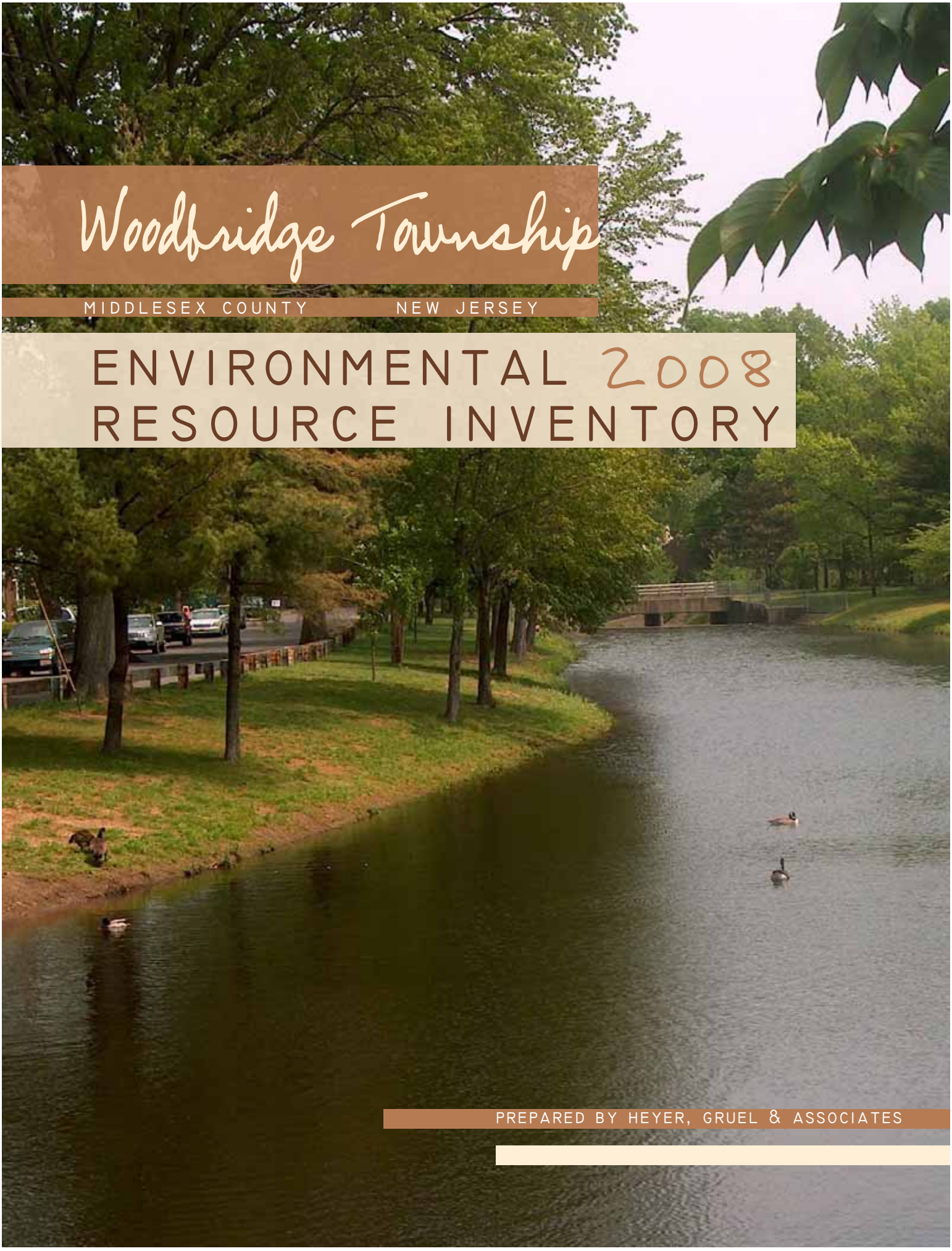


Woodbridge Township

MIDDLESEX COUNTY NEW JERSEY

ENVIRONMENTAL RESOURCE INVENTORY 2008

PREPARED BY HEYER, GRUEL & ASSOCIATES

2008

ENVIRONMENTAL RESOURCE INVENTORY

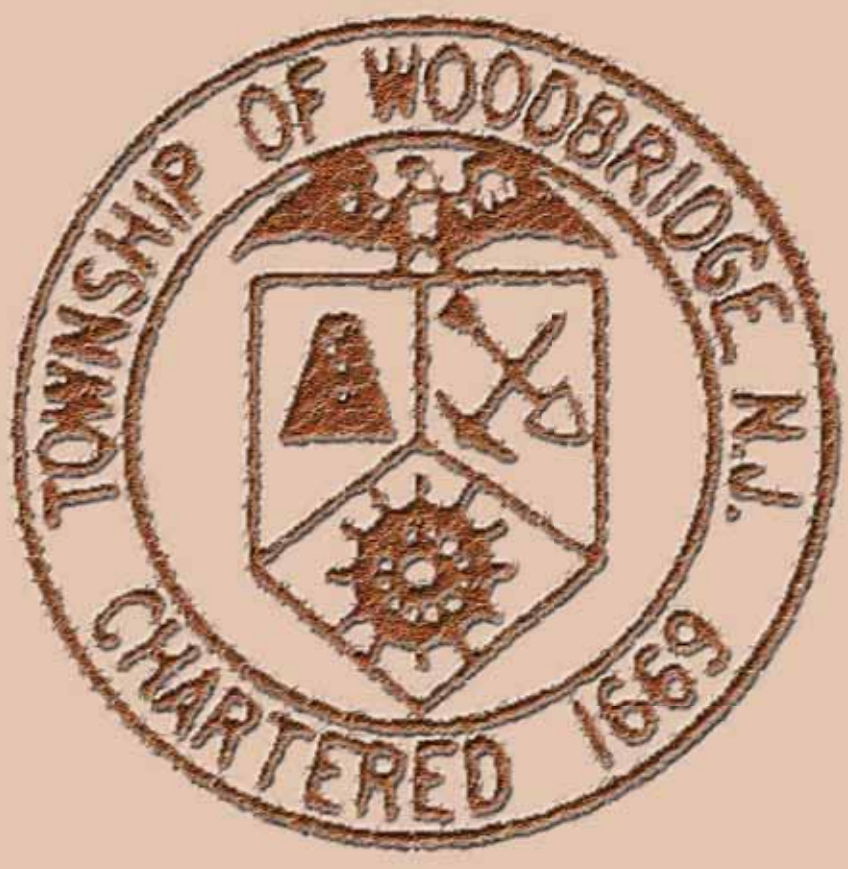
Woodbridge Township
Middlesex County, New Jersey

Scenic Resources Element
Prepared by
Environment Commission

Heyer, Gruel & Associates, PA
Community Planning Consultants

63 Church Street, 2nd Floor
New Brunswick, NJ 08901
732-828-2200

Paul Gleitz, P.P. #5802, AICP
Aditi Mantrawadi, Associates Planner


TOWNSHIP OF WOODBRIDGE N.J.
CHARTERED 1669

Acknowledgements

Mayor
John E. McCormac, CPA
Robert Landolfi, Business Administrator

Woodbridge Township Council
Greg Bedard
James V. Carroll
Richard A. Dalina
Gregg M. Ficarra
Charles Kenny
Robert G. Luban
James Major
Patricia Osborne
Brenda Yori Velasco

Environment Commission
Chantal Greffer, Chairperson
Patricia Osborne, Council Representative
Christopher Adornato
Mary Beth Koza
Roberta Martin
Jeanette Miller
Elizabeth Rudowski
Charles Shaughnessy

Marta Lefsky, Director of Planning
and Development, Woodbridge Township
John Eberhardt, Director, Parks and
Recreation, Woodbridge Township
Woodbridge Township Planning Board
Woodbridge Township Historical
Preservation Commission

This ERI Made Possible Through a
2006 Smart Growth Planning Grant
From the Association of New Jersey
Environmental Commissions (**ANJEC**)
Sandy Batty, Executive Director
Kerry Butch, Project Director

ANJEC
ASSOCIATION OF NEW JERSEY
ENVIRONMENTAL COMMISSIONS

Heyer, Gruel & Associates
Paul Gleitz, P.P. AICP, *Project Manager*
Aditi Mantrawadi, *Associate Planner*
Dilip Chittajallu, *Associate Planner*
Ring Yu Lin, *Graphic Designer*

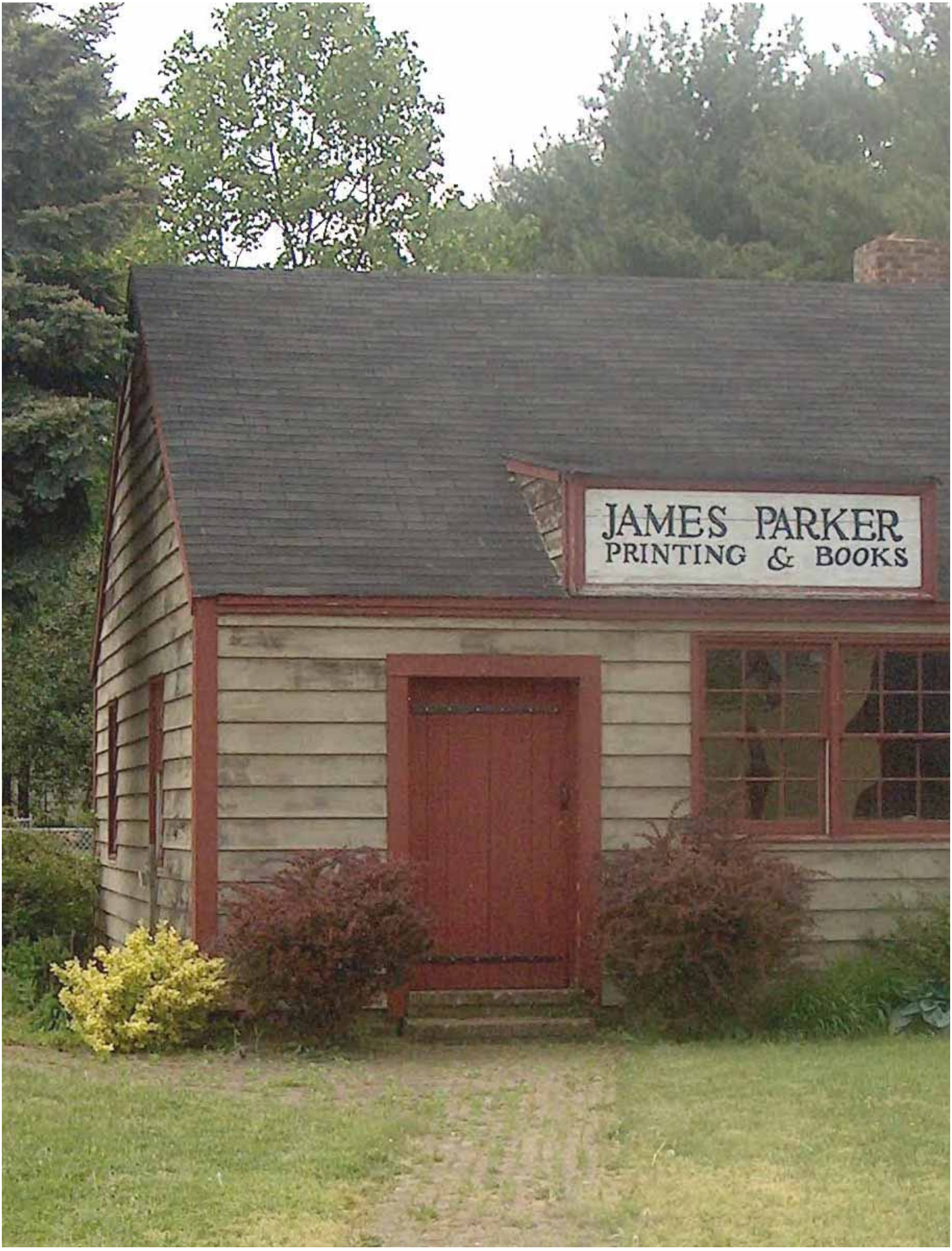

JAMES PARKER
PRINTING & BOOKS

Table of Contents

Introduction

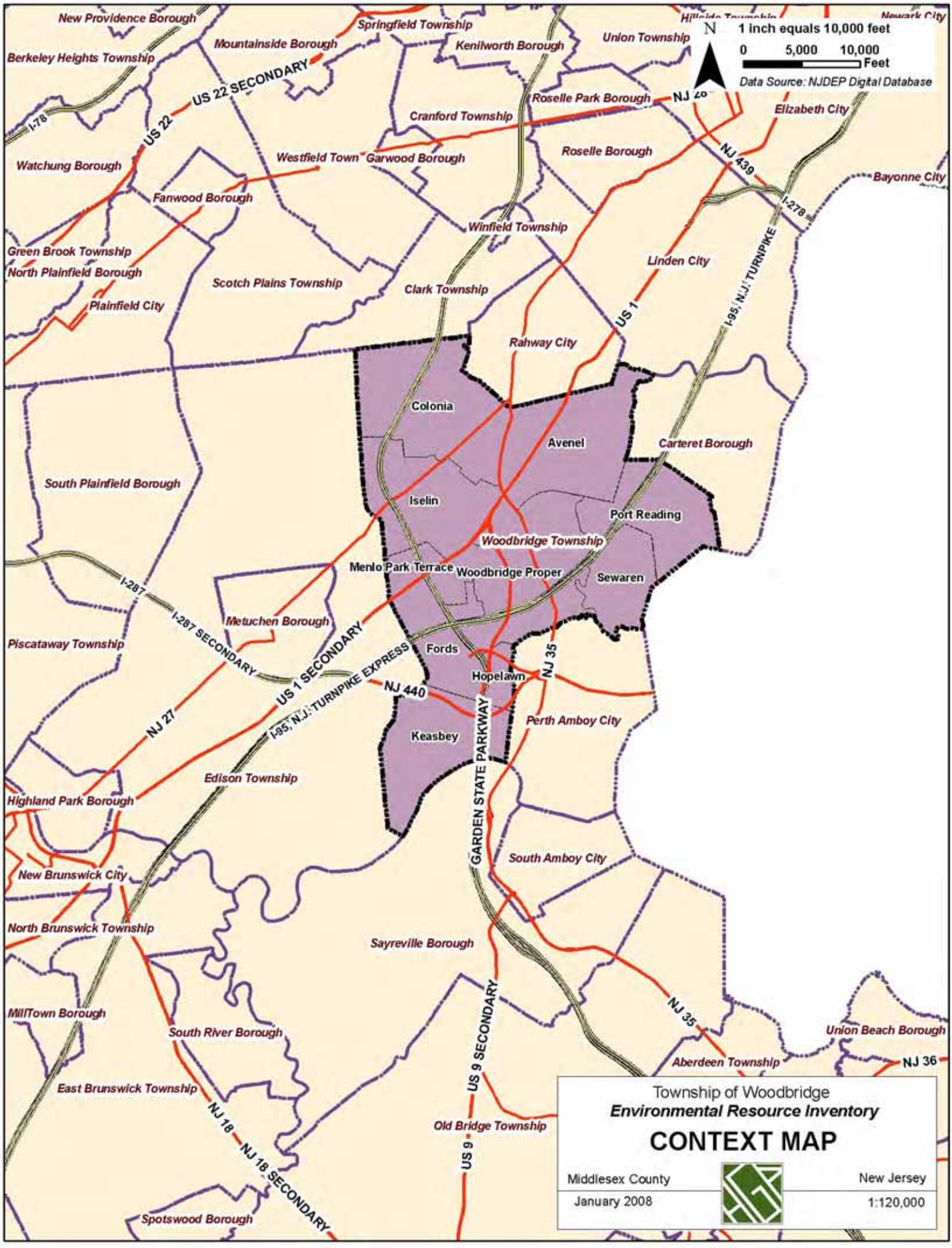
The Environmental Resource Inventory (ERI) is an unbiased report of data that describes the current state of the various environmental resources in a community. It is a compilation of text and maps, and forms the baseline documentation that the community can use to evaluate, and possibly revise, planning documents, policy initiatives, and local ordinances to better protect the remaining resources, and when possible, improve the state of the natural environment.

The ERI is not a policy statement or a plan. Rather, it is an objective listing of the resources in the community. It can be used as a tool for Environmental Commissions, Planning Boards and Zoning Boards, as well as by the Township administration and the public at large. The ERI can be adopted as part of the Master Plan, or it can be combined with policy statements and programs to create a Conservation Element for the Master Plan. ERIs are often the basis for resource protection ordinances in a community, which are designed to protect the resources inventoried in the ERI. Whether the ERI is an amendment to the Master Plan, a part of a Conservation Element, or a separate reference document, it is always seen as dynamic and revisable as circumstance on the ground evolve and change.

Introduction

The legal authority for the drafting and adoption of an ERI is the Environmental Commission Enabling Legislation (N.J.S.A. 40:56A), which states, "Power to conduct research into the use and possible use of open land areas of the municipality.... It shall keep an index of the marshlands, swamps, and wetlands.... the proper use of such areas...recommend to the Planning Board.... plans and programs for a master plan and the development of such areas". Additionally, the Municipal Land Use Law (N.J.S.A 40:55D) requires a Land Use Plan element and states that "Whenever the Environmental Commission has prepared and submitted to the Planning Board and to the Board of Adjustment an index of the natural resources of the municipality, the Planning Board or the Board of Adjustment shall make available to the Environmental Commission an informational copy of every application for development submitted to the board".

It should be noted that all of the information included in this ERI should be considered to be reasonably accurate for planning purposes, but does not replace site-specific investigations for regulatory purposes. It should also be noted that the most up-to-date data sources were used to create this document; however, some of the most recent information is based on data and aerial photography collected by NJDEP in 2002. Other information is based on topographic maps that were last updated prior to that time. Environmental resource information is dynamic and should always be understood to be so.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Mountainside Borough
Kenilworth Borough
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Berkeley Heights Township
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US 22
I-78
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NJ 28
Elizabeth City
Cranford Township
Roselle Borough
NJ 439
Watchung Borough
Westfield Town
Garwood Borough
Bayonne City
I-278
Fanwood Borough
Winfield Township
I-95; N.J. TURNPIKE
Green Brook Township
North Plainfield Borough
Linden City
Scotch Plains Township
Clark Township
Plainfield City
US 1
Rahway City
Colonia
Avenel
Carteret Borough
South Plainfield Borough
Iselin
Port Reading
Woodbridge Township
Menlo Park Terrace
Woodbridge Proper
Sewaren
I-287
I-287 SECONDARY
Metuchen Borough
Piscataway Township
US 1 SECONDARY
Fords
NJ 35
I-95; N.J. TURNPIKE EXPRESS
Hopelawn
NJ 440
NJ 27
Perth Amboy City
Keasbey
GARDEN STATE PARKWAY
Edison Township
Highland Park Borough
South Amboy City
New Brunswick City
North Brunswick Township
Sayreville Borough
MillTown Borough
South River Borough
US 9 SECONDARY
NJ 35
Union Beach Borough
Aberdeen Township
NJ 36
East Brunswick Township
NJ 18
NJ 18 SECONDARY
Old Bridge Township
US 9
Spotswood Borough
Township of Woodbridge
Environmental Resource Inventory
CONTEXT MAP
Middlesex County
New Jersey
January 2008
1:120,000

Municipal Summary

Woodbridge Township is comprised of 23.1 square miles. With a population of approximately 99,000, it is the fifth largest Township in New Jersey. Woodbridge is the oldest original township in the state and is named after Reverend John W. Woodbridge. The area was originally settled by Lenni-Lenape Indians. In 1664 a treaty was signed transferring the possession of Woodbridge to three New Englanders. The township was granted a charter on June 1, 1669 by King Charles II of England. Over the 1800s and early 1900s portions of the Township were taken to form the neighboring municipalities of Rahway, Edison (formerly Raritan Township), and Carteret (formerly Roosevelt). The first newspaper in New Jersey was printed at Parker's Press in Woodbridge. The Township also had a role in the Revolutionary War, with some minor conflicts settled in 1777, 1779, and 1782.

The township is comprised of ten towns:

- Avenel
- Colonia
- Fords
- Hopelawn
- Iselin
- Keasbey
- Port Reading
- Menlo Park Terrace
- Sewaren
- Woodbridge

Although these are separate towns, the township functions and thrives as "one community".

Municipal Summary

The Township's population has almost quadrupled since 1930, when 25,266 people called the Township of Woodbridge home, according to the United States Census. The greatest population growth took place between 1950 and 1960 when the population went from 35,758 to 78,846, an increase just over 120 percent. The current population density in Woodbridge Township is 4,225 residents per square mile, according to the US Census. This is a big change from 1816 when the Township's total population was approximately 4,000 persons. The number of residents within the township's borders only grew during the 1800s as clay mining and brick manufacturing were the primary industries.

The population increased to 98,944 by 1970, but dropped 9.5 percent to 90,074 by 1980. There has been an increase of approximately 9,000 residents or an approximate 10 percent growth over the past 27 years. But when comparing the population density from 37 years ago to today, there's been little change as the total population numbers are similar to the numbers posted in 1970.

Located in northern Middlesex County, Woodbridge is a mature suburb of the New York Metropolitan region. It is surrounded by Sayreville Borough, Linden City, Carteret Borough, Rahway City, Clark Township, and Edison Township. The Township is one of the most accessible in New Jersey and it is the only municipality where the Garden State Parkway and New Jersey Turnpike intersect. There are also a plethora of other major roadways in the Township, which includes Route 287, Route 1, Route 9, Route 27, and Route 35.

The Township has three train stations: Avenel, Metropark, and Woodbridge. All three provide direct service via New Jersey Transit to Newark and New York City. Connections to Monmouth County - including many Jersey Shore attractions – are available from Avenel and Woodbridge. Connections to Philadelphia, Boston and Washington are available from Metropark, which provides Amtrak service.

The Township Master Plan of 1990 is based on the following goals and policy statements:

- To promote a balanced residential, commercial, industrial, recreational, public, and conservation land uses.
- To preserve the residential character of neighborhoods within the Township while providing a mix of housing types and uses.
- To promote the preservation of natural systems and environmentally sensitive areas, particularly wetlands and flood hazard areas.
- To provide a balance between housing and employment and assure adequate retail and service establishments in appropriate locations.
- To safeguard the tax base and provide for a continuing source of employment and tax ratables through appropriate use of nonresidential land.
- To provide adequate community facilities and services in order to maintain the quality of life for existing and future Township residents.
- To encourage mixed use development where appropriate.
- To encourage resource recovery and the recycling of recyclable materials.
- To insure that the Township's Land Use Plan is compatible with those of adjacent municipalities, the County and State.

In Woodbridge Township, environmental conservation is a longstanding tradition. The Township has been named a "Tree City USA" municipality for 14 consecutive years by the National Arbor Day Foundation. The Township is also active in Community Forestry as it recently had its second five-year Community Forestry Management Plan approved by the state.

The Woodbridge Township Environmental Commission was established May 15, 1973 and supports the development of a sustainable community. A sustainable community meets the needs of the present without compromising the needs of the future through the effective and efficient use of natural ecosystems and social systems.

The commission has four major goals:

- To maintain a healthy community and populations
- To identify, protect and preserve open space
- Create and expand awareness of natural systems
- Provide educational information that will increase awareness of issues and concerns.

The 2003 Master Plan Reexamination Report outlined and updated objectives from the Master Plan of 1990. These objectives are a main part of the Township's present and future direction. The highlights of these objectives include:

- To preserve the integrity of existing residential areas: By preventing intrusion of nonresidential uses into residential neighborhoods, By maintaining existing development intensity and population density consistent with residential neighborhood patterns.
- To encourage and control commercial development by limiting regional commercial and office development to major highway corridors.
- To expand and protect the Township's ratable base, through attraction and retention of nationally known and respected companies to town.
- To control industrial development: By limiting industrial development to only land suitable for industrial use in relation to flat topography, good drainage, and access to arterial and primary roadways. By permitting a range of industrial lot sizes and uses within industrial districts.
- To continue to provide a variety of housing opportunities for all income levels in appropriate locations consistent with environmental constraints.


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Current Land Use Land Cover 2002

Woodbridge Township is dominated by urban areas that consist of residential uses, commercial uses, industrial uses, lands used for transportation networks, schools, churches, cemeteries, recreation areas, military uses, etc. All the urban uses amount to approximately 12,000 acres, or just under 77% of total land area. It is covered to a much less extent by water (5.56%), wetlands (7.41%) and forests (8.81%). The total land area is approximately 24.48 square miles, or 15671 acres. The following chart is a summary of land uses by six major land use types in the Township, derived from the 2002 NJDEP Land Use/Land Cover GIS data. While this data is now five years old, it is the most current data available.

Major Land Use Types	Acres	Percent of Total
Urban	11962.73	76.34
Forest	1380.59	8.81
Wetlands	1160.75	7.41
Water	870.59	5.56
Barren Land	293.91	1.88
Agriculture	2.38	0.02
Total Area (from Land Use data)	**15670.94**	**100.00**

The single largest land use identified in the Township is urban land, which occupies 11962.73 acres, or just less than 77% of the total land. Urban land uses include residential, industrial, commercial and services, transportation (including roadways, communication and utilities), and other minor uses such as schools, religious institutions, cemeteries, parking lots, and recreational land.

Residential land uses in the Township are very high. Most prevalent are single-family medium-density homes and high-density multi-family units that are spread out equally in all areas of the township. These two land use, together cover 5,528 acres or about 35% of land area within the township. Single-unit homes in low-density areas cover just less than 182 acres or 1.16% of the total land, while rural residential uses occupy 313 acres or 2% of the total land area.

The next largest urban land uses in Woodbridge Township are industrial and commercial uses. The industrial uses take up around 1,480 acres or 9.5% of the land, and commercial and service-oriented uses (that include shopping malls, retail stores, gas stations, restaurants and other similar uses) cover about 1,450 acres or 9.26% of the total land area. Other important land uses in the area include transportation – roadways, communication and utilities – which occupy about 875 acres or 6% of total land. Recreational land, including playgrounds and school athletic fields, takes up a little over 570 acres, while unused, barren land occupies 293 acres. Urban land uses combine to cover slightly more than three-quarters (76.34%) of all the land in the Township, and illustrate the high-density, urban character of its predominantly high-density residential, commercial, and industrial uses.

Forest land use type, which covers about 1,381 acres or 8.81% of total land area, is the second most predominant land-use. Wetland is the third significant land use type in the Township, covering about 1,160 acres or 5.56% of total land area.

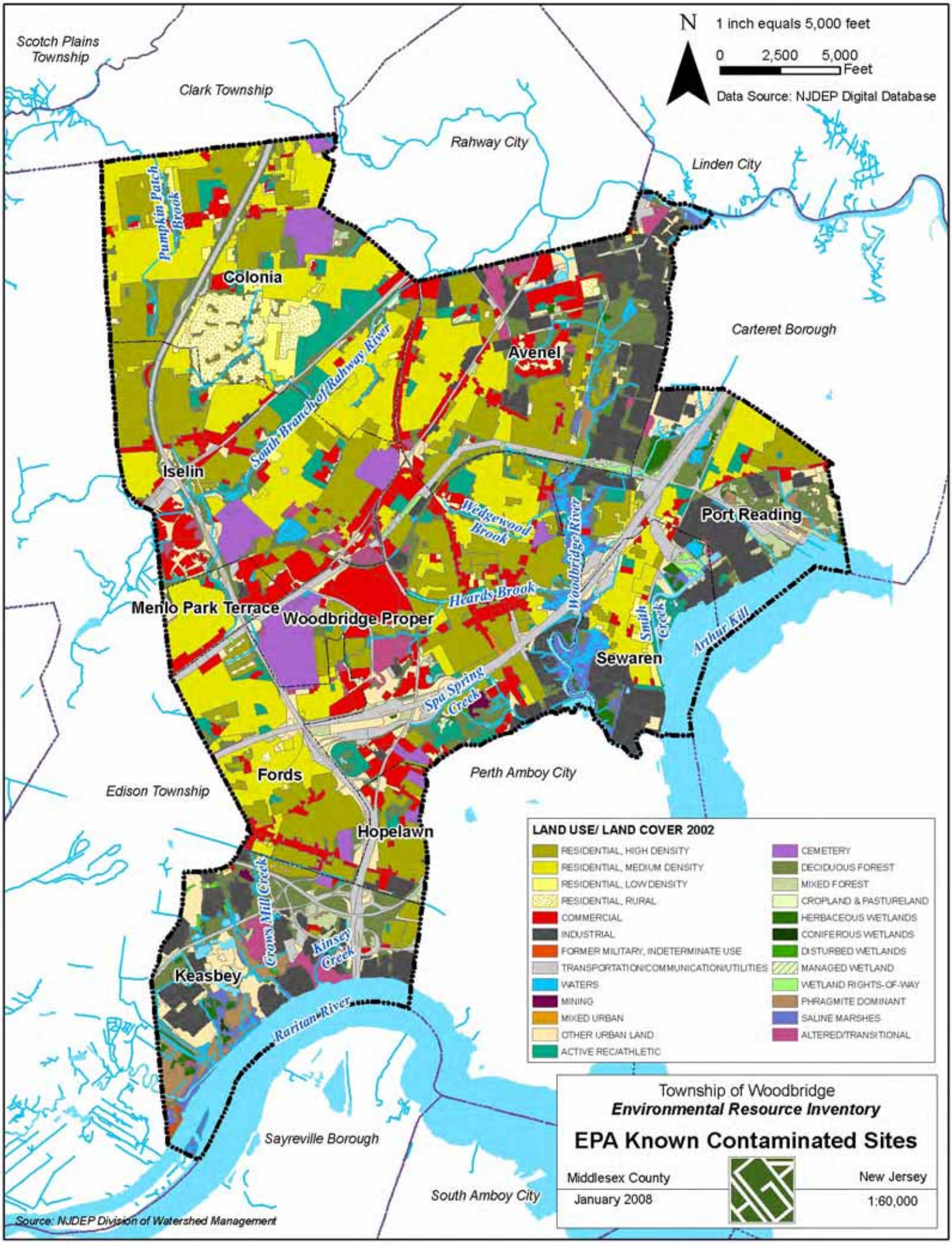
The following table summarizes the acreage and percent total of land use in the Township by the six broad land use type categories and their subtypes.

Land Use Types and Subtypes	Area (in acres)	Percent of Total
Urban		
Residential, Single Unit, Medium Density	2814.24	17.96
Residential, High Density or Multiple Dwelling	2713.87	17.32
Industrial	1480.85	9.45
Commercial/Services	1450.55	9.26
Other Urban or Built-Up Land	834.16	5.32
Major Roadway	613.41	3.91
Cemetery	466.2	2.97
Recreational Land	422.33	2.69
Residential, Rural, Single Unit	313.58	2.00
Transportation/Communication/Utilities	262.27	1.67
Residential, Single Unit, Low Density	181.48	1.16
Athletic Fields (Schools)	150.84	0.96
Upland Rights-of-Way Developed	135.56	0.87
Upland Rights-of-Way Undeveloped	60.6	0.39
Stormwater Basin	40.67	0.26
Mixed Urban or Built-Up Land	10.82	0.07
Former Military, Indeterminate Use	9.5435	0.06
Phragmites Dominate Urban Area	1.7786	0.01
Total of all Urban Subtypes	**11962.73**	**76.34**

Land Use Types and Subtypes	Area (in acres)	Percent of Total
Forest		
Deciduous Forest (>50% Crown Closure)	643.76	4.11
Deciduous Brush/Shrubland	255.35	1.63
Old Field (< 25% Brush Covered)	235.05	1.50
Deciduous Forest (10-50% Crown Closure)	223.1	1.42
Phragmites dominate Old Field	11.38	0.07
Mixed Deciduous/Coniferous Brush/Shrubland	10.18	0.06
Mixed Forest (>50% Deciduous With 10-50% Crown Closure)	1.77	0.01
Total of all Forest Subtypes	**1380.59**	**8.81**

Land Use Types and Subtypes	Area (in acres)	Percent of Total
Wetlands		
Deciduous Wooded Wetlands	277.49	1.77
Saline Marsh (Low Marsh)	252.55	1.61
Herbaceous Wetlands	155.79	0.99
Phragmites Dominate Interior Wetlands	104.88	0.67
Phragmites Dominate Coastal Wetlands	95.67	0.61
Deciduous Scrub/Shrub Wetlands	74.19	0.47
Saline Marsh (High Marsh)	67.61	0.43
Wetland Rights-of-Way	42.34	0.27
Managed Wetland in Built-Up Maintained Recreation Area	41.73	0.27
Managed Wetland in Maintained Lawn/Green space	29.97	0.19
Disturbed Wetlands (Modified)	16.15	0.10
Coniferous Scrub/Shrub Wetlands	2.37	0.02
Total of all Wetland Subtypes	**1160.75**	**7.41**

Land Use Types and Subtypes	Area (in acres)	Percent of Total
Water		
Tidal Rivers, Inland Bays, and Other Tidal Waters	768.67	4.91
Artificial Lakes	67.91	0.43
Streams and Canals	26.19	0.17
Bridge over water	7.82	0.05
Total of all Water Subtypes	**870.59**	**5.56**
Barren Land		
Altered Lands	140.37	0.90
Transitional Areas	133.31	0.85
Extractive Mining	20.23	0.13
Total of all Barren Land Subtypes	**293.91**	**1.88**
Agriculture		
Cropland and Pastureland	2.38	0.02
Total of all Agriculture Subtypes	**2.38**	**0.02**
Total Acreage of all Land Use Types	**15670.94**	**100.00**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Clark Township
Rahway City
Linden City
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Colonia
Avenel
Iselin
Port Reading
Menlo Park Terrace
Woodbridge Proper
Sewaren
Fords
Hopelawn
Keasbey
Edison Township
Perth Amboy City
Sayreville Borough
South Amboy City
Pumpkin Patch Brook
South Branch of Rahway River
Wedgewood Brook
Woodbridge River
Heards Brook
Smith Creek
Arthur Kill
Spa Spring Creek
Crows Mill Creek
Kinsey Creek
Raritan River
LAND USE/ LAND COVER 2002
RESIDENTIAL, HIGH DENSITY
RESIDENTIAL, MEDIUM DENSITY
RESIDENTIAL, LOW DENSITY
RESIDENTIAL, RURAL
COMMERCIAL
INDUSTRIAL
FORMER MILITARY, INDETERMINATE USE
TRANSPORTATION/COMMUNICATION/UTILITIES
WATERS
MINING
MIXED URBAN
OTHER URBAN LAND
ACTIVE REC/ATHLETIC
CEMETERY
DECIDUOUS FOREST
MIXED FOREST
CROPLAND & PASTURELAND
HERBACEOUS WETLANDS
CONIFEROUS WETLANDS
DISTURBED WETLANDS
MANAGED WETLAND
WETLAND RIGHTS-OF-WAY
PHRAGMITE DOMINANT
SALINE MARSHES
ALTERED/TRANSITIONAL
Township of Woodbridge
Environmental Resource Inventory
EPA Known Contaminated Sites
Middlesex County
New Jersey
January 2008
1:60,000
Source: NJDEP Division of Watershed Management

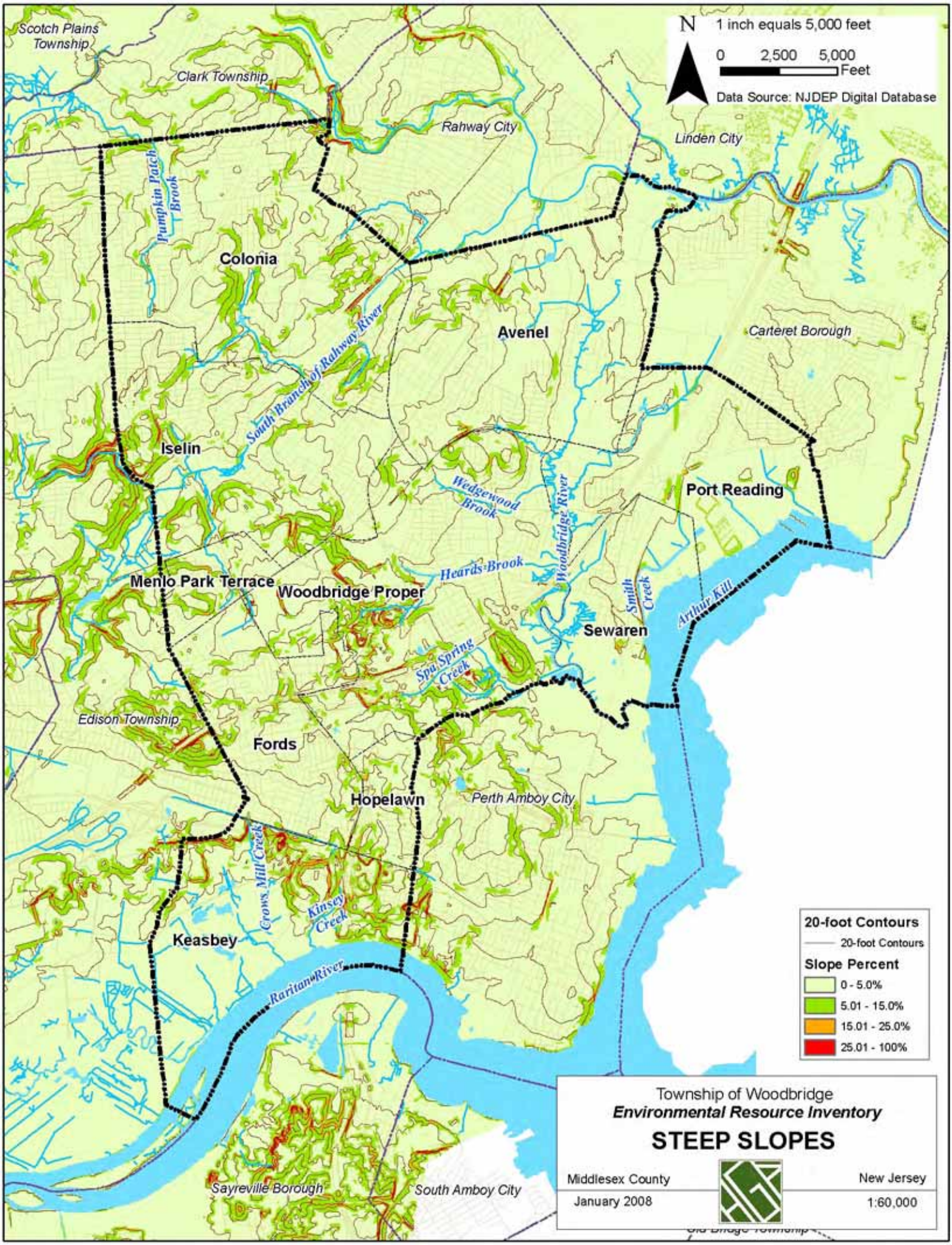
Topography - Slopes and Elevation

The topography of Woodbridge Township consists of a relatively flat terrain and slopes down towards the Raritan River, Rahway River, Woodbridge River, and many other smaller rivers and creeks. A few of these river basins in the northern sections of the township such as Avenel, Colonia, Iselin and Sewaren are also identified as flood hazard areas. Although a lot of these slopes towards the riverbeds are gentle, the terrain does exhibit steeper slopes in some areas. Fords neighborhood and the vicinities of Heards Brook, Spa Spring Creek, and the south branch of Rahway River contain moderate slopes. A very few areas of the Township have steep slopes that are not suitable for building. These include the northwestern portion of Keasbey, the areas south of Hopelawn adjacent to the Raritan River, and a few areas along Heards Brook. The low lying flat lands of Sewaren and the flat land in the southern part of Keasbey along the Raritan River contain a few marshes and swamps.

