives a detailed description of each of the vacant parcels adjacent to the creek and recommendations for their preservation*



**Eastampton-** Eastampton Township adopted an open space plan in January of 2000 that primarily targeted farm parcels adjacent to Smithville County Park in order to protect the integrity of the Smithville complex. Several of the larger parcels identified in the plan have already been purchased by the county, including the Dac and Axelrod farms. A large farm and truck leasing property on the border with Mt. Holly (greenway parcel 055-1300-5) has not been targeted by the municipality or county for protection, but, because of its large stream frontage, a conservation easement along the riparian corridor would be a good solution. A few of the vacant parcels along the creek in the area known as Rancocas Valley are also targeted by the county for acquisition. The remainder of the Rancocas Valley area in Eastampton poses a challenge in that many homes are built in the floodplain and some have malfunctioning septic systems. Some of these homes are passed from family member to family member rather than sold on the market, precluding opportunities for public inspections after a deed is transferred. Some homeowners without adequate financial resources have not been able to maintain their homes, nor sell them because they would not pass inspections. These homes can become severely dilapidated and tax lien before they are abandoned. Due to the unique environmental conditions and development challenges in the Rancocas Valley, this area would benefit from a special district plan that addresses sewage disposal needs to better protect stream water quality in the short term, and addresses land use alternatives for the area over the long term. Possible long-term solutions could include incorporation into parkland and/or lower density development that the valley could better sustain.

### Municipality: EASTAMPTON

Greenway Parcel #	Land Use	Protection Status	Greenway Plan Recommendation	Acres
055-14-g7	Vacant	County Interest	County acquisition	12.233
055-1300-5	Farm	Not targeted	RC or county easement oppty	27.698
055-14-g577	Vacant	County Interest	County acquisition	7.890
055-14-g4a	Vacant	County Interest	County Acquisition	5.151
055-13-g3	Vacant	County Interest	County Acquisition	2.900



**Municipality: SOUTHAMPTON**

<i>Greenway Parcel #</i>	<i>Land Use</i>	<i>Protection Status</i>	<i>Greenway Plan Recommendation</i>	<i>Acres</i>
170-1102-24	Farm	Not targeted	RC or Twp Conservation Ease	9.882
170-1402-1	Farm	Not targeted	RC or Twp Conservation Ease	89.159
170-1402-9	Farm	Not targeted	RC or Twp Conservation Ease	18.146
170-902-1	Farm	County targeted	County PDR	48.085
170-902-13	Farm	County targeted	County PDR	107.714
170-903-25	Farm	County targeted	County PDR	23.772
170-1102-29	Vacant	Not targeted	Protect thru regs or easement	0.566
170-1102-42	Vacant	Not targeted	Mun acquisition for park	0.506
170-1102-43	Vacant	Not targeted	Mun acquisition for park	2.896
170-4-g4	Vacant	Not targeted	Protect thru regs or easement	3.865
170-903-9	Vacant	Not targeted	Protect thru regs or easement	10.012

**Southampton-** Southampton Township adopted a Conservation, Open Space and Recreation Plan Element to their Master Plan in December 2001. The plan element details the specific goals, objectives and actions to be pursued to protect the township’s natural, cultural, and scenic resources, but it does not specify particular parcels on a map or by block and lot. The table at left therefore designates parcels as "not targeted" on the municipalities Open Space Element because they were not specifically targeted by the plan element. However, they fit the criteria that the plan outlines and are recommended for inclusion in any subsequent more detailed open space planning efforts.



**Pemberton Township-** Pemberton Township does not have an Open Space Plan. However, about 91% of the township is within the Pinelands and subject to development restrictions in accordance with the Pinelands Comprehensive Management Plan. The Rancocas Creek Greenway study area in Pemberton falls outside the Pineland boundary, however, the township has expressed reluctance to impose additional development restrictions in areas outside the Pinelands. Nevertheless, the greenway study area contains important floodplain, wetland, and steep slopes that are important to maintain in their natural state to protect water quality and habitat and prevent downstream flooding. In addition, there is still substantial undeveloped land in Pemberton outside the Pinelands boundary beyond the greenway study area. For these reasons, the greenway plan recommends that, at a minimum, a 300 foot wide buffer be maintained along the creek's banks through a stream corridor protection ordinance. The township's current zoning includes development restrictions such as a 300 foot setback from all wetland areas within the Pinelands. Such environmental protections do not, however, seem to apply to areas outside the Pinelands boundary. To ensure protection of the Rancocas and its tributaries, the township should consider extending the 300 foot setback to stream corridors outside the Pinelands. Because the township does wish to see the non-Pinelands' area developed, the greenway recommendations in the following table apply only to the most environmentally sensitive portion of the parcels adjacent to the creek, or the 300 foot buffer, whichever is greater.

### Municipality: PEMBERTON TOWNSHIP

Greenway Parcel #	Land Use	Protection Status	Greenway Plan Recommendation	Acres
150-778-12	Farm/utility	Not targeted	Protect thru regs and easement	15.237
150-778-5.01	Farm	Not targeted	Protect thru regs and easement	0.252
150-786.01-12.01	Farm	Not targeted	Protect thru regs and easement	63.735
150-786.01-12.02	Farm	Not targeted	Protect thru regs and easement	27.082
150-786.01-12.04	Farm	Not targeted	Protect thru regs and easement	1.399
150-786.01-14.01	Farm	Not targeted	Protect thru regs and easement	98.157
150-786.01-7	Farm	Not targeted	Protect thru regs and easement	21.076
150-787-1	Farm	Not targeted	Protect thru regs and easement	15.967
150-788.01-5.01	Farm	Not targeted	Protect thru regs and easement	130.085
150-789-1	Farm	Not targeted	Protect thru regs and easement	1.737
150-786.01-5.01	Vacant	Not targeted	Protect thru regs and easement	9.768
150-786.01-5.02	Vacant	Not targeted	Protect thru regs and easement	5.948
150-789-3	Vacant	Not targeted	Protect thru regs and easement	1.058
150-790-1	Vacant	Not targeted	Protect thru regs and easement	32.795
150-791.01-1	Vacant	Not targeted	Protect thru regs and easement	17.248
150-792-1	Vacant	Not targeted	Protect thru regs and easement	25.895



**Municipality: PEMBERTON BOROUGH**

<i>Greenway Parcel #</i>	<i>Land Use</i>	<i>Protection Status</i>	<i>Greenway Plan Recommendation</i>	<i>Acres</i>
145-104-17	Farm	Not targeted	Protect thru regs and easement	12.046
145-104-19	Farm	Not targeted	Protect thru regs and easement	5.722
145-304-22	Farm	Not targeted	Protect thru regs and easement	2.937
145-103-2.01	Vacant	Not targeted	Protect thru regs and easement	9.701
145-104-16	Vacant	Proposed for Sr. Citizen Dev.	Protect thru regs and easement	23.784
145-104-18	Vacant	Proposed for Sr. Citizen Dev	Protect thru regs and easement	17.133
145-104-5	Vacant	Not targeted	Protect thru regs and easement	0.222
145-104-7	Vacant	Not targeted	Protect thru regs and easement	7.394
145-104-8	Vacant	Not targeted	Protect thru regs and easement	4.630
145-300-2	Vacant	Proposed Shopping Center	Protect thru regs and easement	6.668
145-300-4	Vacant	Not targeted	Protect thru regs and easement	5.541

***Pemberton Borough*** - *The borough does not have an Open Space Plan.*

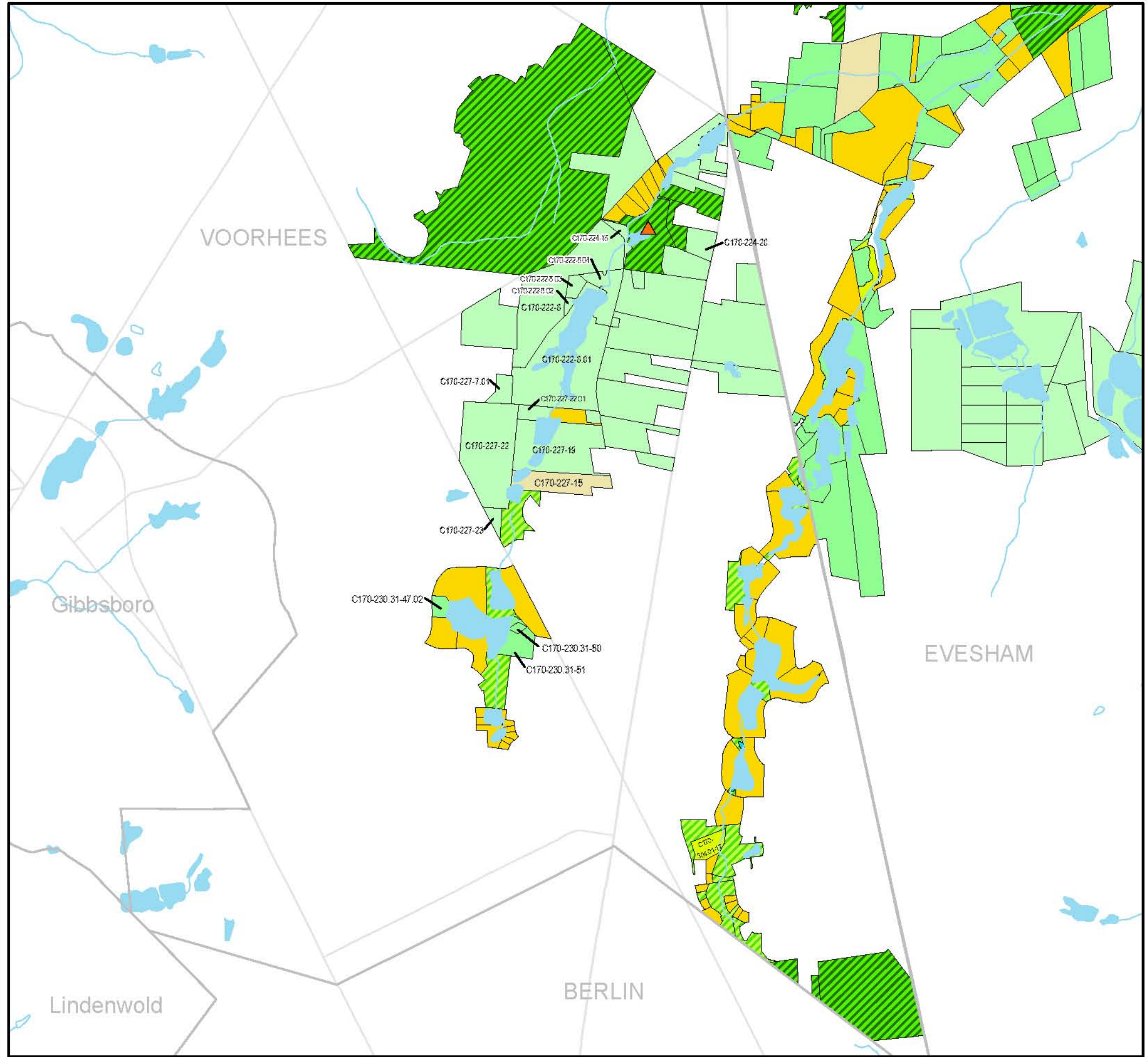
*Some of the vacant parcels along the creek are already proposed for development, and the greenway recommendations are therefore to restrict development along the stream corridor portion of the tracts. The borough is interested in attracting more development, therefore the greenway recommendations are limited to restricting development along the most sensitive portions of the creekside parcels, while allowing appropriate development on the upland portions.*

***Pace of Greenway Implementation***

*Development of the greenway is expected to be piecemeal. As opportunities for acquisitions and conservation easements occur, pieces of land can be added to the puzzle, until eventually all the pieces complete the greenway. The more segments that are added, the more impetus there will be to add the more challenging pieces. Trail development can also be segmented and still have value, because many people enjoy going on short walks close to home. In any case, as more links are added, trails are developed, and canoe launches are formalized, the entire greenway system comes closer to fruition and more effort can be spent on working out the most severe obstacles.*



# MAP 19A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS VOORHEES TOWNSHIP



**OPEN SPACE LANDS**

<b>Proposed : Conservation / Recreation</b>	<b>Protected</b>
County Interest	Public Lands
Municipally Targeted	Privately Protected
	Preserved Farmland
<b>Proposed : Farmland</b>	<b>Other</b>
County Farmland Program : Pending Acquisition & Current Application	Private Recreation
County Farmland Program : Top 30 / Alternate List	Farmland
Municipal Program : TDR Sending Area & Local Funding	Vacant
Eight-Year Program	Developed
	Tidal / Marshland
	Water

**PUBLIC ACCESS / CANOE LAUNCH SITES**

Existing	Proposed
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**BASE MAP**

Stream	Road
Municipal Boundary	County Boundary

N

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Miles

DELAWARE VALLEY  
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# MAP 19B: VOORHEES

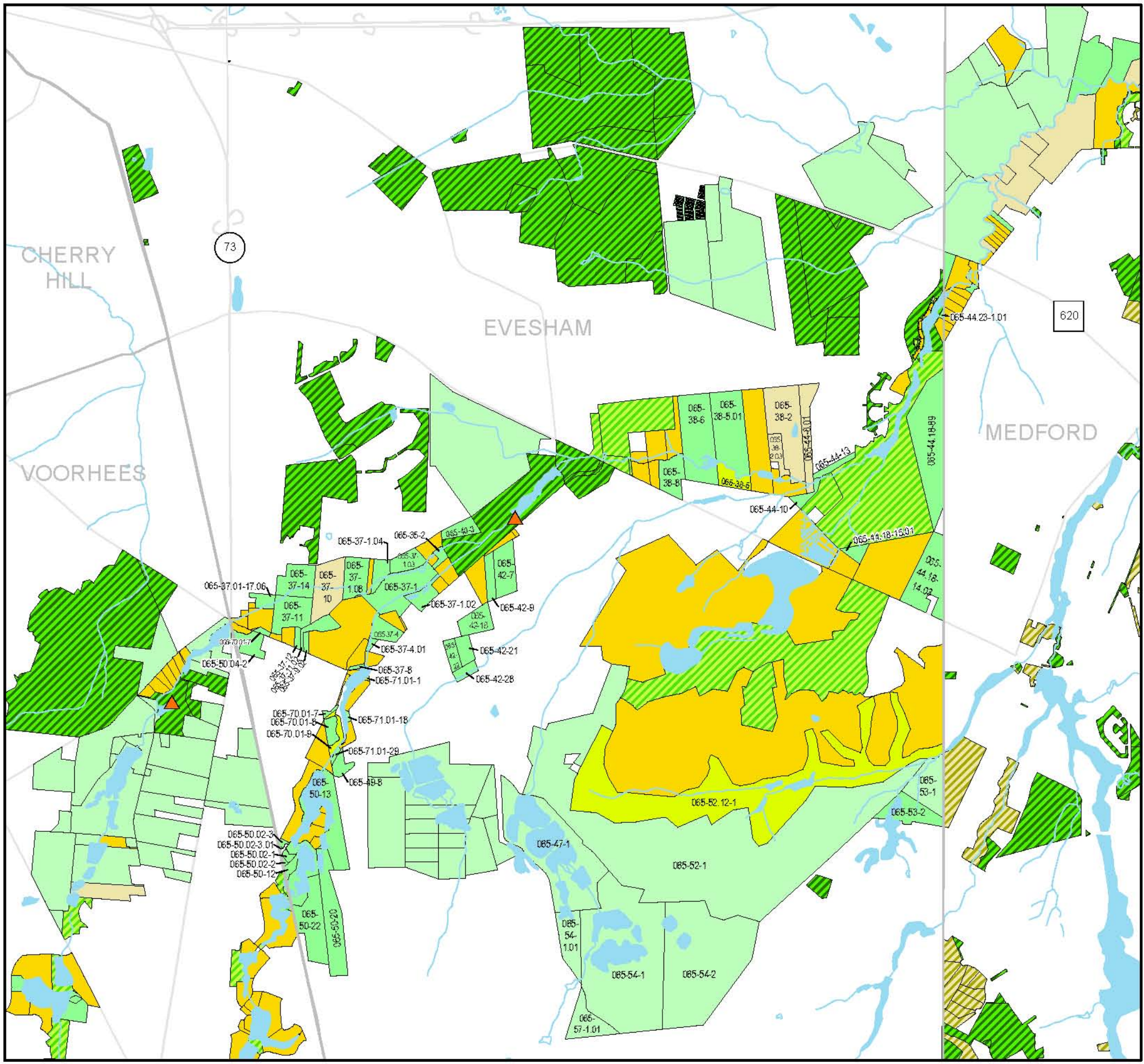


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REGIONAL PLANNING COMMISSION  
2000



# MAP 20A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS EVESHAM TOWNSHIP



## OPEN SPACE LANDS

- |   |                     |
|---|---------------------|
| <b>Proposed : Conservation / Recreation</b>                         | <b>Protected</b>    |
| County Interest   | Public Lands        |
| Municipally Targeted  | Privately Protected |
|   | Preserved Farmland  |
| <b>Proposed : Farmland</b>  | <b>Other</b>        |
| County Farmland Program : Pending Acquisition & Current Application | Private Recreation  |
| County Farmland Program : Top 30 / Alternate List                   | Farmland            |
| Municipal Program : TDR Sending Area & Local Funding                | Vacant              |
| Eight-Year Program  | Developed           |
|   | Tidal / Marshland   |
|   | Water               |

## PUBLIC ACCESS / CANOE LAUNCH SITES

- |          |          |
|----------|----------|
| Existing | Proposed |
|----------|----------|

## BASE MAP

- |                    |                 |
|--------------------|-----------------|
| Stream             | Road            |
| Municipal Boundary | County Boundary |



DELAWARE VALLEY  
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**MAP 20B:  
EVESHAM**

