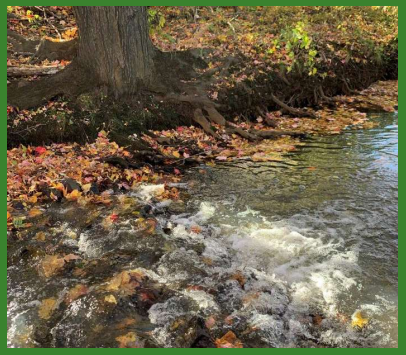
Mount Laurel Environmental Resource Inventory

Prepared for:

Township of Mount Laurel

750 Centerton Road

Mount Laurel, New Jersey 08054



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August 2022
Revised
October
2023

ACKNOWLEDGEMENT

T&M appreciates the opportunity to develop this Environmental Resource Inventory (ERI) for the Township of Mount Laurel. The ERI is intended to be a reference and a basis on which to plan for development and protect natural resources.

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TABLE OF CONTENTS

INTRODUCTION 6
ENVIRONMENTAL COMMISSION AND AUTHORITY FOR ENVIRONMENTAL RESOURCE INVENTORY 6
PURPOSE AND PROVISIONS 6
MOUNT LAUREL OVERVIEW 7
HISTORY OF THE TOWNSHIP 12
EARLY SETTLERS 12
19TH CENTURY MOUNT LAUREL 13
LAND COVER AND LAND USE 14
PHYSIOGRAPHY 21
GEOLOGIC FORMATIONS 21
SOILS 25
SOIL TYPES 25
AGRICULTURAL SOILS 29
SEPTIC SUITABILITY 30
SOIL EROSION 30
TOPOGRAPHY 31
STEEP SLOPES 31
IMPERVIOUS COVERAGE 31
WATERS AND HYDROLOGIC RESOURCES 35
SURFACE WATER 36
FLOODPLAINS AND STORMWATER 49
SURFACE WATER QUALITY 53
GROUNDWATER 58
POTABLE WATER 60
SANITARY SEWER 63
BIOLOGICAL RESOURCES 63
NATIVE AND LOCAL VEGETATION 65
MIXED HARDWOOD 68
FRESHWATER/PALUSTRINE FORESTED WETLAND 68
TIDAL HIGH MARSH 69
FRESHWATER/PALUSTRINE EMERGENT WETLAND 69
LATE SUCCESSIONAL FIELD 69
LAWN 70
SENSITIVE LANDSCAPE AND PRIORITY HABITATS 72
WILDLIFE 76
MAMMALS 76
BIRDS 78
FISH 80
REPTILES AND AMPHIBIANS 81
INVERTEBRATES 81
BUILT STRUCTURES AND THE ENVIRONMENT 82
HISTORICAL SITES 82
SIGNIFICANT STRUCTURES 86
CONTAMINATION AND KNOWN CONTAMINATED SITES 89
RADON 100
MOUNT LAUREL'S ENERGY USE 102
HOMEOWNER'S ASSOCIATIONS (HOAS) 104
OPEN SPACE AND RECREATION 107
DEVELOPMENT CONSTRAINTS 109
SUMMARY 110