The highest elevations in the Township occur in Fords, northern part of Keasbey, areas south of Hopelawn, and areas along Heards Brook, which reach a maximum of about 175 feet above sea level in Fords. The lowest elevations are found in the eastern edge of the Township along Woodbridge and Raritan Rivers; in the northern sections of the Township, on either sides of Rahway River; and in the southern section of the Township, between the steep slopes of northwest Keasbey and the Raritan River. The majority of the Township is found between the 20- and 160-foot contours. All of the Coastal Plain area is below the 20 foot elevation, ranging in height from 5 to10 feet above sea level along the major rivers to 120-160 feet above sea level in Fords.

Steep slopes are those areas with land topology gradient greater than 15 percent. These areas have limited capacity for community development, often accompanied by adverse environmental impacts, due to high construction costs and the potential for soil erosion. According to Soil Conservation Service data, there are a few areas in the township with major slopes that exceed 15 percent.


N
1 inch equals 5,000 feet
0 2,500 5,000
Feet
Data Source: NJDEP Digital Database
Scotch Plains Township
Clark Township
Rahway City
Linden City
Pumpkin Patch Brook
Colonia
Avenel
Carteret Borough
South Branch of Rahway River
Iselin
Wedgewood Brook
Woodbridge River
Port Reading
Heards Brook
Menlo Park Terrace
Woodbridge Proper
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
20-foot Contours
0 - 20
21 - 40
41 - 60
61 - 80
81 - 100
101 - 120
121 - 160
161 - 180
Township of Woodbridge
Environmental Resource Inventory
CONTOURS
Middlesex County
New Jersey
January 2008
1:60,000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Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
20-foot Contours
20-foot Contours
Slope Percent
0 - 5.0%
5.01 - 15.0%
15.01 - 25.0%
25.01 - 100%
Township of Woodbridge
Environmental Resource Inventory
STEEP SLOPES
Middlesex County
New Jersey
January 2008
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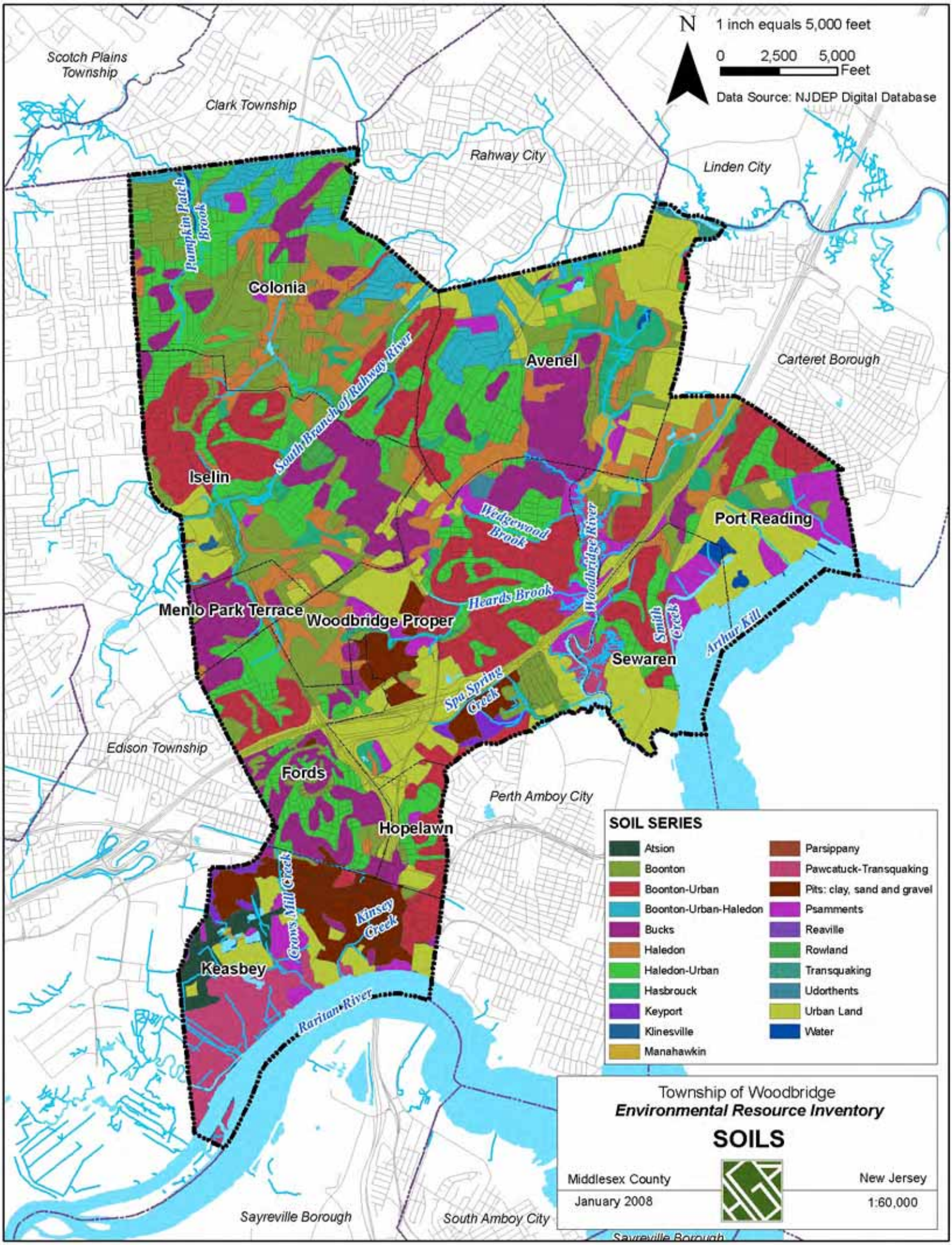
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Woodbridge Proper
Heards Brook
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Fords
Hopelawn
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
SOIL SERIES
Atsion
Boonton
Boonton-Urban
Boonton-Urban-Haledon
Bucks
Haledon
Haledon-Urban
Hasbrouck
Keyport
Klinesville
Manahawkin
Parsippany
Pawcatuck-Transquaking
Pits: clay, sand and gravel
Psamments
Reaville
Rowland
Transquaking
Udorthents
Urban Land
Water
Township of Woodbridge
Environmental Resource Inventory
SOILS
Middlesex County
New Jersey
January 2008
1:60,000

Knowledge of soil types, characteristics, and their geographic distribution can inform the planning and policy processes and influence the smart growth and development of a community. Data on soil depth, permeability, water table and other physical properties are useful when determining the suitability of soils for foundation construction, location of septic system leaching fields, landscaping, preservation of farmland, and construction of roads, athletic fields or parks. The soil data in this report are provided by the National Resources Conservation Service of the United States Department of Agriculture, which started conducting national soil samples in 1899 and continues today.

Soil classifications address such issues as depth to ground water, depth to bedrock, and development suitability. The farmland classification prescribed by NRCS identifies map units as prime farmland soils, unique farmland soils, farmland soils of statewide importance, or farmland soils of local importance. Farmland classification identifies the location and extent of the most suitable soils for producing food, feed, fiber, forage, and oilseed crops. This identification is useful in the management and maintenance of productive agricultural soils.

Prime Farmland Soils

Prime Farmland Soils include all those soils in Land Capability Class I and selected soils from Land Capability Class II. Class 1 soils have slight limitations that restrict their use. Class 2 soils have moderate limitations that reduce the choice of plants or require moderate conservation practices. Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. It has the soil quality, growing season and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods.

The major advantages of prime agricultural soils are their fertility and lack of limitations for crop production purposes. Because of their naturally high fertility and lack of limitations, prime agricultural soils produce superior crop yields on a consistent basis when measured against those soils not rated as prime. Prime Farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are often protected from flooding.

In Woodbridge Township, the following Prime Farmland Soils are found:

Prime Farmland Soil Description	Area in acres
Boonton loam, 3 to 8 % slopes	1708
Boonton loam, 8 to 15 % slopes	131
Bucks silt loam, 2 to 6 % slopes	1584
Haledon silt loam, 0 to 3 % slopes	721
Haledon silt loam, 3 to 8 % slopes	352
Keyport loam, 0 to 2 % slopes	14
Keyport loam, 2 to 5 % slopes	46
Keyport sandy loam, 0 to 2 % slopes	4
Total Acreage of Prime Farmland Soils	4560
Note: The acres have been rounded off to the nearest whole number.	

Unique Farmland Soils

Unique Farmland Soils are soils other than prime farmland soils that are used for the production of specific high value food and fiber crops. They have the special combination of soil quality, location, growing season and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit and vegetables.

Specific characteristics of unique farmland soils are:

- Is used for a specific high-value food or fiber crop;
- Has a moisture supply that is adequate for the specific crop; the supply is from stored moisture, precipitation or a developed-irrigation system;
- Combines favorable factors of soil quality, growing season, temperature, humidity, air drainage, elevation, aspect or other conditions, such a nearness to market, that favor the growth of a specific food or fiber crop.

In Woodbridge Township, the following unique farmland soils for special crops are found:

Unique Farmland Soil Description	Area in acres
Atsion sand, 0 to 2 % slopes	165
Manahawkin muck, 0 to 2 % slopes, frequently flooded	57
Pawcatuck-Transquaking complex, 0 to 2 % slopes, very frequently flooded	589
Total Acreage of Soils of Unique Farmland Soils	**811**

Note: The acres have been rounded off to the nearest whole number.

Soils of Statewide Importance

Soils of Statewide Importance include those soils in land capability Class II and III that do not meet the criteria as Prime Farmland Soils. Class 2 soils have moderate limitations that reduce the choice of plants or require moderate conservation practices and Class 3 soils have severe limitations that reduce the choice of plants or require special conservation practices, or both. These soils are nearly Prime Farmland Soils and economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce yields as high as Prime Farmland if conditions are favorable.

Criteria for defining and delineating this land are to be determined by the appropriate State agency or agencies. In some States, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by State law.

In Woodbridge Township, the following soils of statewide importance are found:

Statewide Importance Soil Description	Area in acres
Reaville silt loam, 2 to 6 % slopes	11
Rowland silt loam, 0 to 2 % slopes, frequently flooded	218
Total Acreage of Soils of Statewide Importance	**229**

Note: The acres have been rounded off to the nearest whole number.

Soils of Local Importance

Soils of Local Importance include those soils that are not prime or statewide importance and are used for the production of high value food, fiber or horticultural crops. In some local areas certain farmlands are not identified as having national or statewide importance. Where appropriate, these lands are identified by the local agency or agencies concerned. These may also include tracts of land that have been designated for agriculture by local ordinance.

Local Importance Soil Description	Area in acres
Rowland silt loam, 0 to 2 % slopes, frequently flooded	218
Total Acreage of Soils of Local Importance	**218**

Note: The acres have been rounded off to the nearest whole number.

Woodbridge Township Soils

Woodbridge Township has 20 different soil series, broken down into 31 distinct soil sub-series. The land is generally level, however, slopes in certain areas vary greatly and can be anywhere between 0 to 25%. For the purpose of this section, the percentages of total land are based on the area of Woodbridge Township, excluding the area occupied by water bodies, as 14,831 acres.

The most prevalent soils are Urban Land, Haledon–Urban land complex and Boonton–Urban land complex. It is interesting to note that all of the top three soil series within the Township contain some percentage of Urban Land. This is due to the highly built-up and developed nature of the township. As noted in the Land Use section previously, Urban Land is also the most common land use within the Township.

Urban Land is comprised of soil units where more than 80% of the surface is covered by buildings – industrial plants, shopping and business centers, residential developments, transportation structures, and other structures. Within Woodbridge Township, Urban Land occupies 2,450 acres or 17% of the total land surface. Most of these areas are nearly level, but fill material could have been used to build up wet soils or level the small areas of steep slopes. This soil is not suitable for any type of cultivation except for landscaping around the buildings.

The next most prevalent soil series is the Haledon–Urban Land complex. It consists of nearly level to generally sloping, somewhat poorly drained soils and areas that are used for urban development. The areas are irregular in shape and range between 20 to 100 acres. About 40% of this unit is Haledon soils with 40% Urban Land. The remaining is made up of small areas of Boonton and Haledon Variant soils that make us 15% of this unit, and red shale bedrock makes up the last 5% of the unit. The soils and urbanized areas are in such an intricate pattern that is not possible to map them separately. Within Woodbridge Township, this complex covers 2,353 acres or about 16% of the total land surface, with the slopes ranging between 0 and 3%.

The third most common soil series in the Township is the Boonton–Urban Land complex. It consists of nearly level to gently sloping, well drained and moderately well drained soils and areas that are used for urban development. The areas are irregular in shape and range between 5 to 300 acres, with gently rolling slopes. About 40% of this unit is Boonton soils with 40% Urban Land. The remaining 20% is made up of small areas of Haledon silt loam and another soil with a surface layer of silt loam; small areas of Haledon Variant and Klinesville soils; areas of soil that have been covered by more than 20 inches of fill material, commonly from adjacent Boonton soils that have been cut or graded; and areas where most or all of the original soil has been removed. Within Woodbridge Township, this unit covers 1,991 acres or 13% of the total land surface, with slopes ranging between 0 and 8%.

Woodbridge Soil Series	Area in acres	% of total land area
Urban Land	2450	17
Haledon-Urban	2353	16
Boonton-Urban	1991	13
Boonton Loam	1839	12
Bucks	1584	11
Haledon	1073	7
Psamments	774	5
Pits - Clay, Sand and Gravel	697	5
Pawcatuk	589	4
Boonton-Urban-Haledon	495	3
Hasbrouk	370	2
Rowland	218	1
Atison	165	1
Keyport	74	1
Manahawkin	57	<1
Klinesville	30	<1
Parsippany	22	<1
Transquacking	22	<1
Udorthents	19	<1
Reaville	11	<1
Total Acres	**14831**	**100**

Note: The acres and percentages have been rounded off to the nearest whole number.

Soil Sub-Series and Constraints to Urban Development:

Symbol	Soil Description	Constraints to Urban Development
AtsA	Atison sand, 0 to 2% slopes	The seasonal high water table limits this soil for most types of community development due to risk of frequent flooding.
BogB	Boonton loam, 3 to 8% slopes	The perched water table and the permeability in the lower part of the subsoil are limitations for community development, particularly as a site for dwellings with basements, septic disposal systems, and streets.
BogC	Boonton loam, 8 to 15% slopes	The perched water table and the permeability in the lower part of the subsoil are limitations for community development, particularly as a site for dwellings with basements, septic disposal systems, and streets.
BouB	Boonton-Urban land complex, 0 to 8% slopes	The soils in these areas are suitable for lawns, shade trees, shrubs, vines and vegetable gardens. The slow permeability and slow run-off are limitations for community development.
BovB	Boonton-Urban land-Haledon complex, 0 to 8% slopes	The soils in these areas are suitable for lawns, shade trees, shrubs, vines and vegetable gardens. The slow permeability, slow run-off, along with a seasonal high water table, a typical characteristic of the Haledon-complex, are limitations for community development,
BucB	Bucks silt loam, 2 to 6% slopes	The soil is generally used for field crops, vegetables, apples, and nursery crops. It offers moderate limitations for dwellings without basements, septic-tank absorption fields, sanitary landfills, streets and athletic fields, mainly due to rippable bedrock, potential frost action, and gentle slopes.
HanA	Haledon silt loam, 0 to 3% slopes	Limitations for community development are the slow permeability in the lower part of subsoil, and seasonal high water table. They limit its use as a site for septic systems, dwellings with basements, and streets.
HanB	Haledon silt loam, 3 to 8% slopes	Limitations for community development are the slow permeability in the lower part of subsoil, and seasonal high water table. They limit its use as a site for septic systems, dwellings with basements, and streets.

Symbol	Soil Description	Constraints to Urban Development
HasA	Haledon-Urban land complex, 0 to 3% slopes	Limitations for community development are the slow permeability in the lower part of subsoil, and seasonal high water table. They limit its use as a site for septic systems, dwellings with basements, and streets.
HatB	Haledon-Urban land-Hasbrouck complex, 0 to 8% slopes	Limitations for community development are the slow permeability in the lower part of subsoil, and seasonal high water table. They limit its use as a site for septic systems, dwellings with basements, and streets.
HctA	Hasbrouck silt loam, 0 to 3% slopes	Limitations for community development are the slow permeability in the lower part of subsoil, and seasonal high water table. They limit its use as a site for septic systems, dwellings with basements, and streets.
KemA	Keyport sandy loam, 0 to 2% slopes	Limitations for dwellings with basements, septic tank filter fields, and some recreation areas are the seasonal high water table, shrinking and swelling, slow percolation, and the high frost action potential.
KemB	Keyport sandy loam, 10 to 15% slopes	Limitations for dwellings with basements, septic tank filter fields, and some recreation areas are the seasonal high water table, shrinking and swelling, slow percolation, and the high frost action potential.
KeoA	Keyport loam, 0 to 2% slopes	The slow permeability, high frost-action potential, and seasonal wetness limit this soil for most urban uses.
KeoB	Keyport loam, 2 to 5% slopes	The main limitations of this soil for urban uses are the seasonal high water table (limits dwellings with basements), the slow permeability (limits on-site septic systems) and high frost-action potential (limits local roads/ streets).
KkoE	Klinesville channery loam, 18 to 35% slopes	Pervious and rippable bedrock and moderate slopes limit the soil as site for dwellings with basements, septic systems and local roads and streets.
KkoB	Klinesville channery loam, 2 to 6% slopes	Pervious and rippable bedrock and moderate slopes limit the soil as site for dwellings with basements, septic systems and local roads and streets.
MakAt	Manahawkin muck, 0 to 2% slopes, frequently flooded	The main limitations of this soil as sites for most urban uses are ponding, flooding, cutbanks caving and subsidence of the surface layer due to low strength.

Symbol	Soil Description	Constraints to Urban Development
PbpAt	Parsippany silt loam, 0 to 3% slopes	Seasonal high water table, low strength, and permeability limit the soil as a site for septic effluent disposal, dwellings with basements, lawns, landscaping, and local roads and streets.
PbpuAt	Parsippany, frequently flooded-Urban land complex, 0 to 3% slopes	Seasonal high water table, low strength, and permeability limit the soil as a site for septic effluent disposal, dwellings with basements, lawns, landscaping, and local roads and streets.
PdwAv	Pawcatuck-Transquaking complex, 0 to 2% slopes, very frequently flooded	This soil is generally found in tidal marshlands and is unsuitable for community development. It is poorly drained, has a slow run-off, and permeability can be moderate to rapid in the organic layers and very rapid in the underlying mineral sediments. Unless protected, this soil can be easily flooded.
PHM	Pits, clay	These are generally spoil that remains in a borrow clay pit after mining has occurred. The pits have either been smoothed or have mounds. Some of these areas are use for land fill, building sites or recreation areas. For most uses onsite investigation and evaluation are needed.
PHG	Pits, sand and gravel	These are areas that have been excavated for sand and gravel. Trees have re-grown in some pits and some abandoned pits are used as dumps. The properties and characteristics differ from place to place. For most uses onsite investigation and evaluation are needed.
PssA	Psamments, 0 to 3% slopes	These soils consist of well-drained soils such as sandy fill material placed in low, poorly drained areas. The properties and characteristics differ from place to place. For most uses onsite investigation and evaluation are needed.

Symbol	Soil Description	Constraints to Urban Development
PstA	Psamments, sulfidic substratum, 0 to 3% slopes	The characteristics of this soil are variable. The areas near the point of deposition are as much as 4 feet thick and have a large content of gravel and cobblestones, while the material farther from the point of deposition is thin as a few inches and ranges in texture from sand to silt and clay. Due to variability of characteristics, on-site investigation is needed to determine the suitability of this soil for any use.
PsuB	Psamments, waste substratum, 0 to 8% slopes	These are reclaimed areas or areas used as sanitary landfills where 24 to 48 inches of sandy fill material has been placed over refuse. It is subject to subsidence and uneven settling, and decomposition of the refuse causes liquid and gas formation. For most uses onsite investigation and evaluation are needed.
RehB	Reaville silt loam, 2 to 6% slopes	The seasonal high water table and the depth to bedrock are the main limitations of the soil as a site for onsite septic systems, dwellings with basements, and local roads and streets.
RorAt	Rowland silt loam, 0 to 2% slopes, frequently flooded	The seasonal high water table and flooding limit the soil for many urban uses.
TrkAv	Transquaking mucky peat, 0 to 1% slopes, very frequently flooded	This soil is generally found in tidal marshes. Seasonal high water table and flooding limit the soil for many urban uses.
UdbB	Udorthents, bedrock substratum, 0 to 8% slopes	This soil includes areas occupied by parking lots, landfills, or recreation areas. Due to the variability of characteristics, on-site investigation is necessary to determine the suitability of this soil for any use.
UR	Urban land	Nearly 80% of the surface is covered by buildings and other impervious surfaces. Onsite investigation is needed to determine if the land is limited by steep slopes, permeability or landfill materials.

Geology

The geology of a place is important for several reasons; mainly that the physical and chemical properties of the land determine the quantity and quality of ground water the aquifers yield. They also control how ground water recharges and move through the aquifers, how contaminants seep into and move through soil and ground water, and where natural hazards like radon, sinkholes and seismic instability may occur. Finally, these properties establish where geologic resources such as sand, gravel, peat, clay, quarry rock and mineral ores are located. Geologic properties also determine the suitability of an area for the use of septic systems, the management of stormwater and surface runoff, and the stability of foundations for buildings, bridges, tunnels, and other structures. [1]

Woodbridge Township is located within the Piedmont and Coastal Plain physiographic provinces of New Jersey. The Fall Line, which divides these two regions, runs in a northeast/southwest direction approximately dividing the Township into two equal halves; on each side of this line is found a different and distinctive underlying geology.

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1 *Stanford, S.D. 1998, NJGS Information Circular: "Geologic Mapping in New Jersey". New Jersey Geological Survey, Trenton, NJ*

Piedmont

The Piedmont Province is an area of about 1,600 square miles and makes up approximately one-fifth of the state. It occupies all of Essex, Hudson, and Union Counties, most of Bergen Hunterdon and Somerset, and parts of Mercer, Middlesex, Morris and Passaic. It is mainly underlain by slightly folded and faulted sedimentary rocks of Triassic and Jurassic age (240 to 140 million years old) and igneous rocks of Jurassic age. Highly folded and faulted lower Paleozoic sedimentary rocks along the northwestern margin in the Clinton and the Peapack areas, as well as at several smaller areas are included as part of the Piedmont. In the Trenton and Jersey City areas, along the southern margin of the province, there are small bands of highly metamorphosed rocks ranging in age from Middle Proterozoic to Cambrian that are also included.

Coastal Plain

The Coastal Plain province is 4,677 square miles and covers Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Monmouth, Ocean and Salem Counties and parts of Mercer and Middlesex. It widens towards the southeast and consists of unconsolidated gravel, sand, silt and clay and ranges in age from the upper Lower Cretaceous to the Miocene (90 to 10 million years old). From the Piedmont boundary, the plain is shaped like trough, extending from the Raritan Bay to Trenton. Near Monmouth Junction, where the trough floor forms a saddle it reaches an elevation of about 80 feet. East of this depression is the drainage divide between the Delaware River and the Atlantic Ocean. The streams that flow northwest to the Delaware have narrow valleys, are shorter and have a steeper gradient than the streams that flow southeast. [2]

2 *Dalton, Richard. 2003. NJGS Information Circular: "Physiographic Provinces of New Jersey". New Jersey Geological Survey, Trenton, NJ*

The geology of a place can be classified into two layers: the surficial geology, which extends from a few to a few hundred feet in depth; and bedrock geology, which is the underlying rock extending deeper into the Earth's crust. The geology map shows the various types of surficial materials and bedrock formations in Woodbridge Township.

Surficial Geology

Surficial materials are the unconsolidated sediments that overlie bedrock or Coastal Plain formations, and that are the parent material for agronomic soils (capable of supporting farming). In Woodbridge Township, they include alluvium, moraines, glaciolacustrine, and estuarine deposits. These materials range from coarse gravel to clay and peat. They affect the movement of ground water from the surface into underlying bedrock and Coastal Plain aquifers, and are aquifers themselves in places. They also provide foundation support for structures, and supply sand and gravel for construction projects.

The surficial materials in Woodbridge Township consist of:

- Alluvium
- Ice Contact Deposits
- Estuarine Deposits
- Late Wisconsinan Moraines
- Swamp and Marsh Deposits
- Glaciolacustrine Sand and Gravel
- Glaciolacustrine Lake Bottom Deposits
- Lower Terrace Deposits
- Rahway Hill
- Weathered Coastal Plain Formation
- Scattered Bedrock Outcrop

Geology Name	Area (acres)	Percent	Lithological Description	Depth of Layer
Alluvium	211	1	Silt, sand, gravel, clay, organic matter	As much as 20 ft thick
Ice Contact Deposits	74	<1	Sand, gravel, till	As much as 50 ft thick
Estuarine Deposits	2455	16	Organic clay and silt, peat, Minor sand and gravel	As much as 100 ft thick
Late Wisconsinan Moraines	2769	18	Till as above forming ridge-and-Swale moraine topography	As much as 130 ft thick
Swamp and Marsh Deposits	61	<1	Peat and organic silt, sand, and clay	As much as 10 ft thick
Glaciolacustrine Sand & Gravel	263	2	Sand and gravel	As much as 30 ft thick
Glaciolacustrine Lake Bottom Deposits	31	<1	Silt and Clay	As much as 20 ft thick
Lower Terrace Deposits	104	1	Sand, gravel, minor silt	As much as 40 ft thick
Rahway Till	8564	55	Silty sand to sandy silt with pebbles and cobbles and a few boulders	As much as 60 ft thick
Weathered Coastal Plain Formation	1135	7	Outcrop areas of sand, silt, and clay coastal plain formations. May be overlain by thin, patchy sand, gravel, and silt colluvium.	
Scattered bedrock outcrop4<1	Surfacial units generally absent	**Total**	**15671**	**100**
Note: Area and Percent Area have been rounded to the nearest whole number				

Bedrock Geology

Bedrock formations include sedimentary rocks formed by compaction and cementation of sediments from ancient river, lake and marine deposits; igneous rocks that formed when molten rock cooled and hardened; and lastly, metamorphic rocks formed by intense heating and compressing of sedimentary, igneous and even other metamorphic rocks. Folding and faulting then deformed the rocks. The bedrock formations, which range in age from 1 billion to 200 million years old, extend to great depths in the Earth's crust.[3]

The underlying rocks of the Piedmont are of late-Triassic to early-Jurassic Age. These rocks include the Brunswick, Lockatong and Stockton Formations and the Diabase (Traprock) intrusions that resulted from periods of volcanic activity. The geologic strata underlying the Coastal Plain are of late Cretaceous origin and consist of the Raritan and Magothy Formations. The Raritan and Magothy Formations are made of unconsolidated sand, salt and clay, and were deposited 135-65 million years ago. The Raritan and the overlying Magothy have often been regarded as one formation. In some areas the two formations are indistinguishable from each other, or the Magothy simply thins into the Raritan Formation.

The bedrock geology of Woodbridge Township consists of the Lockatong and Passaic Formations in the Piedmont province and the Raritan Formation in the Coastal Plain province.

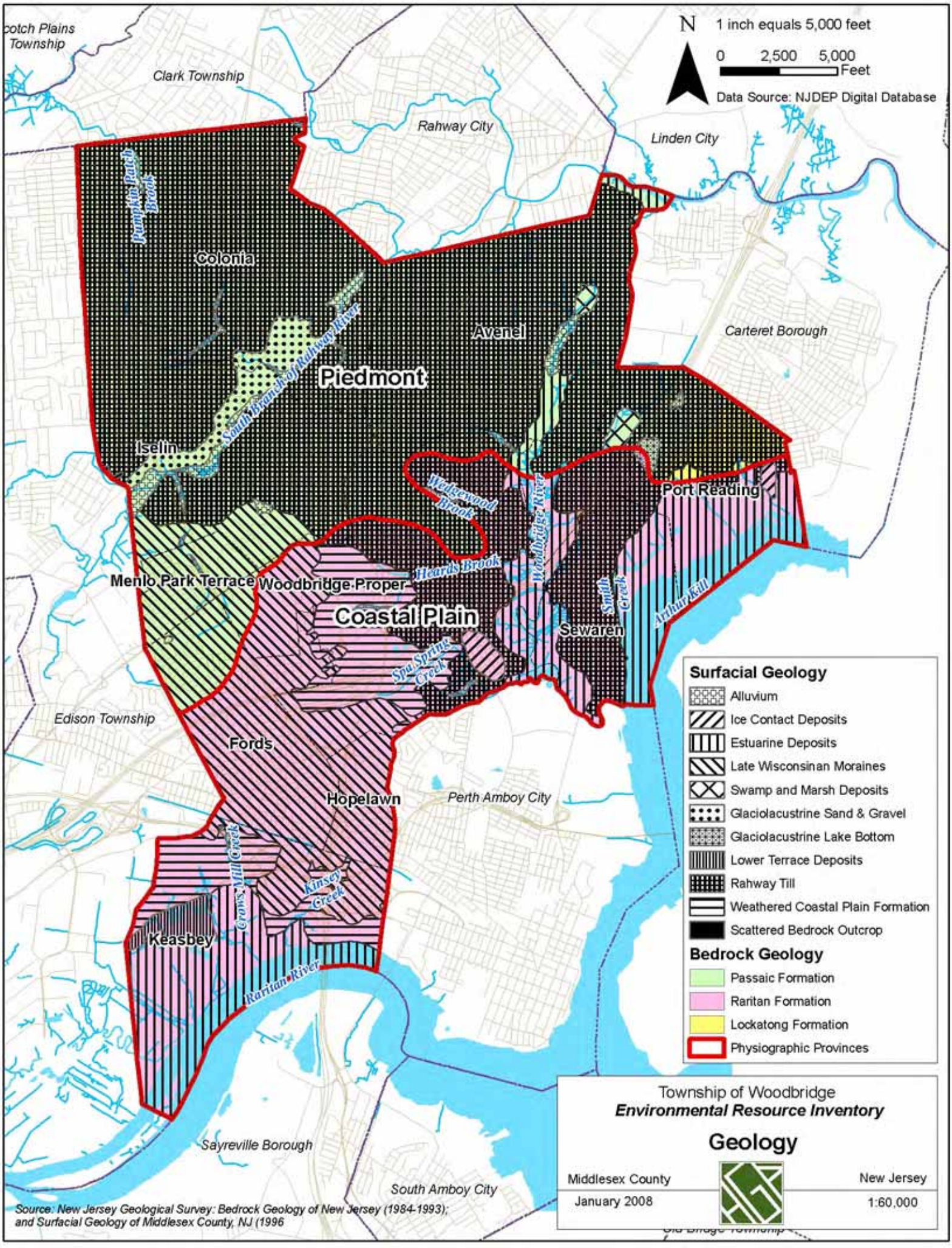
Passaic Formation: The formation consists of inter-bedded sequence of reddish brown, and less often purple or maroon, sandstone, siltstone, shaly siltstone, silty mudstone and/or mudstone. Shaly siltstone, silty mudstone and mudstone are fine-grained, very thin- to thin-bedded, planar- to ripple cross-laminated, locally fissile, bioturbated, and contain evaporate minerals.

Raritan Formation: The Raritan Formation is composed of alternating and irregular beds of clay, sand and gravel, representing a wide range of depositional environments from past geologic times. The total thickness of the Raritan in the outcrop is 150 to 400 feet.

3 *Stanford, S.D. 1998, NJGS Information Circular: "Geologic Mapping in New Jersey". New Jersey Geological Survey, Trenton, NJ*

Lockatong Formation: The Lockatong Formation consists of dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone. The texture is fine grained and it is highly resistant to erosion. The thickness ranges from 1,500 to 3,750 feet.

Geology Name	Area in acres	Percent Area	Lithological Description
Passaic Formation	8283	53	Siltstone and shale
Raritan Formation	7153	46	Clayey silt overlying quartz sand
Lockatong Formation	235	2	Dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
Total	15671	100	
Note: Area and Percent Area have been rounded to the nearest whole number			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Feet
Data Source: NJDEP Digital Database
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Clark Township
Rahway City
Linden City
Carteret Borough
Colonia
Avenel
Piedmont
Iselin
Port Reading
Menlo Park Terrace
Woodbridge Proper
Coastal Plain
Sewaren
Edison Township
Fords
Hopelawn
Perth Amboy City
Keasbey
Sayreville Borough
South Amboy City
Old Bridge Township
Pumpkin Patch Brook
South Branch of Rahway River
Wedgewood Brook
Heards Brook
Woodbridge River
Smith Creek
Arthur Kill
Spa Spring Creek
Crows Mill Creek
Kinsey Creek
Raritan River
Surfacial Geology
Alluvium
Ice Contact Deposits
Estuarine Deposits
Late Wisconsinan Moraines
Swamp and Marsh Deposits
Glaciolacustrine Sand & Gravel
Glaciolacustrine Lake Bottom
Lower Terrace Deposits
Rahway Till
Weathered Coastal Plain Formation
Scattered Bedrock Outcrop
Bedrock Geology
Passaic Formation
Raritan Formation
Lockatong Formation
Physiographic Provinces
Township of Woodbridge
Environmental Resource Inventory
Geology
Middlesex County
New Jersey
January 2008
1:60,000
Source: New Jersey Geological Survey: Bedrock Geology of New Jersey (1984-1993); and Surfacial Geology of Middlesex County, NJ (1996

Wetlands

Wetlands, land which is either submerged or retains water at ground level for a portion of the year, includes marshes, swamps, and bogs. They cover approximately 7967 acres of land in the Township as identified in the Wetlands map.

Wetland areas provide natural flood control by storing excess water and releasing it to surface waters over time. Wetlands also serve as filtration systems, removing pollutants from the water table and storing them in biomass; and they also serve as ground water recharge areas. As the total wetland area decreases and their natural functions decrease over a period of years, the overall quality and quantity of the surface water flow within the watershed is altered. Often, expensive man-made utilities are required to make up for the loss of wetlands.

A community that incorporates growth while maintaining or improving wetlands and wetlands function can achieve lower flood peaks, fewer drought periods, more wildlife and wildlife habitat, and better surface water quality than comparable watersheds with fewer wetlands. Wetlands also provide recreational opportunities such as boating, hiking and bird watching.