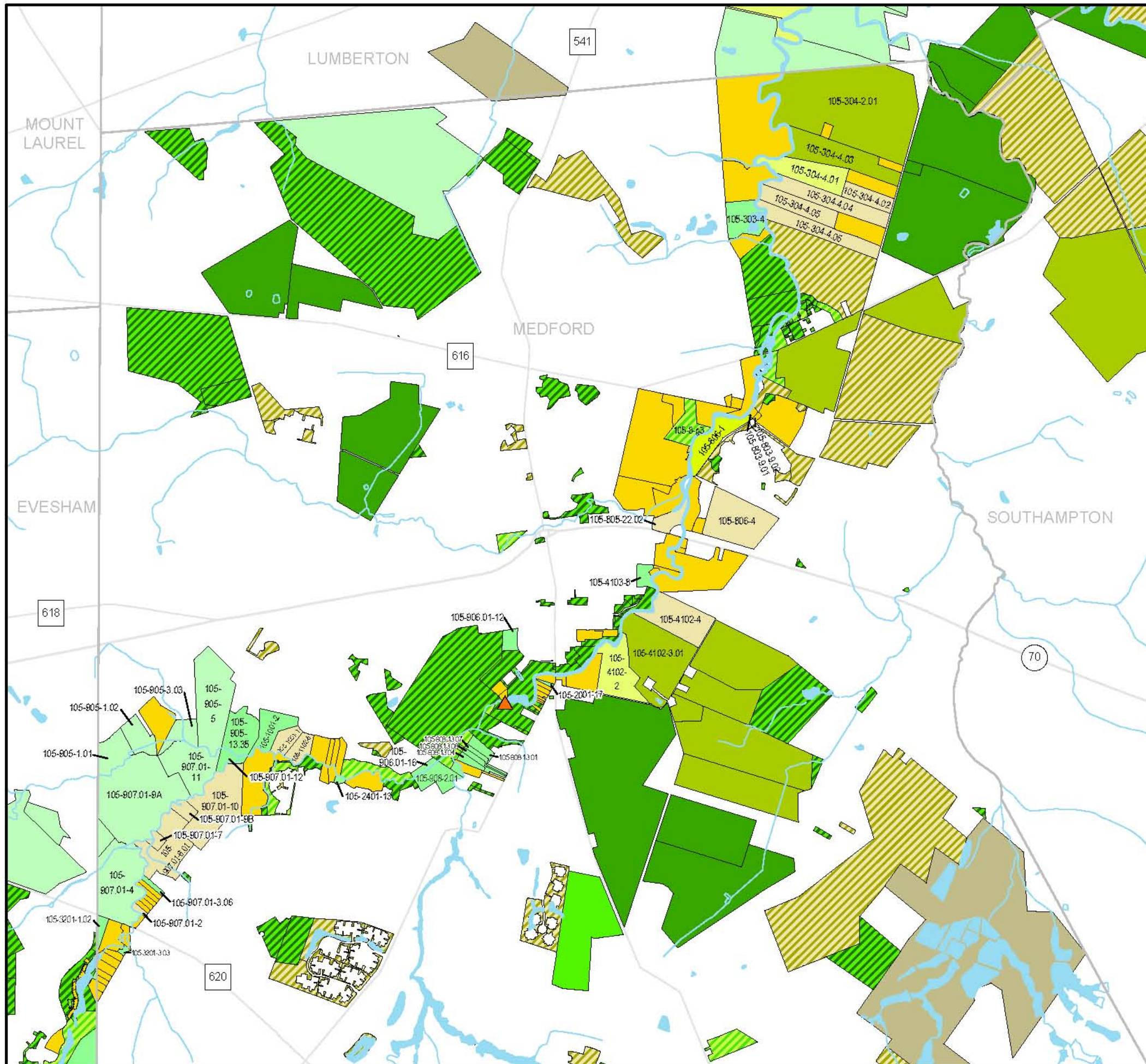


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# MAP 21A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS MEDFORD TOWNSHIP



**OPEN SPACE LANDS**

<b>Proposed : Conservation / Recreation</b>	<b>Protected</b>
County Interest	Public Lands
Municipally Targeted	Privately Protected
	Preserved Farmland
<b>Proposed : Farmland</b>	<b>Other</b>
County Farmland Program : Pending Acquisition & Current Application	Private Recreation
County Farmland Program : Top 30 / Alternate List	Farmland
Municipal Program : TDR Sending Area & Local Funding	Vacant
Eight-Year Program	Developed
	Tidal / Marshland
	Water

**PUBLIC ACCESS / CANOE LAUNCH SITES**

Existing	Proposed
----------	----------

**BASE MAP**

Stream	Road
Municipal Boundary	County Boundary

N

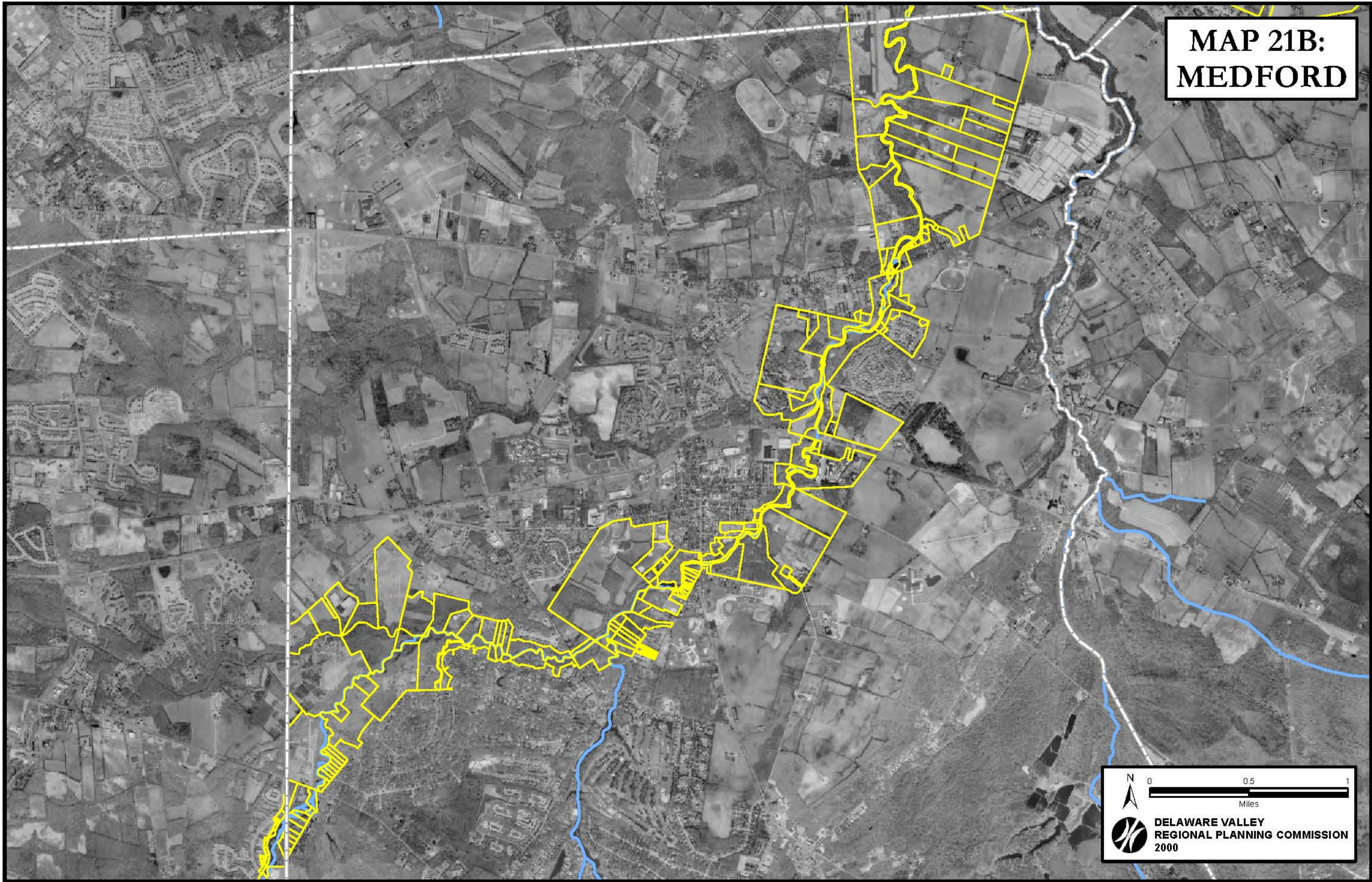
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DELAWARE VALLEY  
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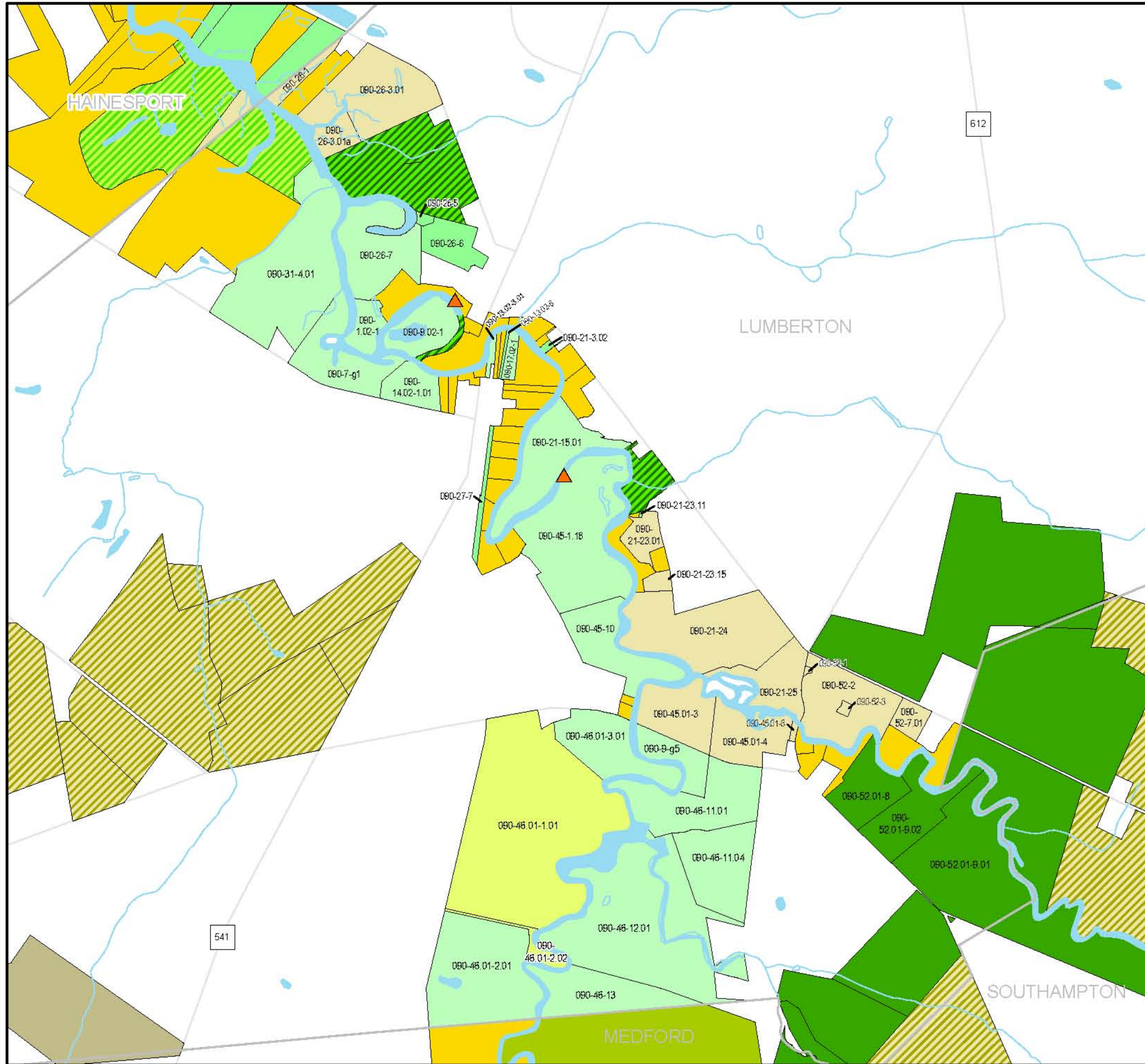
# MAP 21B: MEDFORD



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Miles  
DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000



# MAP 22A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS LUMBERTON TOWNSHIP



**OPEN SPACE LANDS**

<b>Proposed : Conservation / Recreation</b>	<b>Protected</b>
County Interest	Public Lands
Municipally Targeted	Privately Protected
	Preserved Farmland
<b>Proposed : Farmland</b>	<b>Other</b>
County Farmland Program : Pending Acquisition & Current Application	Private Recreation
County Farmland Program : Top 30 / Alternate List	Farmland
Municipal Program : TDR Sending Area & Local Funding	Vacant
Eight-Year Program	Developed
	Tidal / Marshland
	Water

**PUBLIC ACCESS / CANOE LAUNCH SITES**

Existing	Proposed
----------	----------

**BASE MAP**

Stream	Road
Municipal Boundary	County Boundary

N

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Miles

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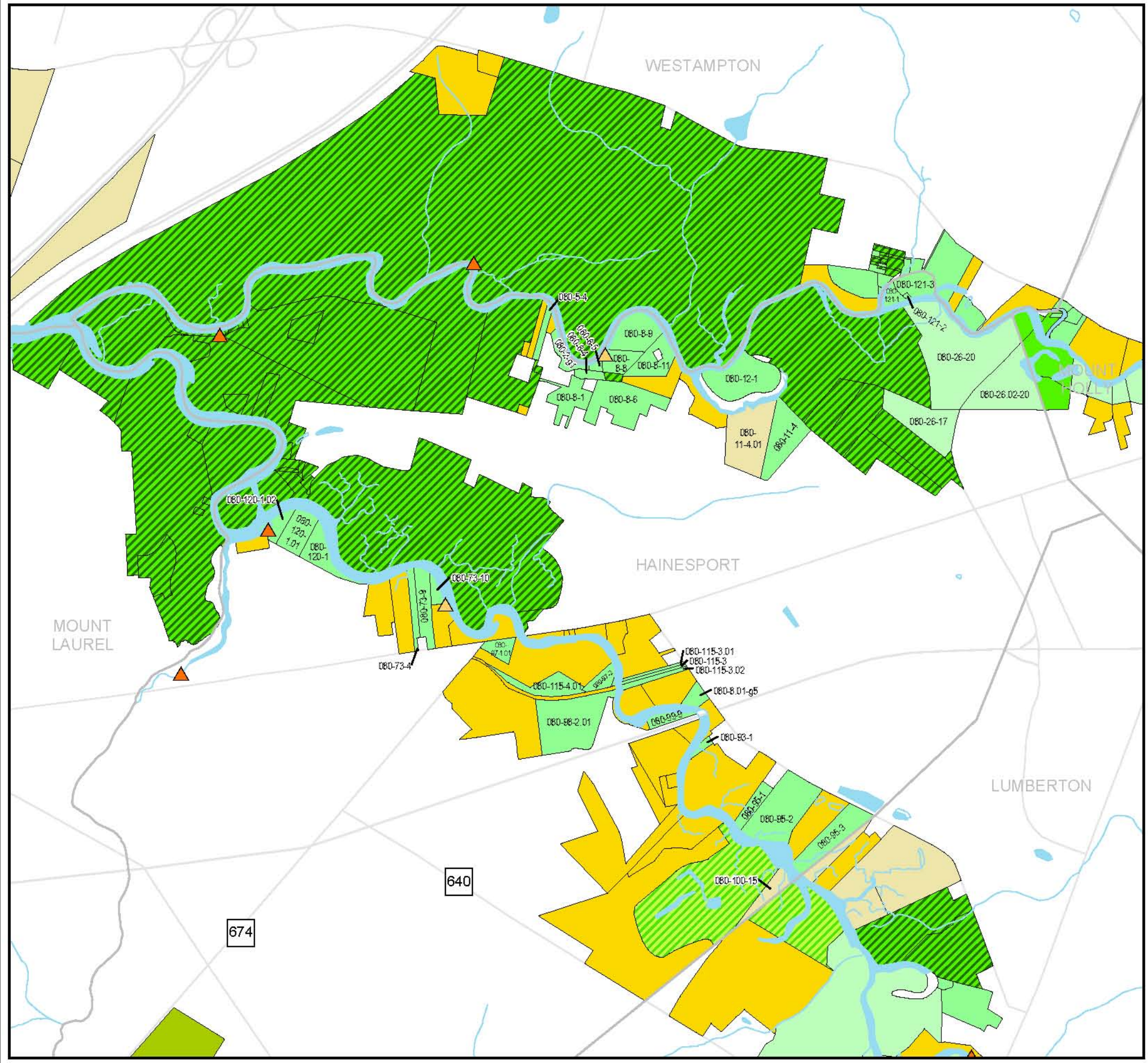
# MAP 22B: LUMBERTON



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Miles  
DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000



# MAP 23A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS HAINESPORT TOWNSHIP



**OPEN SPACE LANDS**

<b>Proposed : Conservation / Recreation</b>	<b>Protected</b>
County Interest	Public Lands
Municipally Targeted	Privately Protected
	Preserved Farmland
<b>Proposed : Farmland</b>	<b>Other</b>
County Farmland Program : Pending Acquisition & Current Application	Private Recreation
County Farmland Program : Top 30 / Alternate List	Farmland
Municipal Program : TDR Sending Area & Local Funding	Vacant
Eight-Year Program	Developed
	Tidal / Marshland
	Water