FIGURES

- Figure 1: County Location Map
- Figure 2: Basemap
- Figure 3: Aerial Imagery (2020)
- Figure 4: Population Density
- Figure 5: Historic Map of Mount Laurel Circa 1876
- Figure 6: Land Use/Land Cover (2015)
- Figure 7: Zoning Map
- Figure 8: New Jersey's Physiographic Provinces
- Figure 9: Geology
- Figure 10: Soil Boring into Mapped Aldelphia Soil
- Figure 11: Soils Map
- Figure 12: Preserved Farmland – Intersection of Mount Laurel and Union Mill Roads
- Figure 13: Test Pit Soil Profile
- Figure 14: Topography
- Figure 15: Slope
- Figure 16: Impervious Surface Cover
- Figure 17: Watersheds
- Figure 18: Pennsauken Creek
- Figure 19: Rancocas Creek
- Figure 20: Waterbodies and Streams
- Figure 21: Flood Zone
- Figure 22: Freshwater Wetlands
- Figure 23: Flood Hazard Areas
- Figure 24: Pennsauken Creek AMNET Water Sampling Location
- Figure 25: Parkers Creek AMNET Water Sampling Location
- Figure 26: Stormwater Runoff Source - Inlet
- Figure 27: Irrigation Well
- Figure 28: Public Water Supply Wells
- Figure 29: Sewer Service Area
- Figure 30: General Species Mapped Habitat
- Figure 31: American Holly (*Ilex opaca*)
- Figure 32: Sweet gum (*Liquidambar styraciflua*)
- Figure 33: Red maple at North Branch Pennsauken Creek
- Figure 34: Sunflower (*Helianthus spp.*)
- Figure 35: Threatened and Endangered Species Habitat
- Figure 36: Bald eagle (*Haliaeetus leucocephalus)*
- Figure 37: White-tailed deer (*Odocoileus virginianus*)
- Figure 38: Woodchuck (*Marmota monax*)
- Figure 39: Goldfinch (*Spinus tristis*)
- Figure 40: Kildeer (*Charadrius vociferus*)
- Figure 41: Eastern box turtle (*Terrapene carolina carolina*)
- Figure 42 Black swallowtail butterfly (*Papilio polyxenes*)
- Figure 43: Historic Districts
- Figure 44 Historic Properties
- Figure 45: Mount Laurel Community Building
- Figure 46: Schools and Daycare Facilities
- Figure 47: Mount Laurel Library
- Figure 48: Known Contaminated Sites
- Figure 49: Above-ground storage tank
- Figure 50: Regional Eight-Hour Ozone Non-Attainment Areas
- Figure 51: Annual Average of Particulate Matter 2.5 ug/m3
- Figure 52: Radon Tiers Map– State of New Jersey
- Figure 53: Solar PV Grid Installations and at Community Facilities
- Figure 54: David Logar Memorial Field
- Figure 55: Deed-Restricted Open Space
- Figure 56: Laurel Acres Park

TABLES

- Table 1: General Population Data 2020
- Table 2: Land Use Category and General Land Type
- Table 3: Surficial Geologic Formations in Mount Laurel Township
- Table 4: Main Streams throughout Mount Laurel Township
- Table 5: All Stream and Water bodies within Mount Laurel Township
- Table 6: Description of wetlands in Mount Laurel Township
- Table 7: Floodplain Areas within Mount Laurel Township
- Table 8: Groundwater Recharge Areas in Mount Laurel Township
- Table 9: Common Plant Species
- Table 10: Potential Rare Species Habitat
- Table 11: Rare Wildlife Species
- Table 12: Common Mammal Species
- Table 13: Common Bird Species
- Table 14: Common Fish Species
- Table 15: Common Reptile and Amphibian Species
- Table 16: Listing of Historic Sites
- Table 17: Known Contaminated Sites
- Table 18: Listing of Current Effective USTs
- Table 19: Listing of Classification Exception Areas
- Table 20: Energy Use By Sector
- Table 21: Residential Energy Use By Source
- Table 22: Commercial & Industrial Energy Use By Source
- Table 23: Listing of HOAs

APPENDICES

- Appendix 1: Listing of Plant Species Found in Burlington County
- Appendix 2: References

INTRODUCTION

ENVIRONMENTAL COMMISSION AND AUTHORITY FOR ENVIRONMENTAL RESOURCE INVENTORY

Pursuant to State Law, N.J.S.A. 40:56A-1, and in accordance with Ordinance Chapter 22-1, the Township of Mount Laurel has the authorization to establish an Environmental Commission for:

> *"the protection, development, or use of natural resources, including water resources, located within the territorial limits of Mount Laurel Township and which shall be known as the "Mount Laurel Environmental Commission" ("Environmental Commission" or "Commission") and which shall be governed by the provisions of the aforementioned law and this chapter."*

As such the Mount Laurel Environmental Commission is given the authority and responsibility to create an Environmental Resource Inventory (ERI) through the basis of two laws including N.J.S.A. 40:56A as the Environmental Commission (EC) Enabling Legislation and at N.J.S.A. 40:55D-1 et. seq. under the Municipal Land Use Law (MLUL).