The NJDEP Land Use Regulation Program manages wetlands permitting in the state, more information, such as that provided below, is available at the programs website: http://www.state.nj.us/dep/landuse/fww.html

Freshwater wetlands protection is governed by section 404 of the "Federal Water Pollution Control Act Amendments of 1972" as amended by the Clean Water Act of 1977". The Freshwater Wetlands Protection Act requires NJDEP to regulate virtually all activities proposed in the wetland, including cutting of vegetation, dredging, excavation or removal of soil, drainage or disturbance of the water level, filling or discharge of any materials, driving of pilings, and placing of obstructions. If you want to pursue activities in an area within 150 feet of a wetland, you may be in a transition area (sometimes called a buffer) and you may need a DEP transition area waiver. A transition area is a strip of land bordering the wetlands. The width of the transition area may vary from 150 feet down to nothing, depending on the value of the particular wetland. For example, a wetland containing endangered species habitat would require a 150-foot wide transition area, whereas a small wetland in a ditch might not require any transition area at all. Most freshwater wetlands require a 50-foot transition area.

NJDEP has developed a system for the classification of freshwater wetlands based upon criteria, which distinguish among wetlands of exceptional resource value, intermediate resource value, and ordinary resource value.

Freshwater wetlands shall be divided into three classifications based on resource value.

The Department shall consider the resource value classification of a wetland in, among other things, evaluating alternatives to the proposed regulated activity, in determining the size of the transition area, and in determining the amount and/or type of mitigation required.

A freshwater wetland of exceptional resource value, or exceptional\resource value wetland, is a freshwater wetland which:

1. Discharges into FW1 or FW2 trout production waters or their tributaries;
2. Is a present habitat for threatened or endangered species; or
3. Is a documented habitat for threatened or endangered species, and which remains suitable for breeding, resting, or feeding by these species during the normal period these species would use the habitat.

The Department identifies present or documented habitat for threatened or endangered species for purposes of determining exceptional resource value using the Landscape Project method, which focuses on habitat areas required to support local populations of threatened or endangered wildlife species.

A freshwater wetland of ordinary resource value, or an ordinary resource value wetland, is a freshwater wetland which does not exhibit any of the characteristics in exceptional resource values, and which is:

1. An isolated wetland, as defined at N.J.A.C. 7:7A-1.4, which:
a. Is smaller than 5,000 square feet; and
b. Has the uses listed below covering more than 50 percent of the area within 50 feet of the wetland boundary. In calculating the area covered by a use, the Department will only consider a use that was legally existing in that location prior to July 1, 1988, or was permitted under this chapter since that date:
    i. Lawns;
    ii. Maintained landscaping;
    iii. Impervious surfaces;
    iv. Active railroad rights-of-way; and
    v. Graveled or stoned parking/ storage areas and roads;
2. A drainage ditch;
3. A swale; or
4. A detention facility created by humans in an area that was upland at the time the facility was created.

A freshwater wetland of intermediate resource value, or intermediate resource value wetland, is any freshwater wetland not defined as exceptional or ordinary.

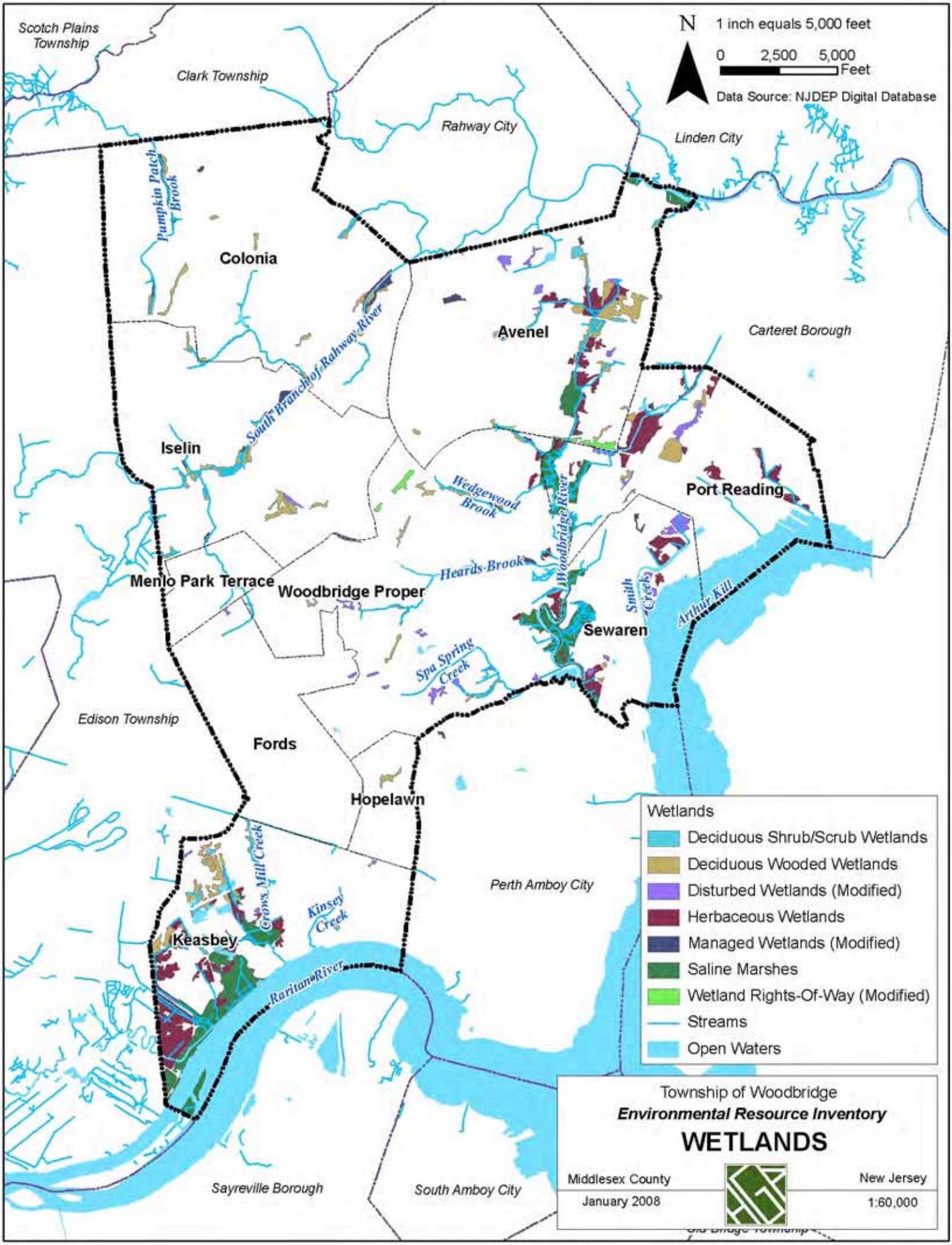
There are many small activities that can be pursued in a transition area under general permits, like the general permits discussed above, for activities in freshwater wetlands. In addition, in some cases the transition area's shape may be altered to allow an activity, without diminishing its total size. This is called transition area averaging.

The 100-year floodplain areas almost overlap the wetland boundaries. The wetlands absorb a significant amount of runoff into the ground during overflow and flooding events. So it is important to protect wetlands to prevent flooding and to provide protection of adjacent developed areas. Another important role of wetlands is to allow recharge of ground water aquifers. The wetlands are composed of hydric soils (soils that are saturated with water) that can be of two types - discharge hydric soils, which release ground water to the land surface, or recharge hydric soils, which allow water to percolate to ground water/aquifer. Sometimes the discharge hydric soils may also function as season dependent recharge systems.

At least 8% of land in Woodbridge Township is occupied by wetlands. Within Woodbridge Township, wetlands are located mainly along water bodies with a few isolated wetlands in the central part of the Township. Herbaceous Wetlands (32%), Saline Marshes (30%), and Deciduous Wooded Wetlands (24%) are the major categories of wetlands in the Township, and occupy around 86% of the total wetland area. Other types of wetlands in the Township include Deciduous Scrub/Shrub Wetlands, Disturbed Wetlands, Managed Wetlands, and Wetlands Rights-of-Way.

The following table shows a detailed breakdown of the types of wetlands within the Township.

Type of Wetlands	Area (acres)	Percent of total wetlands
Herbaceous Wetlands	386	32
Saline Marshes	365	30
Deciduous Wooded Wetlands	284	24
Disturbed Wetlands (Modified)	83	7
Managed Wetlands (Modified)	46	4
Deciduous Scrub/Shrub Wetlands	21	2
Wetland Rights-of-Way (Modified)	20	2
Total Wetlands	**1205**	**100**
Note: Areas and percentages rounded to the nearest whole number		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Feet
Data Source: NJDEP Digital Database
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Clark Township
Rahway City
Linden City
Pumpkin Patch Brook
Colonia
South Branch of Rahway River
Avenel
Carteret Borough
Iselin
Wedgewood Brook
Woodbridge River
Port Reading
Heards Brook
Menlo Park Terrace
Woodbridge Proper
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
Wetlands
Deciduous Shrub/Scrub Wetlands
Deciduous Wooded Wetlands
Disturbed Wetlands (Modified)
Herbaceous Wetlands
Managed Wetlands (Modified)
Saline Marshes
Wetland Rights-Of-Way (Modified)
Streams
Open Waters
Township of Woodbridge
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WETLANDS
Middlesex County
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Surface Water and Surface Water Quality

The surface water system in Woodbridge Township is characterized by streams, ponds, lakes, and wetlands. These resources provide for:

- Surface water potable supply
- Aquifer recharge for groundwater potable supply
- Wildlife habitat
- Recreation areas
- Scenic value and beauty
- Water supplies for agriculture, commerce, and industry

Surface water quality is determined by seasonal weather conditions and precipitation patterns, the depth, width, and flow rates of streams, soil characteristics, types of vegetation, and impacts of development.

The major surface water courses and impoundments within Woodbridge Township, along with the water quality category, are listed in the below:

Stream Name	Surface Water Class	Anti-degradation Status	Trout Water Status	Description / Status	Designated Uses
Arthur Kill	SE3	C2 or Category two waters	NT or Non-Trout producing	Saline Estuarine Waters	Maintenance, migration and propagation of fish populations, migration of diadromous fish, maintenance of wildlife, and secondary contact recreation
Woodbridge River	FW2-NT/SE3	C2 or Category two waters	NT or Non-Trout producing	Freshwater/ Estuarine Waters (not trout producing)	Maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment
Woodbridge Creek	FW2-NT/SE3	C2 or Category two waters	NT or Non-Trout producing	Freshwater/ Estuarine Waters (not trout producing)	Maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment
Smith Creek	FW2-NT/SE3	C2 or Category two waters	NT or Non-Trout producing	Freshwater/ Estuarine Waters (not trout producing)	Maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment

Stream Name	Surface Water Class	Anti-degradation Status	Trout Water Status	Description / Status	Designated Uses
Turtle Creek	FW2-NT/SE3	C2 or Category two waters	NT or Non-Trout producing	Freshwater/ Estuarine Waters (not trout producing)	Maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.
Heards Brook	FW2-NT/SE3	C2 or Category two waters	NT or Non-Trout producing	Freshwater/ Estuarine Waters (not trout producing)	Maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.
Spa Spring Creek	FW2-NT/SE3	C2 or Category two waters	NT or Non-Trout producing	Freshwater/ Estuarine Waters (not trout producing)	Maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.
Rahway River	FW2-NT	C2 or Category two waters	NT or Non-Trout producing	Freshwater (not trout producing)	
Pumpkin Patch Brook	FW2-NT	C2 or Category two waters	NT or Non-Trout producing	Freshwater (not trout producing)	

Stream Name	Surface Water Class	Anti-degradation Status	Trout Water Status	Description / Status	Designated Uses
Raritan River	SE1	C2 or Category two waters	NT or Non-Trout producing	Saline Estuarine Waters	Maintenance, migration and propagation of the natural and established biota, shellfish harvesting in accordance with state regulations, and primary (such as wading, swimming, diving, surfing and water skiing) and secondary contact recreation. Shell-fishing is prohibited in the Raritan River due to difficulties monitoring the many discharges from sewage outfalls and various sources of pollution.
Crows Mill Creek	SE1	C2 or Category two waters	NT or Non-Trout producing	Saline Estuarine Waters	Shellfish harvesting in accordance with state regulations, maintenance, migration and propagation of the natural and established biota, and primary and secondary contact recreation.

A detailed description of the major streams, their location and the C-1 status is given below:

Arthur Kill

Arthur Kill is a 10-mile long channel which borders the Township to the east, and flows between Newark Bay in the north and Raritan Bay in the south. Also known as Staten Island Sound, the channel separates Staten Island, NY from New Jersey. According to NJDEP Surface Water Quality Standards (NJAC 7:9B, et. seq.), the Arthur Kill is classified as SE3 or saline estuarine waters. The designated uses of SE3 waters are maintenance, migration and propagation of fish populations, migration of diadromous fish, maintenance of wildlife, and secondary contact recreation. Secondary contact recreation is recreational activities where the probability of water ingestion is minimal and includes, but is not limited to, boating and fishing. However, according to the NJDEP Bureau of Marine Water Classification, shell-fishing is prohibited in the Arthur Kill.

Woodbridge River

The Woodbridge River is approximately 5.2 miles long. The width of the river varies from a small stream at the headwaters to a tidal river 100' wide and 15' deep. The major tributaries add eight miles to the river system. They are Woodbridge Creek, Heards Brook, Wedgewood Brook, Turtle Creek, and Spa Spring Creek. The river is a brackish tidal creek that is a tributary to the Arthur Kill into which it drains. However, the headwaters are fresh water and are located north of Morrisey Avenue. The pond in this swampy region accepts storm water runoff from a highly industrialized area. The last mile of the river is the boundary between Woodbridge and Perth Amboy after which it empties into the Arthur Kill.

The Woodbridge River is designated as FW2-NT/SE3 within the NJDEP Surface Water Quality Standards (NJAC 7:9B). The creek is classified as a freshwater/estuarine water body that is not trout producing. The designated uses for FW2-NT/ SE3 waters are the maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.

Woodbridge Creek

Woodbridge Creek is a tributary of the Woodbridge River and flows into it from the northeast part of the Township. It is designated as FW2-NT/SE3 within the NJDEP Surface Water Quality Standards (NJAC 7:9B). The creek is classified as a freshwater/estuarine water body that is not trout producing. The designated uses for FW2-NT/ SE3 waters are the maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.

Smith Creek

Smith Creek is located between Woodbridge River and the Arthur Kill in the eastern part of the Township in Sewaren neighborhood. It is located on the floodplain of the Arthur Kill and is classified as FW2-NT/SE3. This classification is applied to those fresh waters that are not designated as FW1 or pineland waters. "NT" or "Nontrout Waters" means fresh waters that have not been designated in N.J.A.C. 7:9B-1.15(b) through (h) as trout production or trout maintenance, but are suitable for a wide variety of other fish species. The SE3 classification indicates saline waters of estuaries. The designated uses for FW2-NT/ SE3 waters are the maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.

Turtle Creek

The Turtle Creek is located in the northeast corner of Avenel. This creek flows in a south-western direction and lies within the Woodbridge River subwatershed. Turtle Creek is designated as FW2-NT/SE3 within the NJDEP Surface Water Quality Standards (NJAC 7:9B). The creek is classified as a freshwater/estuarine water body that is not trout producing. The designated uses for FW2-NT/ SE3 waters are the maintenance, migration and propagation of the natural and established biota, secondary contact recreation, industrial and agricultural water supply, and public potable water supply after treatment.

Heards Brook

Heards Brook, located within the Woodbridge section of the Township, flows easterly and is a subwatershed of Woodbridge Creek. The brook is designated as FW2-NT/SE3, a freshwater/estuarine water body that is not trout producing. Heards Brook begins adjacent to the Garden State Parkway and discharges to the Woodbridge Creek, adjacent to the New Jersey Turnpike.

Spa Spring Creek

Spa Spring Creek is located in the southwestern part of the township, near the northern edge of Perth Amboy. The creek is designated within the Surface Water Quality Standards as FW2-NT/SE3. This creek flows easterly from an area near the Turnpike and discharges to the Woodbridge Creek.

Rahway River

The South Branch of the Rahway River traverses the municipality in a northerly direction, through the neighborhoods of Colonia and Iselin. The Rahway River is designated as FW2-NT within the NJDEP Surface Water Quality Standards. FW2-NT is the general surface water classification applied to fresh waters that are not designated as FW1 or Pinelands Waters and for fresh waters that have not been designated as trout production or maintenance.

Pumpkin Patch Brook

Pumpkin Patch Brook is located in the Colonia section of Woodbridge Township which flows northerly towards the Township of Clark. The Pumpkin Patch Brook discharges to the Robinsons Branch of the Rahway River. It is designated as FW2-NT.

Raritan River

The Raritan River borders Keasbey, or the southern section of Woodbridge, and flows in a easterly direction. The Raritan River is a subwatershed of the Raritan Bay. The Raritan River is designated in this area as SE1 within the NJDEP Surface Water Quality Standards. The designated uses for SE1 are shellfish harvesting in accordance with state regulations, maintenance, migration and propagation of the natural and established biota, and primary and secondary contact recreation. Primary contact recreation is recreational activity which involves significant ingestion risks and includes, but is not limited to, wading, swimming, diving, surfing and water skiing. However, according to the NJDEP Bureau of Marine Water Classification, Science and Research Division, shell-fishing is prohibited within the Raritan River. This prohibition is due to the difficulties of monitoring this area due to the many discharges from sewage outfalls and a large variety of point and non-point sources of pollution.

Crows Mill Creek

Crows Mill Creek is located in the Keasbey section of Woodbridge Township. The headwaters of the creek are located adjacent to King Georges Post Road and flows southerly, eventually discharging to the Raritan River. It is designated as SE1 within the surface water quality standards.

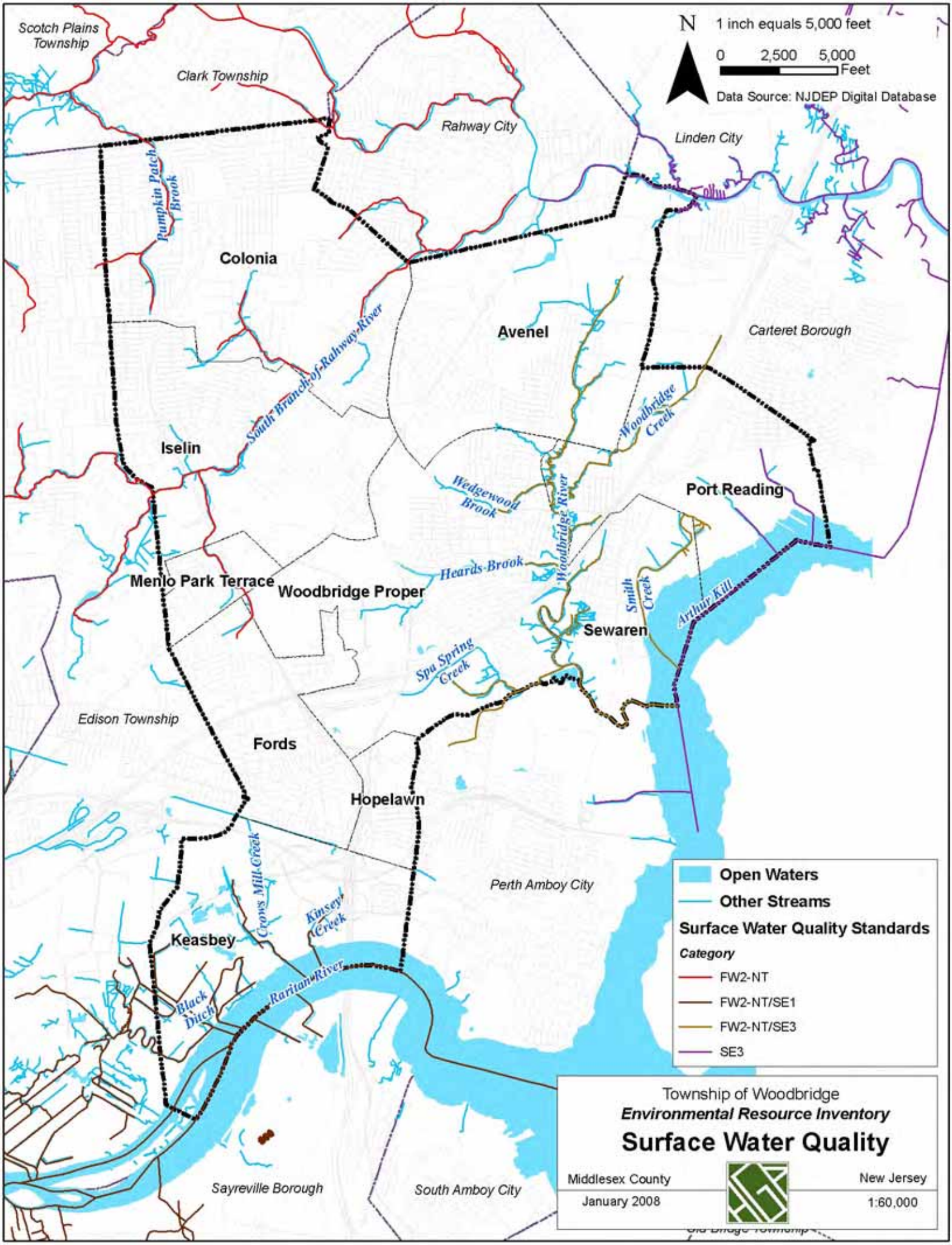
Other Surface Water

Surface water systems also comprise of any vernal ponds, swamps and/or freshwater wetlands that accompany the stream and water impoundments. There are many small ponds throughout Woodbridge, probably glacial in origin, since they have no inlets or outlets.

Human effects upon water quality include discharge from point sources and non-point sources and problems resulting from erosion and sedimentation. Point sources of discharge enter surface waters at specific and identifiable locations, such as industrial wastewater effluent discharge pipes, sewage treatment plant effluent pipes, stormwater runoff pipes, illegal dumping of liquids and materials from mobile sources directly into streams, sewage pumping station malfunctions resulting in bypasses, and malfunctioning septic systems flowing or discharging into streams. Their presence in Woodbridge Township is discussed in greater detail in "NJ Pollutant Discharge Elimination System" section.

Non-point sources enter in a general manner and are difficult to identify; they include stormwater runoff carrying chemicals from agricultural activities, oils and salts from roads and parking lots, and leachate from landfill operations.

Erosion is the wearing away of soil or rock by moving water, and sedimentation is the transportation of these eroded materials in suspension and the deposition of these clays, silts, and sands in other areas. Increased development generally reduces the amount of cover vegetation and increases the amount of impervious surface, therefore lessening the infiltration of precipitation and increasing stormwater runoff and potential erosion, sedimentation, and water quality contamination. Erosion and sedimentation also result in suspended sediment that contributes to a decline in water quality by blocking sunlight, reducing photosynthesis, decreasing plant growth, and destroying bottom dwelling species' habitat.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Wedgewood Brook
Woodbridge River
Port Reading
Menlo Park Terrace
Woodbridge Proper
Heards Brook
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Black Ditch
Sayreville Borough
South Amboy City
Open Waters
Other Streams
Surface Water Quality Standards
Category
FW2-NT
FW2-NT/SE1
FW2-NT/SE3
SE3
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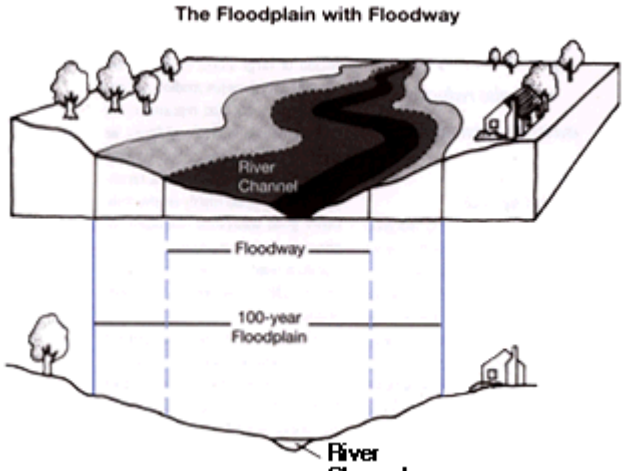
Flood Plains and Flood Hazard Areas

Floodplains are a vital part of any river or estuary ecosystem, acting as water filters and wildlife nurseries. They are important for the maintenance of water quality, providing fresh water to wetlands and backwaters while diluting salts and nutrients. Floodplains are major centers of biological life in the river and estuary ecosystem and improve the overall health of the habitat used by many species of birds, fish, and plants. They are important biologically, as they represent areas where many species reproduce and as such are important for breeding and regeneration cycles.



New Jersey regulates construction in the floodplain under the Flood Hazard Area Control Act, N.I.S.A. 58:16A-50 et seq., and its implementing rules at N.J.A.C. 7:13. The NJDEP Land Use Regulation Program manages Stream Encroachment Permitting in the state, more information, such as that provided below, is available at the programs website: http://www.state.nj.us/dep/landuse/se.html

The state regulates work in floodplains for two reasons. First, such regulation protects the person who is building from loss of life and property in case of a flood. Flooding causes an estimated $3 billion of damage in the United States every year. State regulations minimize the damage by ensuring that buildings are placed in safe areas, and are constructed to withstand high water.

The second reason to regulate building in flood plains is to protect other properties along the stream or pond from flood damage. When you build on a flood plain and the waters begin to rise, the buildings on your property displace water thus increasing the height of the rising waters and making the flooding worse everywhere along the banks. In addition, your buildings and pavement cover the natural ground surface that would have helped soak up the water. Therefore, the more buildings and pavement allowed, the higher the flood waters along that water body will rise, and the worse the flooding problems will get. Even if a building is permissible in the flood plain, regulations are necessary to ensure that it is strongly constructed so that it won't wash away in floodwaters, causing danger and damage downstream.

The flood plain is made up of two parts - the floodway and the flood fringe. The floodway is the inner area where floodwaters are deep and move fast. The floodway always includes the streambed or lakebed where the water normally flows, and usually extends to the top of the bank (if there is a defined bank) and sometimes beyond. The flood fringe is the outer area where floodwaters move more slowly, appearing more still, like a lake or pond.

A building in a floodway will block the water's flow, backing up water and causing flooding upstream to worsen. A building in a flood fringe will prevent floodwaters from spreading out, thus forcing floodwaters downstream faster and increasing downstream flooding.

100-year Floodplain

The 100-year floodplain boundary area has been established by the Federal Emergency Management Administration (FEMA) to denote floodwater impoundment areas. These areas are highly restrictive in order to avoid destruction of flood areas and the destruction of property that has been improperly located and therefore subject to flooding. The 100-year floodplain is known as the Special Flood Hazard Area (SFHA).

According to the FEMA definition, the SFHA is defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent-annual-chance flood is also referred to as the "base flood."" FIRMs are maps that show different floodplains with different zone designations. These are primarily for insurance rating purposes, but the zone differentiation can be very helpful for other floodplain management purposes. Note that the Special Flood Hazard Area (SFHA) includes only A and V Zones.

Flood Insurance Zone Designations

Following are the categories and zones designated by FEMA for the purposes of flood planning and insurance:

High Risk – Coastal Areas:

Zone V: Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards associated with storm-induced waves. Because detailed hydraulic analyses have not been performed, no BFEs (Base Flood Elevations) or flood depths are shown. Mandatory flood insurance purchase requirements apply.

Zones VE and V1-V30: Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. BFEs derived from detailed hydraulic analyses are shown within these zones. Mandatory flood insurance purchase requirements apply. (Zone VE is used on new and revised maps in place of Zones V1-V30.)

High Risk Areas:

Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no BFEs or flood depths are shown. Mandatory flood insurance purchase requirements apply.

Zones AE and A1-A30: Areas subject to inundation by the 1-percent-annual-chance flood event, determined by detailed methods. BFEs are shown within these zones. Mandatory flood insurance purchase requirements apply. (Zone AE is used on new and revised maps in place of Zones A1-A30.)

Zone AH: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. BFEs derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements apply.

Zone AO: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average flood depths derived from detailed hydraulic analyses are shown within this zone. Mandatory flood insurance purchase requirements apply.

Zone A99: Areas subject to inundation by the 1-percent-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction Federal flood protection system. These are areas of special flood hazard where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. Zone A99 may only be used when the flood protection system has reached specified statutory progress toward completion. No BFEs or flood depths are shown. Mandatory flood insurance purchase requirements apply.

Zone AR: Areas that result from the decertification of a previously accredited flood protection system that is determined to be in the process of being restored to provide base flood protection. Mandatory flood insurance purchase requirements apply.

Zones AR/AE, AR/AH, AR/AO, AR/A1-A30, AR/A: Dual flood zones that, because of the risk of flooding from other water sources that the flood protection system does not contain, will continue to be subject to flooding after the flood protection system is adequately restored. Mandatory flood insurance purchase requirements apply.

Moderate to Low Risk Areas:

Zones B, C, and X: Areas of moderate or minimal hazard from the principal source of flood in the area. However, buildings in these zones could be flooded by severe, concentrated rainfall coupled with inadequate local drainage systems. Local stormwater drainage systems are not normally considered in the community's FIS. The failure of a local drainage system creates areas of high flood risk within these rate zones. Flood insurance is available in participating communities but is not required by regulation in these zones. (Zone X is used on new and revised maps in place of Zones B and C.)

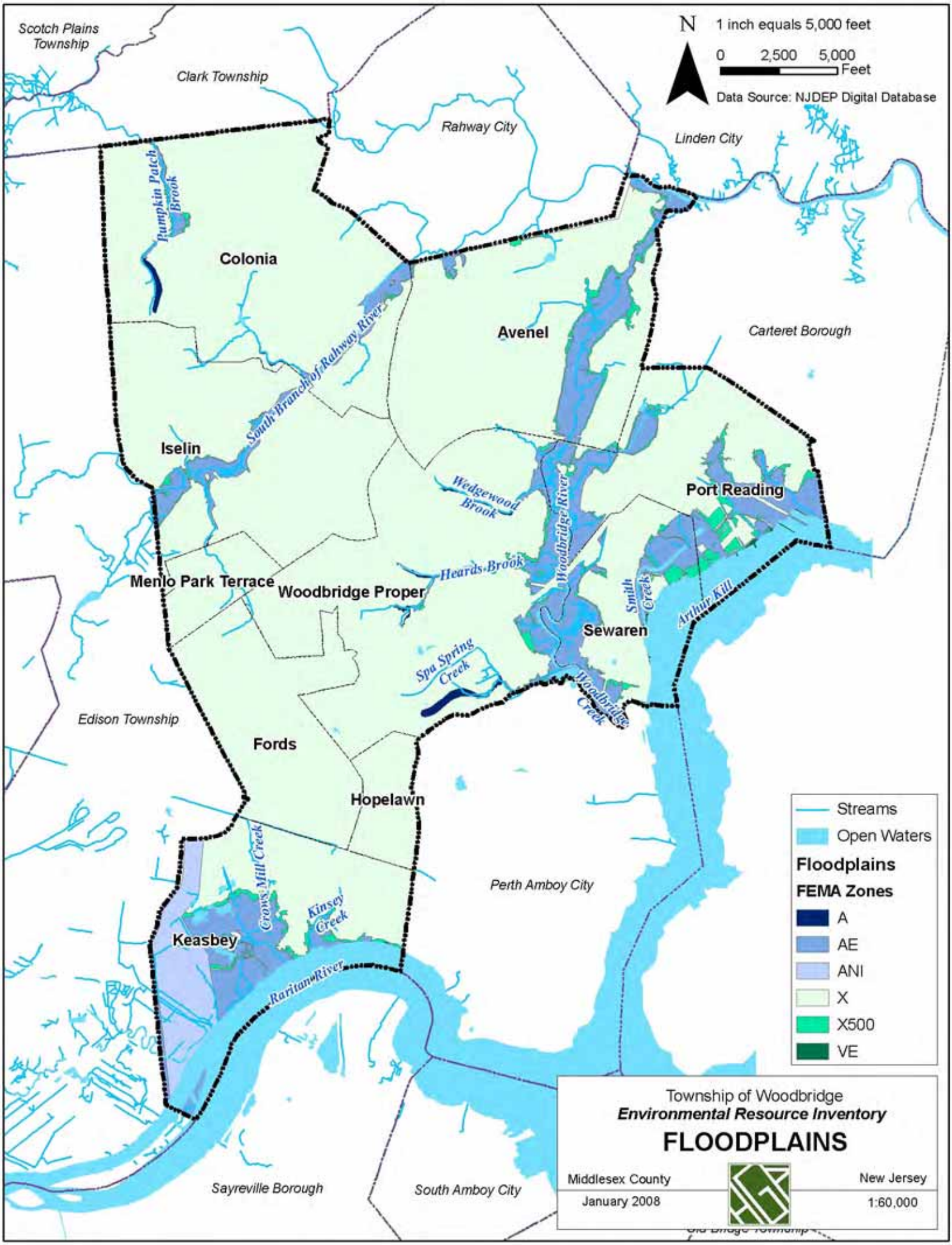
Undetermined Risk Areas:

Zone D: Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

Several areas of Woodbridge Township are located in what the Federal Emergency Management Agency (FEMA) considers to be a flood hazard area. The floodplain in the Township has similar locations as wetlands. Thus, the floodplain in combination with the wetlands provides additional open space areas within the Township.

Location and acreage of various FEMA-designated flood zones within Woodbridge Township:

Zone	Location	Area in acres	Percent of total
A	Floodway of Wedgewood Brook, and parts of floodways of Spa Spring Creek, Heards Brook, Pumpkin Patch Brook and south branch of Rahway River tributaries.	59	<1
AE	Along south branch of Rahway River, Pumpkin Patch Brook, large areas along Woodbridge River, in eastern part of the Township along Smith Creek and Arthur Kill, in southern part of Township along Raritan River, Crows Mill Creek and Kinsey Creek.	2036	13
ANI	Southwest corner of Township along Raritan River and Edison Township.	374	2
VE	Floodways of Raritan and Arthur Kill rivers.	408	3
X500	Along outer fringes of the AE Zone.	343	2
X	Remainder of the Township.	12393	79
	Totals	**15612**	**100**
Note: Areas and percentages rounded to the nearest whole number			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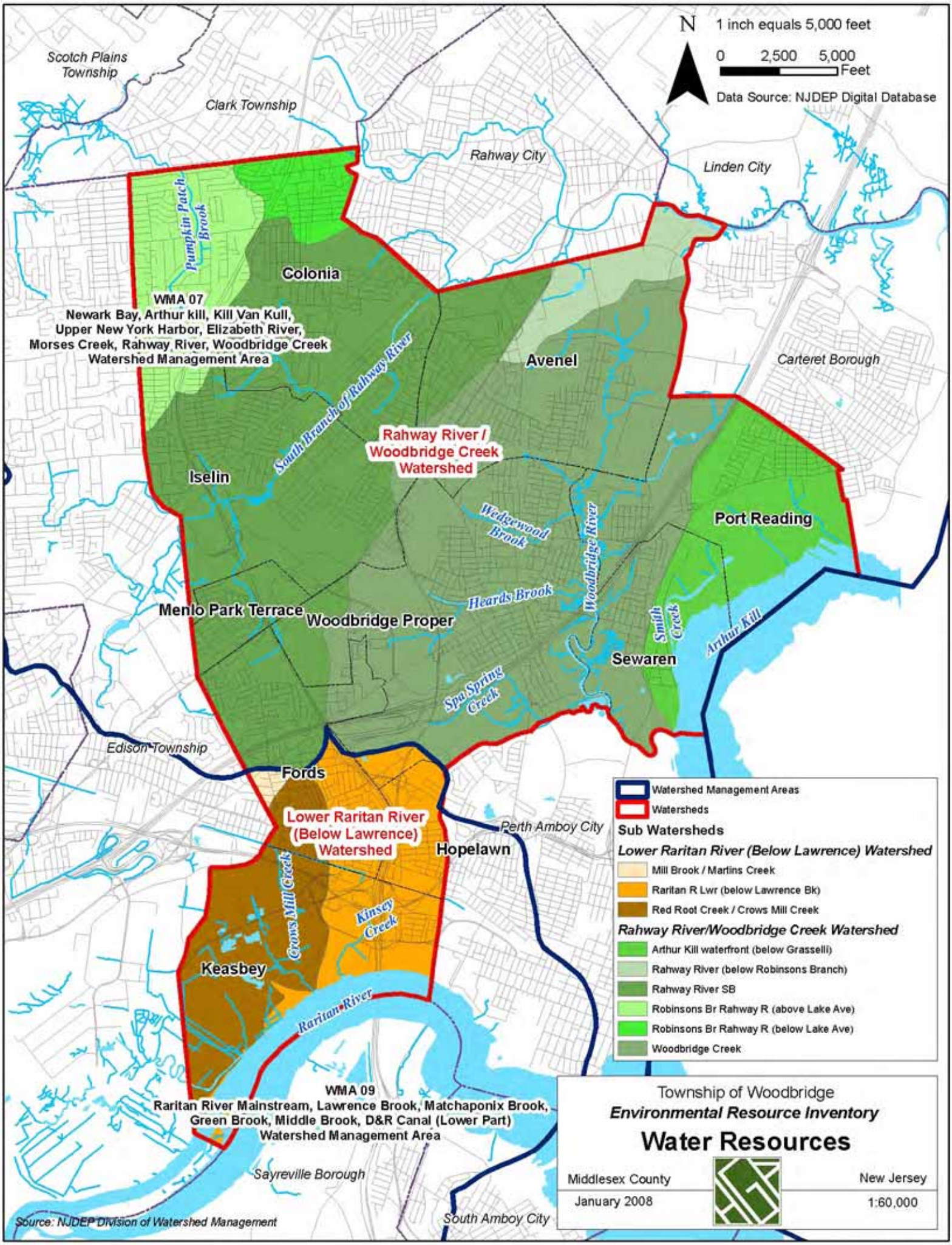
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Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Lower Raritan River (Below Lawrence) Watershed
Perth Amboy City
Hopelawn
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
WMA 09
Raritan River Mainstream, Lawrence Brook, Matchaponix Brook, Green Brook, Middle Brook, D&R Canal (Lower Part) Watershed Management Area
Sayreville Borough
South Amboy City
Source: NJDEP Division of Watershed Management
Watershed Management Areas
Watersheds
Sub Watersheds
Lower Raritan River (Below Lawrence) Watershed
Mill Brook / Martins Creek
Raritan R Lwr (below Lawrence Bk)
Red Root Creek / Crows Mill Creek
Rahway River/Woodbridge Creek Watershed
Arthur Kill waterfront (below Grasselli)
Rahway River (below Robinsons Branch)
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Watershed Management Areas, Watersheds and Sub-watersheds

A watershed is an area that drains into a common waterway, such as a stream, lake, estuary, wetland, or, ultimately, the ocean. The watershed includes both the waterway itself and the entire land area that drains into it. Geographical features such as hills and slopes separate distinct watershed systems. Watershed Management Areas (WMAs) are the regulatory units of NJDEP's Division of Watershed Management for categorizing, managing and protecting watersheds throughout the State. Woodbridge Township is divided into two primary WMAs, the Lower Raritan River Drainage (WMA 9) and the Arthur Kill River Drainage (WMA7).