**PUBLIC ACCESS / CANOE LAUNCH SITES**

Existing	Proposed
----------	----------

**BASE MAP**

Stream	Road
Municipal Boundary	County Boundary

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Miles

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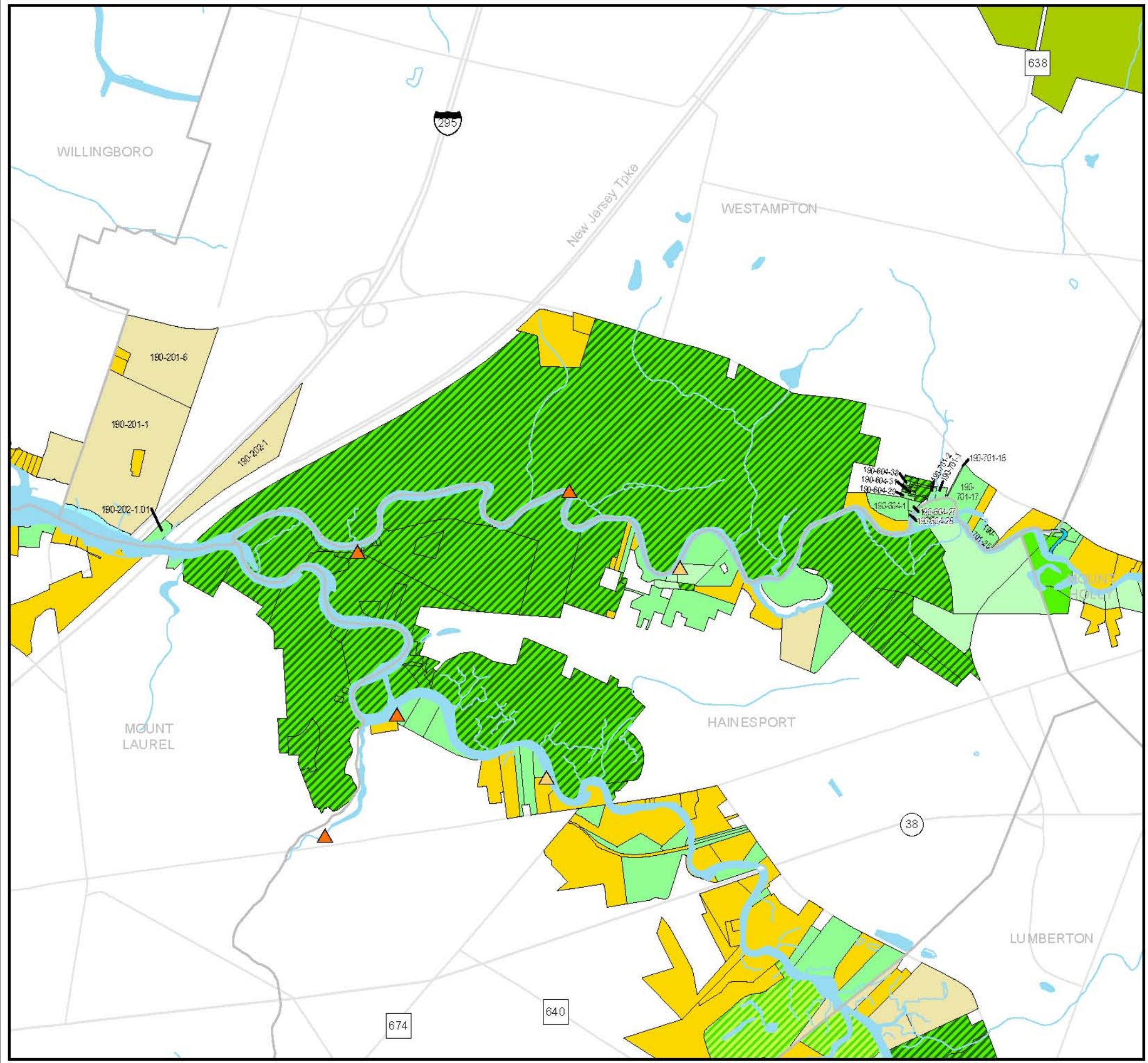


# MAP 23B: HAINESPORT





# MAP 24A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS WESTAMPTON TOWNSHIP



**OPEN SPACE LANDS**

<b>Proposed : Conservation / Recreation</b>	<b>Protected</b>
County Interest	Public Lands
Municipally Targeted	Privately Protected
	Preserved Farmland
<b>Proposed : Farmland</b>	<b>Other</b>
County Farmland Program : Pending Acquisition & Current Application	Private Recreation
County Farmland Program : Top 30 / Alternate List	Farmland
Municipal Program : TDR Sending Area & Local Funding	Vacant
Eight-Year Program	Developed
	Tidal / Marshland
	Water

**PUBLIC ACCESS / CANOE LAUNCH SITES**

Existing	Proposed
----------	----------

**BASE MAP**

Stream	Road
Municipal Boundary	County Boundary

N

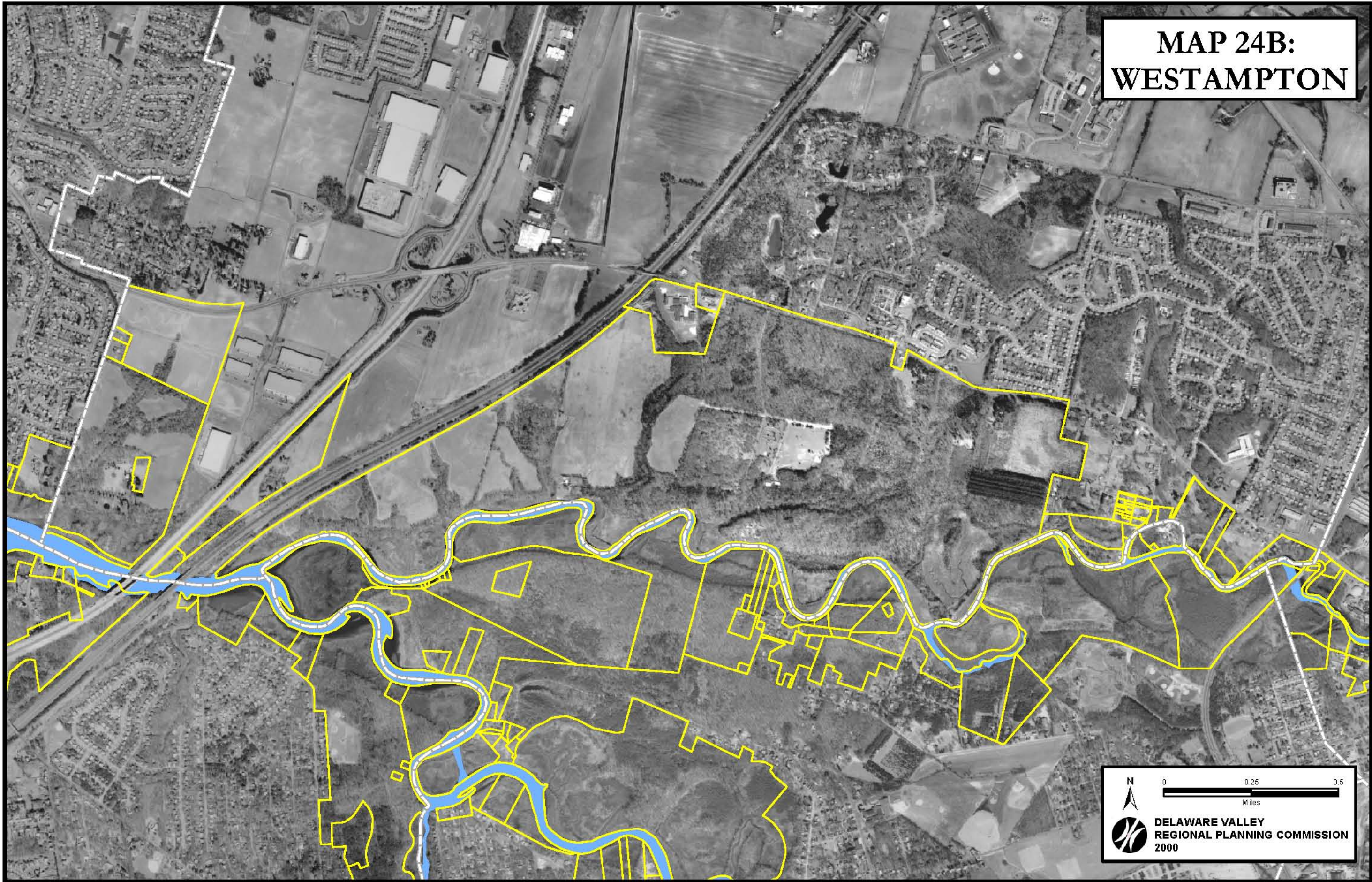
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# MAP 24B: WESTAMPTON

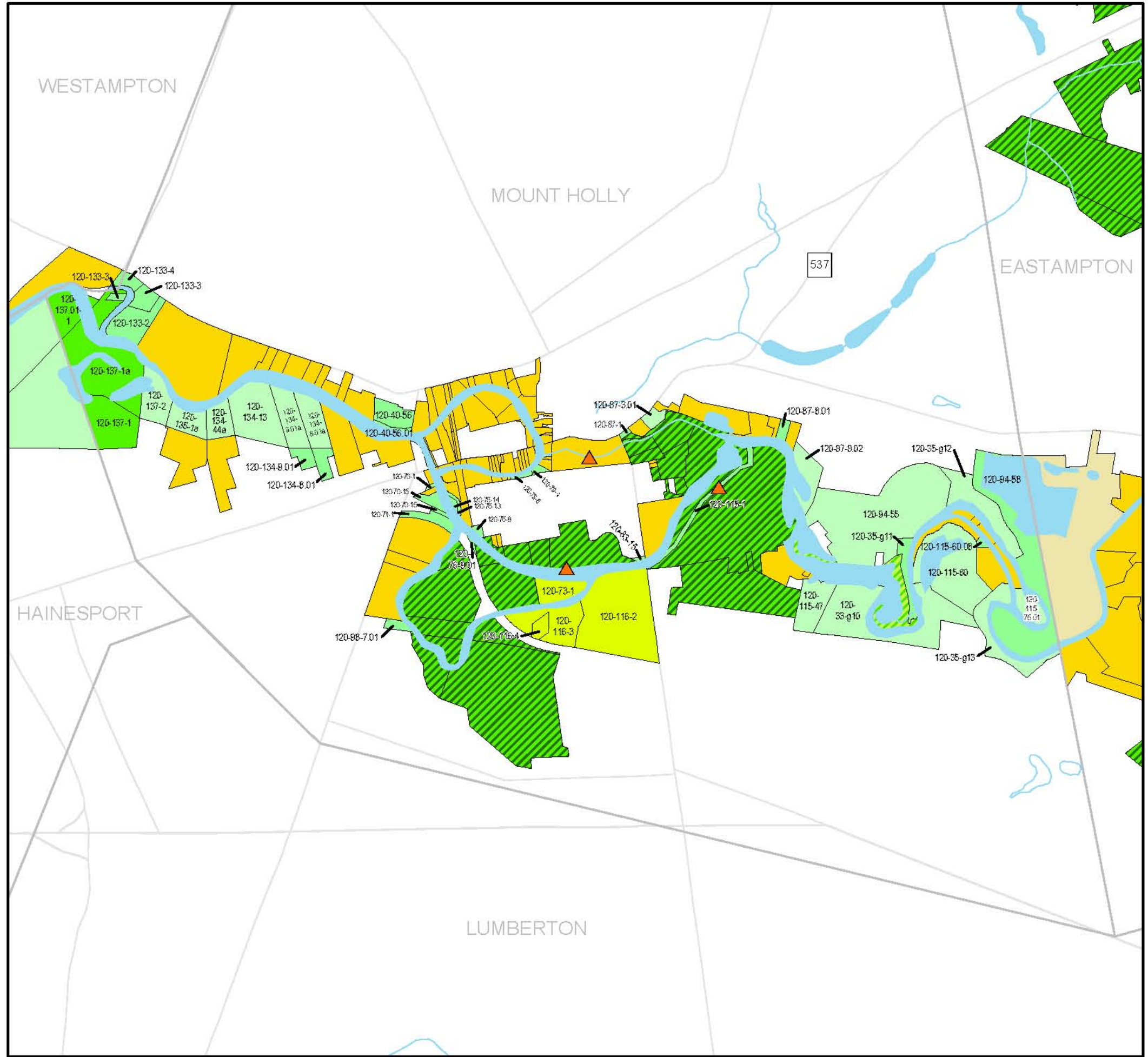


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# MAP 25A: RANCOCAS CREEK GREENWAY

## PROTECTED & PROPOSED OPEN SPACE LANDS

### MOUNT HOLLY TOWNSHIP

**OPEN SPACE LANDS**

<b>Proposed : Conservation / Recreation</b>	<b>Protected</b>
County Interest	Public Lands
Municipally Targeted	Privately Protected
	Preserved Farmland
<b>Proposed : Farmland</b>	<b>Other</b>
County Farmland Program : Pending Acquisition & Current Application	Private Recreation
County Farmland Program : Top 30 / Alternate List	Farmland
Municipal Program : TDR Sending Area & Local Funding	Vacant
Eight-Year Program	Developed
	Tidal / Marshland
	Water

**PUBLIC ACCESS / CANOE LAUNCH SITES**

Existing	Proposed
----------	----------

**BASE MAP**

Stream	Road
Municipal Boundary	County Boundary

N

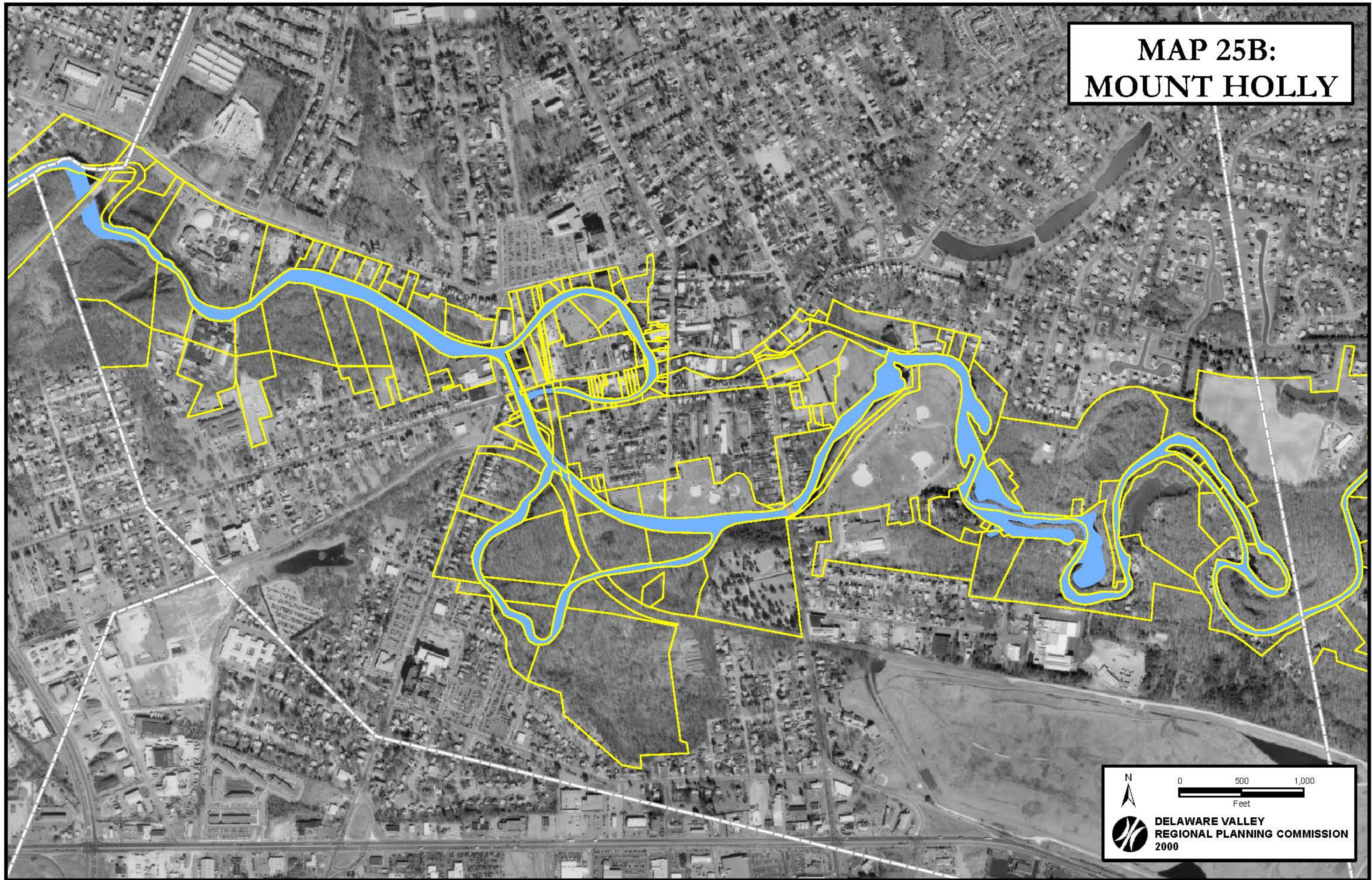
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Miles

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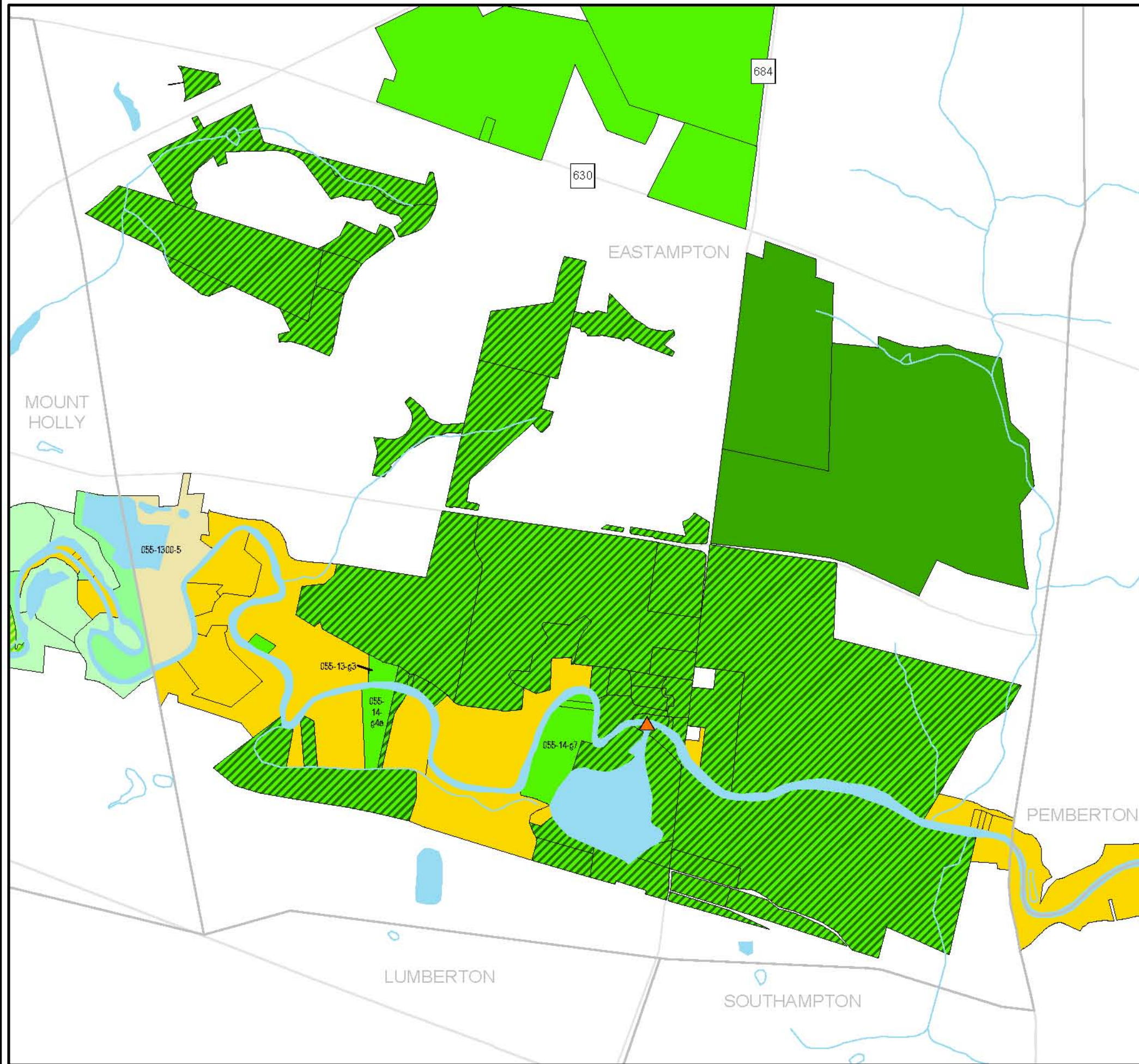
# MAP 25B: MOUNT HOLLY