PURPOSE AND PROVISIONS

Under Ordinance Chapter 22-7.D, the Mount Laurel Environmental Commission (MLEC) shall:

> *"develop and maintain an inventory of all open space areas publicly or privately owned, including sensitive environmental features like streams, open marsh lands, swamps, wetlands and floodplains, as a resource for obtaining information on the proper use of such areas. It may recommend to the Planning Board plans and programs for inclusion in the Municipal Master Plan and for the development and use of such areas."*

Under the provisions reference above, this ERI is developed to present an inventory of the Township of Mount Laurel environs with regard to the following topics including township history, land use and cover, physiography, geology, soils, utilities and energy, waterways and waterbodies, biological and natural resources, flood hazard areas, the built environment, contaminated sites, open spaces and other preserved areas, conservation areas, and development constraints.

The ERI is intended to be a reference and a basis on which to plan for development and protect natural resources. It does not replace data which can be obtained through onsite testing and assessments. The document should be evaluated and updated periodically to reflect current conditions. The ERI is made available to the Township residents to through the Township website and in hardcopy at the Township office and municipal library.

MOUNT LAUREL OVERVIEW

Mount Laurel Township is located in Burlington County, New Jersey. It is situated in the southwestern portion of the state and is found at coordinates 39.948992°N, 74.900247°W. According to the United State Census 2020, the population is 44,633 persons, and is 21.99 square miles of land which includes 0.27 square miles of water. See ***Figure 1*** for County location and ***Figure 2*** as the Township Basemap showing the boundaries and roadways with the Township. ***Figure 3*** is an aerial photograph of the Township.

The Township is bordered by several Burlington County municipalities including Evesham Township, Hainesport Township, Lumberton Township, Maple Shade Township, Medford Township, Moorestown Township, Willingboro Township, and Cherry Hill Township in Camden County. Locales within the Township include Birchfield, Centerton, Colemantown, Coxs Corner, Fellowship, Hartford, Heulings Hill, Masonville, Petersburg, Pine Grove, and Rancocas Woods. ***Figure 4*** shows the population density of the Township to 2,055 persons per square mile (2020 United States Census). ***Table 1*** also provides the 2020 population totals for the Township and surround municipalities, along with population density.