Arthur Kill River Drainage Watershed Management Area

Watershed Management Area 7 includes large portions of Essex, Union and Middlesex Counties. The Arthur Kill River Drainage WMA, about 179 square miles in area, includes large portions of Essex, Union and Middlesex Counties. The WMA is surrounded by the Lower Passaic and Hackensack to the north, Upper Passaic to the west, and Lower Raritan to the south. Around 83% of land area in Woodbridge Township falls within the limits of this WMA.

The mainstem of the Rahway River is 24 miles long, flowing from Union into the Arthur Kill near Linden and is tidal from the Pennsylvania Railroad Bridge at Rahway down to the mouth. Major tributaries include the East Branch Rahway River, Woodbridge River and Robinson's Branch and major impoundments are the Middlesex Reservoir, Orange Reservoir, Lower and Upper Echo Lakes and Diamond Mill Pond. The Elizabeth River is 11 miles long, much of it channelized for flood control purposes. Land uses in the Rahway and Elizabeth Watersheds are principally residential, commercial and industrial. There are 50 NJPDES permitted discharges and 12 biological monitoring stations in these watersheds.

The watersheds in Arthur Kill drainage area are the Rahway River/Woodbridge Creek, Elizabeth River, Newark bay/Kill Van Kull/ Upper New York Bay, Morses Creek/Piles Creek watersheds. The only major watershed of this WMA within Woodbridge Township is the Rahway River/Woodbridge Creek watersheds. This watershed alone covers 82.6% of the Township. The major rivers and creeks in the Township flowing through this watershed include: South Branch of Rahway River, Woodbridge River, Pumpkin Parch Brook, Wedgewood Brook, Heards Brook, Spa Spring Creek, and Smith Creek. Arthur Kill River flows along the eastern edge of this watershed and outside the Township. This watershed is located in the northern and central parts of the Township.

Each of these watersheds is further divided into sub-watersheds. A sub-watershed is a smaller drainage basin of a local stream that eventually drains to a central point of the larger watershed. The Rahway River/ Woodbridge Creek Watershed has six sub-watersheds within Woodbridge Township. These are:

- Arthur Kill Waterfront, below Grasselli (9.9% of the Township)
- Rahway River, below Robinson's Branch (2.9%)
- Rahway River South Branch (28.5%)

- Robinson's Brook & Rahway River, above Lake Avenue (6.4%)
- Robinson's Brook & Rahway River, below Lake Avenue (2.1%)
- Woodbridge Creek (32.8%).

The Lower Raritan River Drainage Watershed Management Area

The Lower Raritan River Drainage WMA, about 352 square miles in area, includes watersheds draining into the lower portion of the Raritan River, South River, and Lawrence Brook. Located in Central New Jersey, mostly in Middlesex, Somerset and Monmouth counties, the WMA is surrounded by the Upper Passaic to the north, the Arthur Kill and Monmouth watersheds to the east, the Millstone to the southwest and the North & South Branch to the west. The major waterways in the Lower Raritan River watershed management area include Mainstem Raritan River, Green Brook, South River, Lawrence Brook, and Manalapan Brook.

The Mainstem Raritan River begins at the confluence of the North and South branches to the Raritan Bay, north of Sandy Hook. It is 31 miles long and drains parts of Somerset, Union, Middlesex and Monmouth Counties before emptying into the Raritan Bay. The major highways within the Lower Raritan River watershed management area include the NJ Turnpike, US Routes 1 & 9, and Interstate 287. It is a densely populated drainage area, consisting of primarily urban and suburban land uses, with some industrial and commercial centers. There are two low dams in this river, Fieldsville Dam and Calco Dam. The watershed has more than 70 NJPDES permitted dischargers and 29 biological monitoring stations. The southern parts of Woodbridge Township lie within the Lower Raritan River WMA. Raritan River is the only major waterway, and it flows along the southern edge of Woodbridge Township.

Watershed Management Areas, Watersheds and Sub-watersheds

The watersheds in Lower Raritan River drainage area are the Mainstem Raritan River, South River, Lawrence Brook, Manalapan River, and Matchaponix Brook watersheds. The only major watershed of this WMA within Woodbridge Township is the Lower Raritan River (Below Lawrence) Watershed. Lower Raritan River watershed is located in the southern tip of the Township and covers about 17.4% of the land area. Crows Mill Creek and Kinsey Creek are the only significant water bodies that flow through this watershed within Woodbridge Township. This watershed is further divided into three sub-watersheds. They are:

- Mill Brook/Martins Creek (9.9% of the Township)
- Lower Raritan River, below Lawrence Brook (9.5%)
- Red Root/Crows Mill Creek (7.6%).

Watershed Management Areas, Watersheds and Sub-Watersheds

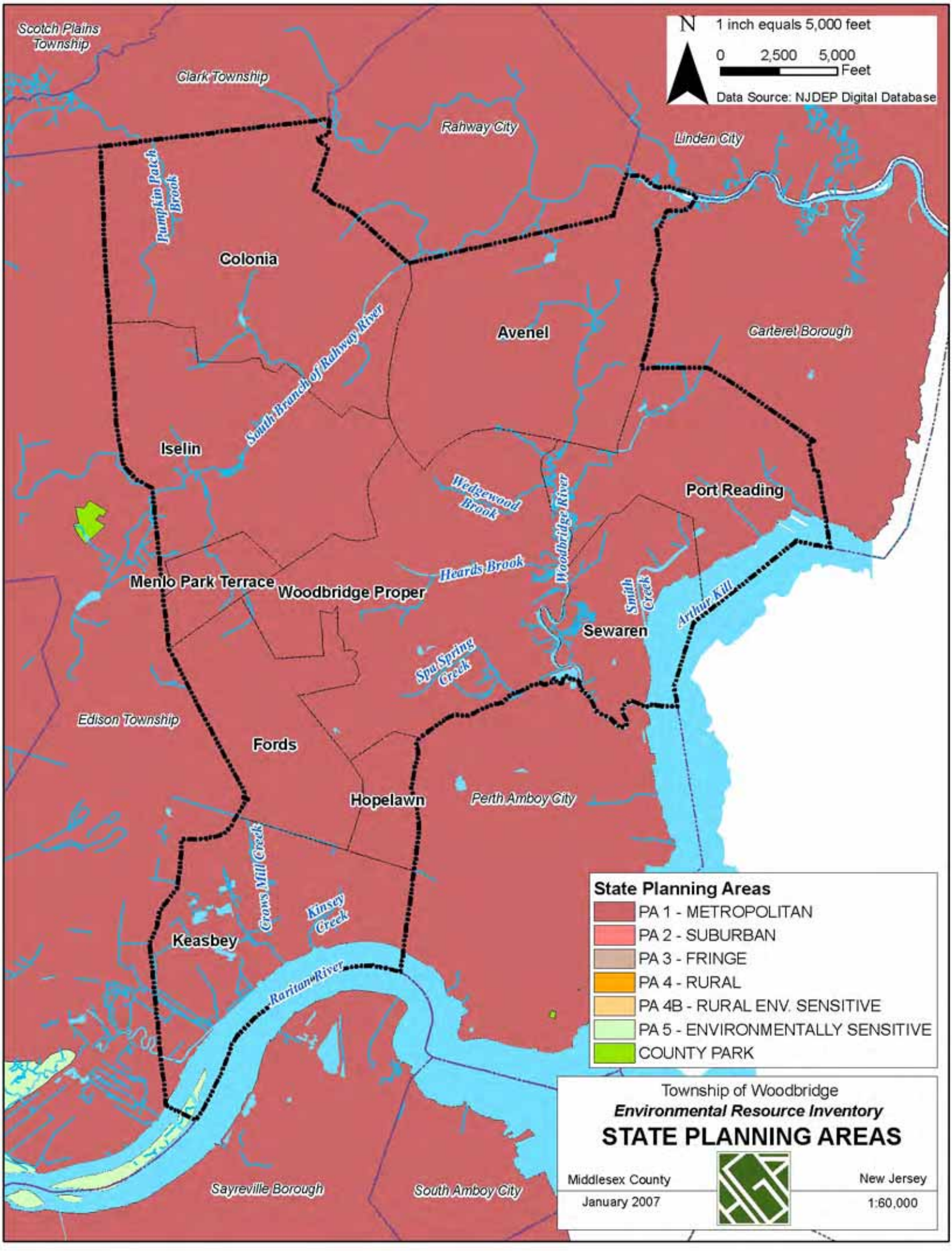
			Area (acres)	Percent Total
Watershed Management Area 7: Newark Bay, Arthur kill, Kill Van Kull, Upper New York Harbor, Elizabeth River, Morses Creek, Rahway River, Woodbridge Creek Watershed Management Area				
	Rahway River / Woodbridge Creek Watershed:			
	Sub-watersheds:	Arthur Kill waterfront (below Grasselli)	1548.2	9.9
		Rahway River (below Robinson's Branch)	452.6	2.9
		Rahway River South Branch	4473.5	28.5
		Robinson's Brook, Rahway River (above Lake Ave)	1008.0	6.4
		Robinson's Brook, Rahway River (below Lake Ave)	326.3	2.1
		Woodbridge Creek	5141.7	32.8
		Total	12950.1	82.6

Watershed Management Area 9: Raritan River Mainstream, Lawrence Brook, South River, Manalapan Brook, Matchaponix Brook, Green Brook, Middle Brook, D & R Canal (lower part) Watershed Management Area				
	Lower Raritan River (Below Lawrence) Watershed			
	Sub-watersheds:	Mill Brook / Martin's Creek	42.3	0.3
		Lower Raritan River (below Lawrence Brook)	1491.6	9.5
		Red Root Creek / Crows Mill Creek	1187.3	7.6
		Total	**2721.2**	**17.4**
		Total of all Watersheds	**26214**	**100**


SEWAREN
FREE PUBLIC
LIBRARY
634-7571

Existing Infrastructure

The existing infrastructure includes the water supply, sewerage and waste treatment, solid waste disposal, and drainage and flood control facilities serving Woodbridge Township. Due to the developed nature of Woodbridge, the entire Township, with minor exceptions, is well serviced by utilities including the location of major regional utility facilities in Woodbridge such as the PSE&G plant in Sewaren.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Heards Brook
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Arthur Kill
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Edison Township
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Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
State Planning Areas
PA 1 - METROPOLITAN
PA 2 - SUBURBAN
PA 3 - FRINGE
PA 4 - RURAL
PA 4B - RURAL ENV. SENSITIVE
PA 5 - ENVIRONMENTALLY SENSITIVE
COUNTY PARK
Township of Woodbridge
Environmental Resource Inventory
STATE PLANNING AREAS
Middlesex County
New Jersey
January 2007
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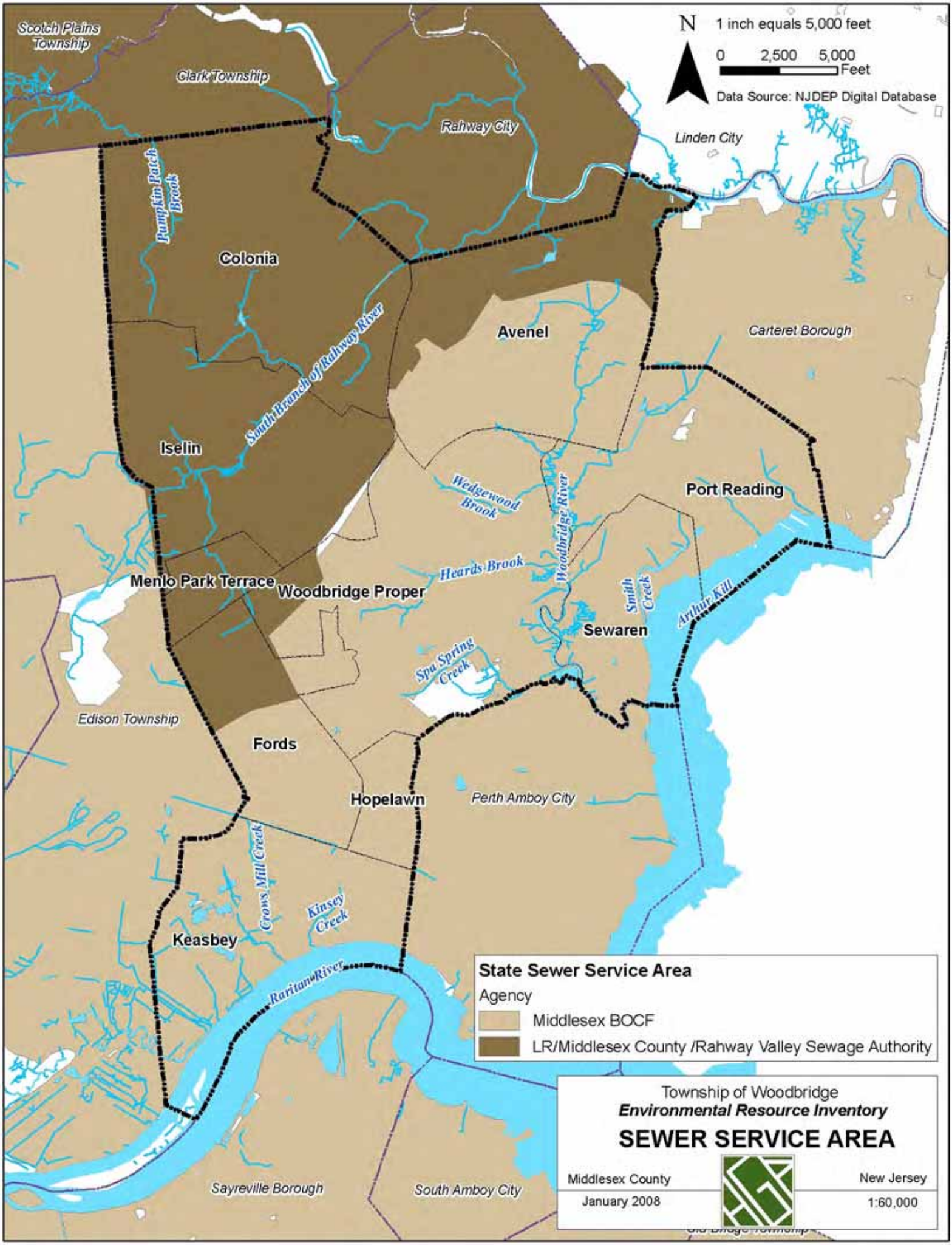
Sewer Service

The treatment of wastewater in Woodbridge Township is predominantly off-site at one of two wastewater treatment plants. There remain some privately-owned package treatment plants that serve a few of the Township's industries. Several on-site septic disposal systems can still be found scattered throughout Woodbridge.

Woodbridge Township is divided into two sewer service areas that are under the jurisdiction of the Middlesex County Utilities Authority (MCUA) in Sayreville and the Rahway Valley Sewage Authority (RVSA) in Rahway. As indicted on the Sewer Service Area Map, the RVSA serves the north and northwestern sections of the Township and MCUA, whose system the Township joined in September of 1988, serves the remainder of the municipality. Prior to joining the MCUA, the Township operated two municipal collection systems in Sewaren and Keasbey. Sanitary sewer lines still flow through these stations, although all treatment now takes place at the MCUA treatment plant in Sayreville.

The MCUA connection was mandated because Township plants were not providing adequate treatment of waste water. The MCUA trunkline has been receiving sewage, which was once treated at the Township's other facility in Sewaren, since 1989. The central treatment plant of the MCUA, located in Sayreville, has been in operation since 1958. Primary and secondary treatment and chlorination of raw sewage are conducted at this plant. Treated effluent is then discharged into the Raritan Bay through a gravity outfall sewer.

The sewage at the RVSA's Rahway treatment plant receives both primary and secondary treatment. Liquid effluent from the plant is discharged into the Arthur Kill, while sludge is pumped to the Linden/Roselle facility to be dumped at sea.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Sayreville Borough
South Amboy City
State Sewer Service Area
Agency
Middlesex BOCF
LR/Middlesex County /Rahway Valley Sewage Authority
Township of Woodbridge
Environmental Resource Inventory
SEWER SERVICE AREA
Middlesex County
New Jersey
January 2008
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Water Supply

Woodbridge Township is wholly within the franchise area of the Middlesex Water Company (MWC). Besides Woodbridge, the company has historically served Metuchen, Carteret, part of South Plainfield, and most of Edison. The MWC has recently expanded its service area to include East Brunswick, Old Bridge, Sayreville, and Marlboro.

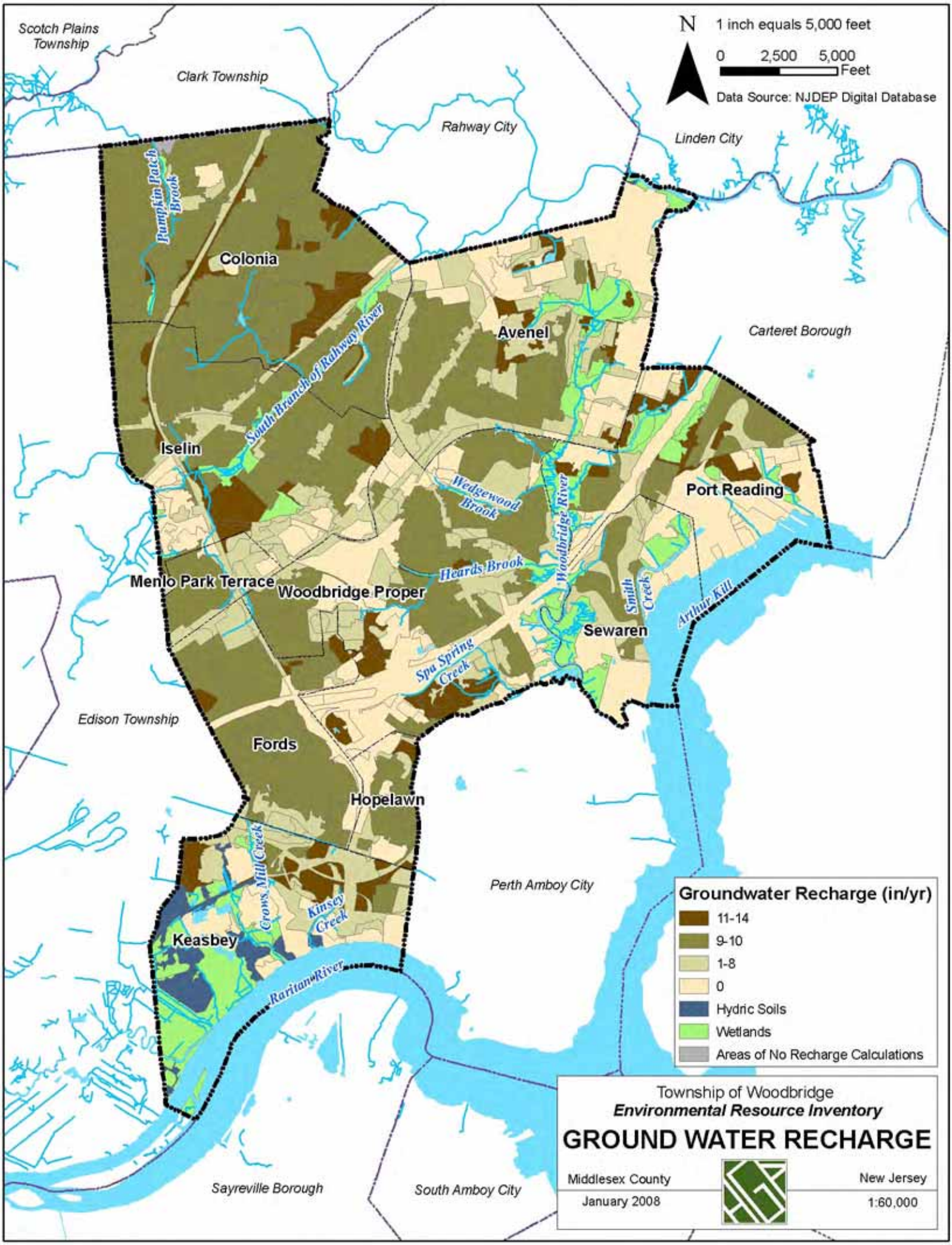
The MWC's primary water sources are located in New Brunswick, Clark, South Plainfield and Edison. New Brunswick serves as a major source of water, which is obtained from the Delaware and Raritan Canal. The MWC removed Woodbridge's well in 1988, which had been located on Maplewood Avenue but the Township continues to have operating booster pumping stations in Avenel and on the Iselin/Edison boundary.

Solid Waste

Woodbridge Township's solid waste collection is coordinated at the Public Works building in Keasbey. Refuse is collected weekly in the Township. Collection is by Township-owned garbage trucks, each with a twenty-five (25) cubic yard capacity. Between 34 and 45 trucks haul the Township's solid waste to Edgeboro landfill in East Brunswick.

Storm Drainage/Flood Control

Woodbridge Township is bisected by a number of waterways including the Raritan River, Arthur Kill, the Woodbridge River, South Branch of the Rahway River, and various creeks and brooks. The combined effect of these numerous waterways, the developed nature of the Township and the location of various major roadways also bisecting the Township result in drainage problem areas scattered throughout the Township. While a number of the problem areas have been addressed through improvements, flooding in many areas persists.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South Branch of Rahway River
Wedgewood Brook
Woodbridge River
Heards Brook
Smith Creek
Arthur Kill
Spa Spring Creek
Crows Mill Creek
Kinsey Creek
Raritan River
Groundwater Recharge (in/yr)
11-14
9-10
1-8
0
Hydric Soils
Wetlands
Areas of No Recharge Calculations
Township of Woodbridge
Environmental Resource Inventory
GROUND WATER RECHARGE
Middlesex County
New Jersey
January 2008
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Ground Water Recharge Areas

Ground water recharge is defined as the natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water-holding rocks or unconsolidated materials (such as sands and gravels) that provide underground storage in saturated zones known as ground water; where the ground water can yield good water supplies to wells it is known as an aquifer.

The Ground Water Recharge Map in this ERI is an estimation of ground water recharge for Middlesex County using the NJGS methodology from NJ Geological Survey Report GSR-32 "A Method for Evaluation of Ground-Water-Recharge Areas in New Jersey." Land-use/land-cover, soil and municipality-based climatic data were combined and used to produce an estimate of ground-water recharge in inches/year, using average annual precipitation values. Recharge was then ranked by volume (billions of gallons/year) using natural breaks in the percentage of total volume.

Ground Water Recharge Areas

Most areas, unless composed of solid rock or covered by development, allow a certain percentage of total precipitation to reach the water table (the upper layer of a ground water unit or aquifer). Woodbridge Township is generally blessed with adequate recharge potential, in the sense that at least 67% of the land in the Township has 1 to 14 inches per year of recharge potential. Within this proportion, at least 48% of land has a recharge potential of 9-14 inches per year, and around 41% of the Township is composed of land with a recharge potential of 9 to 10 inches per year (County Rank C). 22% of Township land has 0 inches per year of recharge, and a very less percentage of land in the Township (11%) is composed of wetlands or hydric soils that generally have very limited recharge, if any. The following table shows the area of land in each recharge range:

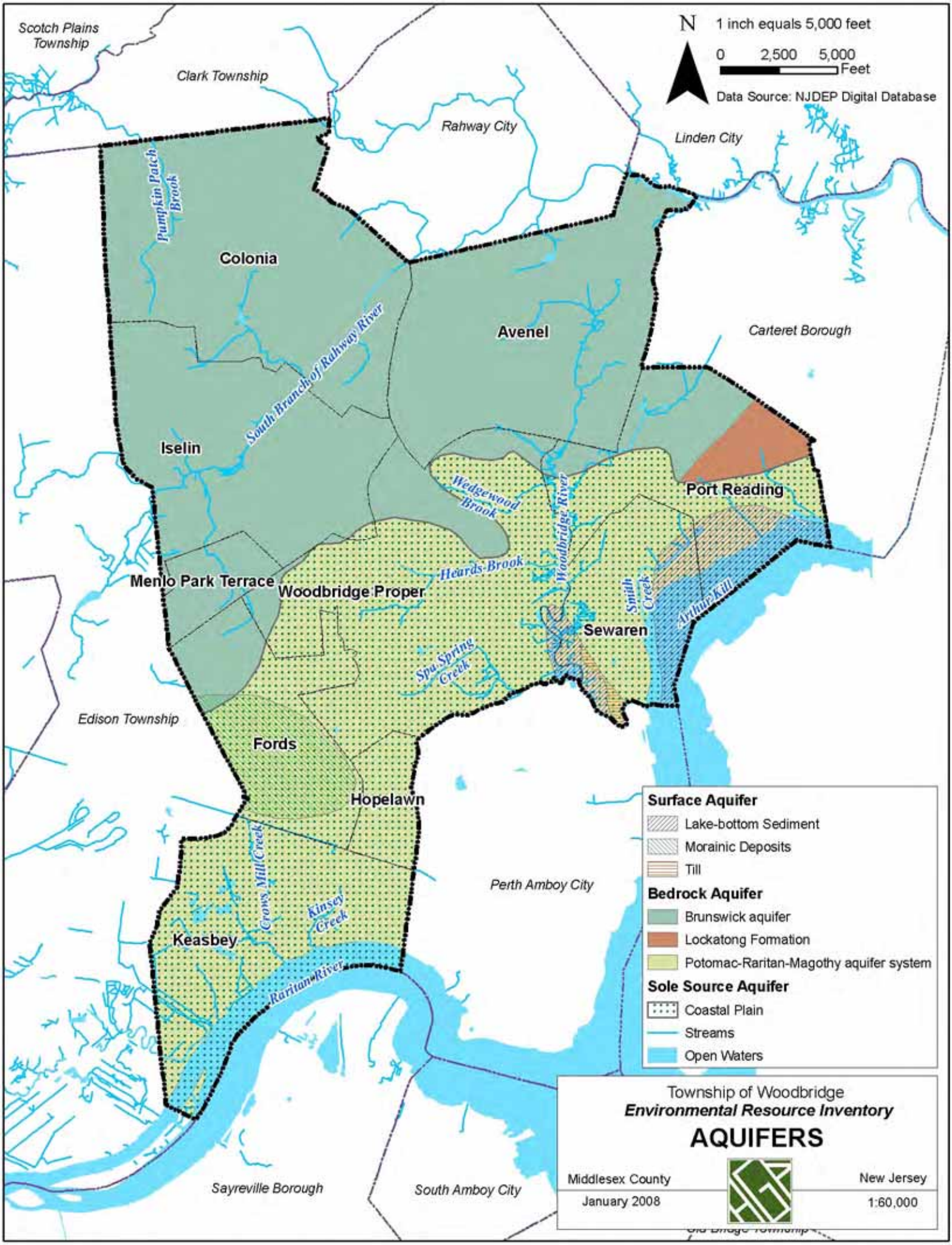
County Rank	Range of Recharge Rate	Acres	Percent
B	11 to 14 in/yr	1091	7
C	9 to 10 in/yr	6164	41
D	1 to 8 in/yr	2779	19
E	0 in/yr	3345	22
L	Hydric soils	227	2
W	Wetlands	1316	9
X	No Calculations	53	<1
	Total Area	**14975**	**100**

Note: Area and percent area have been rounded off to the nearest whole number

A major contributing factor in the amount of ground water recharge is the type of soils found in the area. The following table shows the series of soils found in Woodbridge Township:

County Rank	Range of Recharge	Soil Series' included
B	11 to 14 in/yr	Boonton, Boonton Urban Land, Clay Pits, Haledon, Haledon Variant, Haledon Urban Land, Keyport, Klinesville
C	9 to 10 in/yr	Boonton, Boonton Urban Land, Clay Pits, Haledon, Haledon Variant, Haledon Urban Land,
D	1 to 8 in/yr	Boonton, Boonton Urban Land, Clay Pits, Haledon, Haledon Variant, Haledon Urban Land, Klinesville, Rowland
E	0 in/yr	Psamments, Udorthents, Urban Land
L	Hydric soils	Atsion, Parsippany, Sulfaquents-Sulfihemists
W	Wetlands and Open Waters	Atsion, Boonton, Clay Pits, Haledon, Haledon Variant, Haledon Urban Land, Manahawkin, Parsippany, Psamments, Rowland, Sulfaquents-Sulfihemists, Urban Land

The quality of ground water recharged to the water table depends largely on the nature of the overlying land use. Areas with significant concentrations of septic systems, urban land or active agriculture are known to be more prone to contamination of ground water recharge, as are those Known Contaminated Sites or sites on the Site Remediation Program (SRP) Comprehensive Site List where ground water contamination has been identified. Where ground water contamination has been verified, New Jersey has a system for designating Classification Exception Areas (CEA), as institutional controls in geographically defined areas within which the New Jersey Ground Water Quality Standards (GWQS) for specific contaminants have been exceeded.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Surface Aquifer
Lake-bottom Sediment
Morainic Deposits
Till
Bedrock Aquifer
Brunswick aquifer
Lockatong Formation
Potomac-Raritan-Magothy aquifer system
Sole Source Aquifer
Coastal Plain
Streams
Open Waters
Township of Woodbridge
Environmental Resource Inventory
AQUIFERS
Middlesex County
New Jersey
January 2008
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Aquifers

Ground water is water below land surface that is stored in the cracks and spaces in rock, sand and gravel formations. Precipitation to the land surface can become ground water if it infiltrates through the soils to the saturated area, a process called ground water recharge. Ground water eventually makes it way back to the surface and provides water to springs, streams, ponds and lakes – in natural areas this ground water is the only flow in a stream during dry periods.

An aquifer is a ground water formation that can provide economically useful quantities of water to a pumping well – whether for a single home, a business, a farm or a municipality. Note that all aquifers contain ground water, but not all ground water is in aquifers! For this reason, it is important to know what portion of total ground water recharge reaches aquifers and is available for human use. The rate of recharge is not the same for all aquifers, though, and that must be considered when pumping water from a well. Pumping too much water too fast draws down the water in the aquifer and causes a well to yield less and less water and eventually run dry. In addition, excessive human uses can damage the surface waters to which the ground water naturally flows, drying up streams during droughts.

The aquifers of New Jersey are classified as either consolidated (rock formations, also known as bedrock) or unconsolidated (sand and gravel) aquifers. Consolidated aquifers contain ground water in fractures and sometimes in pore spaces, while unconsolidated aquifers contain ground water primarily in the pore spaces between sand and gravel particles. The bedrock aquifers in New Jersey include fractured-rock aquifers of the Valley and Ridge, Highlands, and Piedmont physiographic provinces. The Piedmont province included several types of rock formations, including shale, sandstone, basalt and diabase such as the Sourland Mountains. Unconsolidated aquifers include the sand aquifers of the Coastal Plain physiographic province and the aquifers of glacial sediment exceeding 50 ft. thickness in northern New Jersey. Where aquifer formations are at the land surface with no confining layer over them, they are known as surficial aquifers. Where an aquifer is overlain by a confining layer, it is known as a confined aquifer, and the water in it may be under pressure and could rise up through a well all the way above the land surface (an artesian well). For instance, the Potomac-Raritan-Magothy Aquifers are a series of Coastal Plain aquifers with confining layers in between.

The aquifers are also ranked by their yield rates or the gallons for minute that can be expected from wells in each aquifer. The ranking consists of a scale from A through E, as follows: A - greater than 500 gallons per minute, B - 251 to 500 gallons per minute, C - 101 to 250 gallons per minute, D - 25 to 100 gallons per minute, E – less than 25 gallons per minute.

Bedrock Aquifers

The aquifers in Woodbridge Township are all part of the Coastal Plain province. The aquifers are distinguished by the types of materials, porosity, chemical and physical composition, and as a result, the quantity and quality of water they yield. The physical and chemical descriptions and yield rates of the different aquifers systems, and their component formations, found in Woodbridge Township are as below:

Aquifer Name	Aquifer Rank	Well Yield (gallons/ minute)	Area in acres	Percent
Brunswick Aquifer	C	101 to 250	8275	55
Lockatong Formation	D	25 to 100	234	2
Potomac-Raritan-Magothy	A	> 500	6467	43
		Totals	**14976**	**100**

Note: Area and percent area have been rounded off to the nearest whole number.

Brunswick Aquifer: With an aquifer rank of "C" and an average yield of 101 to 250 gallons per minute, this aquifer is composed of sandstone, siltstone, and shale. The water from this aquifer is normally fresh, slightly alkaline, non-corrosive and hard, containing calcium-bicarbonate and sub-ordinate calcium-sulfate waters that are associated with high total dissolved solids. This system covers about 55% of the Township.

Lockatong Formation: This "D"-ranked aquifer, with an average yield of 25 to 100 gallons per minute, is composed of silty argillite, mudstone and fine-grained sandstone, and siltstone with minor limestone. The ground water is stored and transferred in fractures. Wells completed in the conglomerate facies generally show increased capacities of ground water yield. Water is normally fresh, slightly alkaline, non-corrosive, and hard. Calcium-bicarbonate type waters dominate. The Lockatong formation covers about 2% of the Township.

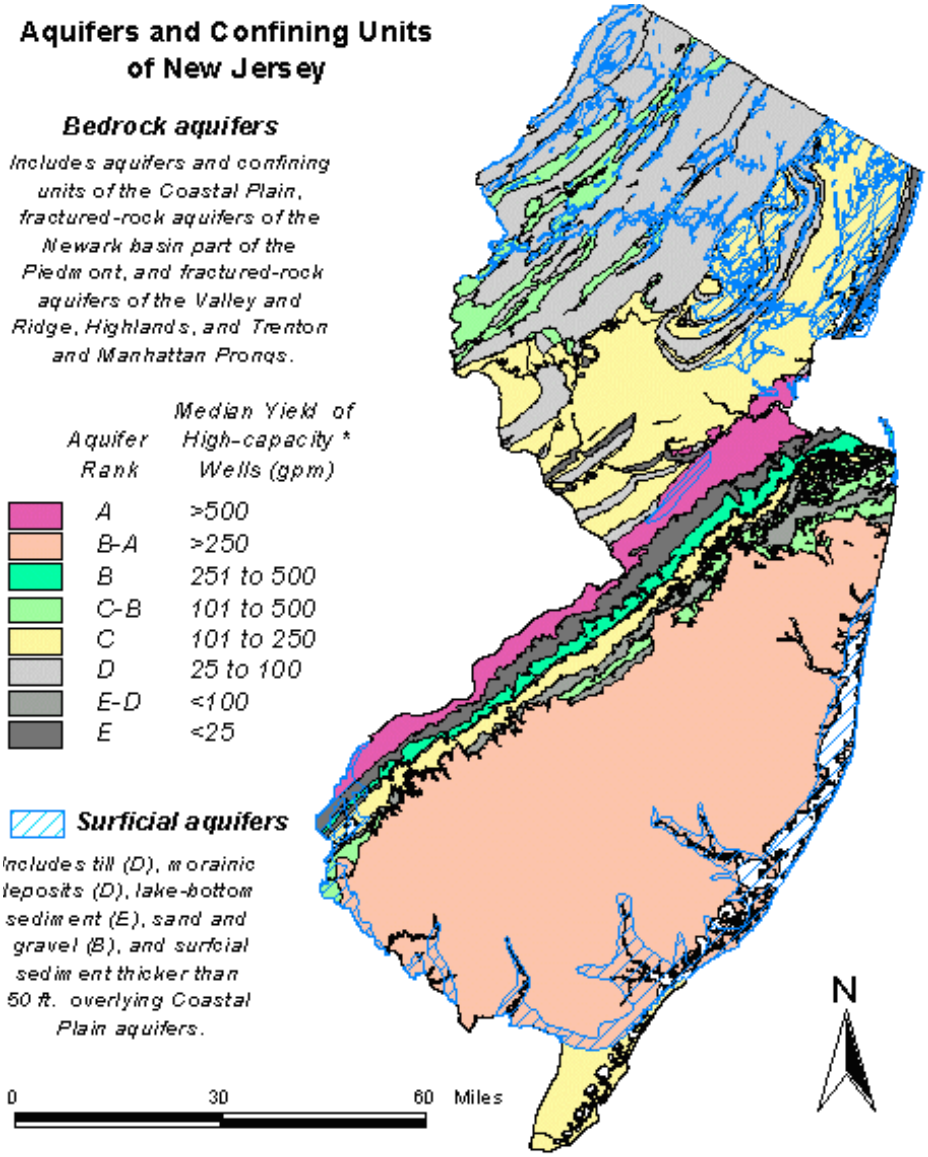
Potomac-Raritan-Magothy aquifer system: The Potomac-Raritan-Magothy aquifer system has a Middlesex county rank of "A" and an average yield of more than 500 gallons per minute per well. The aquifer system is comprised of inter-bedded sand, gravel, silt and clay separated into lower, middle and upper aquifers. It includes the Raritan confining unit composed of inter-bedded sand, silt and clay. The total thickness of the Raritan in the outcrop area is 150 to 400 feet. Water is fresh, moderately hard with a near-neutral pH. Elevated iron and manganese are common. Calcium and magnesium levels decrease and sodium and potassium levels generally increase towards the southeast. Calcium-bicarbonate type waters dominate.