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Feet  
DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000



# MAP 26A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS EASTAMPTON TOWNSHIP



## OPEN SPACE LANDS

### Proposed : Conservation / Recreation

- County Interest
- Municipally Targeted

### Proposed : Farmland

- County Farmland Program : Pending Acquisition & Current Application
- County Farmland Program : Top 30 / Alternate List
- Municipal Program : TDR Sending Area & Local Funding
- Eight-Year Program

### Protected

- Public Lands
- Privately Protected
- Preserved Farmland

### Other

- Private Recreation
- Farmland
- Vacant
- Developed
- Tidal / Marshland
- Water

## PUBLIC ACCESS / CANOE LAUNCH SITES

- Existing
- Proposed

## BASE MAP

- Stream
- Road
- Municipal Boundary
- County Boundary



0 0.25 0.5



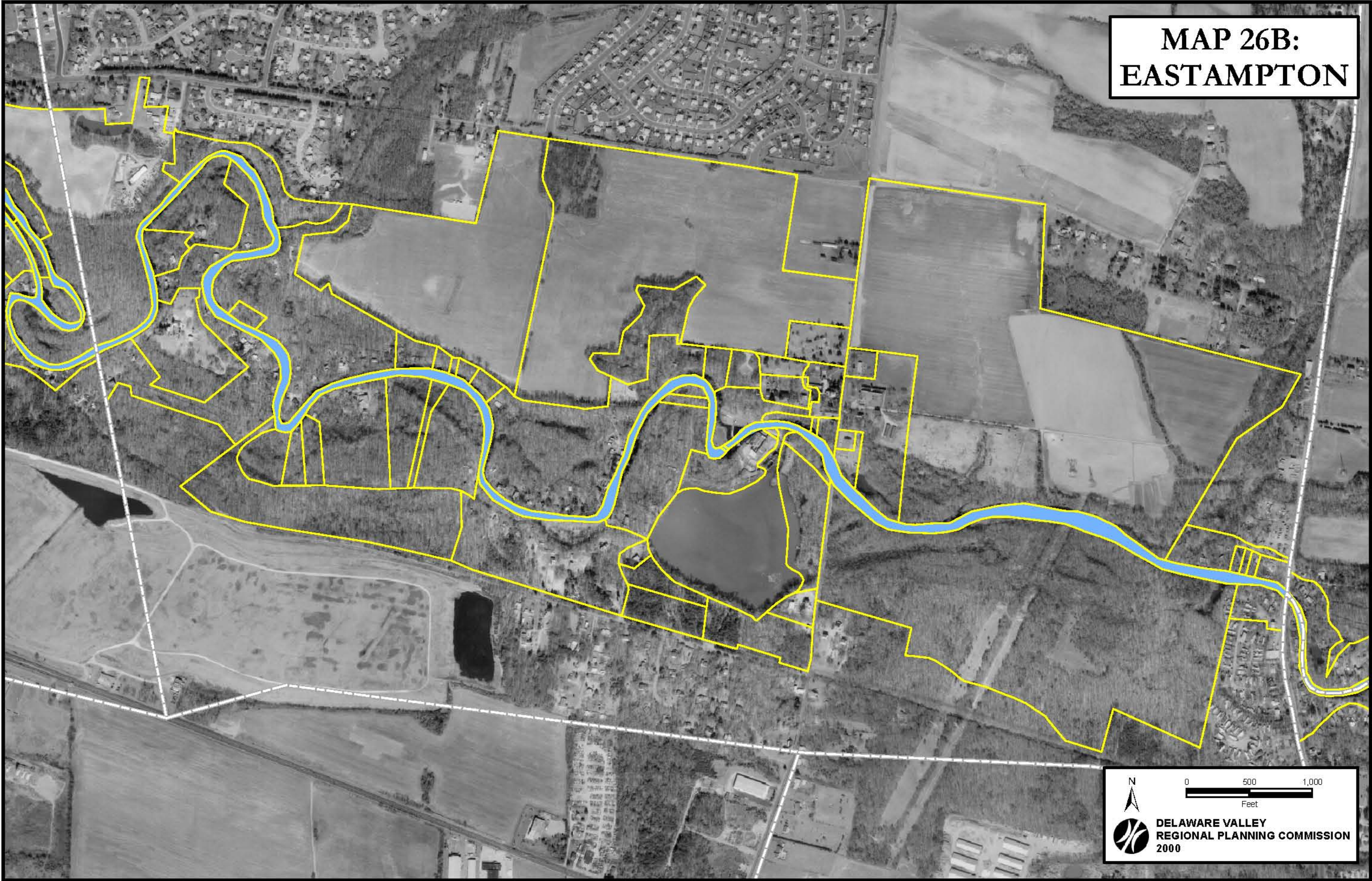
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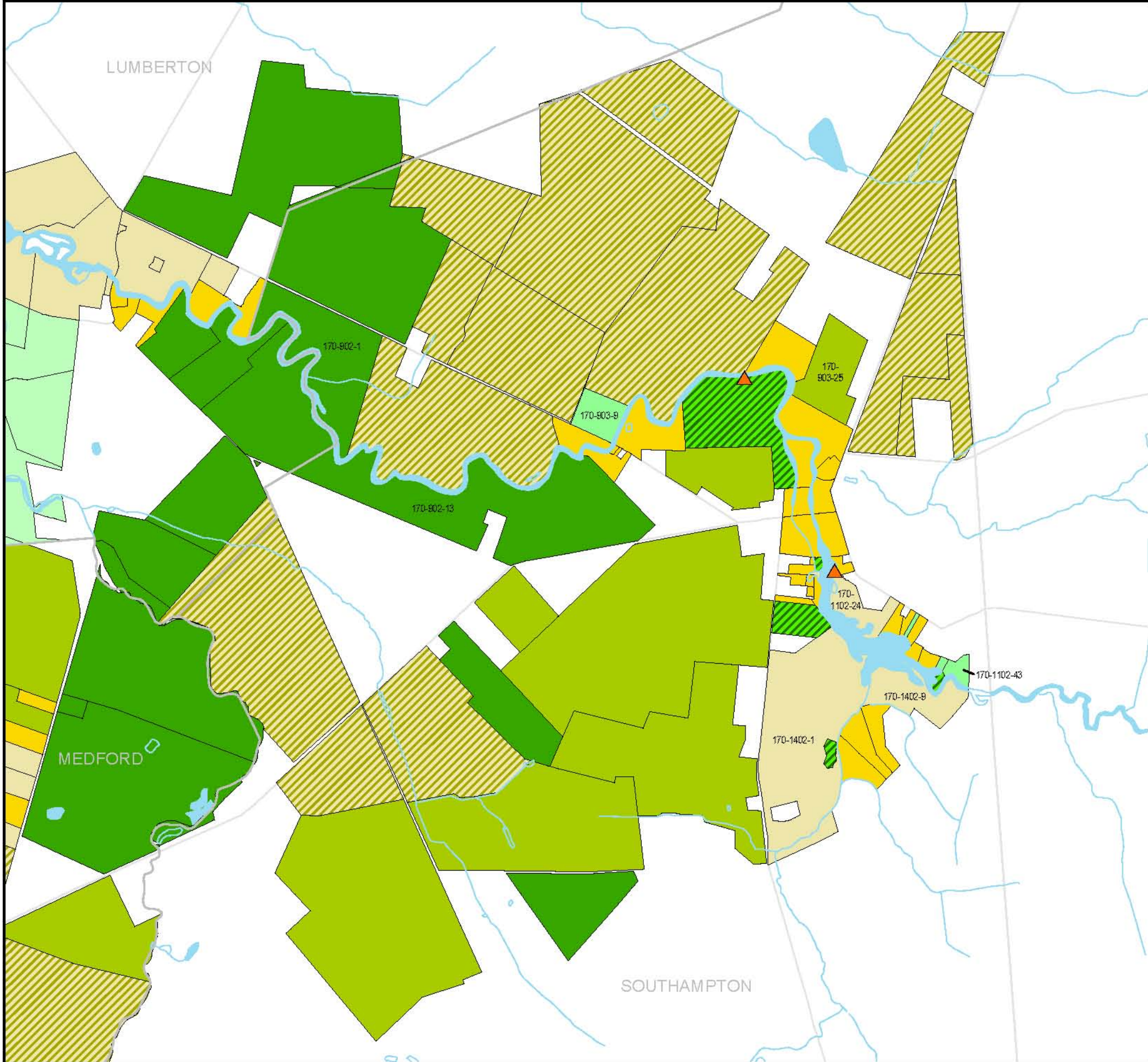


**MAP 26B:  
EASTAMPTON**





# MAP 27A: RANCOCAS CREEK GREENWAY PROTECTED & PROPOSED OPEN SPACE LANDS SOUTHAMPTON TOWNSHIP



### OPEN SPACE LANDS

#### Proposed : Conservation / Recreation

- County Interest
- Municipally Targeted

#### Protected

- Public Lands
- Privately Protected
- Preserved Farmland

#### Proposed : Farmland

- County Farmland Program : Pending Acquisition & Current Application
- County Farmland Program : Top 30 / Alternate List
- Municipal Program : TDR Sending Area & Local Funding
- Eight-Year Program

#### Other

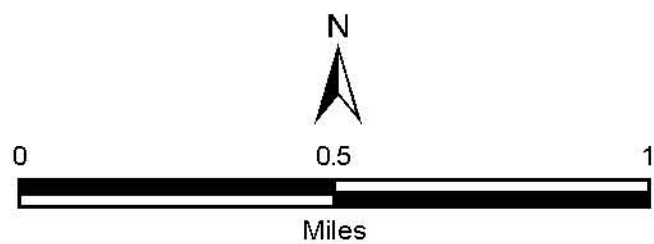
- Private Recreation
- Farmland
- Vacant
- Developed
- Tidal / Marshland
- Water

### PUBLIC ACCESS / CANOE LAUNCH SITES

- Existing
- Proposed

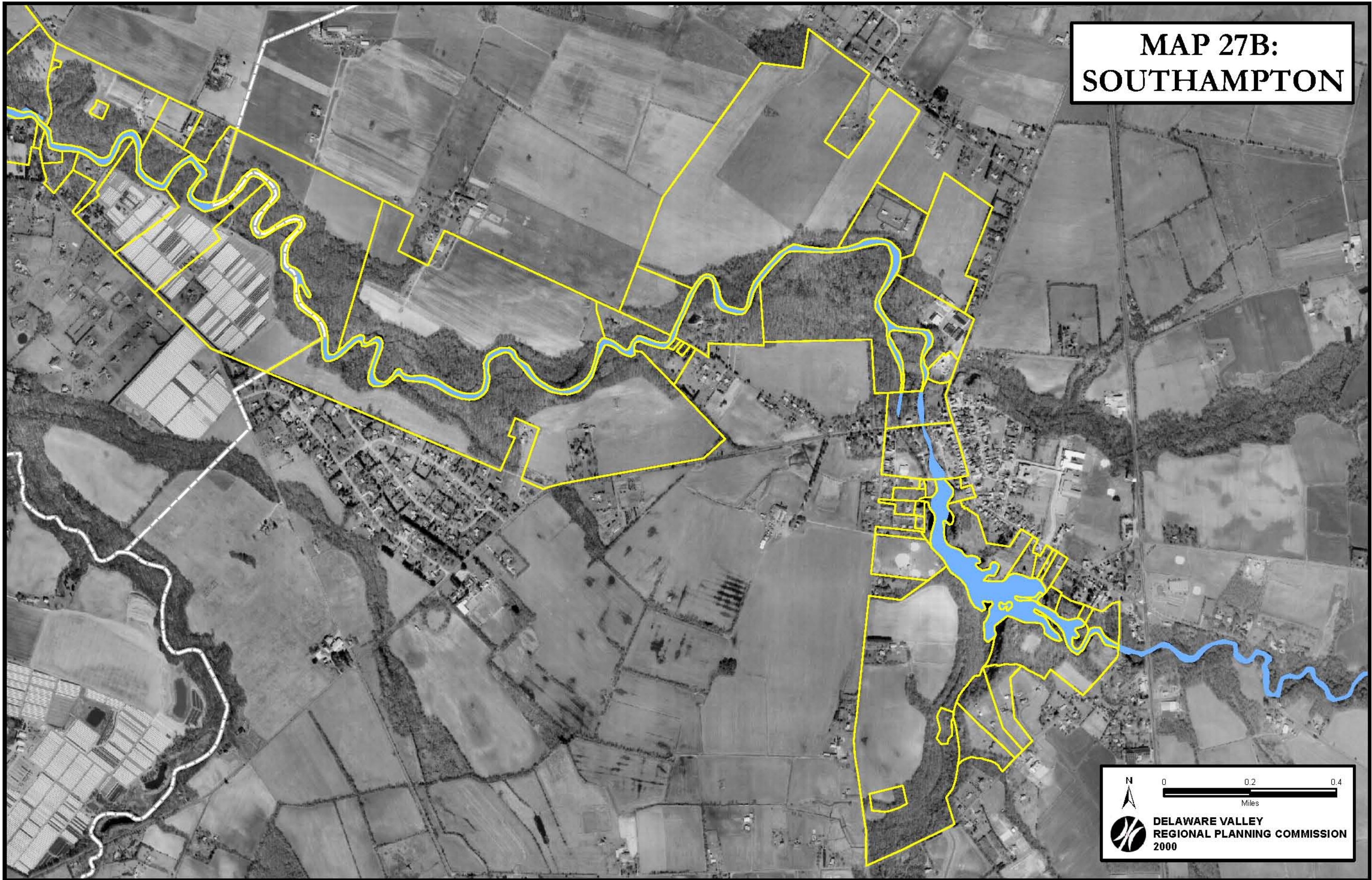
### BASE MAP

- Stream
- Road
- Municipal Boundary
- County Boundary





**MAP 27B:  
SOUTHAMPTON**



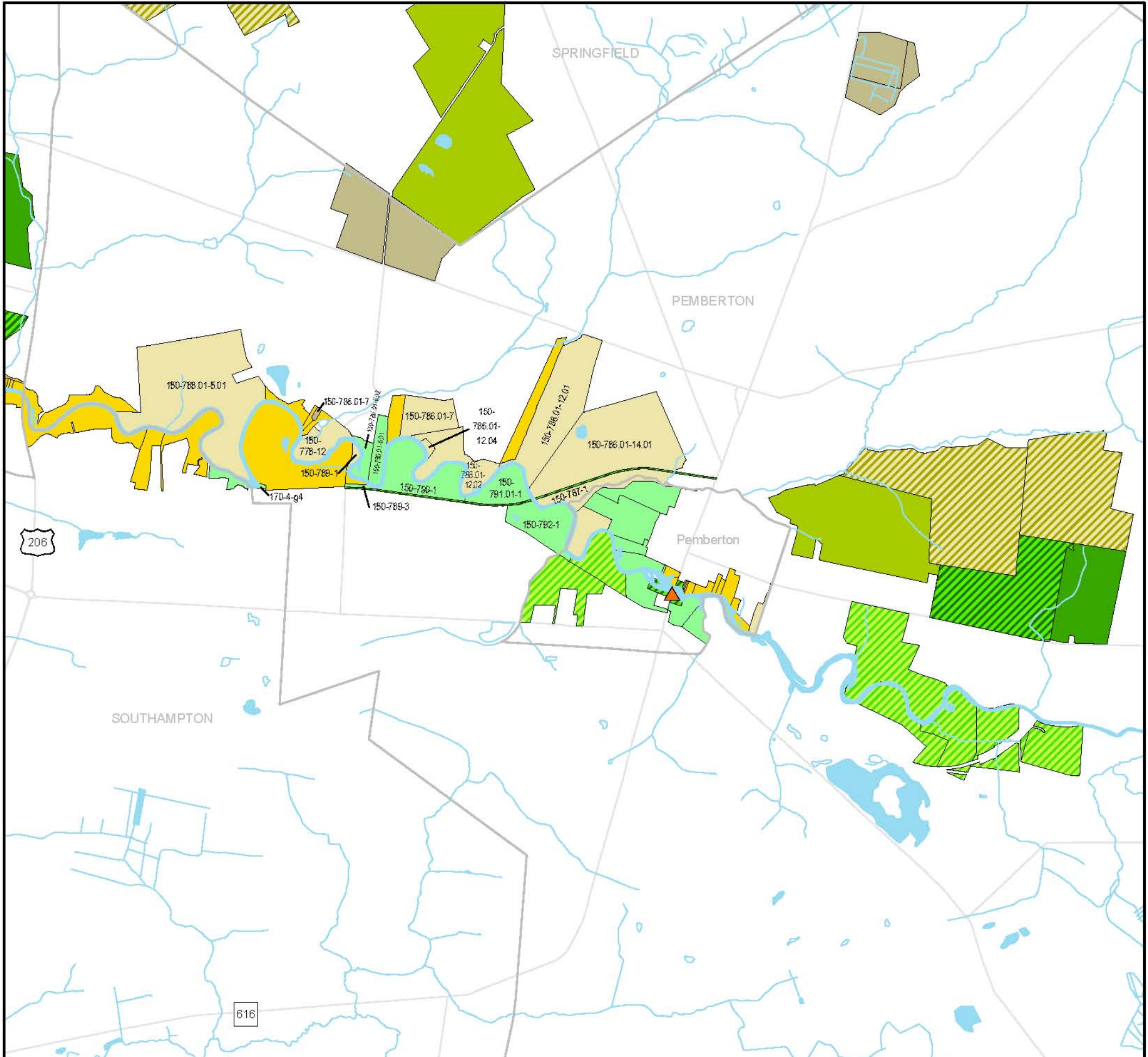
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Miles  
DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000