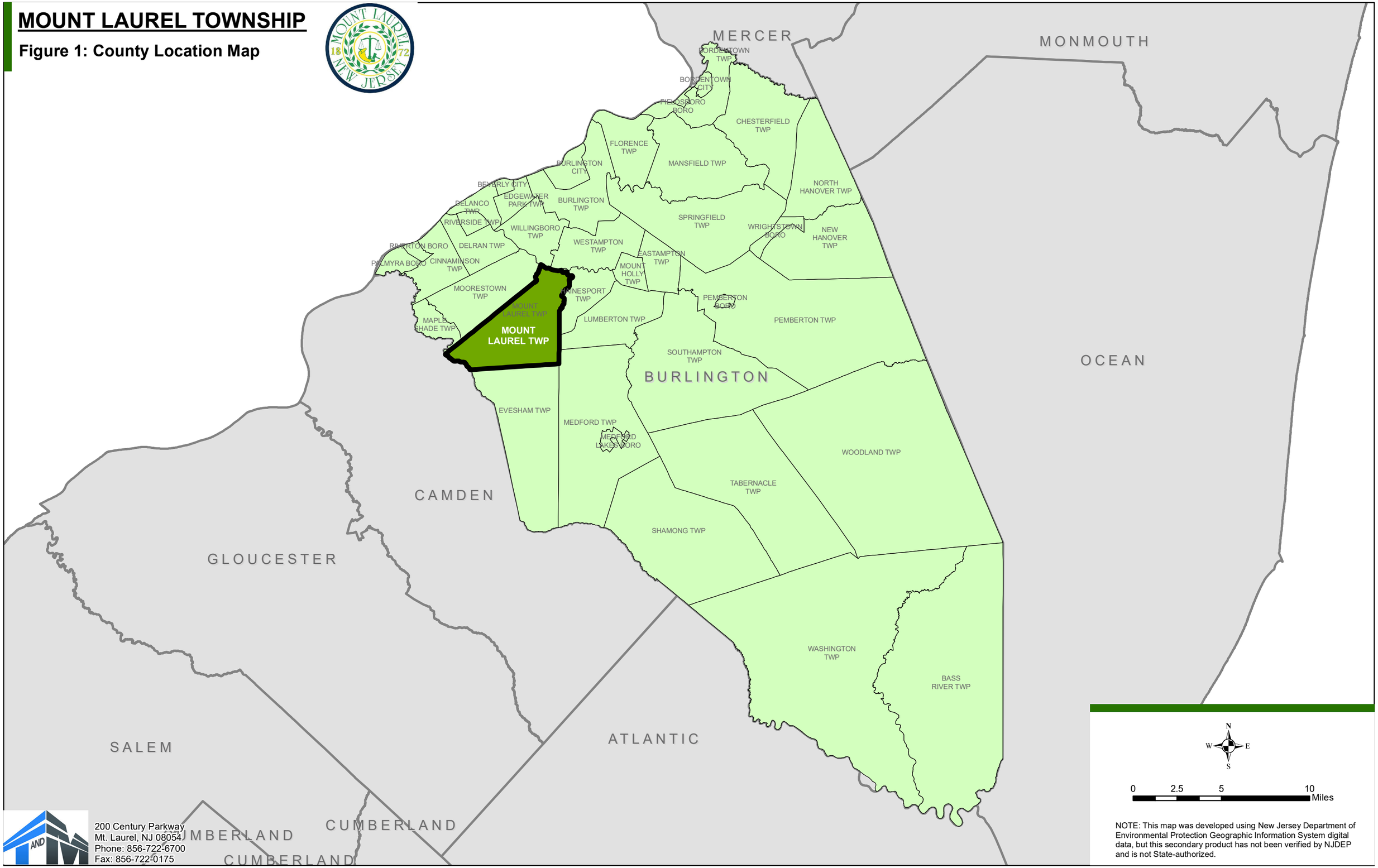
Major roadways within the Township include the New Jersey Turnpike, Interstate Route 295, State Highway Route 38, State Route 73, Burlington County Route 607 (Church Street), Burlington County Route 603 (Mount Laurel Road and Meetinghouse Road), Burlington County 686 (Springfield Road and Hartford Road), and Burlington County Route 537. The Township is bounded by the Rancocas Creek to the north and Pennsauken Creek to the south.

LOCATION	POPULATION DENSITY PER SQUARE MILE	POPULATION PER 2020 US CENSUS IN PERSONS	LAND AREA IN SQUARE MILES
Burlington County	558	461860	827
Mount Laurel	2055	44633	21.69
Evesham Township	1606	46826	29.16
Hainesport Township	933	6035	6.97
Lumberton Township	994	12803	12.92
Maple Shade Township	5221	19980	3.82
Medford Township	631	24497	38.92
Moorestown Township	1450	21355	14.69
Willingboro Township	4120	31889	7.74
Cherry Hill Township	3097	74553	24.10