Surficial Aquifers

Surficial Aquifers include glacial sediment exceeding 50 ft. thickness in northern New Jersey, and surficial sediment thicker than 50 ft. overlying Coastal Plain aquifers and confining units.

Aquifer Name	Aquifer Rank	Well Yield (gallons/ minute)	Area in acres	Percent
Lake-bottom Sediment	E	<25	676	55
Morainic Deposits	D	25 to 100	538	43
Till	D	25 to 100	30	2
		Totals	**1244**	**100**
Note: Area and percent area have been rounded off to the nearest whole number.				

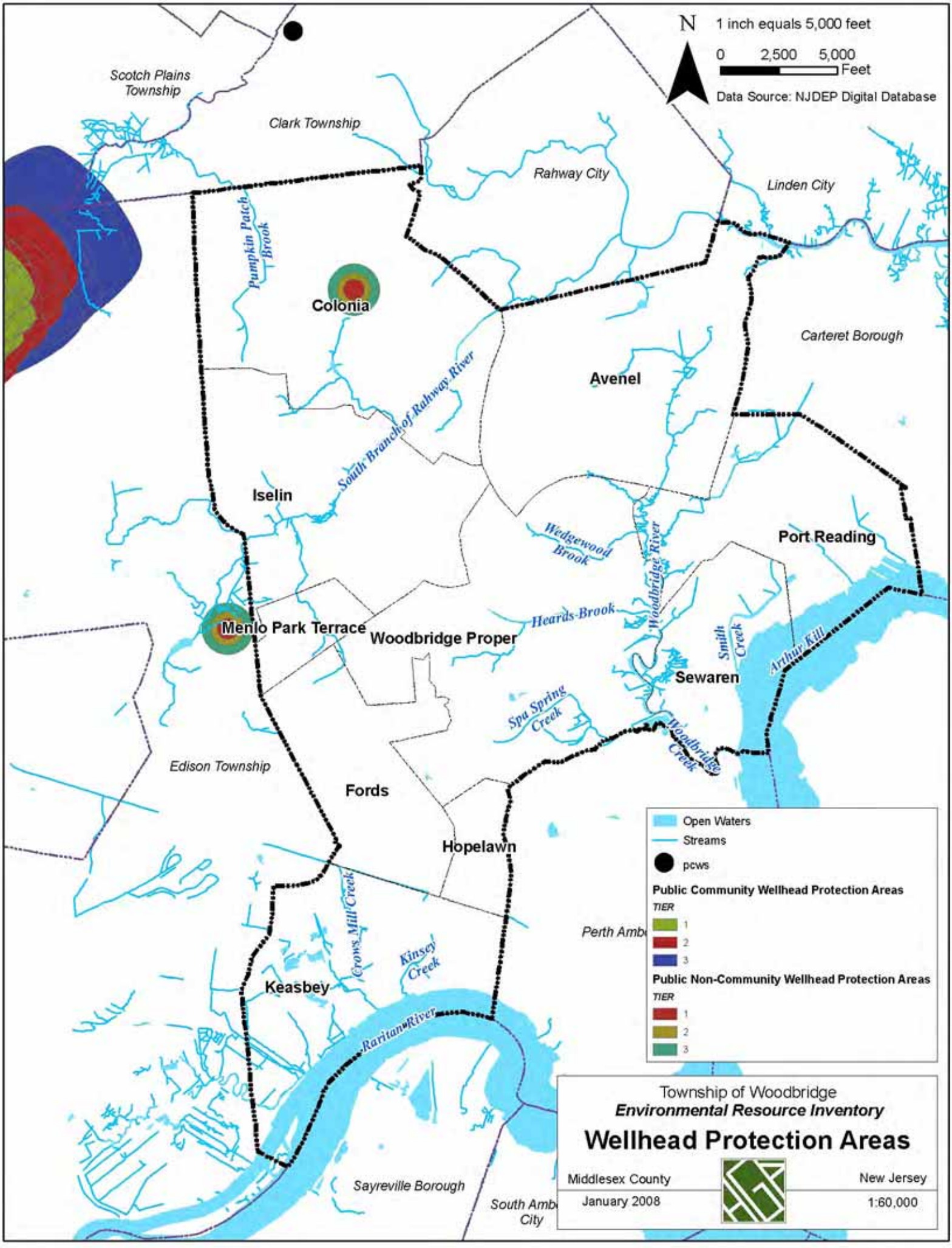
Map Showing Aquifers of New Jersey.



Sole-Source Aquifers

Sole-source aquifers (SSA) are those aquifers that contribute more than 50% of the drinking water to a specific area and the water would be impossible to replace if the aquifer were contaminated. Sole-source aquifers are defined with guidelines set forth by the U.S. Environmental Protection Agency (EPA) as authorized in section 1424(e) of the Safe Drinking Water act of 1974. Any federally-funded project in an area that could affect ground-water in a sole-source aquifer must be reviewed by the USEPA. This 'project review area' includes the aquifer's 'recharge zone' and it's 'stream-flow source zone'. The recharge zone is the area through which water recharges the aquifer. The source zone is the upstream area that contributes recharge water to the aquifer. Seven sole-source aquifers are defined in New Jersey and their project review areas cover most of the state. The sole source aquifer program is a federal program administered by the Environmental Protection Agency under the Safe Drinking Water Act.

Woodbridge Township lies partially within the Coastal Plain SSA. Coastal Plain SSA is formally known as the 'New Jersey Coastal Plain Sole Source Aquifer system.' (Notice of approval was published in the Federal Register, vol. 53, no. 122, 6/24/88, pp. 23791 – 23794). The recharge zone is defined as the New Jersey Coastal Plain physiographic province. Its stream-flow source zone includes all upstream parts of the Delaware River watershed in New Jersey, Delaware, Pennsylvania and New York. USEPA's project review area includes the recharge zone and that part of the streamflow-source zone that lies within two miles of the mainstem Delaware River. The center line of the Delaware River, corresponding to the New Jersey- Pennsylvania state boundary, was used for generating the two-mile buffer for the purposes of this coverage. About 6467 acres of the Township (about 43%) lie within the Coastal Plain SSA.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Township of Woodbridge
Environmental Resource Inventory
Wellhead Protection Areas
Middlesex County
New Jersey
January 2008
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Public Community Water Supply Wells and Wellhead Protection Areas

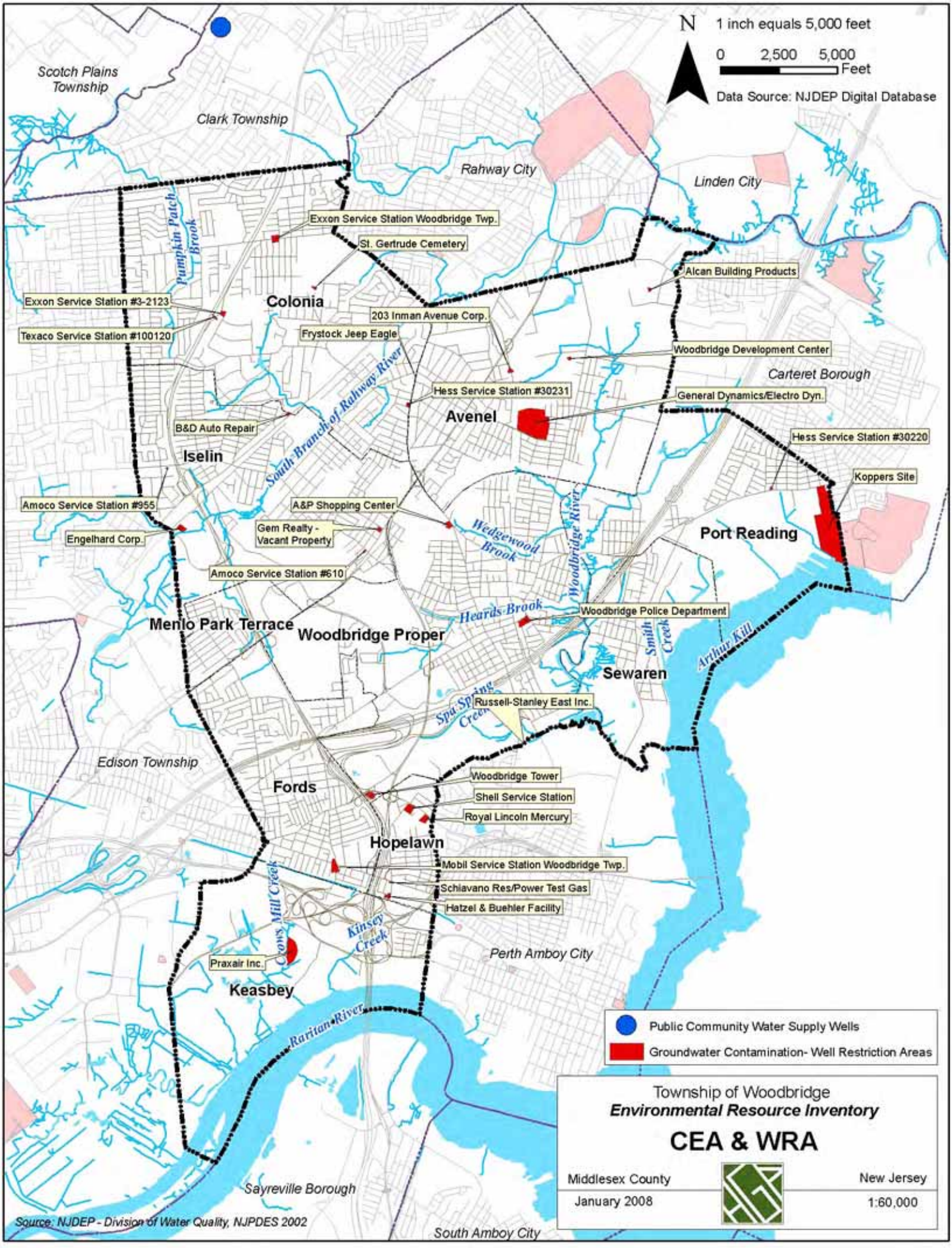
According to the NJDEP, "A Well Head Protection Area (WHPA) in New Jersey is a map area calculated around a Public Community Water Supply (PCWS) well that delineates the horizontal extent of ground water captured by a well pumping at a specific rate over a two, five, and twelve-year tiers for unconfined wells. The tiers are defined as the travel time taken for water to reach the well that the protection area marks, and are classified into 2-year, 5-year and 12-year boundaries demarcated around the well.

Confined wells have a fifty foot radius delineated around each well serving as the wellhead protection area to be controlled by the water purveyor in accordance with Safe Drinking Water Regulations" (see NJAC 7:10-11.7(b) 1). Confined wells are sunk through an impermeable stratum down into an aquifer, which is sandwiched between two impermeable strata. The majority of confined aquifers are classified as artesian because the hydraulic head in a confined well is higher than the level of the top of the aquifer. If the hydraulic head in a confined well is higher than the land surface it is a "flowing" artesian well. Unconfined wells are completed in the uppermost-saturated aquifer at that location

A wellhead protection area (WHPA) is the portion of an aquifer through which groundwater moves to a well. Well Head Protection Area delineations are conducted in response to the Safe Drinking Water Act Amendments of 1986 and 1996 as part of the Source Water Area Protection Program (SWAP). The delineations are the first step in defining the sources of water to a public supply well. Within these areas, potential contamination will be assessed and appropriate monitoring will be undertaken as subsequent phases of the NJDEP SWAP program.

The Wellhead Protection Areas include the two, five, and twelve-year tiers for public community wellheads and public non-community wellheads. There is only one such public non-community wellhead protection area in the north-eastern part of the Township. Another such wellhead protection area lies along the municipal boundary in Edison Township. However, the DEP also does not have GIS data currently available for public non-community well locations.

There are no Public Community Water Supply wells in Woodbridge Township (as of 7/31/2006). Woodbridge Township's nearest public community water supply wells are: Elks Well owned by Elizabethtown Water Co. at Featherbed Lane and Old Raritan Road in Clark Township, and nine wells owned by Middlesex Water Co. at Tingley Lane in northern part of Edison Township.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Raritan River
Exxon Service Station Woodbridge Twp.
St. Gertrude Cemetery
Alcan Building Products
Exxon Service Station #3-2123
Texaco Service Station #100120
203 Inman Avenue Corp.
Frystock Jeep Eagle
Woodbridge Development Center
Hess Service Station #30231
General Dynamics/Electro Dyn.
B&D Auto Repair
Hess Service Station #30220
Koppers Site
Amoco Service Station #955
A&P Shopping Center
Engelhard Corp.
Gem Realty - Vacant Property
Amoco Service Station #610
Woodbridge Police Department
Russell-Stanley East Inc.
Woodbridge Tower
Shell Service Station
Royal Lincoln Mercury
Mobil Service Station Woodbridge Twp.
Schiavano Res/Power Test Gas
Hatzel & Buehler Facility
Praxair Inc.
Public Community Water Supply Wells
Groundwater Contamination- Well Restriction Areas
Township of Woodbridge
Environmental Resource Inventory
CEA & WRA
Middlesex County
New Jersey
January 2008
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Source: NJDEP - Division of Water Quality, NJPDES 2002

Groundwater Contamination Classification Exception Areas /Well Restriction Areas (CEA/ WRA):

The quality of ground water recharged to the water table depends on the presence of Known Contaminated Sites or sites on the Site Remediation Program (SRP) Comprehensive Site List where groundwater contamination has been identified. Such areas, known as Classification Exception Area (CEA) and Well Restriction Areas (WRAs), are institutional controls in geographically defined areas within which the New Jersey Ground Water Quality Standards (NJGWQS) for specific contaminants have been exceeded. The CEA list is compiled by New Jersey Department of Environmental Protection (NJDEP), Site Remediation Program (SRP), Division of Remediation Support (DRS), Information Services Element (ISE), Bureau of Information Services and Program Support (BISPS).

When a CEA is designated for an area, the constituent standards and designated aquifer uses are suspended for the term of the CEA. A public understanding of where groundwater is known to be contaminated can help prevent inappropriate well placement, preventing potential health risks and can minimize unintended contaminant plume migration. There are 27 CEAs/WRAs located within Woodbridge Township. There are no Currently Known Extents of Groundwater Contamination (CKEs) within the Township.

Agency Abbreviations:
BUST – Bureau of Underground Storage Tanks;
BCM – Bureau of Case Management;
BFO-S – Bureau of Field Operations - Southern office;
BEECRA – Bureau of Environmental Evaluation, Cleanup and Response Assessment.

KCSL #	Name	Address	Block-Lot	Area (acres)	Depth (feet)	Lead Agency	Contaminants
NJL600114458	203 Inman Avenue Corp.	203 Inman Ave.	787-1A1	0.82	-	BFO-S	Benzene, Trichloroethylene, Polychloroethylene
NJL800499097	A&P Shopping Center	St George Ave/ Amboy Ave	See report.	1.54	-	BFO-S	Arsenic, Nickel
NJD047501457	Alcan Building Products	11 Cragwood Rd.	912-27	0.5	-	BEECRA	Trichloroethylene, Polychloroethylene
NJD986610459	Amoco Service Station #610	745 Green St.	383E-17 to 22	0.32	50	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Toluene, Ethyl benzene, Xylenes
NJL600012298	Amoco Service Station #955	1547 Oak Tree Rd.	1.7B-1.7C	0.16	-	BUST	Benzene, Methyl Tertiary Butyl Ether
NJL600032650	B&D Auto Repair	705 Rt. 27	See report.	0.4	50	BUST	Tentatively Identified Compounds
NJD000811034	Engelhard Corp.	25 Middlesex Essex Tpke.	356-2A	1.81	40	BEECRA	Trichloroethylene, Polychloroethylene
NJD986699256	Exxon Service Station	270 Inman Ave.	See report.	2.14	50	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Tentatively Identified Compounds, Ethylbenzene, Xylenes
NJD986595650	Exxon Service Station #3-2123	78 Garden State Pwy S.	484G-2	1.05	50	BUST	Benzene, Methyl Tertiary Butyl Ether, Xylenes
NJL800245268	Frystock Jeep Eagle	1305 St. Georges Ave.	414-27.A	0.06	50	BUST	Benzene

KCSL #	Name	Address	Block-Lot	Area (acres)	Depth (feet)	Lead Agency	Contaminants
NJL800473589	Gem Realty - Vacant Property	825 U.S. Rt. 1	403H-15-30	0.83	50	BUST	Benzene, Tentatively Identified Compounds, Ethyl benzene, Xylenes, Naphthalene, Bis(2-Ethylhexyl) Phthalate
NJD002173052	General Dynamics/ Electro Dyn.	150 Avenel St.		33.7	-	BUST	Trichloroethylene
NJL000043497	Hatzel & Buehler Facility	175 Quincy Ct.	31H-1	1.04	50	BUST	Benzene, Methyl Tertiary Butyl Ether,T-Butyl Alcohol
NJD986586014	Hess Service Station #30220	751 Port Reading Rd.	1095-1	0.38	50	BUST	-
NJD986586824	Hess Service Station #30231	1215 St. Georges Ave.		0.66	-	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Napthalene, Tentatively Identified Compounds, Polychloroethylene
NJD980530802	Koppers Site (Prologic)	Roosevelt Ave & Edwing St	See report.	56.06	-	BCM	Benzene, Trichloroethylene, Polychloroethylene, Dichloroethene, methylene chloride, xylenes, chlorobenzene, Acenaphthene, Anthracene, Bis(2-ethylhexyl)-Phthalate, Benzo(a) anthracene, Benzo(b) fluoranthene, Benzo(k) fluoranthene, Benzo(a) pyrene, Chrysene, 2,4-Dimethylphenol, Fluorene, Fluoranthene, Indeno(1,2,3-,d)pyrene, Phenanthrene, Pyrene

KCSL #	Name	Address	Block-Lot	Area (acres)	Depth (feet)	Lead Agency	Contaminants
NJL600054118	Mobil Service Station	Crows Mill Rd /New Brunswick Ave.	See report.	3.12	50	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Tentatively Identified Compounds, Toluene, Ethyl benzene, Xylenes
NJL500036249	Praxair Inc.	Industrial Hwy.	58-1	10.4	8	BEECRA	Benzene
NJD986568087	Royal Lincoln Mercury	119 W. Pond Rd.		2.07	-	BFO-S	Arsenic
NJD002179190	Russell-Stanley East Inc.	Convery Blvd. & Bey St.	See report.	0.03	20	BEECRA	Benzene
NJL600196026	Schiavano Res/ Power Test Gas	169 New Brunswick Ave.	30A-40A to 43A	0.33	50	BUST	Benzene
NJD986594141	Shell Service Station	Rt. 184 & Laurel St.	1-77 to 79,97 to 99	2.68	50	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Toluene, ethyl benzene, Xylenes
NJL600235279	St. Gertrude Cemetery	53 Inman Ave.		0.46	50	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Tentatively Identified Compounds, Xylenes, Toluene
NJD986580769	Texaco Service Station #100120	Garden State Pkwy East	479-1	0.44	-	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol,
NJD172637787	Woodbridge Development Center	1275 Rahway Ave.	872-4	0.49	-	BUST	Benzene, Methyl Tertiary Butyl Ether, Naphthalene
NJL600241848	Woodbridge Police Dept.	1 Main St.		3.22	50	BUST	Benzene, and Tentatively Identified Compounds
NJL600204580	Woodbridge Tower	Garden State Pkwy. MP 129.0		1.86	50	BUST	Benzene, Methyl Tertiary Butyl Ether, T-Butyl Alcohol, Toluene, Ethyl benzene, Xylenes

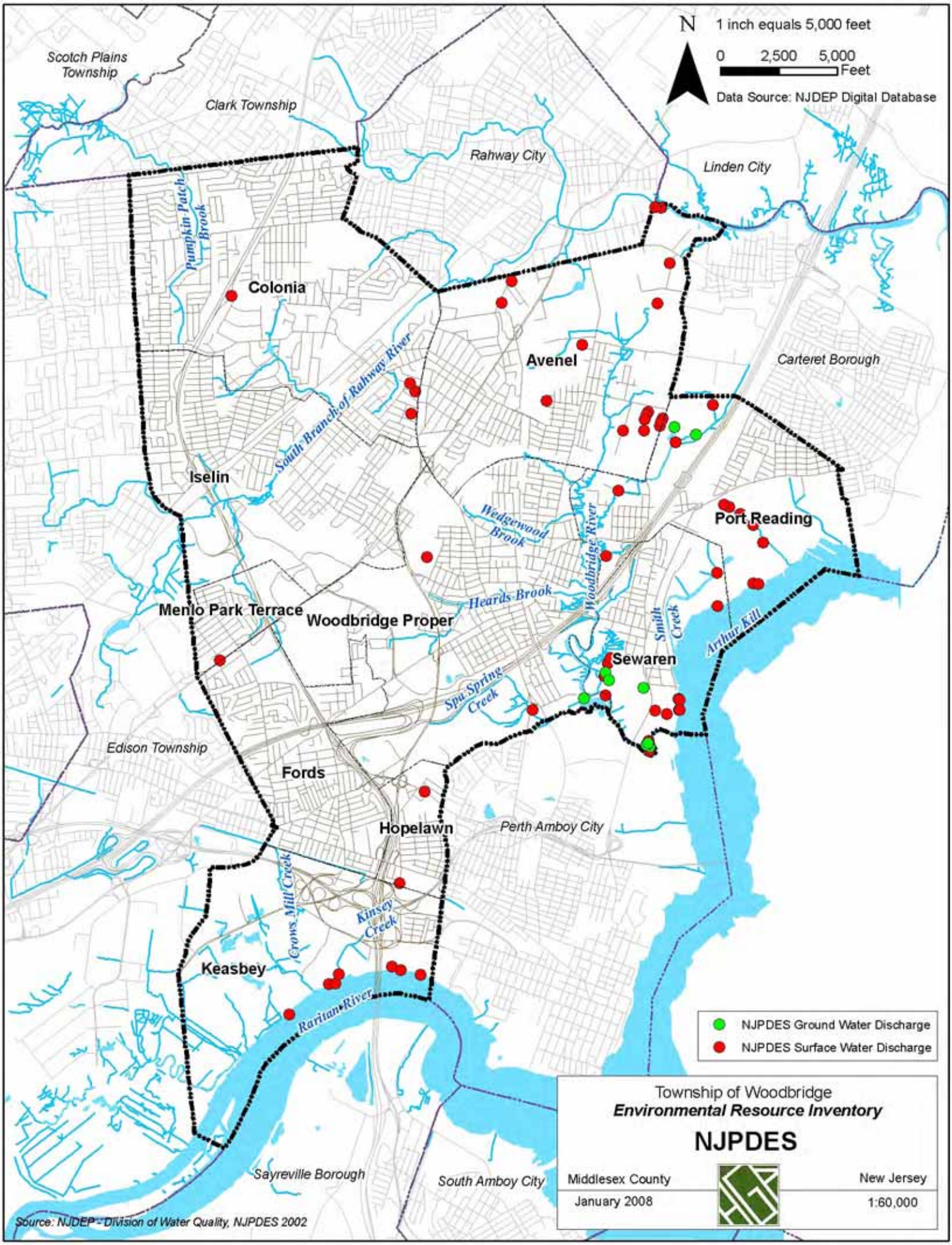
New Jersey Pollution Discharge Elimination System (NJPDES) Locations

The NJPDES Program protects New Jersey's ground and surface water quality by assuring the proper treatment and discharge of wastewater (and its residuals) and storm water from various types of facilities and activities. To accomplish this, permits are issued limiting the mass and/or concentration of pollutants, which may be discharged into ground water, streams, rivers, and the ocean. The types of regulated facilities can range from very small users such as campgrounds, schools, and shopping centers to larger industrial and municipal wastewater dischargers.

Surface Water Discharge

This regulated activity involves the discharge of treated effluent from various municipal and industrial facilities directly into a river, stream, or the ocean. These facilities operate under the authority of a NJPDES permit that limits the mass and/or concentration of pollutants discharged.

The following table lists the surface water discharge points (compiled from GPS locations, NJPDES databases, and permit applications), the receiving waters, discharge type, type of discharge pipe and permit status of all locations within the Township of Woodbridge: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1 inch equals 5,000 feet
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Feet
Data Source: NJDEP Digital Database
Scotch Plains Township
Clark Township
Rahway City
Linden City
Pumpkin Patch Brook
Colonia
Avenel
Carteret Borough
South Branch of Rahway River
Iselin
Wedgewood Brook
Woodbridge River
Port Reading
Menlo Park Terrace
Woodbridge Proper
Heards Brook
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
NJPDES Ground Water Discharge
NJPDES Surface Water Discharge
Township of Woodbridge
Environmental Resource Inventory
NJPDES
Middlesex County
New Jersey
January 2008
1:60,000
Source: NJDEP - Division of Water Quality, NJPDES 2002


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NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status
NJ0001392.003A	Amerada Hess Corp - F R Terminal	Raritan River	IMI	B	E
NJ0028878.001C	Amerada Hess Corp - Port Reading	Arthur Kill	IMJ	B	E
NJ0028878.004A	Amerada Hess Corp - Port Reading	Arthur Kill via tidal ditch	IMJ	RF	X
NJ0142549.003A	Amerada Hess Corp - Port Reading	Arthur Kill via tidal ditch	IMJ	RF	X
NJ0142549.005A	Amerada Hess Corp - Port Reading	Arthur Kill via tidal ditch	IMJ	RF	X
NJ0142549.006A	Amerada Hess Corp - Port Reading	Arthur Kill via tidal ditch	IMJ	RF	X
NJ0142549.007A	Amerada Hess Corp - Port Reading	Arthur Kill via tidal ditch	IMJ	RF	X
NJ0142549.008A	Amerada Hess Corp - Port Reading	Arthur Kill via tidal ditch	IMJ	RF	X
NJ0142549.002A	Amerada Hess Corp - Port Reading	Arthur Kill	IMJ	B	E
NJ0001384.001A	Amerada Hess Corp - S R Terminal	Arthur Kill	IMI	B	E
NJ0002950.001A	Bayshore Recycling Corp	Raritan River	IMI	B	E
NJ0002950.002A	Bayshore Recycling Corp	Raritan River	IMI	B	E
NJ0002950.003A	Bayshore Recycling Corp	Raritan River via unnamed tributary	IMI	RF	R
NJ0129372.002A	Brunswick Hot Mix, Weldon Concrete	Raritan River	IMI	RF	X

NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status
NJ0003867.001A	C P Chemicals Inc	Woodbridge Creek	IMI	RF	R
NJ0003867.002A	C P Chemicals Inc	Woodbridge Creek	IMI	RF	R
NJG0087840.001A	CITGO S/S - Well Oil Co	Raritan River via storm sewer	B4B	B4B	R
NJG0076376.001A	CITGO S/S (Former)	Rahway River SB via storm sewer	B4B	B4B	E
NJ0051420.001A	Colonial Pipeline - Linden	Woodbridge Creek	IMI	05	R
NJ0051420.002A	Colonial Pipeline - Linden	Woodbridge Creek via unnamed tributary	IMI	05	E
NJ0051420.003A	Colonial Pipeline - Linden	Woodbridge Creek via unnamed tributary	IMI	05	E
NJG0106399.001A	Dependable Iron & Metal Co Inc	Rahway River SB via storm sewer	IMI	RF	X
NJ0106691.004A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R
NJ0106691.005A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R
NJ0106691.006A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R
NJ0106691.007A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R

NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status
NJ0106691.003A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R
NJ0106691.001A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R
NJ0106691.002A	Ecolab Inc	Woodbridge Creek via storm sewer	IMI	RF	R
NJG0100170.001A	Exxon S/S 3-2124	Pumpkin Patch Brook via storm sewer	B4B	B4B	E
NJ0106313.001A	Gallo Asphalt Company	Raritan River	RF	RF	E
NJ0106313.002A	Gallo Asphalt Company	Raritan River	RF	RF	E
NJ0089079.001A	Gantek Building Products	Rahway River via unnamed tributary & storm sewer	IMI	RF	X
NJ0089079.002A	Gantek Building Products	Rahway River via unnamed tributary & storm sewer	IMI	RF	X
NJ0105287.001A	General Dynamics Corp	Woodbridge Creek via storm sewer	IMI	B	E
NJ0128201.001A	Getty S/S 56896	Rahway River SB	B4B	B4B	E
NJ0003328.001A	Haagen-Dazs Company (Teixiera Bakery)	Spa Spring Creek	IMI	B	R
NJ0070335.001A	Hess S/S 3-0231 Colonia	Rahway River S B via storm sewer	B4B	B4B	R

NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status
NJ0124192.001A	Leesville Auto Wreckers	Rahway River SB via storm sewer	IMI	SM	X
NJG0105155.001A	Linden Junction Tank Farm	Woodbridge Creek via unnamed tributary	B4B	B4B	E
NJ0078239.001A	NJ Turnpike Area 10S	Woodbridge Creek	B4B	B4B	R
NJ0000680.WTPA	PSE&G - Sewaren G S	Arthur Kill (Staten Island Sound)	IMJ	C	E
NJ0000680.501A	PSE&G - Sewaren G S	Smith Creek via pond and overflow	IMJ	C	E
NJ0000680.502A	PSE&G - Sewaren G S	Arthur Kill (Staten Island Sound)	IMJ	B	E
NJ0024643.002A	Rahway Valley SA	Rahway River	MMJ	A	E
NJ0024643.003A	Rahway Valley SA	Rahway River	MMJ	A	R
NJ0106551.001A	Roadway Express Inc	Woodbridge Creek via storm sewer	IMI	RF	X
NJ0000752.006A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	RF	E
NJ0000752.001A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	RF	E
NJ0000752.002A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	RF	E
NJ0000752.003A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	RF	E

NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status
NJ0000752.004A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	RF	E
NJ0000752.005A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	B	E
NJ0000752.007A	Shell Oil Co - Sewaren	Woodbridge Creek	IMI	RF	E
NJ0000752.008A	Shell Oil Co - Sewaren	Arthur Kill	IMI	RF	E
NJ0000752.009A	Shell Oil Co - Sewaren	Arthur Kill	IMI	RF	E
NJ0000752.010A	Shell Oil Co - Sewaren	Arthur Kill	IMI	RF	E
NJ0003379.001A	Shell Oil Company	Arthur Kill	IMI	RF	R
NJ0003379.002A	Shell Oil Company	Arthur Kill	IMI	RF	R
NJ0003379.003A	Shell Oil Company	Arthur Kill	IMI	RF	R
NJG0079197.001A	Shell S/S - Woodbridge	Rahway R SB via storm sewer & unnamed tributary	B4B	B4B	E
NJ0103900.001A	Supermarkets General Corp	Raritan R via storm sewer	B4B	B4B	R
NJ0034118.001A	United States Gypsum Co	Turtle Brook Branch (Woodbridge Cr)	IMI	B	E
NJ0052787.001A	Van Waters & Rogers Inc	Woodbridge Creek via storm sewer	IMI	RF	X

NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status
NJ0000345.002A	Weldon Concrete	Raritan River	IMI	RF	U
NJ0076309.001A	Woodbridge Developmental Center	Woodbridge Ck via storm sewer & unnamed tributary	IMI	B	E
NJ0033286.001A	Woodbridge Sanitary Pottery (Gerber)	Woodbridge Creek via storm sewer	IMI	RF	X

Description of Abbreviations:

Discharge Type: B4B – Petroleum hydrocarbon remediation; IMI – Industrial minor - based on the amount of pollutants(s) in the effluent; IMJ – Industrial major - based on the amount of pollutants(s) in the effluent

Pipe Category: B4B – General permit GW petroleum product cleanup; B – Industrial discharge; RF – Stormwater; 5G – General industrial site stormwater runoff

Status: R - Revoked/Terminated - Pipe no longer permitted for discharge; E - Existing in the point source permitting regions; X - Permits transferred to the Bureau of Non-point Pollution Control; U - Unknown (could not be determined from data available)

Ground Water Discharge

The discharge of pollutants to the ground waters of the State is regulated by the Department under the authority of the New Jersey Water Pollution Control Act (WPCA) N.J.S.A. 58:10A. The WPCA specifies, "No person shall discharge any pollutant except in conformity with a valid NJPDES permit." The permit program is called NJPDES which stands for New Jersey Pollutant Elimination System, and the regulations are found at N.J.A.C. 7:14A.

NJPDES permits are required for discharges to ground water of both sanitary and industrial wastes, as defined in N.J.A.C. 7:14A-1.9. These permits, which limit the mass and/or concentration of pollutants discharged, are issued to sanitary and industrial facilities that have ongoing, operational discharges of wastewater to ground water. The pollution control requirements contained in NJPDES ground water permits are those conditions necessary to restrict the discharge of pollutants to the ground waters of the state and protect the public health and the environment.

Regardless of flow volume or constituent content/concentration, all industrial discharges to ground water must be authorized under a NJPDES permit or procure an exemption or non-permit determination. Sanitary discharges to ground water may be subject to NJPDES program requirements based on flow volume and method of discharge. In most cases, a Treatment Works Approval (TWA) is required prior to constructing or altering facilities associated with a NJPDES permit.

The types of discharge activities that are regulated by the Division of Water Quality and its NJPDES program include: surface impoundments; infiltration/percolation lagoons; overland flow systems; spray irrigation systems; and various types of subsurface disposal systems that are classified as underground injection systems.

The types of facilities regulated include: mines, pits and quarries; schools and hospitals; potable water treatment plants; large corporate office buildings; industrial manufacturing facilities; campgrounds and mobile home parks; food processors; and sewage treatment plants and other dischargers of wastewater that can impact ground water, including dredge spoils disposed onto land.

The following table lists the ground water discharge points (compiled from GPS locations, NJPDES databases, and permit

applications), the receiving waters, discharge type, type of discharge pipe, and permit status of all locations within the Township of Woodbridge:

NJPDES Permit #	Facility Name	Receiving Waters	Discharge Type	Pipe Category	Status Code	Comments
NJ0101672.I02I GPS	Colonial Pipeline Company	Infiltration Pond	INF	I	U	
NJ0101672.I01I GPS	Colonial Pipeline Company	Infiltration Pond	INF	I	U	
NJ0001295.J01J GPS	Cytec Industries	Infiltration Pond	INF	J	E	
NJ0077488.I06I GPS	Shell Oil Company	Infiltration Pond	INF	I	U	Over influent pipe to pond C-2
NJ0077488.I05I GPS	Shell Oil Company	Infiltration Pond	INF	I	U	Over influent pipe to pond C-1
NJ0077488.I04I GPS	Shell Oil Company	Infiltration Pond	INF	I	U	10ft E of influent pipe to pond B-1
NJ0077488.I01I GPS	Shell Oil Company	Infiltration Pond	INF	I	U	Over influent pipe to pond A-1
NJ0077488.I02I GPS	Shell Oil Company	Infiltration Pond	INF	I	U	Over influent pipe to pond A-2
NJ0077488.I03I GPS	Shell Oil Company	Infiltration Pond	INF	I	U	Over influent pipe to pond A-3

Description of Abbreviations:

Discharge Type: INF – Infiltration lagoon, pond, spray field or other such water body.