# MAP 28A: RANCOCAS CREEK GREENWAY

## PROTECTED & PROPOSED OPEN SPACE LANDS

### PEMBERTON TOWNSHIP



#### OPEN SPACE LANDS

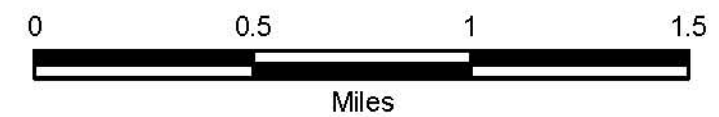
- |   |                     |
|---|---------------------|
| <b>Proposed : Conservation / Recreation</b>                         | <b>Protected</b>    |
| County Interest   | Public Lands        |
| Municipally Targeted  | Privately Protected |
|   | Preserved Farmland  |
| <b>Proposed : Farmland</b>  | <b>Other</b>        |
| County Farmland Program : Pending Acquisition & Current Application | Private Recreation  |
| County Farmland Program : Top 30 / Alternate List                   | Farmland            |
| Municipal Program : TDR Sending Area & Local Funding                | Vacant              |
| Eight-Year Program  | Developed           |
|   | Tidal / Marshland   |
|   | Water               |

#### PUBLIC ACCESS / CANOE LAUNCH SITES

- |          |          |
|----------|----------|
| Existing | Proposed |
|----------|----------|

#### BASE MAP

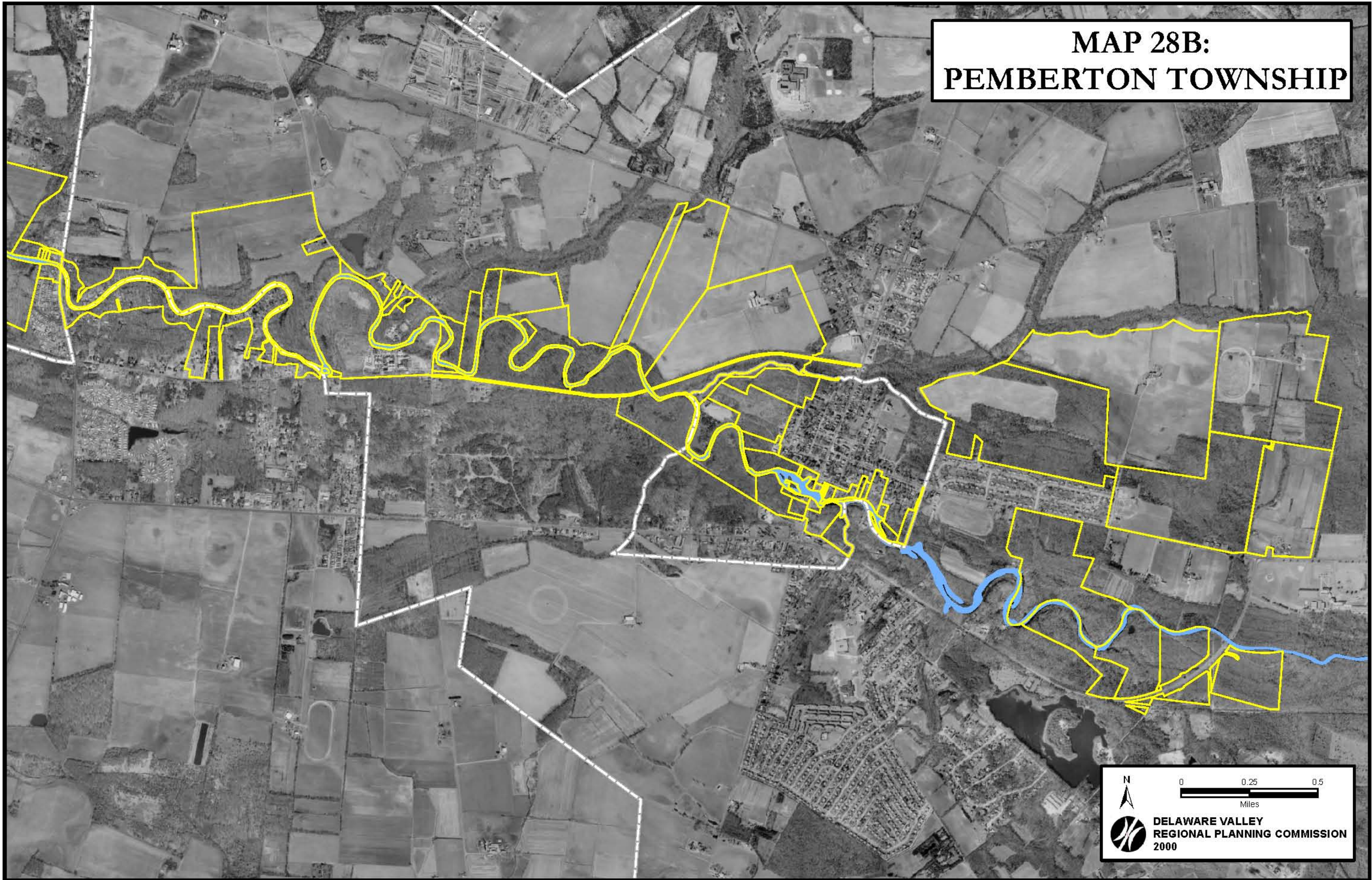
- |                    |                 |
|--------------------|-----------------|
| Stream             | Road            |
| Municipal Boundary | County Boundary |



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REGIONAL PLANNING COMMISSION  
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**MAP 28B:  
PEMBERTON TOWNSHIP**



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Miles

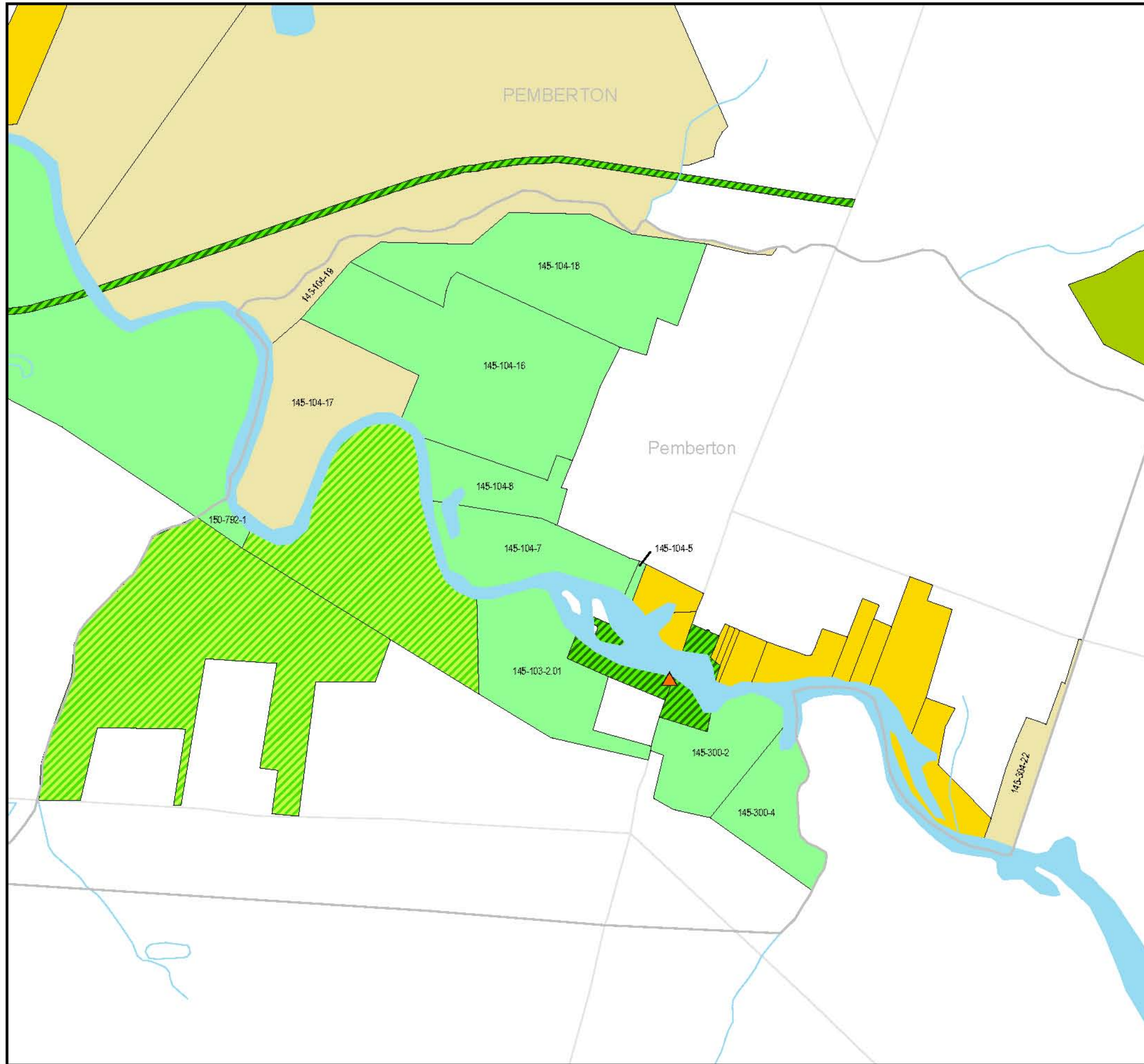
 DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000



# MAP 29A: RANCOCAS CREEK GREENWAY

## PROTECTED & PROPOSED OPEN SPACE LANDS

### PEMBERTON BOROUGH



#### OPEN SPACE LANDS

##### Proposed : Conservation / Recreation

- County Interest
- Municipally Targeted

##### Protected

- Public Lands
- Privately Protected
- Preserved Farmland

##### Proposed : Farmland

- County Farmland Program : Pending Acquisition & Current Application
- County Farmland Program : Top 30 / Alternate List
- Municipal Program : TDR Sending Area & Local Funding
- Eight-Year Program

##### Other

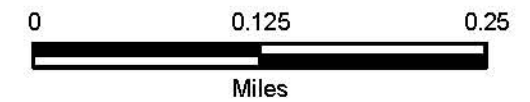
- Private Recreation
- Farmland
- Vacant
- Developed
- Tidal / Marshland
- Water

#### PUBLIC ACCESS / CANOE LAUNCH SITES

- Existing
- Proposed

#### BASE MAP

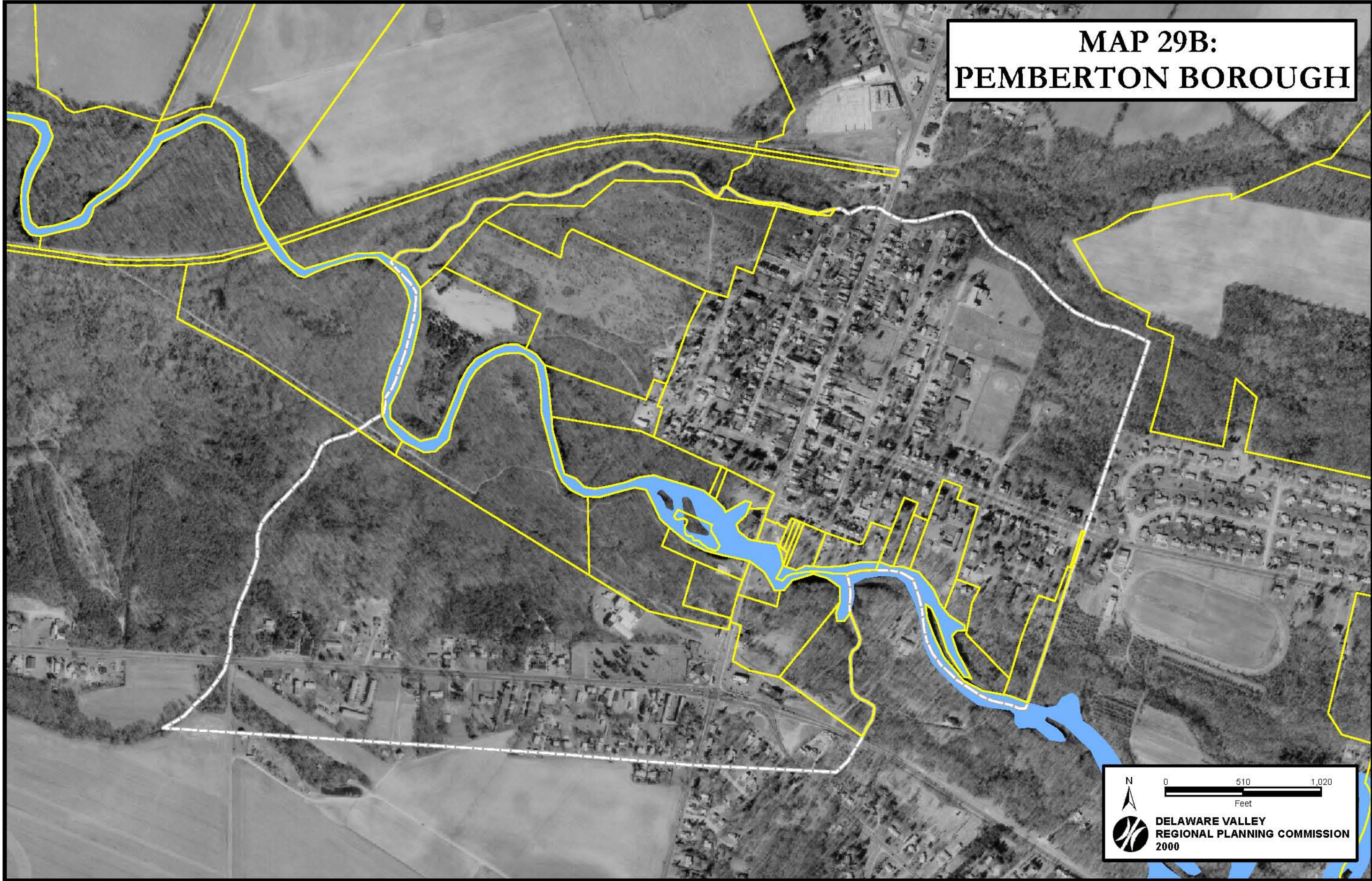
- Stream
- Road
- Municipal Boundary
- County Boundary



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
DECEMBER 2002



**MAP 29B:  
PEMBERTON BOROUGH**



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0 510 1,020  
Feet  
DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION  
2000









# 6

## Chapter

### Rancocas Main Branches Greenway

*Major Issues, Goals and Recommended Actions*







**T**he combination of mapping, research, analysis and meetings with the steering committee, municipalities and the public elicited the following major issues and goals for the Rancocas Creek Main Branches Greenway. **Each recommendation is based on analysis in the report on the noted pages.**

**I. ISSUE:** Of the 1,400 streamside parcels along the Main Stem and Main Branches of the Rancocas, about half are considered already developed, 20% are permanently protected, and 30% remain undeveloped and unprotected. Of these remaining undeveloped properties, Burlington County and the study-area municipalities have already targeted 25% of the parcels for preservation through existing open space plans and programs. Additional protection strategies are needed for the approximately 325 untargeted parcels in order to formalize and complete the Rancocas greenway from the Pinelands borders and beyond to the Rancocas's mouth at the Delaware River.

#### Goals

- A.** Conserve environmentally sensitive open space areas along the creek through acquisition and conservation easements.
- B.** Strengthen land use regulations governing protection of ecologically important streamside lands.

#### Recommended Actions

- 1. Burlington County, the Rancocas Conservancy and the municipalities should follow the Conservation Package to preserve the riparian buffer along the creek.** (pages 54 - 89)
- 2. Municipalities should adopt stream corridor protection ordinances that require development and disturbances to be set back from stream banks.** (pages 15 - 19)
- 3. Municipalities should adopt steep slope ordinances which limit disturbances on areas classified as steep, typically starting at 8% gradient.** (pages 15- 19)

**4. Municipalities should adopt open space ordinances that require the preservation of at least 50% of a tract as open space.** (pages 15- 19)

**5. Municipalities should adopt Official Greenway Maps to facilitate protection of the greenway.** (pages 68 - 89)

**II. ISSUE:** Creek-related recreational opportunities including trails and canoeing need enhancement to better instill appreciation and stewardship, along with enjoyment of the creek.

#### Goals

- A.** Develop the abandoned rail bed between Mt. Holly and Medford into a rail-trail.
- B.** Develop a trail within the wide right-of-way along Route 70 between Medford and Marlton.
- C.** Create additional canoe launch sites and formalize and publicize existing launch sites.

#### Recommended Actions

- 1. Burlington County, Mt. Holly, Lumberton, and Medford should work together to create the Mt. Holly to Medford rail-to-trail.** (pages 28-29, 43-44)
  - 2. Medford and Evesham should work with NJDOT to create a trail within the wide right-of-way along Route 70 between Medford Village and Marlton.** (pages 29,43)
  - 3. Burlington County should open a canoe livery at Smithville and/or the new Winzinger Tract county park, and consider acquiring and re-opening Hacks Canoes in Mt. Holly.** (pages 30,56)
  - 4. Municipalities and the Rancocas State Park should promote canoeing by formalizing canoe launch sites with improved signage and access.** (pages 30, 56)
- III. ISSUE:** With its large state park and growing county park system, burgeoning canoe and trail opportunities, and over 200 historic and archaeological sites and districts, the Rancocas Valley offers a multitude of natural and historic treasures to enjoy. However, many of these features



are unknown, underdeveloped, not accessible, and/or not coordinated or linked with surrounding resources. Further developing the natural, historical and recreational resources of the area with an environmental and historical education component could result in eco-tourism for the Rancocas Valley. Eco-tourism, in this context, is defined as a responsible way for local and regional visitors to enjoy the Rancocas that also contributes to the conservation of the stream valley and to the well-being of the historic villages and historic Mt. Holly.