Pipe Category: I – Various infiltration lagoons or other impoundments

Status: E - Existing in the point source permitting regions; U – Unknown (could not be determined from data available)


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Landscape Project- Critical Habitat Area

The NJDEP Endangered and Non-Game Species Program created the Landscape Project as an ecosystem level approach to identifying and protecting species habitat in the state. The program identifies critical habitat areas and ranks them by the presence or absence of priority, threatened or endangered species. The habitat areas are divided into five broad habitat types – grasslands, forested wetlands, forest, emergent wetlands and beach. These five habitat types are then mapped into habitat blocks and the habitat blocks are ranked based on the presence or absence of priority, threatened or endangered species. Specific habitat areas for bald eagle foraging areas, urban peregrine falcon nests, and wood turtles have further augmented the information gathered for the different habitat types.

The Emergent Wetlands, Forested Wetlands, Forest habitat types are all part of the Piedmont Plains landscape. This landscape encompasses all or parts of Burlington, Gloucester, Mercer, Middlesex, Monmouth and Salem counties. It is dominated by the Delaware and Raritan rivers, and is characterized by farmed areas, extensive grasslands, fragmented woodlands and tidal freshwater marshes that are among the most productive in the world. Imperiled species within this landscape include grassland birds such as the endangered upland sandpiper, and woodland raptors such as the barred owl and Cooper's hawk. The importance of these habitat areas and ranking is to preserve not just specific threatened locations of imperiled species, but also all the critical wildlife areas that must be preserved to protect those species.

Areas of each type and rank of landscape habitats:

Habitat Type	Suitable Habitat	Priority Habitat	State Threatened habitat	State Endangered Habitat	Total
Emergent Wetlands	18	283	463	49	809
Forested Wetlands	261	4	0	0	265
Forest	219	28	0	0	247

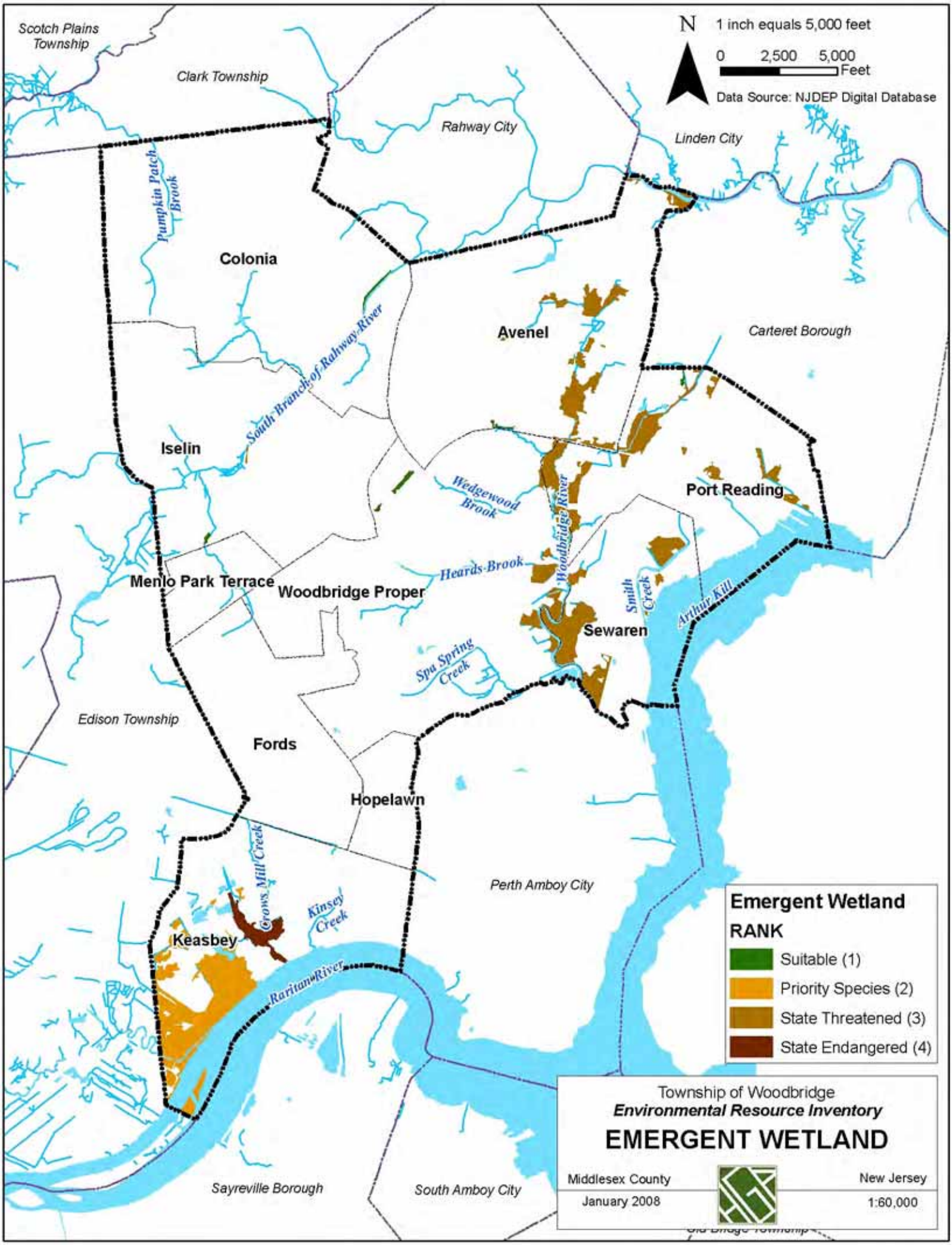
Note: Area in acres, rounded to nearest whole number. The total areas do not add up to the area of the township since many habitat types overlap each other, resulting in one or more types in a particular area.


WOODBRIDGE TOWNSHIP
FATHER MILOS PARK

Emergent Wetland – The critical area maps for emergent wetland dependent species were generated by selecting specific land-use classes from NJDEP's Land Use/Land Cover data set, aggregating the various, contiguous habitat patches into single emergent wetland habitat patched and then ranking each patch for the presence or absence of Federal and State priority, threatened or endangered species.

- Wetlands Agricultural Wetlands (Modified)
- Wetlands Former Agricultural Wetland (Becoming Shrubby)
- Wetlands Freshwater Tidal Marshes
- Wetlands Herbaceous Wetlands
- Wetlands Saline Marshes
- Wetlands Severe Burned Wetlands
- Wetlands Vegetated Dune Communities
- Wetlands Wetland Rights-Of-Way (Modified)

Woodbridge has all of or portions of 156 distinct emergent wetland habitat patches that either lie entirely within or that cross over into adjacent municipalities that total approximately 809 acres. Of these, 18 acres are suitable emergent wetland habitat, 283 acres of priority emergent wetland habitat, 460 acres of State threatened emergent wetland habitat, and 49 acres of State endangered emergent wetland habitat. The suitable habitat is located mainly in central parts of the township; the priority habitat is located in the southern tip of the Township; a small patch of state endangered habitat is located in proximity of Crows Mill Creek; and the State threatened habitat in the northeastern parts of the township, mostly along Woodbridge River and Smith Creek.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Feet
Data Source: NJDEP Digital Database
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Clark Township
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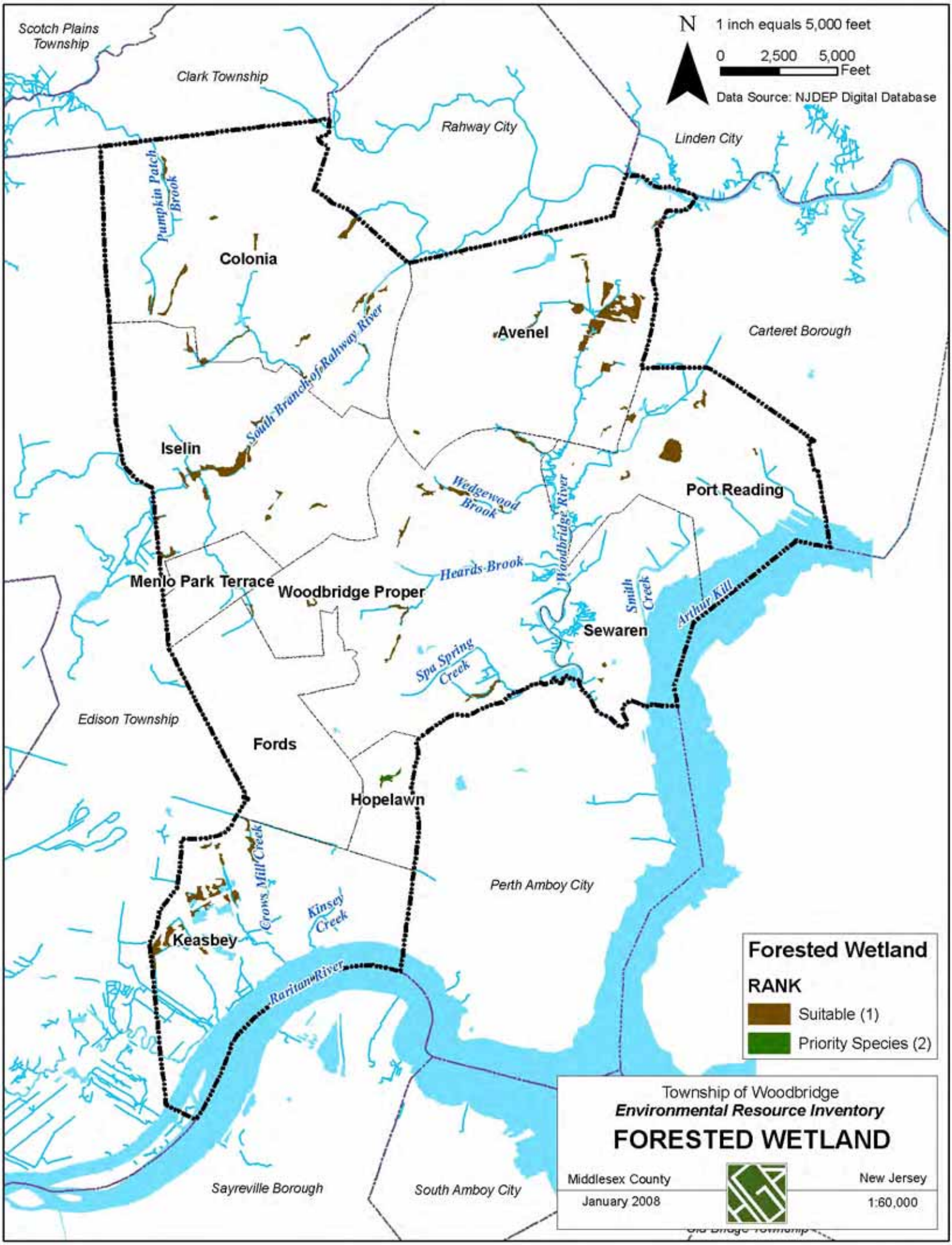
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
Emergent Wetland
RANK
Suitable (1)
Priority Species (2)
State Threatened (3)
State Endangered (4)
Township of Woodbridge
Environmental Resource Inventory
EMERGENT WETLAND
Middlesex County
New Jersey
January 2008
1:60,000

Forested Wetland – The critical area maps for forested wetland dependent species were generated by selecting specific land-use classes from NJDEP's Land Use/Land Cover data set, aggregating the various, contiguous habitat patches into single forested wetland habitat patched and then ranking each patch for the presence or absence of Federal and State priority, threatened or endangered species.

- Wetlands Atlantic White Cedar Swamp
- Wetlands Coniferous Scrub /Shrub Wetlands
- Wetlands Coniferous Wooded Wetlands
- Wetlands Deciduous Scrub /Shrub Wetlands
- Wetlands Deciduous Wooded Wetlands
- Wetlands Mixed Forested Wetlands (Coniferous Dominant)
- Wetlands Mixed Forested Wetlands (Deciduous Dominant)
- Wetlands Mixed Scrub/Shrub Wetlands (Coniferous Dominant)
- Wetlands Mixed Scrub/Shrub Wetlands (Deciduous Dominant)

Woodbridge has all of or portions of 233 distinct forested wetland habitat patches that either lie entirely within or that cross over into adjacent municipalities that total approximately 265 acres. Of these, 261 acres are suitable forested wetland habitat, and 4 acres are priority forested wetland habitat. The suitable habitat is spread out throughout the Township - along the banks of most of the rivers and creeks. A small area of Priority habitat is found near the intersection of Route 9 and Garden State Parkway.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Forested Wetland
RANK
Suitable (1)
Priority Species (2)
Township of Woodbridge
Environmental Resource Inventory
FORESTED WETLAND
Middlesex County
New Jersey
January 2008
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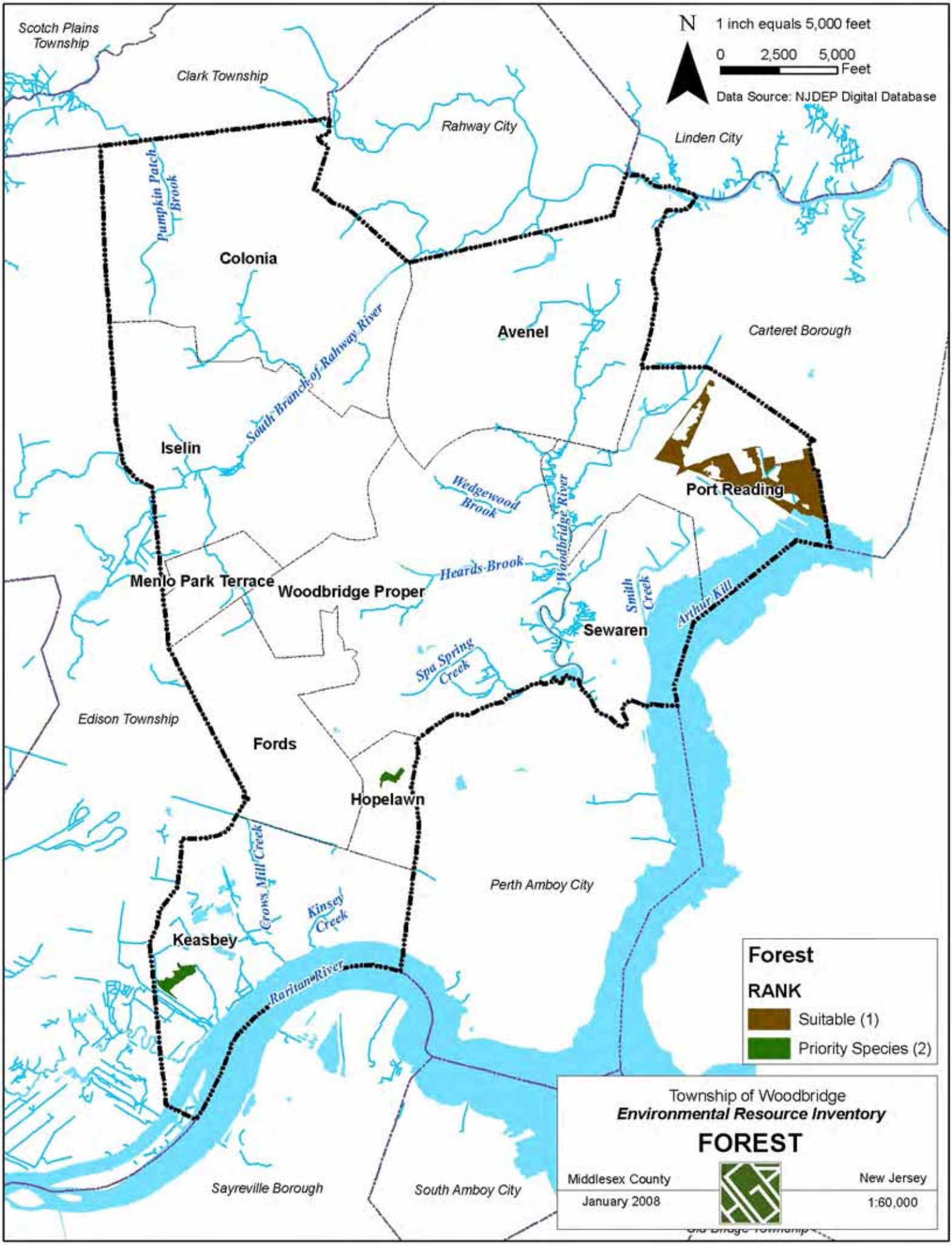
Forest – The critical area maps for forest dependent species were generated by selecting specific land-use classes from NJDEP's Land Use/Land Cover data set, aggregating the various, contiguous habitat patches into single forest habitat patched and then ranking each patch for the presence or absence of Federal and State priority, threatened or endangered species.

- Forest Coniferous Brush/Shrubland
- Forest Coniferous Forest (>50% Crown Closure)
- Forest Coniferous Forest (10-50% Crown Closure)
- Forest Deciduous Brush/Shrubland
- Forest Deciduous Forest (>50% Crown Closure)
- Forest Deciduous Forest (10-50% Crown Closure)
- Forest Mixed Deciduous/Coniferous Brush/Shrubland
- Forest Mixed Forest (>50% Coniferous With >50% Crown Closure)
- Forest Mixed Forest (>50% Coniferous With 10%-50% Crown Closure)
- Forest Mixed Forest (>50% Deciduous With >50% Crown Closure)
- Forest Mixed Forest (>50% Deciduous With 10-50% Crown Closure)
- Forest Old Field (< 25% Brush Covered)
- Forest Plantation

- Forest Severe Burned Upland Vegetation

Woodbridge has all of or portions of 111 distinct forest habitat patches that either lie entirely within or that cross over into adjacent municipalities that total approximately 247 acres. Of these, 219 acres are suitable forest habitat and 28 acres are priority forest. The suitable forest habitat is found in large contiguous patches in the northeastern corner of the township, near its boundary with Carteret Borough. Priority forest habitat areas are located in two small patches, one near the intersection of Route 9 and Garden State Parkway, and another in the southern corner of the Township along its boundary with Edison Township.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FOREST
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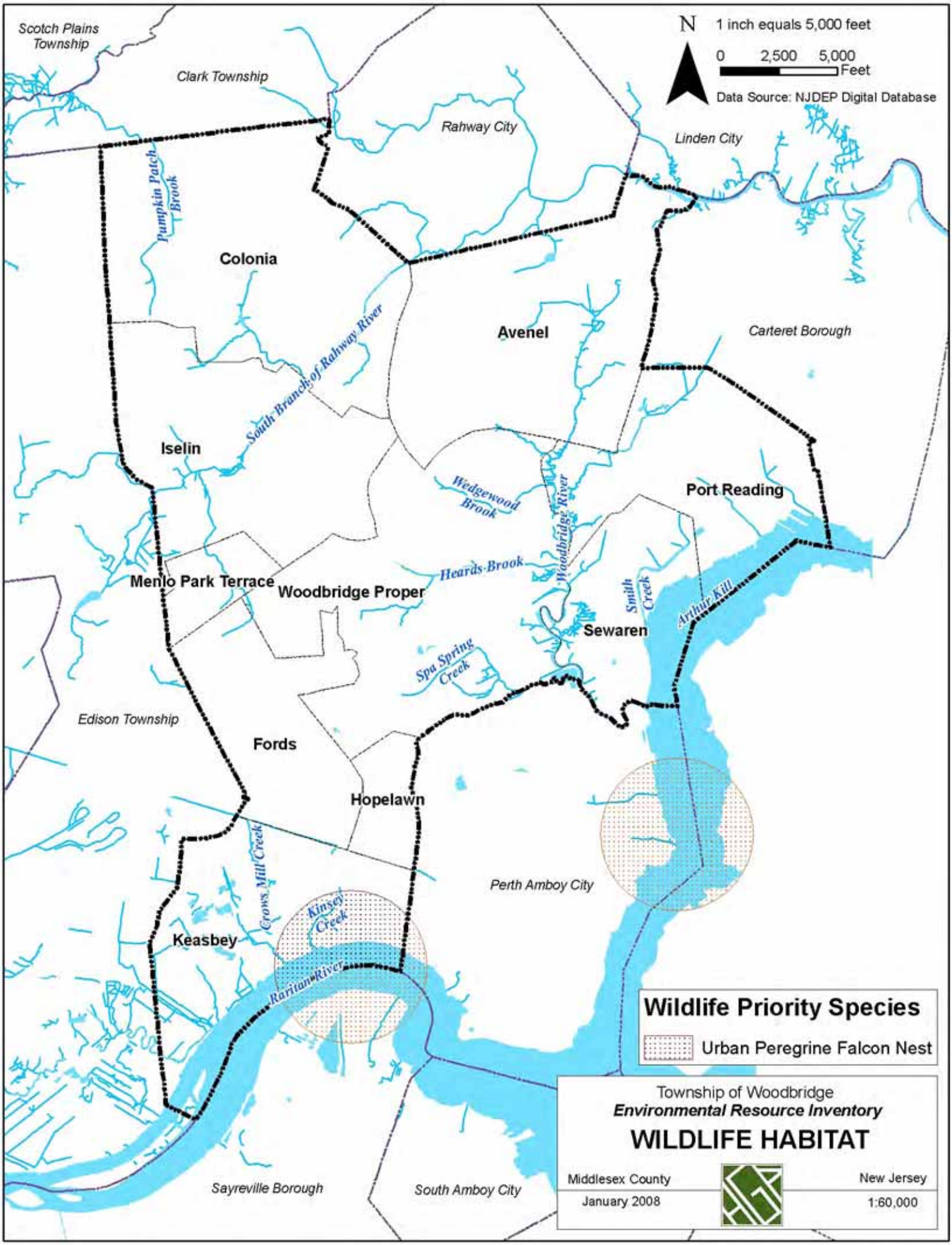
Urban Peregrine Falcon Nest Area

Peregrine falcon nests are separated into two types, urban and non-urban, depending on the type of landscape they are located in. For urban nests a 1-km radius area around the nest is now valued as peregrine falcon habitat regardless of the land-cover type. Urban peregrine nests continue to value emergent wetland patches that intersect with the 1-km radius area delineated around a peregrine falcon nest. Non-urban peregrine falcon nests continue to value only emergent wetland patches that intersect with the 1-km radius area around the nest. The urban peregrine falcon model is a stand-alone GIS layer that values emergent wetland habitat patches.

Woodbridge Township has 392 acres of Urban Peregrine Falcon Nest Area habitats, which includes portion of a habitat patch that crosses over into City of Perth Amboy and Borough of Sayreville. The habitat is located in the southern part of the Township in the region of Raritan River and Kinsey Creek. This habitat patch is ranked 4, indicating the patch's state-endangered priority ranking, and lies within the Piedmont/Coastal Plains region.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Data Source: NJDEP Digital Database
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Carteret Borough
South Branch of Rahway River
Iselin
Wedgewood Brook
Woodbridge River
Port Reading
Menlo Park Terrace
Woodbridge Proper
Heards Brook
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
Wildlife Priority Species
Urban Peregrine Falcon Nest
Township of Woodbridge
Environmental Resource Inventory
WILDLIFE HABITAT
Middlesex County
New Jersey
January 2008
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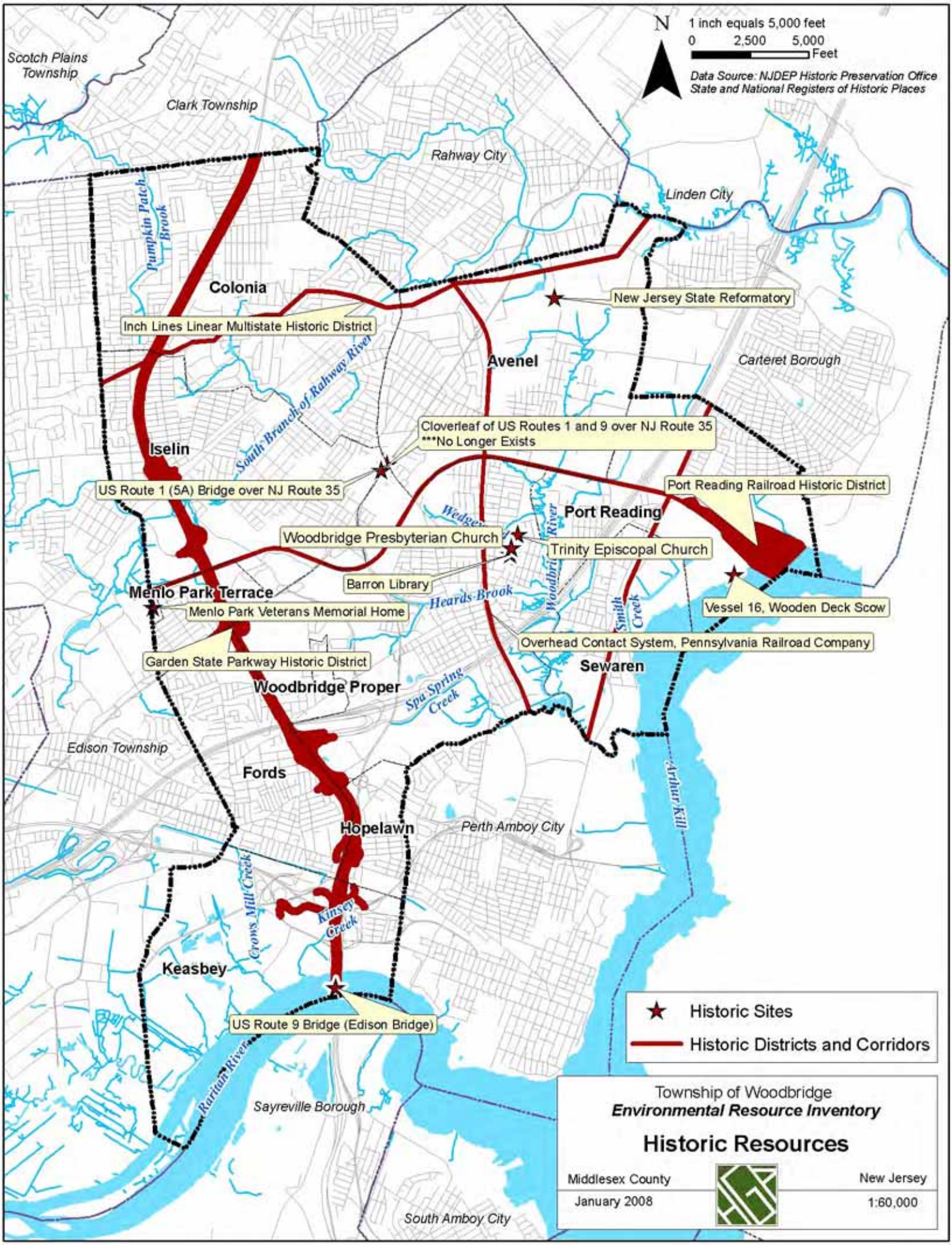
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Data Source: NJDEP Historic Preservation Office
State and National Registers of Historic Places
Scotch Plains Township
Clark Township
Rahway City
Linden City
Pumpkin Patch Brook
Colonia
New Jersey State Reformatory
Inch Lines Linear Multistate Historic District
Avenel
Carteret Borough
South Branch of Rahway River
Cloverleaf of US Routes 1 and 9 over NJ Route 35
***No Longer Exists
Iselin
US Route 1 (5A) Bridge over NJ Route 35
Port Reading Railroad Historic District
Port Reading
Woodbridge Presbyterian Church
Trinity Episcopal Church
Barron Library
Menlo Park Terrace
Menlo Park Veterans Memorial Home
Heards Brook
Vessel 16, Wooden Deck Scow
Garden State Parkway Historic District
Overhead Contact System, Pennsylvania Railroad Company
Sewaren
Woodbridge Proper
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Arthur Kill
Crows Mill Creek
Kinsey Creek
Keasbey
US Route 9 Bridge (Edison Bridge)
Raritan River
Sayreville Borough
South Amboy City
Historic Sites
Historic Districts and Corridors
Township of Woodbridge
Environmental Resource Inventory
Historic Resources
Middlesex County
New Jersey
January 2008
1:60,000

History of Woodbridge Township

The Township of Woodbridge is the oldest original Township in the State of New Jersey. It was settled in the early autumn of 1664 in the area purchased from the Lenni-Lenape Indians, and was granted a charter by King Charles of England on June 1, 1669, and was reincorporated on October 31, 1693. The township of Woodbridge is named after Reverend John W. Woodbridge (1613-1691) of Newbury, Massachusetts. Woodbridge Township was incorporated by an Act of the New Jersey Legislature on February 21, 1798.

In the 1800's, the original boundaries of Woodbridge comprised the communities now known as Carteret, Rahway, New Dover, Oak Tree, Bonhamtown, Metuchen, Milton, Avenel, Colonia, Iselin, Menlo Park, Fords, Hopelawn, Keasbey, Sewaren, Port Reading, the eastern part of Raritan Township and Woodbridge proper. Portions of the township were taken to form Rahway (created in 1858), Raritan Township along with portions of Piscatawaytown and Metuchen (created in 1870, now Edison Township) and Borough of Roosevelt (created in 1906, now known as Borough of Carteret).

Today the Township is made up of five wards, the first ward consisting of Woodbridge and Sewaren; the second ward consisting of Fords, Hopelawn, and Keasbey; the third ward includes Avenel and Port Reading; the fourth ward consists of Iselin; and the fifth ward represents Colonia.

Important achievements in Woodbridge Township were the establishment of Jonathan Dunham's grist mill as the first industry in the Township in 1670, and the establishment of James Parker's print shop.

Woodbridge is also known for its fine clay deposits and its by-product, fire brick. In 1859, it is said that material for nearly 80,000,000 fire bricks was at that time being sent annually to the market from Woodbridge. In 1866, M.D. Valentine and James R. Valentine commenced business on the present site of the M.D. Valentine and Brothers Co. plant near Spa Spring in the manufacture of lath brick, for which J.R. Valentine had been granted a patent the previous year. By 1876, the plant had grown to such proportions that it was capable of making 4,000,000 of these bricks in a year. The original Valentine Brick Co. is now known as Valentine Div. A.P. Green Refractories Co.

Woodbridge has also been the hub of transportation since 1893, with the establishment of trolley line running on Rahway Avenue and Woodbridge Avenue from Rahway, through Sewaren to Perth Amboy. In 1929, the first Safety Engineered Super Highway intersection was built at the intersection of U.S. #1and N.J. #35 in Woodbridge. This is the first such intersection built in the United States or the world, known as Woodbridge Cloverleaf. When the N.J. Turnpike was opened in 1951, it created the famous intersection with the Garden State Parkway in Woodbridge. Woodbridge Township celebrated its Tercentennial in 1969.

Historic Sites and Districts

The historic sites and districts Woodbridge Township on the New Jersey and National Registers are listed below, with the last update from July 2006.

ID#	Site	Location	State/National Eligibility
1944	Barron Library	582 Rahway Avenue	NR: 11/11/1977 SR: 8/26/1977
3874	Garden State Parkway Historic District	Entire Garden State Parkway Right-of-Way	SHPO Opinion: 10/12/2001
1914	Inch Lines Linear Multistate Historic District	Extends through twelve municipalities in three counties	SHPO Opinion: 8/13/1993
1839	Menlo Park Veterans Memorial Home	132 Evergreen Road	SHPO Opinion: 7/20/1994
3341	New Jersey State Reformatory (East Jersey State Prison)	Rahway Avenue	SHPO Opinion: 12/12/1991
3990	Overhead Contact System, Pennsylvania Railroad Company	Between Rahway, Union County and South Amboy, Middlesex County	SHPO Opinion: 4/26/2002
4187	Perth Amboy and Elizabethport branch of the Central Railroad of New Jersey		SHPO Opinion: 8/30/2000
4142	Port Reading Railroad Historic District		SHPO Opinion: 3/15/2002
1946	US Route 1 (5A) Bridge	US Routes 1, 1&9 (5A) over NJ Route 35	SHPO Opinion: 7/19/1991

ID#	Site	Location	State/National Eligibility
1947	US Route 9 Bridge (Edison Bridge) (SI&A#1209155)	US Route 9 over the Raritan River	SHPO Opinion:1/23/1992
4248	Trinity Episcopal Church	650 Rahway Avenue	NR: 5/12/2004 SR: 3/8/2004
3342	Cloverleaf of US Routes 1 & 9 over NJ Route 35 (SI&A#1205150)	US Routes 1 & 9 over NJ Route 35	SHPO Opinion: 7/19/1991
135	Vessel 16, Wooden Deck Scow	NJ side of Arthur Kill	SHPO Opinion: 7/23/1998
4594	Woodbridge Presbyterian Church and Cemetery	600 Rahway Avenue	COE: 4/13/2006

Although all the points of interests and historic landmarks of the Township are not listed in the national and/or state registers, several noteworthy architectural structures still exist. Some of these are:

Descriptions of Historic Buildings

Barron Art Center

On the State and National Register of Historic Places, the Barron Art Center is a public arts facility housed in a magnificent Richardsonian Revival building with stained glass windows and clock tower. Thomas Barron, a wealthy businessman and Woodbridge native, bequeathed $50,000 for the establishment of a library and public reading room. J. Cleveland Cady, a student of H.H. Richardson, served as architect for the structure, which was built in 1877 as the Barron Library. After a century, the library closed and the property was deeded to Woodbridge Township for use as an arts center.

Trinity Episcopal Church

On the State and National Register of Historic Places since 2004, and established in 1698, Trinity Church stands on the foundation of two previous buildings dating to 1711. The present building, built in 1860 and designed by C. Harrison Condit of Newark, is of the "Gothic Bell Cot" style and has been largely unaltered since it was built. The two previous buildings on this site were constructed in 1711 and 1756, the latter been destroyed by fire in 1858.

Woodbridge's first miller, Jonathan Dunham, built the house which is now Trinity Rectory in about the year 1670 from bricks which were brought from Holland. The parish acquired the home in 1872 at which time it was enlarged and renovated. The current house remains much the same as it was in 1872.

Cross Keys Tavern

The Cross Keys Tavern is the place where, as the first President of the United States, George Washington stayed the night of April 22, 1789, on his way from Mount Vernon, Virginia to New York City for his inauguration. The building has since been moved one block north from its original location at the corner of Main Street and Amboy Avenue, and is among the oldest remaining historic structures in Woodbridge Township. It stands virtually unnoticed today.

Old White Church

One of the oldest churches in American Protestantism, the First Presbyterian Church of Woodbridge stands on a site dedicated to divine worship since the 17th century. Fondly known as "The Old White Church", and a prominent landmark in the Township, its origins can be traced to 1675, a few years after Woodbridge was chartered. The church and cemetery are listed on the State Register of Historic Places.
they areawaiting notification for listing in the National Register.

First Congregational Church

The First Congregational Church of Woodbridge was organized September 30, 1874. It was an off-shoot of the First Presbyterian Church after about thirty of the Presbyterian members wanted to go back to the "old ways" which their ancestors had followed in Massachusetts during the 17th century. The first church services were held in the old Masonic Hall on Green Street and Rahway Avenue until the present edifice was completed in 1875.

Campbell/Hoy House

Campbell/Hoy House is located at 65 Green Street. The structure is important as an example of early construction in the Township - windows contain the original glass; the door knobs are china; and the original locks can be seen on most of the doors. The structure is clapboard and the walls are lined with handmade bricks.

Woodbridge Methodist Church

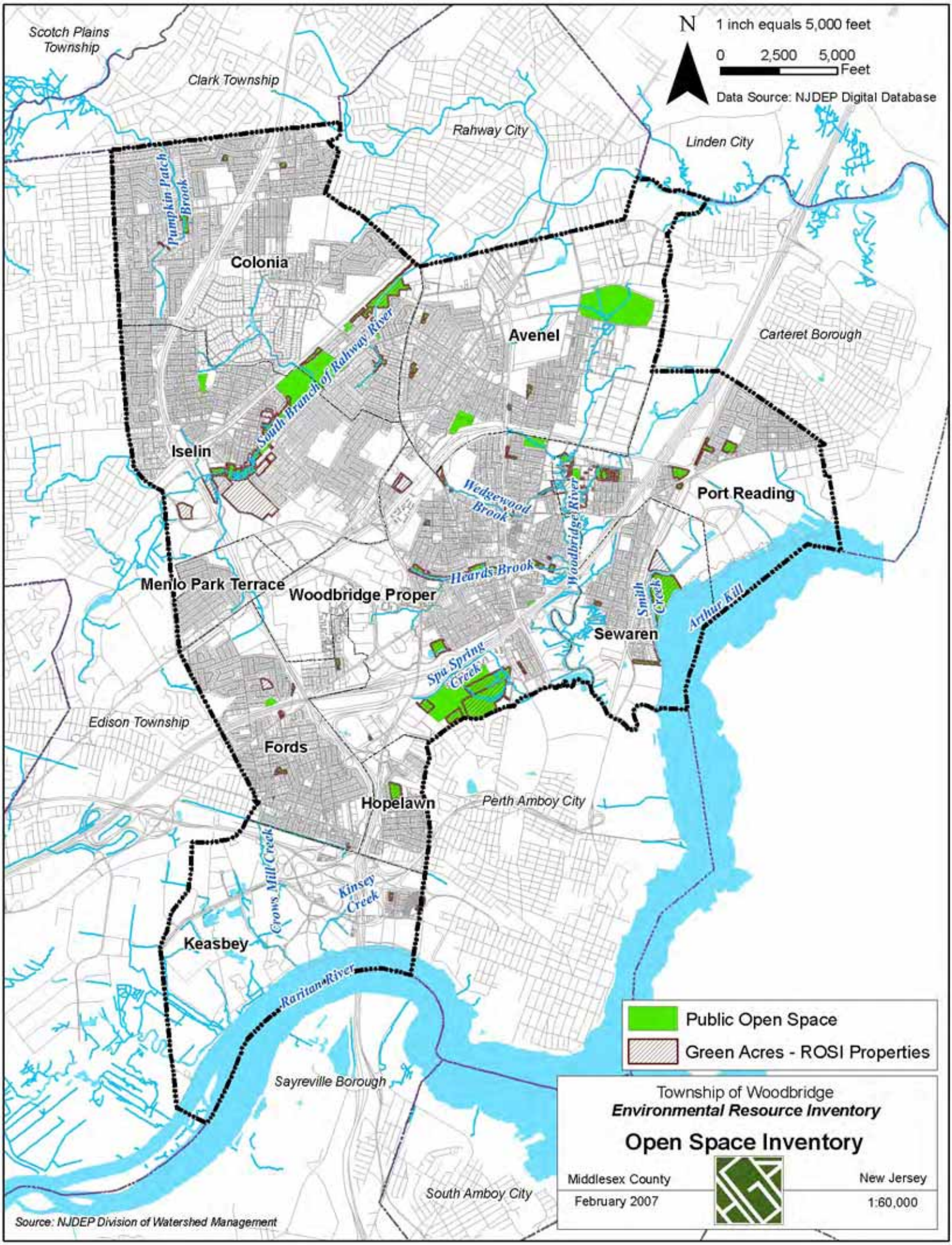
The Perth Amboy Society of Friends (Quakers) moved to Woodbridge in 1686 and met in members' homes. In 1713 they constructed a Meeting House at 71 Main Street. The Quaker Burial Ground, containing the Quaker tradition of the time, unmarked graves, was located behind the Meeting House and dates from 1707. In 1822 the old Methodist Episcopal Church Parsonage was built on the same site of the 1713 Quaker Meeting House.