### Goals

**A.** Promote ecotourism in the Rancocas Valley, with emphasis on economic activity in Mt. Holly and the historic villages along the Rancocas.

**B.** Create a unifying icon for the Rancocas Valley and its attractions.

**C.** Interpret the historic resources in the Rancocas Valley for residents and visitors alike to better understand the events that took place and the people who shaped them.

### Recommended Actions

**1. Burlington County should work with the private sector consortium of businesses that produced the website [www.rancocasvalley.com](http://www.rancocasvalley.com) to develop and market a thematic and interpretative signage system for the Rancocas. (page 50)**

**2. Burlington County should develop a brochure and website mapping the Rancocas for canoeing, complete with location of access points, facilities, gage stations, safety tips, and points of interest. (pages 30,56)**

**3. Burlington County, the Rancocas Conservancy, the Education and Outreach Committee of Watershed Management Area 19, area municipalities and the private sector should work together to develop and distribute educational materials and programs about the Rancocas natural and built environment. (pages 8-15)**

**4. Municipalities should utilize all historic preservation planning tools available, such as**

*establishing Historical Commissions, compiling historic resource inventories, enacting local historic districts in their zoning codes, and requiring Historic Impact Statements in subdivision and land development applications(pages 46-51)*

**IV. ISSUE:** *The creation and maintenance of the Rancocas Greenway, including protecting a continuous riparian buffer, expanding the trail network across municipal boundaries, and promoting eco-tourism will require intermunicipal and interagency cooperation and coordination.*

### Goals

**A.** Improve intermunicipal and interagency cooperation on the environmental and enjoyment-of-place issues facing the Rancocas.

**B.** Improve private and public sector coordination on developing ecotourism in the Rancocas Valley.

### Recommended Action

**1. Burlington County should convene meetings of county, municipal, Rancocas Conservancy staff and other stakeholders interested in formalizing the Rancocas Greenway project. (page 54)**











# *Appendix*

List of Local Contacts





**ANJEC**

PO Box 157  
Mendham, NJ 07945  
973-539-7547

**Burlington County Office  
of Resource Conservation**

PO Box 6000  
Mt. Holly, NJ 08060-6000  
Located at 1900 Briggs Road  
Mt. Laurel, NJ 08054  
856-642-3850  
Matt Johnson, County Open Space Program  
Julie Gandy, Municipal Open Space Program  
Gina Berg, Rancocas Watershed Coordinator

**Burlington County Parks Department**

Jeffrey Kerchner, Superintendent of Parks  
13 Park Avenue  
Smithville County Park  
PO Box 6000  
Eastampton, NJ 08060-6000  
609-265-5858

**Delaware Riverkeeper Network**

PO Box 326  
Washington Crossing, PA 18977  
215-369-1188  
Fred Stine, Outreach Coordinator  
856-854-5108  
Pollution Hotline  
1-800-8-DELAWARE

**Delaware Valley Regional  
Planning Commission**

111 South Independence Mall East  
Philadelphia, PA 19106  
215-238-2838  
Patty Elkis, Manager of Environmental Planning

**New Jersey Department of Transportation**

Transportation Equity Act for the 21st Century  
(TEA21) Enhancements Grants  
609-530-3640  
Robert Goslin, Local Aid Coordinator  
609-530-8062  
Bill Feldman, Bicycle and Pedestrian Coordinator

**New Jersey Department of  
Environmental Protection**

Office of Environmental Planning  
PO Box 418  
Trenton, NJ 08625-0418  
609-292-2113  
Division of Watershed Management  
609-633-1179  
Waterwatch Program  
609-984-3588  
Environmental Education  
609-984-9802  
Office of Natural Lands Management  
609-984-1339

**Green Acres Department**

PO Box 412  
Trenton, NJ 080625-0412  
Bob Stokes, Director of Planning  
609-984-0495

**NJ Environmental Infrastructure Trust**

Dirk Hofman, Executive Director  
PO Box 440  
Trenton, NJ 08625  
609-219-8600

**Rancocas Conservancy**

37 E. Central Avenue  
Moorestown, NJ 08057  
Barbara Rich, President  
856-234-2787  
Chris Jage, Project Manager  
856-985-9128

**Municipal Contacts****Borough of Pemberton**

Ed Kaelin, Clerk  
50 Egbert Street  
Pemberton, NJ 08068  
609-894-8222

**Eastampton Township**

Tom Czerniecki, Manager  
12 Manor House Court  
Eastampton, NJ 08060  
609-267-5723

**Evesham Township**

Bob Perry, Director of Community Development  
984 Tuckerton Road  
Marlton, NJ 08053  
856-983-2900

**Hainesport Township**

Christopher Schultz, Administrator  
100 Broad Street  
PO Box 477  
Hainesport, NJ 08036  
609-267-6252

**Lumberton Township**

June Madden, Administrator  
35 Municipal Drive  
Lumberton, NJ 08048  
609-267-3217

**Medford Township**

Beth Richman, Director of Recreation  
Dennis Funaro, Director of Community  
Development  
17 North Main Street  
Medford, NJ 08055  
609-654-2608

**Mt. Holly Township**

Township Building  
609-267-0170  
23 Washington Street  
Mt. Holly, NJ 08060  
Robert Moore  
Planning Board Chair  
609-267-0814

**Pemberton Township**

Paul Tuliano, Administrator  
500 Pemberton-Browns Mill Rd  
Pemberton, NJ 08068-1539  
609-894-8201

**Southampton Township**

Jack Lipsett, Administrator  
5 Retreat Road  
Southampton, NJ 08088

**Voorhees Township**

Valeria Marchitto, Environmental  
Advisory Board Secretary  
Debbie Schwartz, Environmental  
Advisory Board Chair  
620 Berlin Road  
Voorhees, NJ 08043  
856-429-2427  
Lori Volpe  
Voorhees Environmental and Recreational  
Alliance (VERA)  
101 Forrest Hills Drive  
Voorhees, NJ 08043  
856-768-7187

**Westampton Township**

Donna Ryan, Administrator  
710 Rancocas Road  
Westampton, NJ 08060  
609-267-1891





# B

## Appendix

List of Grant Opportunities  
*for Funding Open Space Planning and Acquisition*





## COUNTY

### 1. Burlington County Open Space Trust Fund

Tax Funds raised through the collection of a maximum tax of four cents per \$100 of assessed valuation in any given year will be used for land acquisition and recreational facility development. This funding, estimated at about \$10.2 million per year, will supplement the county's continued active participation in the state's Farmland Preservation Program and Green Acres land acquisition program. **Contact:** Matt Johnson and Julie Gandy, Burlington County Office of Resource Conservation 856-642-3850

## STATE

Voters overwhelmingly approved a referendum in November 1998 to dedicate \$98 million annually in state taxes toward land preservation over the next 10 years. A bill authorizing the spending, the Garden State Preservation Trust Act, was passed June 30, 1999, annually allocating \$55.2 million for Green Acres acquisitions of open space, parks and greenways; \$36.8 million for farmland purchases; and \$6 million for historic preservation projects. The bill guarantees the distribution of \$98 million each year for the next 10 years, eliminating the previous year-to-year uncertainty that used to bring land acquisitions to a halt when funding expired, until voters authorized additional bond acts. The legislation establishes the Garden State Preservation Trust, a nine-member board that will receive applications and approve projects submitted by Green Acres and the state Agriculture Development Committee twice a year.

**Website:** [www.state.nj.us/dep/grantandloanprograms/](http://www.state.nj.us/dep/grantandloanprograms/)

### 1. New Jersey Green Acres Program

**Eligible applicants:** Municipalities and counties  
**Eligible projects:** Open space acquisition and outdoor recreational facility development  
**Application Round:** Year round  
**Project Categories:**  
*a. Standard Program* - Offers 2% loans over 20 years

and grants (typically 75% loan, 25% grant), to finance eligible costs associated with the acquisition and development of recreation lands.

*b. Planning Incentive Program* - Offers 50% loan, 50% grant to those local governments that have enacted an open space tax and have adopted an open space and recreation plan.

*c. Urban Aid Program* - Offers 50% loan, 50% grant. This category is limited to acquisition and development projects sponsored by local units eligible to receive state aid pursuant to P.L. 1978, c. 14 (C.52:27D-178 et seq.) Within the study area, Mt. Holly and Pemberton townships are listed as Urban Aid Eligible Municipalities.

*d. Nonprofit Organization Program:* The Green Acres Program also runs Green Trust Funding Rounds for nonprofit charitable conservancies. The program offers 50% grants, with the match being made with cash or a donation of land. Maximum grants are \$500,000.

*e. Tax Exempt Program:* Program provides exemption from local property taxes to eligible nonprofit organizations that own recreation or conservation lands and open their private lands to the public.

**Contact:** Fawn McGee, Team Leader, 609-984-0570  
**Website:** [www.state.nj.us/dep/greenacres/](http://www.state.nj.us/dep/greenacres/)

### 2. New Jersey Environmental Infrastructure Trust (Clean Water Financing)

**Eligible Applicants:** Municipalities, counties, sewerage or utility authorities, improvement authorities or local government units constructing new or improving existing wastewater, stormwater or nonpoint source management facilities.

**Eligible Projects:** Included in the universe of projects that are currently eligible for the EIFP are: wastewater collection and conveyance facilities, combined sewer overflow abatement facilities, rehabilitation of existing sewer systems, pump stations, stormwater basins, sewer maintenance equipment, lake restoration activities, landfill closure facilities (such as capping systems or leachate collection and treatment systems), new landfill facilities (such as double-composite liner systems and leachate collection and treatment systems), salt domes and others. **The Financing Program also includes activities such as land purchase and conservation**

**that protects water resources, remedial action activities (including brownfields) and well sealing.** Although the EIFP does not directly finance planning and design costs, an allowance (calculated as a percentage of the allowable building costs) to assist in defraying these costs is provided by the EIFP as part of the loan package.

**Maximum Grant:** Financing is provided from two sources, the New Jersey Department of Environmental Protection and the New Jersey Environmental Infrastructure Trust. The Department provides loans at 0% interest for approximately 20 years for up to one-half the allowable project costs. The Trust offers loans at about the market rate or less for the remaining allowable project costs, also for a 20-year term. Between these two funding sources, the rate on the loans is essentially half the market rate. Approximately \$100 million-\$200 million is available per year.

**Application Round:** Deadline: on or about March 1st  
**Notification:** early September of same year

**Contact Person:** Nicholas G. Binder, Assistant Director 609-292-8961

**Website:** [www.njeit.org](http://www.njeit.org)

### 3. New Jersey Department of Environmental Protection Nonpoint Source Pollution Control 319 (h) Grants

**Eligible Applicants:** Entities that may be eligible for funding include but are not limited to:

1. Municipal and county planning and health departments or boards
  2. Designated water quality management planning agencies
  3. State and regional entities entirely within New Jersey
  4. State and federal government agencies
  5. Universities and colleges
  6. Interstate agencies of which New Jersey is a member
  7. Watershed and water resource associations and other local Nonprofit 501(c)(3) organizations
- In order to be eligible for these funds, the applicant must have:**

1. Staff and resources with the capability, expertise and environmental experience to perform the

proposed work

2. Ability and authority to implement the proposed project

3. Ability to establish and maintain partnerships to ensure project implementation as well as long term maintenance/management.

**Eligible Projects:** Specifically, funds are available for projects that: 1) identify and address nonpoint source pollution in a defined project area with priority given to those projects addressing 303(d) listed impairments, and 2) implement measures to protect currently unimpaired waters that are threatened by reasonably foreseeable degradation. The focus of the projects should be on specific measures that will mitigate or prevent adverse impact to lakes, bathing areas, drinking water intakes, shellfish beds, special aquatic habitats, and stream corridor integrity. Examples of eligible projects include urban retrofit, stream bank restoration, nonstructural and structural stormwater management and/or water quality measures, development and implementation of regional stormwater management plans, source assessment leading to remediation, and projects to affect the nonpoint source load allocation implementation plans for established Total Maximum Daily Loads (TMDLs). **(Please note the EPA 319 guidelines (Federal FY 2002/ State FY 2003) regarding the current shift in emphasis on funding TMDL and watershed based projects.)** Eligible activities include construction activities, design, monitoring (to assess the success of specific nonpoint source implementation projects), and resource restoration to prevent the need for future remediation.

Priority will be given to those projects that propose implementation of a nonpoint source or stormwater management measure to improve an existing impairment on the 303(d) list, prevent future impairment at an Ambient Biological Monitoring Station currently assessed as "nonimpaired" or implement a stormwater management and/or water quality measure that has been identified under previous assessment projects, such as TMDLs and regional stormwater management plans.

Interested parties should submit projects that target the priority impairments in each region and involve



some activity related to assessment and/or implementation of NPS pollution issues, whether through prevention or reduction.

**Section 319 funds may not be used for the following purposes:**

1. Funding the purchase of land, major capital improvements, or computer hardware
2. Implementation of permit application requirements of federal, state, or local storm water regulations.
3. Implementation of activities required by the NJPDES regulations.
4. Implementation of lake dredging, weed harvesting, or dam maintenance without addressing the sources of the NPS pollutants causing the impairment.
5. Funding may not be used on private lands with the exception of demonstration projects, or if maintenance, access, and conservation easements have been obtained for the area by an eligible entity. Demonstration projects reflect innovative methods in addressing nonpoint source pollution.
6. Education and Outreach. For projects involving implementation, education and outreach may be funded as a de minimus component of the project and no greater than 3% of the grant amount requested.
7. Funding food or promotional items.
8. Other ineligible activities based on current EPA guidelines for Section 319(h) grants.

**Application Round:** Pre-proposals due September 3, 2002  
**Contact:** Karen Dorris, 609-984-6577 or karen.dorris@dep.state.nj.us

**Website:**

[www.state.nj.us/dep/watershedmgt/DOCS/BMP\\_DOC/S/319afterDH\\_June7.doc](http://www.state.nj.us/dep/watershedmgt/DOCS/BMP_DOC/S/319afterDH_June7.doc)

**4. New Jersey Office of Environmental Services Matching Grants Program**

**Eligible applicants:** Local environmental agencies  
**Eligible projects:** Projects that promote the protection of natural resources by documenting those resources, preparing policy recommendations to protect those resources, and by preparing and disseminating information about the ways in which the public can participate in protecting the environment. Examples of previously funded projects include: natural resource inventories, water quality studies, master plan and zoning ordinance amendments, open space plans, greenway planning, environmental trail

designs, GIS mapping projects and public education programs.

**Maximum grant:** \$2,500

**Required match:** At least 50%

**Application Round:** Deadline is December 1, notification is March 15 of following year  
**Contact:** John Rogers, Program Manager, 609-984-0828 or: jrogers@dep.state.nj.us  
**Website:**  
[www.state.nj.us/depgrantandloanprograms/beamglea.htm](http://www.state.nj.us/depgrantandloanprograms/beamglea.htm)

**5. NJDEP Clean Lakes Program (currently unfunded)**

**Eligible applicants:** Municipal, county and regional government agencies  
**Eligible projects:** Projects that improve the recreational water quality at public lakes  
**Maximum grant:** Up to 70% USEPA funding for Phase I Diagnostic Feasibility Projects; up to 50% state funding for Phase I Diagnostic Feasibility Projects. Up to 50% USEPA funding for Phase II Implementation Projects; up to 75% state funding for Phase II Implementation Projects.  
**Application round:** Typically September 1 each year.  
**Contact:** Bud Cann, Supervising Environmental Specialist, Water Monitoring Management, 609-292-0427  
**Website:**  
[state.nj.us/dep/grantandloanprograms/clp.htm](http://state.nj.us/dep/grantandloanprograms/clp.htm)

**6. National Recreational Trails Act Projects - Administered through NJDEP, Division of Parks and Forestry, Office of Natural Lands Management**

**Eligible applicants:** Public agencies and nonprofit organizations  
**Eligible projects:** Trail proposal must be located on land that is publicly owned or privately owned with a government agency holding an easement or lease for public access. Projects must be completed within 3 years.  
**Maximum grant:** \$25,000  
**Match required:** 20% of total project, may be cash or fair market value of labor or materials  
**Application round:** Varies yearly  
**Contact:** Office of Natural Lands Management, 609-984-1339.

**7. New Jersey Local Coastal Planning Grant Program (currently unfunded)**

Funds projects that promote sustainability and environmental protection in the coastal zone. The program is dependent on the availability of funds. For updated status of the grant program, call Dorrina Frizzera of the Coastal Planning Unit, Office of Environmental Planning, NJDEP, at 609-292-2662.

**FEDERAL**

**1. National Parks Service Rivers, Trails and Conservation Assistance Program**

**Eligible applicants:** Community groups, municipalities, partnerships.  
**Eligible projects:** Greenway plans, stream restoration, trail design, conservation workshops, inventories of natural, cultural and recreational resources.  
**Maximum grant:** Staff involvement (technical assistance) rather than financial assistance.  
**Required match:** Projects are undertaken as partnerships, and costs are shared with other organizations. Cost-sharing arrangements may involve money and/or in-kind services.  
**Application Round:** Ongoing assistance offered to applicants developing proposals, July deadline for formal application for assistance  
**Contact:** Robert Potter, Program Manager, 215-597-1787  
**Website:** [www.nps.gov/chal/rtca/intro1.htm](http://www.nps.gov/chal/rtca/intro1.htm)

**2. Wetlands Reserve Program of the USDA Natural Resources Conservation Service (NRCS)**  
**Eligible applicants:** Landowners (NRCS determines final eligibility)

**Eligible projects:** Land with the potential to contribute to desired ecosystem functions and values fitting into one of the following categories: agricultural lands with restorable wetlands, former or degraded wetlands occurring in range and forest production land, riparian areas that connect with protected wetlands along streams or other waterways, adjacent lands that will contribute significantly to the wetland functions and values,

previously restored wetlands under a state or federal restoration program, privately developed wetland areas meeting NRCS restoration standards

**Maximum grant:** The program offers landowners three options to choose from when enrolling: a permanent easement, a 30 year easement, and a cost-share agreement in lieu of requiring an easement. Easement payment is for the agricultural value of the land, an established payment cap, or an amount offered by the landowner. Restoration projects are fully funded by the NRCS for permanent and 30 year easements, and are funded 50 - 75% for non-easement agreements.