While Methodism was active in Woodbridge in the late 18th Century, the first Methodist Episcopal Church building was built on the adjoining property at 69 Main Street in 1832. Later destroyed by fire, the corner stone of the present church structure was laid on June 2, 1870. This building is surrounded by now unmarked Methodist graves including the remains of Woodbridge Patriot Janet Pike Gage, who died in 1821, her Tory husband, Philip Gage, who died in 1780 and their son Thomas, who died in 1793.

The front entrance tower of this church contains original stained glass windows, saved from another disastrous fire in 1954. The restored church structure contines in use today.

Parker Press

James Parker, born in 1714, was apprenticed to Benjamin Franklin and William Bradford and later opened a printing office on his father's land, located where St. James Roman Catholic Church now stands at Amboy Avenue and Main Street. The shop was destroyed by the British in 1777. Evidence of the shop being at this location was unearthed when the church was relocated from upper Main Street to its present site. Besides being New Jersey's first printer and the state's official printer until his death in 1770, Parker was the first printer in Connecticut where he founded the "Connecticut Gazette" in New Haven in 1755.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Data Source: NJDEP Digital Database
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Heards Brook
Smith Creek
Arthur Kill
Spa Spring Creek
Crows Mill Creek
Kinsey Creek
Raritan River
Public Open Space
Green Acres - ROSI Properties
Township of Woodbridge
Environmental Resource Inventory
Open Space Inventory
Middlesex County
New Jersey
February 2007
1:60,000
Source: NJDEP Division of Watershed Management

PARKS, RECREATION AND OPEN SPACE RESOURCES

Parks and recreation facilities play a central role in maintaining a Township's quality of life and contribute to a community's reputation as a desirable place to live and work. Such facilities provide an essential counterbalance for fully developed municipalities, providing residents with recreational opportunities, open space, social outlets and a refuge from the urban environment. Well-designed parks and recreation facilities also have the potential to function as a public common where residents may gather for civic and recreational purposes.

There are countless types of open space. Everyone has their own conception of what open space is and often times, many seemingly different types of open space occupy the same site. But open space generally falls into three categories that play individual roles within a community: active recreation (soccer fields, football fields, baseball and softball diamonds, running tracts, tennis courts, basketball courts, exercise trails, etc.); passive recreation (hiking trails, picnic areas, quite places, etc.) and natural resources protection (forest lands, wetlands, floodplains, steep slopes, stream corridors, etc.).

Woodbridge's lack of undeveloped parcels and large population generates a significant need for parks and recreation facilities as well as open space. It is the intent of Woodbridge to increase the availability of active and passive creation activities within the Township. However, because Woodbridge is almost fully built out, most new recreation facilities will, by necessity, be located within existing or renovated structures, on vacant parcels, or created through redevelopment within the Township.

The 1990 Master Plan identified a shortfall in the amount of park, recreation, and open space facilities in the Township when compared with National Recreation Association standards. A shortfall of 217 acres was estimated throughout the Township, yet, when the Township's individual neighborhoods were assessed, no deficiencies were found.

The Township of Woodbridge commissioned two subsequent updates to the 1990 Master Plan. The 1994 and 2003 Master Plan Reexaminations reported on the Township's progress in addressing the needs and recommendations of the 1990 plan. The 2003 Master Plan Reexaminations reported that in order to further the goal of "maintaining and upgrading existing recreation facilities within the Township" the Township has created a Township recreation center, developed the Township summer concert series, improved Fords Park, and developed the Sewaren Peninsula into a passive shore park. Most recently, the Township opened a popular skateboarding park in the Rahway Avenue Park.

EXISTING PARKS, RECREATION AND OPEN SPACE

To fully understand the nature of parks and open space in Woodbridge Township, it is important to inventory the existing park, recreation and open space facilities in the Township.

The inventory below lists the current parks and open space lands in the Township of Woodbridge, listing the parks and acreage of each facility. Park spaces are broken down by ownership/ operation, as Middlesex County, the Woodbridge School District, and Township of Woodbridge all operate park, recreation and open space facilities within the Township. In fully developed communities, education facilities often double as park/ recreation/ open space facilities, providing and important supplement to Township facilities. Park and recreation spaces are mapped by town, show the geographic distribution of these facilities. The inventory below includes all local, county, state, and federal parks located in Woodbridge.

Woodbridge Parkland Acreage by Town*

Town	Acreage
Avenel	125.1
Colonia	161.8
Fords	58.6
Hopelawn	7.1
Iselin	132.3
Keasbey	2.0
Menlo Park Terrace	10.2
Port Reading	97.2
Sewaren	56.8
Woodbridge Proper	253.3
Township Total	**904.4**

Woodbridge Parkland Acreage*					
Facility Name	**Town**	**Acreage**	**Facility Name**	**Town**	**Acreage**
Township Parks					**167.7**
Avenel Park	Avenel	13.0	Boynton Park	Port Reading	11.5
Fifth District Playground	Avenel	1.9	4th Street Playground	Port Reading	9.8
Prospect Park	Avenel	2.7	Saint's Field	Port Reading	3.0
Crystal Park	Avenel	1.5	Bowtie Municpal Complex	Port Reading	6.0
Pennsylvania Avenue Park	Avenel	0.6	West Avenue Park	Port Reading	0.8
Inman Park	Colonia	5.3	Captin Carlsen Park	Sewaren	3.6
Cameo Park	Colonia	1.0	Sewaren Boat Launch and Boynton Beach	Sewaren	2.2
Longhill Playground	Colonia	0.1	South Robert Street Park	Sewaren	0.9
Pennsylvania Avenue Park	Colonia	3.9	Municipal Marina	Sewaren	4.0
Valley Road Park	Colonia	4.2	Bucknell Playground	Woodbridge	1.1
East Williams	Fords	0.5	Bunns Lane Playground	Woodbridge	2.0
Quigley Park	Fords	3.2	Berry Street Playground	Woodbridge	0.9
Woodland Park	Fords	2.1	Parker Press Park	Woodbridge	2.2
Howell Avenue Playgorund	Fords	1.0	Lyman Playground	Woodbridge	0.9
Douglas Street Playground	Fords	0.0	Pearl Street Playground	Woodbridge	2.8
Highland Terrace	Fords	3.9	Regina Park	Woodbridge	8.3
Clyde Avenue Park	Hopelawn	7.1	Strawberry Hill Playground	Woodbridge	1.3
Kennedy Park	Iselin	4.8	Van Buren Fields	Woodbridge	4.1
Keasbey Park	Keasbey	1.0	Mobile Street Park	Woodbridge	24.7
Dino Drive Playground	Keasbey	1.0	Oak Street Park	Woodbridge	7.1
Wall Street Playground	Menlo Park Terrace	0.7	Rahway Avenue Park	Woodbridge	11.0

* All acreages are approximate

Woodbridge Parkland Acreage*					
Facility Name	**Town**	**Acreage**	**Facility Name**	**Town**	**Acreage**
School District Recreation Space					**216.1**
Avenel Middle School	Avenel	8.5	Woodbridge High School	Woodbridge	49.0
Colonia Middle School	Colonia	14.4	Mawbey Street school #1	Woodbridge	2.0
Hoffman Playground	Colonia	10.9	**County Parks**		**458.9**
Pennsylvania Avenue School	Colonia	4.7	Pin Oak Forest	Avenel	96.89
Lynn Crest School #22	Colonia	5.2			
Colonia High School	Colonia	15.5	Merrill Park	Colonia/ Iselin	179.0
Oak Ridge Heights School #21	Colonia	6.5	Fords Park	Fords	18.0
Fords Middle School	Fords	22.8	Warren Park	Woodbridge Proper	126.0
Lafayette Estates School #25	Fords	6.0	Sewaren Peninsula	Sewaren	39.0
Ford Avenue School #14	Fords	0.9	**Township Open Space**		**61.7**
Iselin Middle School	Iselin	19.0	Corielle Street Triangle	Fords	0.1
JFK High School	Iselin	19.0	64 Doulgas Street	Fords	0.1
Menlo Park Terrace School #19	Menlo Park Terrace	9.5	Hawthorne-Gaywood Lots	Colonia	0.6
Port Reading School #9	Port Reading	14.2	East Green Street	Woodbridge Proper	5.0
Birch Street	Port Reading	0.9	Freeman Street	Woodbridge Proper	5.0
Matthew Jago School #28	Sewaren	7.1	Woodbridge River Park	Port Reading	50.9
Grand Total *(Includes Township Owned Parks)*					***904.4***

* All acreages are approximate

Current Facilities

Avenel

Avenel has approximately 12.1 acres of parkland. The largest single park/ open space in Avenel is the Pin Oak Forest, open space that contains the Woodbridge River's head waters. This 96.8 acre open space was recently purchased by Middlesex County. Other open spaces are distributed throughout Avenel, most located in the existing residential neighborhoods in the southeastern portion of the community. While open space such as the Pin Oak Forest is valuable, the space is simply preserved open space, rather than a mixture of preserved areas for passive recreation and active recreation spaces such as play fields. Without the Pin Oak Forest, Avenel has approximately 28.3 acres of parkland. 8.5 acres of this parkland is the grounds of the Avenel Middle School. The remaining twenty acres is existing Township-owned parkland.

Colonia

With 161.8 acres of parkland, Colonia has the second highest park/recreation/ open space total of any town in Woodbridge. A significant portion of this total (approximately 55%) is Merrill County Park. Located in the southwestern part of Colonia, separated from the bulk of the town by both Route 27 and the Northeast Corridor line, Merrill Park is the largest single park space in the Township. Shared between Colonia and Iselin, the park and its many fields is a great asset, drawing users from surrounding municipalities.

Outside of Merrill Park, the remaining 72 acres of locally controlled parkland is primarily located on school properties throughout Colonia, including Colonia Middle School and High School. Scattered smaller community parks and open spaces, such as Inman Park, Pennsylvania Avenue Park, and Valley Road Park also dot residential neighborhoods. The particular concentration of parkland, schools, and other community facilities along Inman Avenue creates the basis for a network of linkages among the town's recreation facilities.

While not Township owned or operated, Colonia Country Club along Route 27 adjacent to the estate section of Colonia also represents an important open space parcel. Additionally, numerous stream and river corridors, such as the South Branch of the Rahway River and Pumpkin Patch Brook pass through Colonia. While recreation areas such as Merrill Park, Inman Avenue Park, and School #22 surround portions of these stream corridors, long portions of these corridors are surrounded by existing residential development.

Fords

Fords parkland (approximately 58 acres) is divided mainly between Fords Park, an 18 acre county park separated from the bulk of Fords by both the NJ Turnpike and the Garden State Parkway, and the 22.8 acres grounds of Fords Middle School. Combined, these two facilities comprise close to two-thirds of the towns total recreation space. Additional small neighborhood parks such as Douglas Street Playground, Howell Avenue Playground, and Woodland Park are scattered throughout town. Geographically, parkland and open space is spread throughout Fords, though the residential area north of the NJ Turnpike comparatively have more large recreation spaces than do those residents south of King Georges Road. The new Middlesex County Greenway runs along the southern boundary of Fords, with the existing East Williams Park providing a ready-made connection from the greenway into the neighboring residential neighborhoods. Fords is also home to the Township's Community Center along Woodbridge Avenue.

Hopelawn

Only one park is located in Hopelawn, the 7.1 acre Clyde Avenue Park. Located along Clyde Avenue, the 7.13 acre park includes two baseball fields, one basketball court, two tennis courts, one soccer field, and one playground. Clyde Park is the only park within the boundaries of the Hopelawn neighborhoods, although Warren Park in Woodbridge along Florida Grove Road is located near the northwestern portion of the neighborhood and also helps to address the local need for park space.

Iselin

The bulk of Iselin's parkland is located in three concentrated areas. The first is Merrill County Park, which cuts through the center of Iselin, along the Route 27 corridor. The second is the combined 36 acre grounds of JFK High School and Iselin Middle School. The third 4.8 Kennedy Park, located adjacent to Kennedy Park School #24. Combined, these three parks represent the whole of park and recreation space in Iselin. While parks are relatively evenly distributed throughout the area south of Route 27 and to some degree in the wedge between Route 27 and the Garden State Parkway, there are no park areas for the residential areas located between Wood Avenue and the Garden State Parkway. Additionally, there are few pocket parks in Iselin.

Keasbey

As a mostly industrial area, Keasbey contains only a few neighborhood parks located in the small residential area east of Route 440. In total 2 acres of parkland are located in Keasbey. The town is also served by the new Middlesex Greenway which runs along the northern boundary of the town.

Menlo Park Terrace

Physically the smallest town in Woodbridge, Menlo Park Terrace contains two recreation areas. The first is a pocket playground located along Wall Street. The second is the 9.5 acre grounds of Menlo Park Terrace School #19.

Port Reading

The 97 acres of parkland in Port Reading is divided into three basic groupings. The first is the 50 acre Woodbridge River Park, located in the largely wetlands constrained areas along the western edge of the town. The second grouping is the parks located at the intersection of West Avenue and Port Reading Avenue, including West Avenue Park and the Bowtie Municipal Complex. The third is a mix of parks located in the residential neighborhoods east of the West Avenue- Port Reading Avenue intersection. Combined, most residential areas of the town are well served with parkland.

Sewaren

The bulk of the parkland in Sewaren is located along the Arthur Kill waterfront. Waterfront parkland includes the new Alvin P. Williams Park created by Middlesex County along with the Buffer Strip Park, the Sewaren Boat Launch, and the Municipal marina. Additional parkland is located in the interior residential neighborhoods of Sewaren. In total the town has approximately 53 acres of parkland.

Woodbridge Proper

Woodbridge Proper has the most parkland within its bounds of any town, with 253 combined acres. This parkland includes a number of key town facilities in addition to county parks and wetlands constrained open space. The largest single park in Woodbridge, 126 acre Warren Park, is located in the southern portion of the town. Its location makes it a draw from nearby towns such as Hopelawn and other municipalities such as Perth Amboy. The linear parkland stretched along the banks of Heards Brook cuts through the middle of the town, drawing residents into the heart of downtown Woodbridge. A number of wetlands constrained open space parcels are located along the eastern border of the Town, adjacent to the Woodbridge River area. The large complex of Main Library, Woodbridge High School and Health Center along Route 35 in the northern part of the town provides a key civic hub. Additional Township-owned neighborhood parks and school-owned recreation areas dot residential neighborhoods.

Recreation Programs

Above and beyond the provision of recreation and open space areas throughout the municipality provided by the Township, the Board of Education, and the County, Woodbridge offers a wide array of recreational programs throughout the year. Different program sets are offered in each of the four seasons (spring, summer, fall and winter).

The majority of activities offered in the winter season are held indoors, except for the Holiday Parade and the Menorah Lighting. Therefore, the Recreation Department relies heavily on cooperation from the Board of Education to accommodate the various programs. Winter programs include adult and youth karate, basketball, co-ed volleyball, ice-staking, roller skating, bowling, and ballet. Some programs, such as adult and youth karate, pre-school fun with arts and crafts, co-ed volleyball, and skating require the payment of fees for participation, ranging from $175 per team for co-ed volleyball to $6 for admission to

the roller rink and skate rental. In addition to the above winter season programs, the Township also offers many holiday season related activities including a snow sculpture contest, pictures with Santa, and an annual trip to New York City.

Spring programs are a mix of winter indoor and summer outdoor activities. Programs such as bowling, roller and ice skating, and karate are carried over from the winter while additional programs such as "triples" outdoor volleyball, an adult softball league, and buddy-ball basketball are added. Special spring season activities include an Easter parade, an Easter egg hunt, and youth in government day.

The summer season is by far the largest for the Township Recreation Department, offering the Summer Day Camp, the Summer Sports Camp, the Mayor's Summer Concerts and other high profile events. Started in 1999, the Mayor's Summer Concerts is a series of free family oriented concerts accompanied by a food court and games. The concerts occur at the Woodbridge High School. Past acts have included The Platters, Brooklyn Bridge, and the Duprees. The Movie-In-The-Park event run by the Youth Recreation Advisory Committee with the help of Federal Express has also been quite successful. During the summer families can come out to Williams Park and enjoy a movie in the park.

In addition to the previously mentioned activities, Summer Season events include youth tennis, walk for your health in Merrill Park, bowling, and buddy-ball baseball. The Recreation Department also offers assorted trips, including professional baseball games, the Baltimore Harbor, New York City, and Atlantic City. From Memorial Day to Labor Day the Municipal Boat Launch in Sewaren is manned by the Harbor Master. Fall season activities include street hockey, bowling, karate and seasonal activities like pumpkin painting and hayrides.

Information regarding Township-run recreation programs is distributed through a variety of media. Flyers and brochures are available at schools, libraries, and senior buildings. Additionally, the newspaper ads and articles are also published for some programs. The local television network, WTT-35, provides an excellent outlet for recreation information, including use of the bulletin board and the appearance of the Director of Recreation on the "About the Town" program.

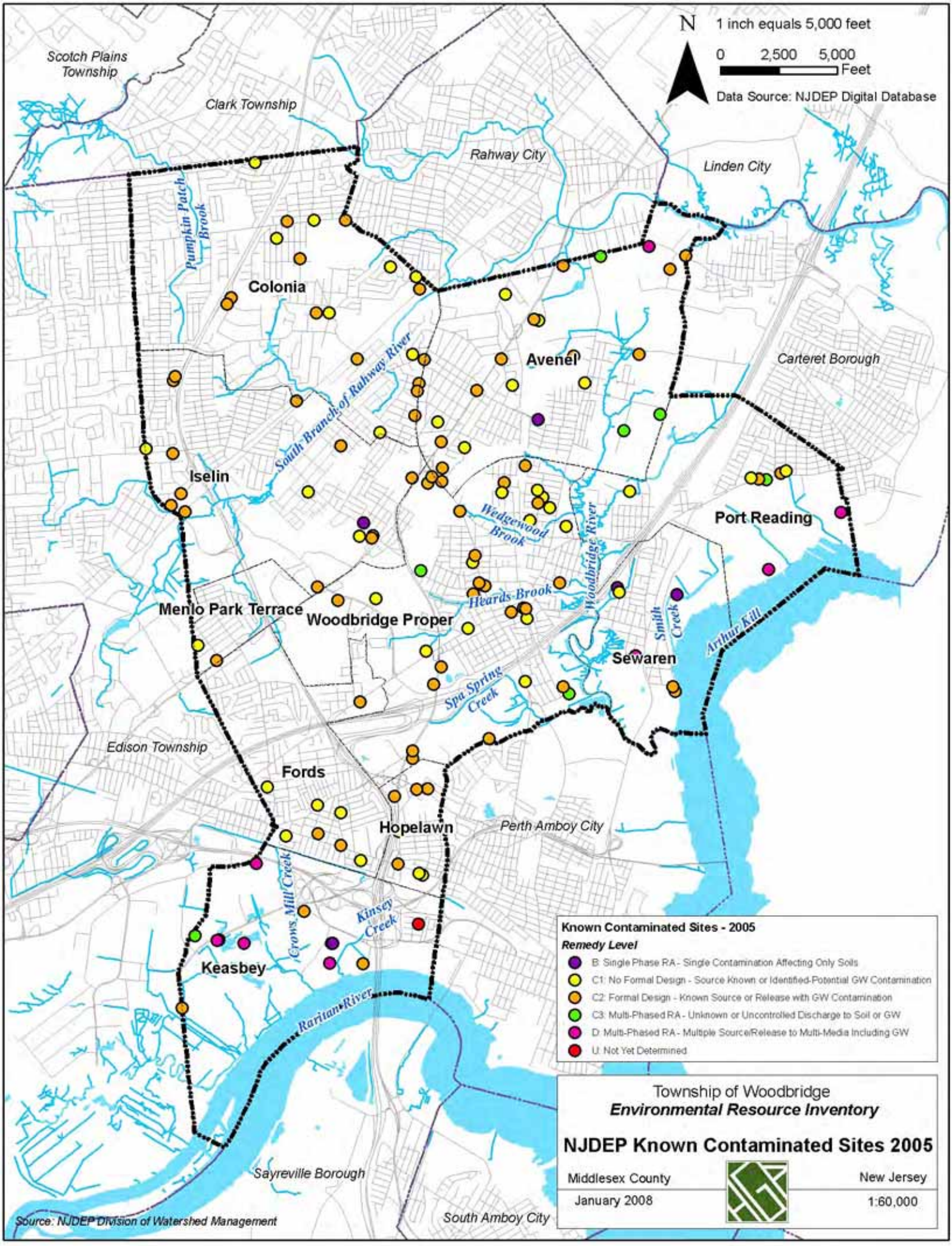
Planned Facility Improvements

The Township strives to improve both Woodbridge's recreation facilities as well as its offerings. In recent years

In 1995 the Recreation Department sought to further improve the range of Township recreational activities, increasing offerings for the physically and mentally challenged. Out of the recognition that the Township needed to provide more specialized recreational activities, a whole cadre of "buddy ball" youth sports including baseball, bowling, soccer, hockey, basketball, and swimming. Building on the success of "buddy ball" adult special recreation leagues for softball, volleyball and basketball were formed.

Similarly, the Recreation Department and the Township as a whole has south to improve the selection of age-specific recreation offerings. To this end, the Township has added the variety of adult recreational leagues, including the Woodbridge Township Softball League, which is among the largest in the state, using six fields and a computerized scheduling system. The recent improvements to Rahway Avenue Park are also endemic of the Township's focus on creating activity opportunities for residents of all ages. The new Stake board park at Rahway Avenue replaced the existing three tennis courts.

To build on improvements in the recent past, the Township has identified prospective projects to improve the quality of the parks and recreation facilities in Woodbridge. Many of these proposed improvements are in a similar vein to the past focus on improving the usability of parks for all age groups. The Township is currently working with the Board of Education to create a "Boundless Playground." Such a facility would be a completely ADA compliant playground. The Township is also working to add a pocket park adjacent to the Woodbridge Community Center. The additional parkland would both serve to meet the stated concern about a lack of outdoor recreation space connected to the Community Center in addition to providing additional space to assist the Township's Summer Day Camp held at the Community Center. Many of these proposed improvements are being funded through a $500,000 grant received by the Township from the Middlesex County Open Space, Recreation, Farmland and Historic Preservation Trust Fund in 2007.


N
1 inch equals 5,000 feet
0 2,500 5,000
Feet
Data Source: NJDEP Digital Database
Scotch Plains Township
Clark Township
Rahway City
Linden City
Pumpkin Patch Brook
Colonia
Avenel
Carteret Borough
South Branch of Rahway River
Iselin
Wedgewood Brook
Woodbridge River
Port Reading
Menlo Park Terrace
Woodbridge Proper
Heards Brook
Smith Creek
Arthur Kill
Sewaren
Spa Spring Creek
Edison Township
Fords
Hopelawn
Perth Amboy City
Crows Mill Creek
Kinsey Creek
Keasbey
Raritan River
Sayreville Borough
South Amboy City
Known Contaminated Sites - 2005
Remedy Level
B: Single Phase RA - Single Contamination Affecting Only Soils
C1: No Formal Design - Source Known or Identified-Potential GW Contamination
C2: Formal Design - Known Source or Release with GW Contamination
C3: Multi-Phased RA - Unknown or Uncontrolled Discharge to Soil or GW
D: Multi-Phased RA - Multiple Source/Release to Multi-Media Including GW
U: Not Yet Determined
Township of Woodbridge
Environmental Resource Inventory
NJDEP Known Contaminated Sites 2005
Middlesex County
New Jersey
January 2008
1:60,000
Source: NJDEP Division of Watershed Management

Brownfields and Known Contaminated Site

A brownfield is defined under NJ state law (N.J.S.A. 58:10B-23.d) as "any former or current commercial or industrial site that is currently vacant or underutilized and on which there has been, or there is suspected to have been, a discharge of a contaminant." While this is the definition recognized in state legislation, there are many variations on this definition. Generally, brownfields are properties that are abandoned or underutilized because of either real or perceived contamination.

Brownfields can be a mixed blessing. At best, they are an opportunity to turn blighted areas into community assets with much of the cost coming from state funds for brownfields' reclamation. At worst, they are contaminated sites without sponsors that hamper efforts for redevelopment, especially for any land use such as housing, schools or parks that would lead to human contact with the contaminants.

The NJDEP Site Remediation Program has an excellent website with information on brownfields (http://www.state.NJ.us/dep/srp/brownfields/). Much of the following information is from that website supported by information specific to Woodbridge Township.

The NJDEP oversees some 23,000 contaminated sites. An estimated 10,000 of these are potential brownfield sites. Many more potential brownfields that may exist in the State are not yet before the Department for review. The NJDEP Known Contaminated Site List for 2005 listed 160 contaminated sites in Woodbridge Township. Following the statewide estimate, those 160 sites could produce about 30 to 40 brownfield sites appropriate for redevelopment or recreation development in Woodbridge Township.

NJDEP launched the "Brownfields to Greenfields" initiative in November 2002. That initiative encourages the restoration of Brownfield sites into recreational or natural areas. If a municipality, county or partnership wants to turn a Brownfield into a Greenfield; experienced NJDEP case managers can oversee remediation and revitalization efforts to help the locality comply with the Technical Requirements for Site Remediation. Assurance that the public is protected from any exposure is a key concern addressed by long-term monitoring and maintenance of engineering and institutional controls when required. Funding for remediation and acquisition may be available from other parts of NJDEP, such as the Green Acres Program.

The NJDEP works with the NJ Economic Development Authority (EDA) in the implementation of the Hazardous Discharge Site Remediation Fund (HDSRF). The legislature created the HDSRF in 1993 to provide loans and grants to municipal governmental entities, the New Jersey Redevelopment Authority (NJRA), and private parties. HDSRF funding is devoted to remediating discharges of hazardous substances. Over the past ten years, the HDSRF provided over $100,000,000 for remediation of over 1,000 sites. Municipalities may apply for grants and loans up to $2 million per year for investigation and cleanup activities from the Hazardous Discharge Site Remediation Fund.

The New Jersey EDA plays a key role in financing these grants and loans, working with DEP to cover eligible costs and provide loan servicing. Grants are specifically provided to municipalities for a preliminary assessment (PA) and site investigation (SI) when a municipality holds the tax sales certificate or has foreclosed or has voluntarily acquired a property for redevelopment. Municipalities may obtain money to proceed with the remedial investigation (RI) if they own the property. (If, after conducting the PA/SI/RI, a municipality wants to conduct the cleanup, low interest loans are available).

Woodbridge Township could benefit from this program by identifying contaminated sites, notifying NJDEP case managers and coming up with a plan for remediation. Often, sites can be cleaned and capped, and new surfacing for recreation areas can effectively "seal" the area. Recreation uses are also desirable for brownfields because one of the main concerns over re-use of sites is exposure. Recreation uses are almost by definition short-term exposures, a couple of hours at most for any activity, whereas residential development on re-use sites is more problematic due to prolonged exposure times on remediated sites.

Existing Brownfields and Landfills

Brownfields and landfills, polluted by former or ongoing uses, hold the potential for recreational open spaces. The NJDEP and the USEPA list 252 potentially contaminated sites in Woodbridge Township.

Category	Number of sites
1. Known Contaminated Sites noted by NJDEP in 2005	160
2. Air Facility Subsystem for NJ	29
3. Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS)	7
4. Resource Conservation and Recovery Act for NJ (Generators, Transporters and TSDs)	36
5. Permit and Compliance System for NJ	14
6. Toxic Release Inventory (TRI) Reporting	6
Total	**252**

Several state and federal statutes regulate these sites, and a site can be regulated under more than one statute at the same time. The statutes are:

State

- Brownfield and Contaminated Site Remediation Act
- Industrial Site Recovery Act
- Solid Waste Management Act
- Spill Compensation & Control Act
- Underground Storage of Hazardous Substances Act
- Water Pollution Control Act Federal
- Comprehensive Environmental Response, Compensation and Liability Act (Superfund)
- Superfund Amendments and Reauthorization Act
- Resource Conservation and Recovery Act Corrective Action Program

New Jersey DEP Known Contaminated Sites List 2005

The KCS-NJ report is a list of sites where contamination of soil and/or ground water is confirmed at levels greater than applicable cleanup criteria or environmental standards. The data included in the KCS-NJ report are as of April 1, 2005. The KCS-NJ report is produced by the New Jersey Department of Environmental Protection (NJDEP) Site Remediation and Waste Management Program (SRWM) in response to state law N.J.S.A. 58:10-23.16-17, which requires the SRWM to prepare a list of sites that have been contaminated by hazardous substances. The report also satisfies obligations under the New Jersey New Residential Construction Off-Site Conditions Disclosure Act (N.J.S.A 46:3C1 et seq.).

Sites included in the KCS-NJ report can undergo a wide variety of remedial activities, ranging from relatively simple "cut and scrape" cleanups to highly complex cleanups. The sites with complex contamination issues can have several sources of contamination, which can affect both soil and ground water at the same time. Several groups or remedial bureaus within the Site Remediation and Waste Management (SRWM) Program manage these cleanups. It is possible for more than one bureau to be involved at one site at the same time. A site being regulated under more than one statute or regulation often drives this scenario. However, this report lists only the main contact bureau for the site. The link available within this web site, titled "What Contact Bureaus Do," explains what types of sites each bureau manages and lists phone numbers for each bureau. For further information contact NJDEP's Site Remediation and Waste Management (SRWM) Program lead units, which are identified with each site listed in this database. Contact information for SRWM's lead program can be acquired at http://www.state.NJ.us/dep/srp. Cases range in classification from B (single media contaminated, usually soils, and no ground water contamination) to D (multiple media contaminated, including ground water, with significant complexity and potential off-site contamination)

Bureau of Case Management oversees complex remedial activities that are conducted by responsible parties (usually current or former site owners or operators, but sometimes waste generators that are linked to pollution of a landfill or other contaminated site). In addition, BCM has the authority to use public funds for remedial activities, when responsible parties are recalcitrant or where immediate environmental concern situations exist and a willing or able

responsible party does not exist. These sites involve multiple environmental media and/or contaminants and include ground water contamination. Remedial activities are conducted under the federal Superfund program, the Resource Conservation and Recover Act (RCRA) Corrective Action program, the New Jersey's Brownfield and Contaminated Site Remediation Act, the Spill Compensation and Control Act, the Solid Waste Management Act and the Water Pollution Control Act. There are four such sites in Woodbridge.

PI Number	Name	Address	Source of Contamination
006148	Amerada Hess Corp	750 Cliff Rd	A: On-Site Sources Of Contamination
G000003943	Hatco Chemical Corporation	1020 Georges Post Rd	A: On-Site Sources Of Contamination
G000004599	Koppers Company Incorporated	Roosevelt Ave	A: On-Site Sources Of Contamination
005401	Oliver Mfg Supply Co	730 Port Reading Ave	A: On-Site Sources Of Contamination

Bureau of Southern Case Management primarily oversees environmental cleanups at sites subject to the Underground Storage of Hazardous Substances Act where remediation may involve soil and/or ground water. Sites under this program are also subject to the state's Brownfield and Contaminated Site Remediation Act, the Spill Compensation and Control Act, the Solid Waste Management Act and the Water Pollution Control Act. Woodbridge Township has several of these sites.

PI Number	Name	Address	Source of Contamination
031644	775 Port Reading Ave Corp	753 Port Reading Ave	A: On-Site Sources of Contamination
000877	Amoco Service Station 5141	700 Rte 1 N	A: On-Site Sources of Contamination
000879	Amoco Service Station 610	745 Green St & Rte 1	A: On-Site Sources of Contamination
001810	Amoco Service Station 955	1547 Oak Tree Rd	A: On-Site Sources of Contamination
015344	Amoco Station	Rt 27 Wood Ave	A: On-Site Sources of Contamination
005026	B&D Auto Repair Inc	705 Rte 27	C: Closed Sites with Restrictions
011320	Beth Israel Memorial Park	Rte 1 N & Gill Ln	A: On-Site Sources of Contamination
001196	Bp Service Station 1844	Rt 27 & Wood Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
001802	Bp Service Station 3909	886 Saint Georges Ave	A: On-Site Sources of Contamination
007782	Clover Leaf Memorial Park	Rte 1 S & St Georges Rd	A: On-Site Sources of Contamination
000530	Conocophillips Mobil 2634885	345 Rte 1 & Gill Ln	A: On-Site Sources of Contamination
225169	Cutters Dock Road	Cutters Dock Rd	A: On-Site Sources of Contamination
005298	Department Of Public Works	225 Smith St	A: On-Site Sources of Contamination
172945	E&B Inc	1153 Rahway Ave	A: On-Site Sources of Contamination
008364	Exxon R/S 32123	78 Gs Pwy S	A: On-Site Sources of Contamination
008365	Exxon R/S 32124	Gs Pwy & Sycamore Rd	A: On-Site Sources of Contamination
008660	Exxon S/S 32516	870 N Rt 1	A: On-Site Sources of Contamination
G000041138	Former Service Station	1090 Rte 1 N	A: On-Site Sources of Contamination
021998	Fritz Citgo Service Stati (Former)	1239 St Georges Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
014366	General Toyota Inc	100 Rt 1	A: On-Site Sources of Contamination
001731	Getty 00657	168 New Brunswick Ave	A: On-Site Sources of Contamination
006723	Gulf 120200	485 Amboy Ave & Green St	A: On-Site Sources of Contamination
006694	Hess Station 30216	Rte 9 N	A: On-Site Sources of Contamination
003217	Hess Station 30220	751 Port Reading Rd	A: On-Site Sources of Contamination
006693	Hess Station 30231	1215 Saint Georges Ave	B: Unknown Sources of Contamination
004879	Hopelawn Citgo	74 Pond Rd	A: On-Site Sources of Contamination
033887	Hosch Property	451 Rt 9	A: On-Site Sources of Contamination
160176	Howard Bus Co	898 Rt 1	A: On-Site Sources of Contamination
033114	Johnnys Service Center	723 King Georges Rd	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
159689	Main Street & Pearl Street	Main St & Pearl St	A: On-Site Sources of Contamination
226944	Medical Office Support Services	1280 Rt 27	A: On-Site Sources of Contamination
008689	Metro Iii Fuel Station	2540 Randolph Ave	A: On-Site Sources of Contamination
008547	Mobil 57256	Crowsmill Rd & New Brunswick	A: On-Site Sources of Contamination
022378	Polex Tire And Auto Center	95 To 97 New Brunswick Ave	A: On-Site Sources of Contamination
010146	Rs Oil Corp	685 Port Reading Ave	A: On-Site Sources of Contamination
007884	S&M Automotive	1001 Rte 1	A: On-Site Sources of Contamination
014367	Sansone Nissan Inc	90 Rt 1	A: On-Site Sources of Contamination
025295	Sansone Rt 1 Auto Mall	90 Rt 1	A: On-Site Sources of Contamination
033422	Seifert's Towne Garage	154 Amboy Ave	A: On-Site Sources of Contamination
007289	Sensible Auto Service Inc	Ford Ave & Lafayette Rd	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
005231	Shell Service Station	Rt 35 & Jansen Ave	A: On-Site Sources of Contamination
004713	Shell Service Station #138383	Rte 27 & Willow St	A: On-Site Sources of Contamination
005246	Shell Service Station 138384	82 Gs Pwy S	A: On-Site Sources of Contamination
003481	Shell Service Station 138427	Rte 1 & Menlo Ave	A: On-Site Sources of Contamination
005230	Shell Service Station 138555	7 Green St & Amboy Ave	A: On-Site Sources of Contamination
004628	Shines Service Station Rpm Automotive	348 Fulton St	A: On-Site Sources of Contamination
015793	Sterns Department Store	Rtes 1 & 9	A: On-Site Sources of Contamination
014843	Sunoco 0007-6497	501 Amboy Ave & Green St	A: On-Site Sources of Contamination
002350	T J Getty	166 New Brunswick Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
005655	T J Getty Service Station	168 New Brunswick Ave	A: On-Site Sources of Contamination
004877	Tauriello Enterprises T/A A&A Auto Repai	41 Main St	A: On-Site Sources of Contamination
005801	Waste Water Treatment Plant	Cliff Rd	A: On-Site Sources of Contamination
002776	Willard Dunham Construction Co	305 Kimball St	A: On-Site Sources of Contamination
012736	William Warren Cnty Pk	Florida Grove Rd	A: On-Site Sources of Contamination
013458	Woodbridge Citgo	615 Main St	A: On-Site Sources of Contamination
013898	Woodbridge Developmental Center	1275 Rahway Ave	A: On-Site Sources of Contamination
013217	Woodbridge Twp Sewaren Stp	Clf Rd	A: On-Site Sources of Contamination
014697	Yellow Freight System Inc (Avl)	943 Omar Ave	A: On-Site Sources of Contamination

Bureau of Operation, Maintenance & Monitoring oversees the long-term operations and maintenance of remedial actions such as ground water pump and treatment systems. BOMM also reviews biennial certification reports to ensure institutional controls, such as a Deed Notice and Classification Exception Area, remain effective.

PI Number	Name	Address	Source of Contamination
G000000448	Ashland Chemical Company	Meadow Rd	A: On-Site Sources of Contamination
001036	Elizabethtown Gas Co	1 Brown Ave	C: Closed Sites with Restrictions
002113	Engelhard Corp	25 Middlesex Essex Tpke	C: Closed Sites with Restrictions
008363	Exxon R/S 32119	270 Inman Ave	A: Sites with On-Site Sources of Contamination
031383	Frystock Jeep Eagle	1305 St Georges Ave	C: Closed Sites with Restrictions
000171	Frystock Sales & Service Corp	1305 St Georges Ave	C: Closed Sites with Restrictions
033831	Gem Realty	835 Route 1	A: On-Site Sources of Contamination
001625	Getty 56896	1131 Saint Georges Ave	A: On-Site Sources of Contamination
013316	Grover Cleveland Svc Area 10n	NJ Tpke Mm 92.9	A: On-Site Sources of Contamination
003216	Hess Station 30215	Rte 9 S	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
G000015135	Praxair Incorporated	Crows Mill Rd	A: On-Site Sources of Contamination
006457	Reppad Inc	835 Rt 1 South	A: On-Site Sources of Contamination
011689	Shell Service Station #100120	85 Gs Pwy	A: On-Site Sources of Contamination
005212	Shell Service Station 138380	Rte 184 E & Laurel St	A: On-Site Sources of Contamination
020643	St Gertrude Cemetery	53 Inman Ave	A: On-Site Sources of Contamination
013317	Thomas Edison Service Area 10s	NJ Tpke Mm 92.9	A: On-Site Sources of Contamination
014605	Woodbridge Motor Pool & Adm Offices	Gs Pwy Mp 1290	A: On-Site Sources of Contamination
019758	Woodbridge Tower	Gs Pwy Mp 129.0	A: On-Site Sources of Contamination

Bureau of Field Operations – Southern (BFOS) is responsible for overseeing the remediation of sites located in counties of southern New Jersey, including Middlesex. The types of cleanups handled by BFO-S are considered moderate in remedial complexity, ranging from the remediation of a single source of contamination to several sources. The cleanup may include ground water contamination. Remediation are conducted, by responsible parties, under the state's Brownfield and Contaminated Site Remediation Act, the Spill Compensation and Control Act, the Solid Waste Management Act, the Water Pollution Control Act, the Industrial Site Recovery Act and the Underground Storage of Hazardous Substances Act.

PI Number	Name	Address	Source of Contamination
G000062059	10 Hagaman St	10 Hagaman St	A: On-Site Sources of Contamination
G000062652	11 Vanderbilt Place	11 Vanderbilt Pl	A: On-Site Sources of Contamination
217513	11 Warner Street	11 Warner St	A: On-Site Sources of Contamination
G000060754	113 E Prospect Ave	113 E Prospect Ave	A: On-Site Sources of Contamination
G000060775	12 S Grant St	12 S Grant St	A: On-Site Sources of Contamination
G000060775	12 S Grant St	12 S Grant St	A: On-Site Sources of Contamination
230874	128 Cleveland Avenue	128 Cleveland Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
237568	13 Evergreen Avenue	13 Evergreen Ave	A: On-Site Sources of Contamination
G000032425	133 Ridge Road	133 Ridge Rd	A: On-Site Sources of Contamination
192169	138 Park Avenue	138 Park Ave	A: On-Site Sources of Contamination
217503	152 Pennsylvania Avenue	152 Pennsylvania Ave	A: On-Site Sources of Contamination
G000040138	162 Inman Ave	162 Inman Ave	A: On-Site Sources of Contamination
193018	165 Wedgewood Avenue	165 Wedgewood Ave	A: On-Site Sources of Contamination
245798	170 Edgar Street	170 Edgar St	A: On-Site Sources of Contamination
245798	170 Edgar Street	170 Edgar St	A: On-Site Sources of Contamination
208200	194 South Hill Road	194 S Hill Rd	A: On-Site Sources of Contamination
G000030530	201 Campbell Street	201 Campbell St	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
G000043242	215 Main St	215 Main St	A: On-Site Sources of Contamination
213212	218 Wood Avenue	218 Wood Ave	A: On-Site Sources of Contamination
G000035786	31 Runnymede Road	31 Runnymede Rd	A: On-Site Sources of Contamination
173067	36 Tanglewood Lane	36 Tanglewood Ln	A: On-Site Sources of Contamination
G000044061	427 Hudson Blvd	427 Hudson Blvd	A: On-Site Sources of Contamination
220542	45 Harrison Avenue	45 Harrison Ave	A: On-Site Sources of Contamination
224382	50 Clark Place	50 Clark Pl	A: On-Site Sources of Contamination
159532	52 Dewitt Terrace	52 Dewitt Ter	A: On-Site Sources of Contamination
159532	52 Dewitt Terrace	52 Dewitt Ter	A: On-Site Sources of Contamination
G000034450	550 Colonia Blvd	550 Colonia Blvd	A: On-Site Sources of Contamination
G000060274	62 Clinton Ave	62 Clinton Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
246756	662 Leone Street	662 Leone St	A: On-Site Sources of Contamination
246756	662 Leone Street	662 Leone St	A: On-Site Sources of Contamination
246503	67 Claire Avenue	67 Claire Ave	A: On-Site Sources of Contamination
246503	67 Claire Avenue	67 Claire Ave	A: On-Site Sources of Contamination
167036	707 Harrell Avenue	707 Harrell Ave	A: On-Site Sources of Contamination
224004	71 Lyon Avenue	71 Lyon Ave	A: On-Site Sources of Contamination
233211	75 Creemer Avenue	75 Creemer Ave	A: On-Site Sources of Contamination
233255	767 Middlesex Avenue	767 Middlesex Ave S	A: On-Site Sources of Contamination
235804	785 Harrell Avenue	785 Harrell Ave	A: On-Site Sources of Contamination
G000062255	96 Main St	96 Main St	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
034092	A&P Shopping Center	St George & Amboy Aves	C: Closed Sites with Restrictions
023562	Allied Old English Inc	100 Markley St	A: On-Site Sources of Contamination
034051	Budget Motor Lodge Inc	350 Rte 9 N	A: On-Site Sources of Contamination
022002	Edward A Cantor Affiliated Inter	20 Production Way	A: On-Site Sources of Contamination
031897	Gerdau Ameristeel Keasbey South Yard	100 Bayview Ave	A: On-Site Sources of Contamination
G000031991	Industrial Highway Corporation	Crows Mill Rd	A: On-Site Sources of Contamination
031693	Kama Corp	30 Production Way	A: On-Site Sources of Contamination
032569	Mauro Motors	611 Amboy Ave	A: On-Site Sources of Contamination
171514	NJDOT Route 1 Section 7m And Route 1&9 Section	Rt 1 & 9 S	A: On-Site Sources of Contamination
017207	Olsen Towers	555 New Brunswick Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
G000043151	Plaza 75	75 New Brunswick Ave	A: On-Site Sources of Contamination
G000010109	Riverside Auto Parts	Leesville Ave	C: Closed Sites with Restrictions
G000030266	Sewaren Peninsula Marine Park	Cliff Rd	A: On-Site Sources of Contamination
032780	Stillman Buick	675 To 683 Port Reading Ave	A: On-Site Sources of Contamination
245322	Stolthaven Perth Amboy Inc Pipeline	State St	A: On-Site Sources of Contamination
G000028371	US Postal Service Woodbridge Township	450 New Brunswick Ave	A: On-Site Sources of Contamination
005295	Warehouse Former	350 Main St	A: On-Site Sources of Contamination
033554	Woodbridge Township Municipal Landfill	600 Main St	A: On-Site Sources of Contamination

Bureau of Northern Case Management (BNCM) (formerly BEECRA) primarily oversees the remedial activities conducted in accordance with New Jersey's Industrial Site Recovery Act. This law is triggered by the sale or transfer of a property that either has or has had a regulated industrial or commercial activity, with the requirement that contamination be addressed before the new owner receives full responsibility for the property. The environmental complexity varies at these sites from soil contamination to complex ground water remediation. Sites under this program are also subject to the state's Brownfield and Contaminated Site Remediation Act, the Spill Compensation and Control Act, the Solid Waste Management Act and the Water Pollution Control Act. As an area with significant industry, much of which was built prior to modern waste management regulations, Woodbridge has a number of sites being handled under this program.

PI Number	Name	Address	Source of Contamination
G000002510	A J Ross Logistics Incorporated	100 Bayview Ave	A: On-Site Sources of Contamination
G000002870	Alcan Building Products	11 Cragwood Rd	A: On-Site Sources of Contamination
003382	American Cyanamid Company	35 Cutters Dock Rd	A: On-Site Sources of Contamination
002279	Economics Laboratory Inc	255 Blair Rd	A: On-Site Sources of Contamination
005917	General Dynamics Electro Dynamic	150 Avenel St	A: On-Site Sources of Contamination
G000004372	M & T Chemicals Incorporated	Woodbridge Ave & Randolph Ave	A: On-Site Sources of Contamination

PI Number	Name	Address	Source of Contamination
G000003338	Mckesson Chemical Company	160 Essex Ave E	A: On-Site Sources of Contamination
G000001659	Nuodex Inc	Industrial Hwy	A: On-Site Sources of Contamination
G000002706	PMC Specialties	20 Industrial Ave	A: On-Site Sources of Contamination
G000015133	Praxair Incorporated	Industrial Hwy	A: On-Site Sources of Contamination
030319	Pride Solvents & Chemical Co NJ	211 Randolph Ave	A: On-Site Sources of Contamination
G000003843	Royal Petroleum Corporation	115 State St (Cliff Rd)	A: On-Site Sources of Contamination
G000005141	Sherwin Williams Company	Industrial Hwy	A: On-Site Sources of Contamination
012611	The Carborundum Co	75 Crows Mill Rd	A: On-Site Sources of Contamination
G000041281	Twin Bridge Incorporated	1000 Industrial Ave	A: On-Site Sources of Contamination

County Environmental Health Agency (CEHA) NJDEP has authorized certain county health departments to oversee remedial activities that involve residential home heating oil tanks that have not impacted ground water. However, No Further Action letters are still issued by the Department. The participating counties are Bergen, Camden and Hudson, but not Middlesex. In addition, all 21 counties are approved to receive certain low environmental concern cases for review and possible investigation when appropriate.

PI Number	Name	Address	Source of Contamination
G000040381	1 Ridgedale Road	1 Ridgedale Rd	A: On-Site Sources of Contamination
G000038064	130 Midfield Road	130 Midfield Rd	A: On-Site Sources of Contamination
G000032016	79 Craska Street	79 Craska St	A: On-Site Sources of Contamination

Initial Notice Section (INS) reviews initial applications and other administrative submissions for sites regulated under the Industrial Site Recovery Act and the Underground Storage of Hazardous Substances Act. If a site regulated under either of these two laws, has minimal environmental concerns and requires limited remedial measures, INS oversees the completion of these activities. If there are significant environmental concerns then INS forwards the case to the respective bureau based on the appropriate regulations. Only one site in Woodbridge Township is on the current listing.

PI Number	Name	Address	Source of Contamination
015352	Deepa Auto	770 Green St	A: On-Site Sources of Contamination

Bureau of Landfill & Recycling Management (BLRM) oversees the cleanup, closure and post-closure of solid waste landfills including long-term monitoring and maintenance as well as disruption approvals. Remedial activities are conducted under the New Jersey's Brownfield and Contaminated Site Remediation Act, the Spill Compensation and Control Act, the Solid Waste Management Act and Water Pollution Control Act. BLRM also oversees the remediation of landfill cases under the Voluntary Cleanup Program. There is only one such site listed in Woodbridge Township.

PI Number	Name	Address	Source of Contamination
000481	Woodbridge Sanitary Pottery Corp	500 Green St	A: On-Site Sources of Contamination

Case Assignment Section (CAS) assigns sites to the appropriate bureau within the Site Remediation and Waste Management Program and enters this information into the SRWM database. These assignments are based on regulatory requirements, environmental complexity, and the presence of an oversight document.

PI Number	Name	Address	Source of Contamination
G000043932	16 Atlantic Street	16 Atlantic St	A: On-Site Sources of Contamination

Office of Brownfield Reuse (OBR) coordinates the remediation and reuse efforts at abandoned or underutilized commercial or industrial sites where known or suspected contamination is a deterrent to redevelopment. As a member of the Governor's Brownfields Redevelopment Task Force and the Brownfields Interagency Team, OBR works closely with other State agencies to promote the redevelopment of brownfield sites and encourage Smart Growth practices. OBR staff also manages area-wide remediation projects, which include designated Brownfield Development Areas, and innovative pilot approaches to expedite the revitalization process such as the Cleanup Star Program. Only one site in the Township is listed with the OBR.

PI Number	Name	Address	Source of Contamination
007002	CP Chemicals Inc	7 Arbor St	A: On-Site Sources of Contamination

United States Environmental Protection Agency (USEPA) Contaminated Sites Inventory

The EPA uses a wide variety of data to support environmental analysis and decision making. In Region 2 (New York, New Jersey, Puerto Rico and the United States Virgin Islands), GIS staff have work closely with other organizations at the local, state and federal levels to share or jointly develop critical data sets for environmental analysis.

The Environmental Protection Agency (EPA) is responsible for environmental oversight over a variety of industrial activities under many federal statutes including the Clean Air Act (CAA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and Emergency Planning and Community Right-to-Know Act (EPCRA). These facility layers include the best available locations from EPA's Envirofacts, EPA's Facility Registry System (FRS), other EPA data systems, or enhanced points determined by EPA Region 2 staff.

- Aerometric Information Retrieval System/AIRS Facility Subsystem (AIRS/AFS) Permits in EPA Region 2 (Clean Air Act)
- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Facilities in EPA Region 2 (Comprehensive Environmental Response, Compensation, and Liability Act)
- CERCLIS National Priority List (NPL) sites in EPA Region 2
- Permit Compliance System (PCS) Pipes in EPA Region 2 (Clean Water Act)
- Permit Compliance System (PCS) Facilities in EPA Region 2
- Resource Conservation and Recovery Act (RCRA) Permits in EPA Region 2: All Facilities
- RCRA Permits in EPA Region 2: Hazardous Waste Generators
- RCRA Permits in EPA Region 2: Hazardous Waste Transporters
- RCRA Permits in EPA Region 2: Treatment, Storage and/or Disposal Facilities

- Toxic Release Inventory (TRI) Reporting in EPA Region 2 (Emergency Planning and Community Right-to-Know Act)
- EPA Region 2 Surrounding Six States Regulated Facility GIS Information layer: All facilities

Air Facility Subsystem, NJ

The system contains the locations of stationary sources of air pollution that are regulated by the U. S. EPA, state and local air pollution agencies based on Aerometric Information Retrieval System - Air Facility Subsystem (AIRS/AFS) maintained by the US EPA. This information is used to prepare State Implementation Plans (SIPs), to track the compliance status of point sources with various regulatory programs, and report emissions estimates for pollutants regulated under the Clean Air Act.

Air Facility Subsystem, NJ

Registry ID	Name	Address	Interest Type
110000319245	Alpha Assoc	2 Amboy Ave	Air Synthetic Minor
110001528099	Amerada Hess ; Mobile Treatment Svc Unit	1 Hess Plaza	Air Minor
110007138178	Bayshore Recycling	Crows Mill Road	Air Major
110001534858	Coastal Steel	411 Blair Road	Air Minor
110014866118	Colonial Pipeline	400 Blair Road	Air Major
110010354035	Consolidated RR	Port Reading Ave	Air Minor
110001534411	Continental Plastics And Chem	10 Production Way	Air Minor
110000319254	Cutters Dock Properties	35 Cutters Dock Road	Air Minor
110001543438	Dryclean Amer	10 Main St	Air Minor
110004151756	Elite Tailors And Cleaners	615 Rahway Ave	Air Minor
110004141045	Emerson Quiet Kool	400 Woodbine Ave	Air Minor
110001534457	Food Concentrates In	1303 Rahway Ave	Air Minor
110000498293	Harvest Time Bread/Haagen Dazs	1 Amboy Ave	Air Minor, Air Synthetic Minor
110001535009	Lumured	292 Smith St	Air Minor
110011388202	M And T Chemicals	1 Woodbridge Center	Air Minor
110000500930	Mauser	14 Convery Blvd	Air Major
110001541047	Metro Cleaners	37 Gill Lane	Air Minor
110001981188	Middlesex County Pub	1 Hoover Way	Air Minor
110004193266	Middlesex County Vo Tech High School	1 Convery Blvd	Air Synthetic Minor
110006706065	NJDHS Woodbridge Dev Ctr	1275 Rahway Ave	Air Major
110010283870	Portuguese Baking ; Lp	1 Amboy Ave	Air Synthetic Minor
110010428634	PQ	Paddock St	Air Synthetic Minor
110001535054	Reynolds Metals	433 Blair Road	Air Minor
110001539942	Ronson Liquid - Packaging Div	3 Ronson Road	Air Minor
110007138212	Toana Enterprises	Main St	Air Synthetic Minor
110001534901	Woodbridge Sanitary Pottery Slf	500 Green St	Air Synthetic Minor
110007702851	Zurn Industrial Center Inc. - Clutch Div	Main St And Route 9	Air Minor

Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) or Superfund for the United States

The CERCLIS Database is the Comprehensive Environmental Response, Compensation and Liability Information System that contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation. This program is also known as Superfund. However, there are no NPL Sites in Woodbridge Township.

CERCLIS Facilities

EPA Identifier	Name	Address	Status
NJD001732080	Air Products & Chemicals	1680 Oak Tree Rd	NFRAP
NJD002173151	American Cyanamid Co	Cutters Dock Rd	NFRAP
NJD000531855	Ashland Chemical Co	Meadow Rd	Other Cleanup Activity: State-Lead Cleanup
NJD002179679	Republic Wire Co	411 Blair Road	NFRAP
NJD980770671	Sherwin Williams	Industrial Highway	Other Cleanup Activity: State-Lead Cleanup
NJD980505861	Woodbridge Municipal Dump	Main St	NFRAP
NJD047500897	Woodbridge Plant - Econom	255 Blair Road	NFRAP

Resource Conservation and Recovery Act, NJ

RCRA regulates the management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks holding petroleum products or certain chemicals. Facilities are categorized as generators, transporters and transport-storage-disposal (TSD) facilities. As a municipality with many research and development firms and light and heavy industrial manufacturing, Woodbridge Township has many RCRA generators.

Permit ID	Name	Address	Interest Type
110006185261	Beth Israel Cemetery Assoc	Route 1 N / Woodbridge Center Drive	SQG
110004188281	Blair Distributors P D C	275 Omar Ave	SQG
110004118106	Boyd Robert Dr	410 Amboy Ave	-
110004119533	BP Service Station Number 3909	886 St George Ave	-
110004142179	Charles Schwenzer	767 St George Ave	-
110004207448	Cioffi J Leasing And Trucking	3 Pennval Road	-
110001534858	Coastal Steel	411 Blair Road	-
110014866118	Colonial Pipeline	400 Blair Road	Hazardous Waste Biennial Reporter, LQG
110000319254	Cutters Dock Properties	35 Cutters Dock Road	Hazardous Waste Biennial Reporter, TSD
110007940096	D I G S Auto Body	Route 9 S	-
110001543438	Dryclean Amer	10 Main St	-
110007696653	East Jersey State Prison Sign	Route 1 Rahway Ave	-
110004151756	Elite Tailors And Cleaner	615 Rahway Ave	-
110004141045	Emerson Quiet Kool	400 Woodbine Ave	-

Permit ID	Name	Address	Interest Type
110004174081	F Montecalvo Trucking	73 Prospect Ave	Transporter
110000319227	Fibrenetics	2 Cutters Dock Road	-
110004227603	Firestone Store	Woodbridge Ctr Drive Site 2	SQG
110014721239	Fords Cleaner	460 Rahway Ave	-
110004119579	Former Kawasaki Dealer C O Levin	877 St Georges Ave Bldg 877	-
110004208438	Former Power Gas Station	169 Brunswick Ave	-
110004170101	Fortunato Bros Auto Body	158 Amboy Ave	-
110004126357	Franks Garage	1 Jills Place	-
110006440627	Frystock Sales And Svc	1305 St George Ave	-
110004164341	Genna Cleaner	851 Rahway Ave	-
110004122388	Getty Svc Station Number 56896	1131 St Georges Ave	-
110000498293	Harvest Time Bread	1 Amboy Ave	Hazardous Waste Biennial Reporter, SQG
110004174768	High View Plaza and NJ Bell Tel	1000 Highview Drive	-
110007923550	Ho Ro Trucking	Route 9 N	-
110006087938	Home Depot	373 Route 9 S	CESQG
110006830545	Homestead Village Hotel	1 Hoover Way	-
110007697180	JC Penney Dept Store Number 1983 6	Woodbridge Ct Drive And	-
110004173643	Jiffy Lube King George	424 King George Road	-
110007935636	Lesliess Auto Body Jerico	Route 9 S	-

Permit ID	Name	Address	Interest Type
110004179656	Longhorn Fuel Oil	69 Caroline St	Transporter
110001535009	Lumured	292 Smith St	Transporter
110011388202	M and T Chemicals	1 Woodbridge Center	-
110004186531	M B I Transportation	402 Crickett Lane	-
110004189547	Mack Berkely Heights Warehouse	435 Blair Road	-
110007964499	Macys Store Number 9	Route 1 And 9 - Woodbridge Ctr	SQG
110004148413	Mauro Motors	611 Amboy Ave	-
110000500930	Mauser	14 Convery Blvd	Hazardous Waste Biennial Reporter, LQG
110004194434	McCann's Auto Body	738 Rahway Ave	SQG
110001541047	Metro Cleaner	37 Gill Lane	-
110001981188	Middlesex County Pub	1 Hoover Way	-
110004193266	Middlesex County Vo Tech High School	1 Convery Blvd	CESQG, Transporter
110006085182	Mobil Svc Station Number 2634885	345 Route 1	-
110004193667	Mrs. A Baradi	630 Trinity Place	-
110007704494	National State Bank	Moore Ave And Berry St	-
110007939963	NJ Dept Of Human Services	Rahway Ave	-
110004252843	NJ Highway Authority Woodbridge Bridge	Garden State Parkway Mi Post 131.7	SQG

Permit ID	Name	Address	Interest Type
110004252834	NJ Highway Authority Woodbridge Bridge Over Route 9	Garden State Parkway Mi Post 128.8 North Bound	SQG
110007939936	NJ Transit	Woodridge Rail Facility	SQG
110004213743	NJ Turnpike Authority	Maintenance Yard 5a	-
110004217525	NJ Turnpike Authority Interchange Number 11 Toll Plaza	NJ Turnpike M P 91.3	-
110004217776	NJ Turnpike Authority Maintenance District Number 5a	NJ Turnpike M P 90.0	-
110004217810	NJ Turnpike Authority Thomas Edison Svc Area 10s	NJ Turnpike M P 92.9	Hazardous Waste Biennial Reporter, LQG
110006706065	NJDHS Woodbridge Dev Center	1275 Rahway Ave	SQG
110000803587	NJDM and VA Woodbridge Armory Icrc	625 Main St	SQG
110007963515	NJDOT Structure 1234 156	Crows Mill Road Over Route 440	-
110007963524	NJDOT Structure 1234 157	Crows Mill Road Over Smith St	-
110007963533	NJDOT Structure 1234 158	Smith St Over Ramps Gl And Gm	-
110006087206	NJDOT Structure 1234 159	Ramp Gl Over Route 440 Mp 1.64	-
110007963542	NJDOT Structure 1234 160	Ramps Gm And Gn Over Route 440	-
110004236185	NJDOT Structure 1234 161	Ramp Gl Over Ramp Gk Mp 1.68	-

Permit ID	Name	Address	Interest Type
110007942593	NJDOT Woodbridge Maintenance Yard	373 Route 9	-
110004148967	P and P Bucceroni S S	575 Main St	-
110015673993	Paul's Trucking	301 Blair Road	-
110007945830	Prestige Cleaner	Route 9 And 184e	-
110004166697	Preston Trucking	821 St Georges Ave	-
110007953615	R And S Strauss	Route 9 And 440 Bradlees Plaza	SQG
110001535054	Reynolds Metals	433 Blair Road	-
110001539942	Ronson Liquid Packing Division	3 Ronson Road	-
110004170806	Royal Food Distributors	215 Blair Road	SQG
110004219783	Shell Svc Station Number 138555	480 Amboy Ave	SQG
110007955757	Shell Svc Station Number 9225 0500	Route 35 And Jansen Ave	SQG
110004118776	South Shore Caulking	3 Convery Blvd Ste 100	-
110007699847	Sunoco Service Station	Amboy Ave And St Joseph St	-
110004131706	Sunoco Service Station Number 0007 6497	501 Amboy Ave	CESQG
110004182795	Supermarkets General Grocery	301 Blair Road	CESQG
110007700648	Service Station	Main And Fulton St	-
110004195380	TASC Charles Trautwein	580 Amboy Ave	-
110004148422	Tide Cleaner	275 Amboy Ave	-

Permit ID	Name	Address	Interest Type
110014706238	Truclean Cleaner	828 King Georges Post Road	-
110007952689	Tx Eastern P L M And R 275	Route 35 St George Ave	-
110007952698	Tx Eastern P L Rte 1 Mlv Ln 20	Route 1	-
110007952670	Tx Eastern Pipeline Number 2263	Blair Road	-
110007952661	Tx Eastern Pl Rahway Riv Lns 1 2 And 20	Randolph Ave	-
110004177863	Verizon Comm ; Woodbridge Dsc	657 Fl Grove Road	-
110004177195	Verizon Comm ; Woodbridge Garage	138 Main St	-
110004177943	Verizon Comm ; Woodbridge Garage	441 Main St	-
110004177952	Verizon Comm ; Woodbridge Garage 1	92 Amboy Ave	-
110007949015	W T G Central	Route 1 And Gill Lane	-
110007961312	Wash-A-Rama	877 St Georges Ave And Route 1 Corner	-
110004182198	Woodbridge Auto Body	821 Rahway Ave	-
110004143132	Woodbridge Auto Sales	475 Rahway Ave	SQG
110004150221	Woodbridge Center	250 Woodbridge Center Drive	-
110004153941	Woodbridge Dodge	450 King Georges Road	SQG

Permit ID	Name	Address	Interest Type
110007947981	Woodbridge Gulf Service Station Number 120200	485 Amboy Ave And Green St	-
110004118142	Woodbridge Mach And Tool	259 Bergen St	-
110012239513	Woodbridge Towne Square	350 Main St	LQG
110007933237	Woodbridge Twp School Dist	School St	-
110007924602	Woodbridge Twp Garage	Upper Main St	SQG
110007970909	Woodbridge Twp School Dist	St George Ave And Kelly St	-
110007970874	Woodbridge Twp School Dist	Barron Ave And Green St	-
110004251522	WV Paint	75 Cutter Dock Road	-
110007702851	Zurn Ind ; Centric Clutch Div	Main St And Route 9	-

Abbreviations used: Interest Type:
LQG – Large Quantity Generators
SQG – Small Quantity Generators
CESQG – Compliance Exempt Small Quantity Generators
TSD – Treatment, Storage and Disposal
RCRA Generators

Permit ID	Name	Address	Interest Type
110000319245	Alpha Associates	2 Amboy Ave	Hazardous Waste Biennial Reporter, LQG
110001528099	Amerada Hess Woodbridge Office	1 Hess Plaza	LQG
110004226490	Amerada Hess Sta - Whse	405 Main St	CESQG

Permit ID	Name	Address	Interest Type
110006174040	Amerada Hess Sta 30216	Rte 9 N Block 243 Lot 2a	CESQG
110006818113	Bargain Brakes & Muffler	400 Amboy Ave	CESQG
110006185261	Beth Israel Cementary	Rte 1 N & Woodbridge Center Dr	SQG
110004188281	Blair Distributors P D C	275 Omar Ave	SQG
110014866118	Colonial Pipeline Company - Linden Jct.	400 Blair Road	Hazardous Waste Biennial Reporter, LQG
110004227603	Bridgestone Firestone Tire Store	Woodbridge Center Dr Site 2	SQG
110000498293	Haagen Dazs	1 Amboy Ave	Hazardous Waste Biennial Reporter, SQG
110006087938	Home Depot The 910	373 Rte 9 S	CESQG
110007964499	Macys Store #9	Rte 1 & 9 - Woodbridge Center	SQG
110000500930	Mauser Corp	14 Convery Blvd	Hazardous Waste Biennial Reporter, LQG
110004194434	Mccanns Auto Body Inc	738 Rahway Ave	SQG
110004193266	Middlesex County Votech	1 Convery Blvd	CESQG, Transporter
110004252843	NJ Hwy Auth - Woodbridge Gsp Brg 131.7	Gsp Mp 131.7 Gsp Over S Branch Of Rahway River	SQG
110004252834	Nj Hwy Auth - Woodbridge-Gsp Brg 128.8a	Gsp Mp 128.8 Gsp N Service Rd Over Nj Rte 9 S	SQG
110007939936	Nj Transit	Woodridge Rail Facility	SQG

Permit ID	Name	Address	Interest Type
110004217810	Nj Tnpk Auth - Thomas Edison S/A 10-S	Nj Tnpk M P 92.9	Hazardous Waste Biennial Reporter, LQG
110006706065	Woodbridge Developmental Center	Rahway Ave	SQG
110000803587	Woodbridge Armory	625 Main St	SQG
110007953615	R & S Strauss Store 48	Rte 9 & 440 Bradlees Plaza	SQG
110004170806	Royal Food Distributors Inc	215 Blair Rd	SQG
110004219783	Shell Oil Co	480 Amboy Ave	SQG
110007955757	Shell Oil Co	Rte 35 & Jansen Ave	SQG
110004131706	Sunoco Service Station	501 Amboy Ave	CESQG
110004182795	Supermarkets Gen Corp Grocery	301 Blair Rd - Grocery Distribution Center	CESQG
110004143132	Woodbridge Auto Sales	475 Rahway Ave	SQG
110004153941	Woodbridge Dodge Inc	450 King George Rd	SQG
110012239513	Woodbridge Towne Square	350 Main St	LQG
110007924602	Woodbridge Twp Garage	Upper Main St	SQG

RCRA Transporters

Permit ID	Name	Address	Interest Type
110001535009	LUMURED	292 Smith Street	Transporter
110004174081	F Montecalvo Trucking	23 Prospect Street	Transporter
110004179656	Longhorn Fuel Oil	69 Caroline Street	Transporter

Permit ID	Name	Address	Interest Type
110004196266	Middlesex County Vocational Tech High School	1 Convery Blvd	CESQG, Transporter

RCRA TSDs

Permit ID	Name	Address	Interest Type
110000319254	Cutters Dock Properties	35 Cutters Dock Road	Hazardous Waste Biennial Reporter, TSD

Permit and Compliance System, NJ

The Permit and Compliance System (PCS) contains data on the National Pollution Discharge Elimination Systems (NPDES) permit-holding facilities. PCS contains information on the permitted facility, compliance schedule, outfall schedule, permit limits, discharge monitoring reports, enforcement actions and violations. The PCS data layer was developed from EPA's PCS and Locational Data Implementation Plan (LDIP) databases. These facilities discharge treated effluent to surface waters, and are directly regulated by NJDEP through the NJ Pollution Discharge Elimination Systems (NJPDES) program.

Permit ID	Name	Address	Interest Type
110006704003	Avenel Auto Wreckers	20 Leesville Ave	NPDES Non-Major
110007138178	Bayshore Recycling	Crows Mill Road	NPDES Non-Major
110007138178	Bayshore Recycling	Crows Mill Road	NPDES Non-Major
110014866118	Colonial Pipeline	400 Blair Road	NPDES Non-Major
110014866118	Colonial Pipeline	400 Blair Road	NPDES Non-Major
110000319254	Cutters Dock Properties	35 Cutters Dock Road	NPDES Non-Major

Permit ID	Name	Address	Interest Type
110000319227	Fibrenetics	2 Cutters Dock Road	NPDES Non-Major
110000500930	Mauser	14 Convery Blvd	NPDES Non-Major
110006706065	NJDHS Woodbridge Dev Center	1275 Rahway Ave	NPDES Non-Major
110006706065	NJDHS Woodbridge Dev Center	1275 Rahway Ave	NPDES Non-Major
110015200806	NJDOC East Jersey State Prison	Rahway Ave	NPDES Non-Major
110001539942	Ronson Liquid Packaging Division	3 Ronson Road	NPDES Non-Major
110009837579	Shell Service Station Number 138427	Route 1 S/ Menlo Ave	NPDES Non-Major
110001534901	Woodbridge Sanitary Pottery Slf	500 Green St	NPDES Non-Major

Toxic Release Inventory (TRI) Reporting

The Toxics Release Inventory (TRI) is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

Permit ID	Name	Address	Contaminants
110000319245	Alpha Assoc	2 Amboy Ave	Antimony Compounds, Arsenic Compounds, Chromium Compounds (Except Chromite Ore Mined in the Transvaal Region), Decabromodiphenyl Oxide, Diisocyanates, Methyl Ethyl Ketone, Methylenebis (Phenylisocyanate), Toluene, Toluene-2,4-Diisocyanate, Xylene (Mixed Isomers), Zinc Compounds
110007138178	Bayshore Recycling	Crows Mill Road	
110001534411	Continental Plastics and Chemicals	10 Production Way	
110000319254	Cutters Dock Properties	35 Cutters Dock Road	
110000319227	Fibrenetics	2 Cutters Dock Road	Styrene
110000498293	Harvest Time Bread	1 Amboy Ave	
110011388202	M and T Chemicals	1 Woodbridge Ctr	
110000500930	Mauser	14 Convery Blvd	1, 2, 4-Trimethyl benzene, Acetone, Certain Glycol Ethers, Ethyl benzene, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, N-Butyl Alcohol, Toluene, Trichloroethylene, Xylene (Mixed Isomers)

Scenic Resources

Woodbridge Township regards its scenic views and historic places as an important natural resource and they are greatly valued. They provide opportunities for passive recreation and sightseeing with views of the New York City Skyline from Cliff Road in Sewaren and the Woodbridge River Walk Wildlife Sanctuary.

Scenic Drives are another important resource. It is important that wherever historical sites, parks and recreational and other public uses exist along a scenic drive that efforts be made to continue the scenic qualities of the drives and access ways leading into these historic, cultural and open space sites. The scenic drives could act as linkages within the Township's open space network.

There are several distinctive scenic resources that have been identified throughout Woodbridge Township. Scenic resources within Woodbridge Township include:

1. Woodbridge River Walk Wildlife Sanctuary
2. Pumpkin Patch Brook in Colonia
3. Heards Brook in Woodbridge
4. Downtown Shopping Districts in Woodbridge, Fords, Iselin, and Colonia
5. Merrill Park in Colonia

Policy initiatives such as ordinances or land development regulations could include standards designed to ensure preservation of the scenic value of designated sites and drives, such as identification of permissible adjacent land uses, location and heights of structure, establishment of "scenic easements", landscaping requirements, access controls, signage, and placement of utilities. Active beautification and management measures could include landscaping within the public right-of-way, establishment of speed limits along designated routes, the potential for multiple-use of a scenic roadway such as bikeways and pedestrian walkways, the design and placement of information and directional signs, and needed roadway improvements.