**Required Match:** 25-50% for non-easement agreements. Landowner is responsible for protecting and maintaining the wetlands within the boundaries of the easement. Public access to the easement area is not required. Acceptable uses of the land will be spelled out in detail and approved, and may include hunting, fishing, timber harvest, and haying or grazing, depending on the situation.  
**Application round:** Ongoing, open sign-up in New Jersey began October 1, 1996.

**Contact:** Garry Lee, Assistant State Conservationist 732-246-1171 x123

**3. Environmental Protection Agency Environmental Education Grants Program**

**Eligible applicants:** Government agencies, school districts, colleges or universities, nonprofit organizations, and noncommercial educational broadcasting entities  
**Eligible activities:** Include, but are not limited to: training educators; designing and demonstrating field methods, educational practices and techniques, including assessing environmental and ecological conditions or specific environmental issues or problems; designing, demonstrating or disseminating environmental curricula; and fostering international cooperation in addressing environmental issues and problems in the U.S., Canada and/or Mexico.  
**Maximum Grant:** Approximately \$3 million was available for FY 98; 25% of available funds must go to small grants of \$5,000 or less, maximum limit of \$250,000 for any single grant.

**Required Match:** A minimum of 25% of total cost of



project required

*Application round:* Varies yearly

*Contact:* Terry Ippolito and Josephine Lagenda, USEPA Region 2, [ippolito.teresa@epa.gov](mailto:ippolito.teresa@epa.gov) or [lagenda.josephine@epa.gov](mailto:lagenda.josephine@epa.gov), or Customer Service hotline: 1-800-438-2474.  
*website:* [www.epa.gov/enviroed/grants.html](http://www.epa.gov/enviroed/grants.html)

## **FOUNDATIONS**

### **1. Conservation Fund Kodak American Greenways Award**

*Eligible applicants:* Primarily nonprofit organizations, although individuals and local governments may apply

*Eligible projects:* Mapping, assessments, surveying, conferences and design activities, printed and audio-visual interpretative materials, building paths or bridges and other creative projects

*Maximum grant:* \$2,500

*Required Match:* None

*Application Round:* Deadline June 1, 2003, notification in fall

*Contact:* 703-525-6300

*Website:*

[www.conservationfund.org/pagespinner.asp?article=2106](http://www.conservationfund.org/pagespinner.asp?article=2106)

### **2. Geraldine R. Dodge Foundation**

*Eligible applicants:* Nonprofit organizations with 501(c)(3) status

*Eligible projects:* Projects that fit under the foundation's "Public Issues" category that focus on issues of sustainability, ecosystem preservation, energy conservation, pollution prevention and reduction, and environmental education and outreach that lead to enlightened environmental policy

*Maximum grant:* Grants generally range from \$10,000 to \$100,000

*Required Match:* None

*Application Round:* A one-page letter of inquiry by the applicant is encouraged to determine if a project falls within the foundation's guidelines. Applications for Public Issues Grants must be postmarked by September 15 of each year.

*Contact:* 973-540-8440

*Website:* [www.grdodge.org/environment.html](http://www.grdodge.org/environment.html)

### **3. Environmental Endowment for New Jersey**

*Eligible applicants:* Preference for nonprofits with 501(c)(3) designation, but other nonprofits also eligible

*Eligible projects:* Research, litigation, public education and other activities that will promote the conservation, preservation and improvement of the air, land, water and other natural resources.

*Maximum grant available:* \$20,000

*Required Match:* None

*Application Round:* Typically announced in November with applications due in January.

*Contact:* Richard Sullivan, President, 609-737-9698

### **4. New Jersey Conservation Foundation Grants-In-Aid Program**

*Eligible applicants:* Nonprofit organizations such as emerging land trust, citizen groups and greenway planning groups (organizations do not need nonprofit status)

*Eligible projects:* Land planning, land acquisition, conservation easements

*Maximum grant available:* \$10,000

*Required Match:* 50%

*Application Round:* Varies, mid-September 2002

*Contact:* Stephanie Monaham, 908-234-1225 x 111, or [stephanie@njconservation.org](mailto:stephanie@njconservation.org)

*Website:*

[www.njconservation.org/html/frame\\_news.html](http://www.njconservation.org/html/frame_news.html)

### **5. Pew Charitable Trust**

*Eligible applicants:* Organizations classified as non-profit under section 501(c)(3) of the IRS Code, and as charitable under 509(a) of that code.

*Eligible projects:* Projects whose goals are to reduce the use and production of highly persistent toxic substances that adversely affect the environment and public health, and projects that halt the destruction and further degradation of forest and marine ecosystems in North America

*Maximum grant:* Majority of grants range from \$50,000 to \$250,000

*Required match:* None

*Application Round:* Proposals accepted year round and reviewed on rolling basis.

*Contact:* Joshua S. Reichert, 215-575-4740

*Website:*

[www.pewtrusts.com/grants/index.cfm?image=img3](http://www.pewtrusts.com/grants/index.cfm?image=img3)

### **6. Schumann Fund for New Jersey**

*Eligible applicants:* Nonprofit organizations with 501(c)(3) status

*Eligible projects:* Projects that support protection of natural resources, environmental quality and wildlife

*Maximum grant:* No maximum was stated in the foundation's annual report, but previous environmental protection grants ranged from \$10,000 to \$80,000

*Required match:* No, but preference given to proposals indicating a high level of time and/or money contributed from the group to be served

*Application Round:* No yearly deadline; proposals are reviewed quarterly

*Contact:* 201-509-9883

*Website:*

[www.fdncenter.org/grantmaker/schumann/env.html](http://www.fdncenter.org/grantmaker/schumann/env.html)

### **7. Victoria Foundation**

*Eligible applicants:* Nonprofit organizations with 501(c)(3) status

*Eligible projects:* For land acquisition—projects must be eligible for consideration by the state Green Acres Program, must have passed their initial screening process, and must be in active consideration by Green Acres. Special consideration is given to projects that will protect wetlands and transition areas, farmland, critical wildlife habitats, headwaters, exceptional ecosystems, watershed lands, and aquifer recharge areas. Other eligible projects involve environmental education and leadership training, environmental research, public education and advocacy, and resource conservation in New Jersey

*Maximum grant:* Land Acquisition - grants may be used toward all or part of the 50% match for Green Acres grants, usually up to \$500,000. Other projects generally range from \$8,000 to \$50,000.

*Required match:* Land acquisition - Green Acres grant; Other grants - No

*Application Round:* Ongoing

*Contact:* 973-748-5300

*website:* [www.victoriafoundation.org/application.htm](http://www.victoriafoundation.org/application.htm)

### **8. William Penn Foundation**

*Eligible applicants:* Nonprofit organizations with 501(c)(3) status

*Eligible projects:* Projects that support the goals of promoting open space preservation, promoting development, maintenance and use of natural areas within the Philadelphia region, and that support environmental education.

*Maximum grant:* Grants range from a few thousand to several million dollars, depending on the size of the organization and the scope of the project.

*Required match:* None, but the foundation prefers to make grants for projects that receive support from several sources and that do not depend upon the Foundation for total funding.

*Application Round:* Accepts grant requests throughout the year

*Contact:* Geraldine Wang, 215-988-1830

*Website:*

[www.wpennfdn.org/what\\_we\\_fund/natural.asp](http://www.wpennfdn.org/what_we_fund/natural.asp)

## **Other sources of information on grants:**

*Environmental Grant Making Foundations*, published by Resources for Global Sustainability, PO Box 22770, Rochester, NY 14692-2770. Telephone: 1-800-724-1857; Fax: 716-473-0968; e-mail: [rgs@eznet.net](mailto:rgs@eznet.net); website: <http://home.eznet.net/~rgs>. Costs about \$90.

*The Mitchell Guide to New Jersey Foundations*, published by Janet Mitchell, 430 Federal City Road, Pennington, NJ 08534-4209, 609-737-7224. The guide profiles 412 private foundations that donated more than \$200 million to 18,000 charitable agencies.





# Appendix

## Examples of Stewardship Brochures

**M**uch has been written about good land stewardship. The following materials have been included as examples of stewardship information designed for easy reproduction and dissemination. These flyers and pamphlets were developed, respectively, by:

1. *The Media Area League of Women Voters in cooperation with the Darby Creek Valley Association and the Chester/Ridley/Crum Watersheds Associations*
2. *The New Jersey Coalition for Alternatives to Pesticides and the New Jersey Environmental Federation, with printing costs funded by Whole Earth Center*
3. *Jennifer Robinson, compiled from a 1994 newsletter of the Wildlands Conservancy, Emmaus, Pennsylvania*
4. *Community Forest Network (CFN), authored by Don Zimar of The Care of Trees in Manassas, Virginia, and Brain LeCouteur of the Metropolitan Washington Council of Governments. Call 202-962-3393 for more information.*

*Another excellent source of information too lengthy to include here is "The Clean Water Book - Lifestyle Choices for Water Resource Protection" produced by the New Jersey Department of Environmental Protection, Office of Environmental Planning. Copies of this booklet can be obtained by calling Kyra Hoffman at 609-633-1179.*





## REDUCE TURF AREA

"Americans love their lawns with a passion rarely seen in other countries; fifty-eight million Americans enthusiastically plant, weed, water, spray and mow an estimated twenty million acres of lawn." The passion for lawns has many impacts on our urban/suburban environments. Some of these impacts are:

- ▲ Loss of Forest Cover and Wildlife Habitat
- ▲ Air Pollution from Gasoline Powered Engines
- ▲ Pollution from Lawn Maintenance Chemicals
- ▲ Stress on the Municipal Water Supply

As land development carves up the landscape, fragments of the former landscape remain. Frequently, these fragments which consist of trees, shrubs and plants, are transformed into a grove of trees meeting a manicured lawn.

It is the goal of this Urban Forestry Information Bulletin to discuss how to best preserve these forest fragments in developed areas and present some environmentally sound and low cost/maintenance alternatives to grass or turf.

### Impacts of Turf

Turf and other ground covers require maintenance which is generally incompatible with the needs of a forest ecosystem. Turf offers little or no wildlife habitat compared to the diversity of plants found in an existing forest.

Growing grass or turf management contributes to nonpoint source pollution by the residues of lawn fertilizer insecticides and herbicides applied to the lawn. Maintaining

turf also requires burning fossil fuels to power lawnmowers, and increases the volume of waste (clippings) sent to landfills.

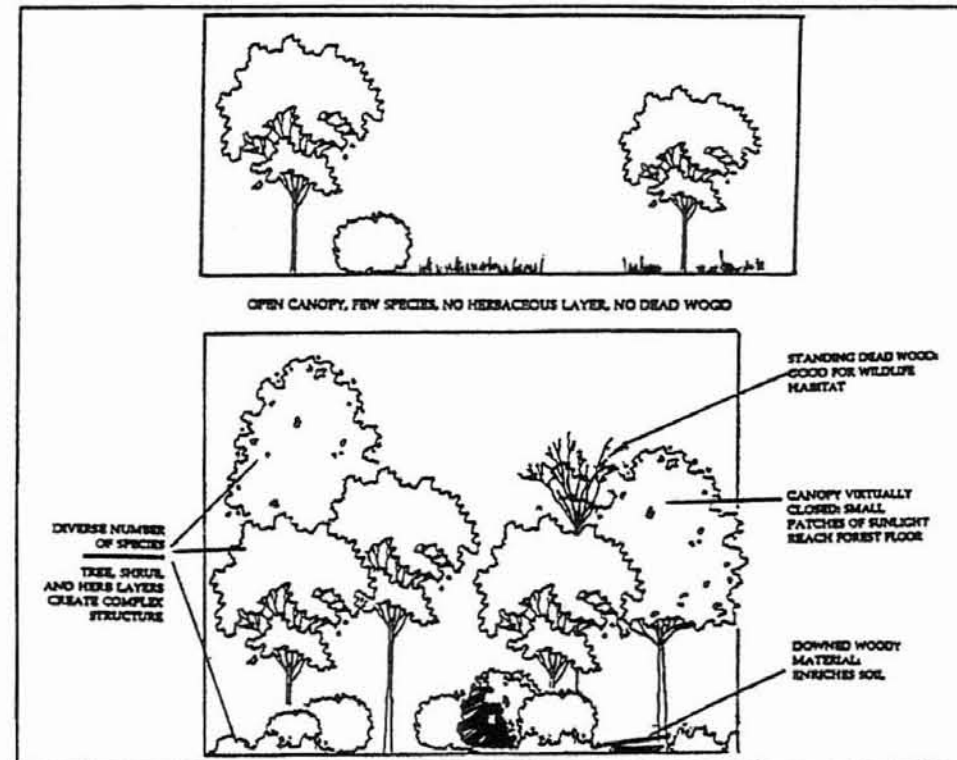
Clearing or grading for the installation of turf and landscape plants destroys the existing plants and damages the remaining trees. Removing leaves and other fallen debris that comprise the forest "duff layer" interrupts the natural cycling of nutrients and water. Digging or tilling under trees [for the removal of understory and installation of turf or other plants,] can damage tree roots and causes a decline in tree health. Soil stockpiled under trees or added to help drainage whether (temporarily or permanently), can interrupt the balance of oxygen, moisture, and nutrient absorption to the tree's root system, and may result in tree decline and/or death. Select areas away from trees being preserved to stockpile soil and use natural or existing drainage contours to direct runoff.

### Ground Covers

The ecology of forests is comprised of many integral components, including flora and wildlife habitat. It is important to consider the entire ecosystem for forest management planning. *The best ground cover* around trees and in forests is the type which most closely resembles the naturally occurring conditions. In general, our forests are characterized by a layered canopy structure consisting of large (overstory trees), smaller (understory trees), shrubs, and natural ground covers. The most prominent natural ground cover is leaf mulch. In deciduous forests, it is composed of deciduous leaves, in evergreen forests, it is primarily needles. Rainfall seldom creates runoff beneath a natural forest canopy due in

part to high soil absorption rates, favorable soil conditions, and large amounts of water which are "sponged" or soaked up by the leaf mulch layers.

The best plants to grow under mature trees are species found in the natural leaf-mulch or "duff layer" of the forest floor. The horticultural industry is becoming increasingly successful at commercially producing more of the naturally occurring or native plants for enhancing natural landscapes. Ferns, woodland species wildflowers, understory shrubs, sedges, and mosses are now available through many nursery suppliers.



Unlike grass, very few *native* ground covers form dense blankets on the forest floor. Under normal circumstances, native ground covers tend to be randomly distributed, loosely arranged, overlapping patches of plant communities. Under moderate cultivation, some of these native plants will flourish and form a dense, uniform patch of vegetation.

Our forests have an understory comprised of mountain laurel, american holly, and other broad-leaved evergreens highly valued for spring blossoms, berries, screening, wildlife food and cover. There are also plants valued for their low to moderate growth habit and spring blossoms, such as wild azaleas, sweet-bay magnolia, flowering dogwood, redbud, and wildflowers. There are species of grasses, sedges, and ferns which also flourish in these undisturbed areas.

It is not necessary to limit ground cover selection to native plants. There are many introduced species which can add color, texture, and form. *However, these introduced species need to be carefully scrutinized* to avoid those with a tendency to take over or become "invasive." Some introduced species may offer the

opportunity to create a blanket effect without requiring excessive maintenance or containing invasive characteristics. Wildlife benefits of non-native species are typically less than native species.

### Benefits of Natural Ground Cover

Maintaining diversity in plant communities is important because it provides balance and reduces the potential for any individual species to dominate the landscape.

Careful selection of alternative ground cover plantings will lead to reduced maintenance. Matching plant requirements to site characteristics to determine the ground cover selection will create a self-sustaining forest ecosystem. Occasional weeding, light fertilization, and supplemental watering may be required until the area has become established. Intensive turf maintenance activities such as mowing, pest treatment, dethatching, overseeding, aerating, and irrigation will also be eliminated.

Retaining the existing natural forest plants maintains the existing environmental character, enhances neighboring areas, and offers considerable environmental and financial advantages over turf and other ground covers. Maintenance requirements will reduce substantially over time for a properly planned and managed forest. More frequent use of turf alternatives will increase as communities discover the maintenance benefits and their importance to the environment.

Communities should focus on preserving as many components of the natural ecosystem as possible and consider the establishment of ground cover in terms of environmental enhancement through stewardship.

Community Forestry Network, CFN 1994  
For more information on CFN, call (202) 962-3393.



This bulletin was co-authored by Don Zimar of The Care of Trees in Manassas, Virginia and Brian M. LeCouteur of the Metropolitan Washington Council of Governments and the Community Forestry Network.

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Our thanks to Nancy Coleman & Susan Wolf of NJ Coalition for Alternatives to Pesticides and Jane Nogaki and Tom Moritz of the NJ Environmental Federation.

Printing costs funded by Whole Earth Center  
A natural food store • 360 Nassau St.,  
Princeton, NJ 08540 • (609) 924-7429

### MONITOR THE LAWN

Identify problems:  
Sufficient sunlight and air? Diseases? (eg. dollar spot, leaf spot) Pests? (Chinch bugs, etc.) Treat only the problems that exist and use alternative controls specific to the problem.

### MOWING

Set mower 3"-4". Taller grass chokes out weeds (like crabgrass).  
To prevent compaction, rotate mowing pattern. Mow lawn as needed, never cutting more than 1/3 of leaf blade at a time, and leave grass clippings on lawn for nutrient recycling.

### TEST SOIL FOR FERTILITY AND PH

Have soil tested each year.  
Adjust pH to the needs of your lawn. Pulverized or pelletized lime should be added according to need determined by pH test results. Fertilize twice a year, once in the fall and once in the spring or fertilize four times a year at half/rate.

### PLANT PROPER VARIETIES OF GRASS

Choose appropriate grasses for your soil and light conditions. Reseed bare spots, preferably in the fall. Overseed (rake in) if grass plants are aging. You can contact the Rutgers Cooperative Extension Program for more information.

### AERATE SOIL

Aeration helps prevent weeds and reduces compaction. Core aeration is ideal. Aerators can be bought or rented. A good supply of earthworms will aerate the soil adequately as long as there is no compaction problem.

### REMOVE THATCH

Thatch is the accumulated dead material at the base of the grass. Rake frequently by hand or rent a thatching machine. Deithatch only if thatch is one inch or more. Organic fertilizers help break down thatch naturally. Worms do too!

### REDUCE WEEDS

Use correct mower height. Reseed bare spots preferably in the fall. In the spring, use seed soaked in water for 24 hours to speed up germination and mix with soil and sand in bare spots.  
Identify weeds and establish tolerance levels. Hand dig weeds until competition by grass plants eliminates most weeds.

### WATERING

If less than 1" of rain falls per week, water deeply and infrequently. This encourages deep root growth. Sandy soils and sloped lawns need more frequent watering. Water only in cool of morning. Lawns in full sun need more frequent watering.

### ELIMINATE PESTS

Attract birds, "nature's insect control," by planting proper shrubs and by offering housing, water and food.  
Identify pests, then use biological pesticides specific to that pest. E.G. B.t. for leaf eating caterpillars; milky spore powder for the long-term control of Japanese beetle grubs. Use beneficial nematodes to control high populations of Japanese beetle grubs.  
Natural pesticides such as pyrethrum, rotenone and sabadilla are broad spectrum and toxic, but are short lived in the environment. They should be used with caution and only as a last resort, in accordance with label directions.

### LAWN SERVICE

Avoid chemicals entirely. Get a written contract, specifying what chemicals the service will use. Reserve the right to cancel use of any chemical product. Don't let them treat problems that are not there!

LAWN CARE WITHOUT TOXIC CHEMICALS

# How to Care for Your Stream

by Jennifer Robinson

*This valuable list of does and don'ts was taken from Wildlands, May/June 1994, the newsletter of the Wildlands Conservancy of Emmaus, Pennsylvania:*

**Don't remove native vegetation growing adjacent to the streams.**

**Why:** Trees and shrubs shade the stream (trout require coolwaters for survival) and provide leaf litter which forms the base of the aquatic food web.

**Do plant native trees and shrubs along unvegetated areas of the stream bank.**

**Why:** the root systems of woody vegetation stabilize stream banks and prevent erosion.

**Don't mow your lawn right up to the stream; allow at least a 5 to 10 foot buffer along the stream. (most experts recommend a minimum of 50 feet.)**

**Why:** an unmowed, naturally vegetated streambank buffer helps prevent erosion and filters out lawn chemicals which are damaging to stream life.

**Do limit your use of lawn chemicals such as fertilizers, pesticides and herbicides.**

**Why:** these chemicals easily find their way into the stream and can kill stream life including vegetation, insects, fish and birds.

**Don't throw your grass clippings (or any other refuse) into the stream.**

**Why:** Grass clippings in the stream will cause water-quality problems and will suffocate fish and other aquatic organisms.

**Do restrict livestock from streamside area.**

**Why:** Trampled banks release sediment into the streams and fecal bacteria animal wastes can cause serious water-quality and health problems.

**Don't dump used oil, antifreeze, etc. into storm drains.**

**Why:** These dangerous chemicals enter our streams through storm drains.

**Don't remove stable, naturally occurring, instream debris, such as fallen logs.**

**Why:** Instream debris holds rock fragments and organic particles for processing by aquatic animal life and provides cover and cooling shade for fish and other stream dwellers.

**Do urge your local municipality to manage streamside parks in a more natural way.**

**Why:** Many governing bodies believe that well-manicured parks are the only kind that are acceptable to residents. They need to hear a different opinion. In addition, mowing and manicuring requires large amounts of time, effort and taxpayer money.



# HOW TO CARE FOR YOUR STREAM

**DO:** ...plant trees and shrubs along your stream.

**WHY:** The roots of woody plants stabilize the banks and reduce erosion. Trees and shrubs also shade and cool the stream, which is better for fish.

**DON'T:** ...remove native vegetation from stream banks.

**WHY:** Leaf litter from native plants is part of the local food chain.

**DO:** ...maintain or create buffer zones (the wider the better) along streams and wetlands.

**WHY:** Buffer zones absorb water and filter out lawn chemicals, fertilizers and sediment.

**DON'T:** ...mow your lawn right up to the stream bank.

**WHY:** Turf does not make a good buffer. It sheds water, especially on slopes, and its shallow roots do not hold the soil as well as native grasses, trees, or shrubs.

**NEVER DUMP OIL, ANTIFREEZE OR TOXIC CHEMICALS. DISPOSE OF THESE AT APPROVED DISPOSAL CENTERS.**

**DO:** ...leave naturally occurring debris, such as fallen logs, leaves and rocks in place in your stream.

**WHY:** In-stream debris provides shelter and food for aquatic life.

**DON'T:** ...throw grass clippings or yard waste into the stream—compost them.

**WHY:** Grass clippings and debris reduce oxygen in the stream, killing water animals.

**DO:** ...limit your use of yard fertilizers and chemicals. Maintain septic tanks in good condition.

**WHY:** Lawn chemicals and septic tank pollutants easily find their way into streams, and can kill insects, fish, frogs, birds, and plants.

**DON'T:** ...dump swimming pool water or soapy water directly into streams or storm sewers.

**WHY:** Storm sewers run directly into streams, where chlorine and detergent harm fish & plants.

CHESTER-RIDLEY-CRUM  
WATERSHED ASSOCIATION

## EVERY LITTLE STREAM COUNTS . . .

The stream on your property may be a spring-fed rivulet, or a real creek. All are part of a single system, feeding into the Delaware River. Even the smallest stream supports aquatic plant and animal life, and is an important part of the water cycle. Every stream deserves to be cared for, and kept free of pollutants, to keep the whole system healthy.

## SOME HELPFUL DEFINITIONS:

A **STREAM BUFFER** or **RIPARIAN BUFFER** is a strip of land along a stream where trees, shrubs, and small plants are encouraged to grow. Recently scientists have learned the importance of buffers in keeping streams healthy.

The U.S. Forest Service now recommends a 50 foot buffer, free of all development, on each bank of a stream. Buffers of 300 feet or more are often used to protect the natural character of streams. On smaller properties, aim for a minimum of ten feet between your lawn and the stream bank. Even a single row of trees or bushes will help protect your stream.

**NATIVE VEGETATION** refers to plants that have always grown in this area. The animals in our streams use specific tree leaves for food and building material and thrive best when those species are present.

Non-native plants can contribute to a buffer zone by reducing erosion, but they may be invasive, and are less well suited to the existing food chain.



## BEAUTIFUL AND HEALTHY:

We may be used to seeing streams edged by neatly mown grass. But running water offers an opportunity for imaginative landscaping. A buffer zone of trees, shrubs and ferns will add interest to your landscape and protect your stream. Here are some of the native species you might try:

**Flowers:** Purple stemmed aster; rose mallow; blue flag; yellow iris; cardinal flower; turtlehead; swamp milkweed; Joe-Pye weed.

**Ferns:** Sensitive fern; cinnamon fern; royal fern.

**Grasses & Sedges:** Soft-stem bulrush; fringed, lurid or tussock sedge; big bluestem; cattails.

**Woody Plants:** Buttonbush; red-twig or silky dogwood; spicebush; Virginia sweetspire; shadbush; cranberry bush viburnum; red or black chokeberry; sweet pepperbush; inkberry and winterberry holly; common alder.

**Trees:** Many kinds of willow; river birch; ash; box elder; red maple; sweet bay magnolia.

Ask your local arboretum or nursery for information about these or other stream side plants.



## WHO IS RESPONSIBLE FOR OUR STREAMS?

We all are! Most of us live upstream from someone else, and what we do affects others' water as well as our own. We need to work together to keep our streams clean and healthy. We are all stewards of the land.

Your township or borough is responsible for making regulations to protect the streams that run through it. These may cover development on steep slopes or flood plains, storm water management, sewers and septic tank regulations. Most streams run through more than one jurisdiction, and ordinances vary. Encourage local officials in towns along your stream to cooperate to protect it.

*Local watershed groups work across municipal boundaries to monitor and enhance the various creeks in our area. You might want to start your own stream protection group, or contact:*

Darby Creek Valley Association  
P.O. Box 583  
Lansdowne, PA 19050

Chester/Ridley/Crum Watersheds Association  
P.O. Box 972  
Edgmont, PA 19028

Brandywine Valley Association  
1760 Unionville-Wawaset Road  
West Chester, PA 19382-6751

*This pamphlet was developed by the Media Area League of Women Voters, in cooperation with the Darby Creek Valley Association and the Chester/Ridley/Crum Watersheds Association. Layout courtesy of Taylor Memorial Arboretum.*



# Bibliography

## General Sources

Association of New Jersey Environmental Commissions, "Protecting Our Streams," 1992.

Bucks County Planning Commission, "Wetlands in Coastal Zone Areas of Bucks County," 1994.

Burlington County Cultural Heritage Department. A Brief History of Smithville, Burlington County.

Burlington County Cultural Heritage Department. Tour Guide - African American Historic Sites.

Colonel Thomas A. Reynolds Chapter of the National Society of the Daughters of the American Revolution. Historic Mount Holly, New Jersey.

Cresson, Jack. Archaeology Maps. 2001.

DeCou, George. The Historic Rancocas. The News Chronicle: Moorestown, NJ, 1949.

Delaware Riverkeeper Network. Citizen Water Quality Monitoring Manual., 1997.

Delaware Valley Regional Planning Commission. Guiding Regional Growth - Land Use Element of the DVRPC Year 2020 Plan, July 1995.

Gertler, Edward. Garden State Canoeing - A Paddler's Guide to New Jersey. The Seneca Press: Silver Spring, MD, 1992.

Gloucester County Planning Department. Still Run Watershed Stormwater Management Plan Final Report, February 1994.

Howe, Linda. Keeping our Garden State Green: A Local Government Guide for Greenway and Open Space Planning, Association of New Jersey Environmental Commissions, 1989.

Koster, Veronique. Ecotourism: "A Valuable Industry for New Jersey." ANJEC Report, Fall 2000.

Louis Berger and Associates, Inc. Model Stream Corridor Protection and Management Overlay Zone Ordinance, July 1994.

Montgomery County Planning Commission. Riparian Corridor Overlay District Model Ordinance, 1996.

New Jersey Department of Environmental Protection and Department of Agriculture, Stormwater and Nonpoint Source Pollution Control Best Management Practices Manual, December 1994.

New Jersey Department of Environmental Protection, Division of Fish, Game and Wildlife, Bureau of Freshwater Fisheries, "Electrofishing data for Whitehead Pond, Assunpink at Quaker Bridge Road, and Assunpink at Youngs Road."

New Jersey Department of Environmental Protection, Green Acres Program. New Jersey Open Space and Outdoor Recreation Plan, 1994.

New Jersey Department of Environmental Protection, Division of Parks and Forestry, Office of Natural Lands Management. Draft New Jersey Trails Plan, February 1995.

New Jersey Department of Environmental Protection, Division of Parks and Forestry, Office of Natural Lands Management, "Natural Heritage Data," 1997.

New Jersey Department of Environmental Protection, Division of Parks and Forestry, Office of New Jersey Heritage. New Jersey and National Registers of Historic Places, 1970 - 1995.

New Jersey Department of Environmental Protection, Office of Land and Water Planning. New Jersey State Water Quality Inventory Report, 1996, 1994, and 1992.

New Jersey Department of Environmental Protection. Surface Water Quality Standards N.J.A.C. 7:9B, April 1994.

New Jersey Department of Environmental Protection, Waterwatch Program. Water Watch Field Guide, 1987.

New Jersey Department of Environmental Protection, "Watershed Focus," Winter 1996.

New Jersey Department of Environmental Protection, "The Dry Facts - Building Near Wetlands" brochure.

New Jersey State Planning Commission. Communities of Place: The New Jersey State Development and Redevelopment Plan, Reexamination Report and Preliminary Plan, June 25, 1997.

Pennsylvania Department of Environmental Protection, "Water Pollution Control in Pennsylvania Fact Sheet," 1996.

Schwarz, Loring LaB., editor, Flink, Charles A., and Searns, Robert M., authors, Greenways: A Guide to Planning, Design, and Development, The Conservation Fund, Island Press: Washington, DC, 1993.

Smith, David S. And Hellmund, Paul Cawood., Ecology of Greenways, University of Minnesota Press: Minneapolis, 1993

Warrick, Joby. "New Rules are Offered on Use of Wetlands," Philadelphia Inquirer, February 2, 1998.

## Website Sources

[www.state.nj.us/dep/sdr/watershed/area\\_19.pdf](http://www.state.nj.us/dep/sdr/watershed/area_19.pdf)

[www.state.nj.us/dep/landuse/announce/fww\\_prop/wetsumm.htm](http://www.state.nj.us/dep/landuse/announce/fww_prop/wetsumm.htm)

[www.state.nj.us/dep/legal/ffwwrule/fwwrule.htm](http://www.state.nj.us/dep/legal/ffwwrule/fwwrule.htm)

[www.epa.gov/owm/sw/phase2](http://www.epa.gov/owm/sw/phase2)

[www.nj.usgs.gov](http://www.nj.usgs.gov)

[www.rancocas.com](http://www.rancocas.com)

[www.burlco.lib.nj.us/county/bchistory.html](http://www.burlco.lib.nj.us/county/bchistory.html)

[www.lumberton.com/club.orgs/historical/Lumbertonhistory.html](http://www.lumberton.com/club.orgs/historical/Lumbertonhistory.html)

[www.medfordtownship.com/history.htm](http://www.medfordtownship.com/history.htm)

[www.geocities.com/Athens/Olympus/6745/Vtown.html](http://www.geocities.com/Athens/Olympus/6745/Vtown.html)



## Municipal Plans and Ordinances

### **Eastampton Township**

*Open Space Plan January 2000*  
*Eastampton Township Land Use Ordinances, 1996*

### **Evesham Township**

*Master Plan*  
*Subdivision and Land Development Ordinance*

### **Hainesport Township**

*Hainesport Township Master Plan Update, 1996*  
*Hainesport Township Ordinance Modifications, 1999*  
*Land Use, Chapter 104 of Code, 1996*  
*Environmental Resource Inventory, May 2000*

### **Lumberton Township**

*Open Space Acquisition Plan, July 2001*  
*Development Regulations Chapter 130 from the Code of Lumberton Township, 1998*  
*Master Plan 1994*

### **Medford Township**

*Master Plan, Combined Recreation and Conservation Plan Elements, 1994*  
*Master Plan, Land Use Plan Update, 1990*  
*Open Space Inventory Map, 1999*  
*Land Development Ordinance, 1992*

### **Mt. Holly Township**

*Master Plan, April 13, 2000*  
*Land Use Chapter 149 of Code, 2002*

### **Pemberton Township**

*Zoning, Chapter 190 of Township Code, 1996*  
*Summary of Proposals, (Master Plan) 1972*  
*Master Plan Reexam Report, 1982 and 1994*

### **Southampton**

*Conservation, Open Space and Recreation Plan Element of the Master Plan for Southampton Township, NJ, prepared by The Southampton Township Environmental Commission and Thomas Scangarello and Associates, December 2001. 1996 Master Plan Update, Southampton Township, Burlington County, NJ*  
*Township of Southampton Land Use Ordinances, 1988, and Extended Outline*  
*The Southampton Township Environmental Commission's Greenway Plan Mapping, 1996*  
*Vincentown Historic Preservation Study, prepared by Scangarello and Associates and William Bolger, 1983*

### **Voorhees Township**

*Voorhees Open Space Ranking System, prepared by J. Timothy Kernan, Inc., April 2000*  
*Zoning, Chapter 131 of Code, July 1998*  
*Subdivision and Site Plan Review Chapters 102 and 110 of Code, 1993*  
*Master Plan Update, 1998, prepared by Alaimo Group*

### **Westampton Township**

*Draft Open Space and Recreation Plan, 2002*  
*Land Use Legislation of the Code of Westampton Township, December 1998*  
*Master Plan Reexam Report, 1997*

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*Robert Moore, Mt. Holly Township*

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*Kim Korejko and Mark Gatti—GIS maps*

*Bob Dean, Dan Grenier, and Eric Genga (all former staff) – Historical, environmental, and recreational resource chapters, respectively*

*Kimberly Meyer and Becky Maule – graphics and layout*

*Carl Barbee – printing and production*

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# Publication Abstract

**Title of Report:** *Rancocas Creek Main Branches Greenway Plan*

**Publication No.:** 02031

**Date Published:** *December 2002*

**Geographic Area Covered:**

*The greenway study area generally covers parcels adjacent to the North, South and Southwest Branches of the Rancocas Creek in the following municipalities: Evesham Township, Eastampton Township, Hainesport Township, Lumberton Township, Medford Township, Mt. Holly Township, Pemberton Borough, Pemberton Township, Southampton Township, and Westampton Township, in Burlington County, and the plan covers parcels adjacent to the Barton's Run Tributary of the Southwest Branch in Voorhees Township, Camden County.*

**Key Words:**

*Greenway, stream corridor, environmental protection, trails, canoes, historic resources, conservation, acquisitions, conservation easements, land use regulations*

**Abstract:**

*The Rancocas Creek Main Branches Greenway Plan has been developed as a "how-to" guide for the Rancocas Conservancy, Burlington County, the 11 study-area municipalities, the state Green Acres Department, and residents interested in protecting the creek environment and people's enjoyment of it. The greenway planning area extends between the Rancocas Creek State Park upstream to the Pinelands border on the North and South branches, and to the Barton's Run headwaters of the Southwest Branch. Through research, analysis and public outreach, four main issues have come forth regarding parcel preservation, recreational opportunities, eco-tourism, and intermunicipal and interagency cooperation. In addition to identifying these issues, the plan attempts to provide a rationale for why they are important, and it proposes recommended actions that, if implemented, will serve to address them.*



**Delaware Valley Regional Planning Commission**

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