Table 1: General Population Data 2020, United States Census Data

MOUNT LAUREL TOWNSHIP

Figure 1: County Location Map



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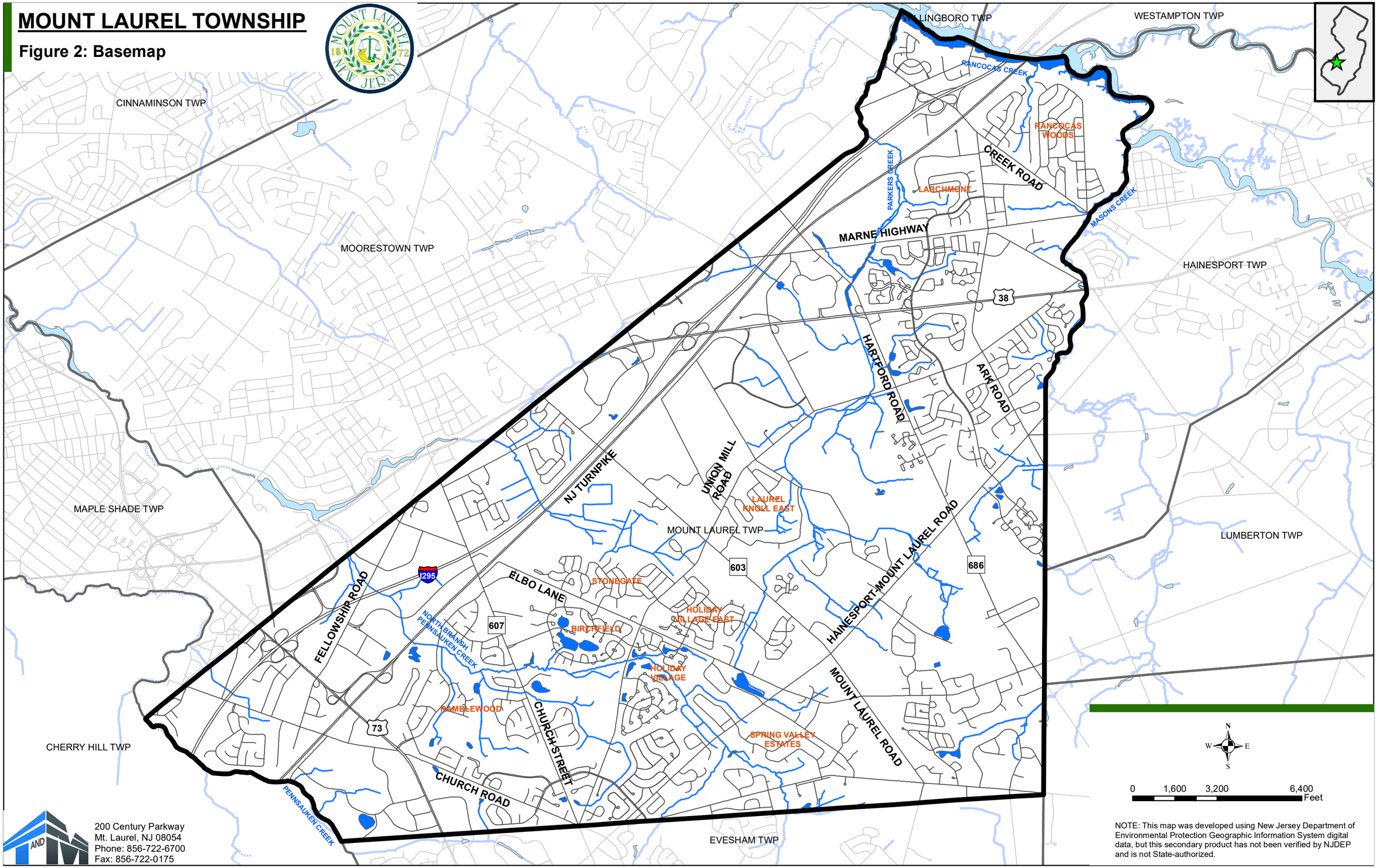
NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

MOUNT LAUREL TOWNSHIP

Figure 2: Basemap



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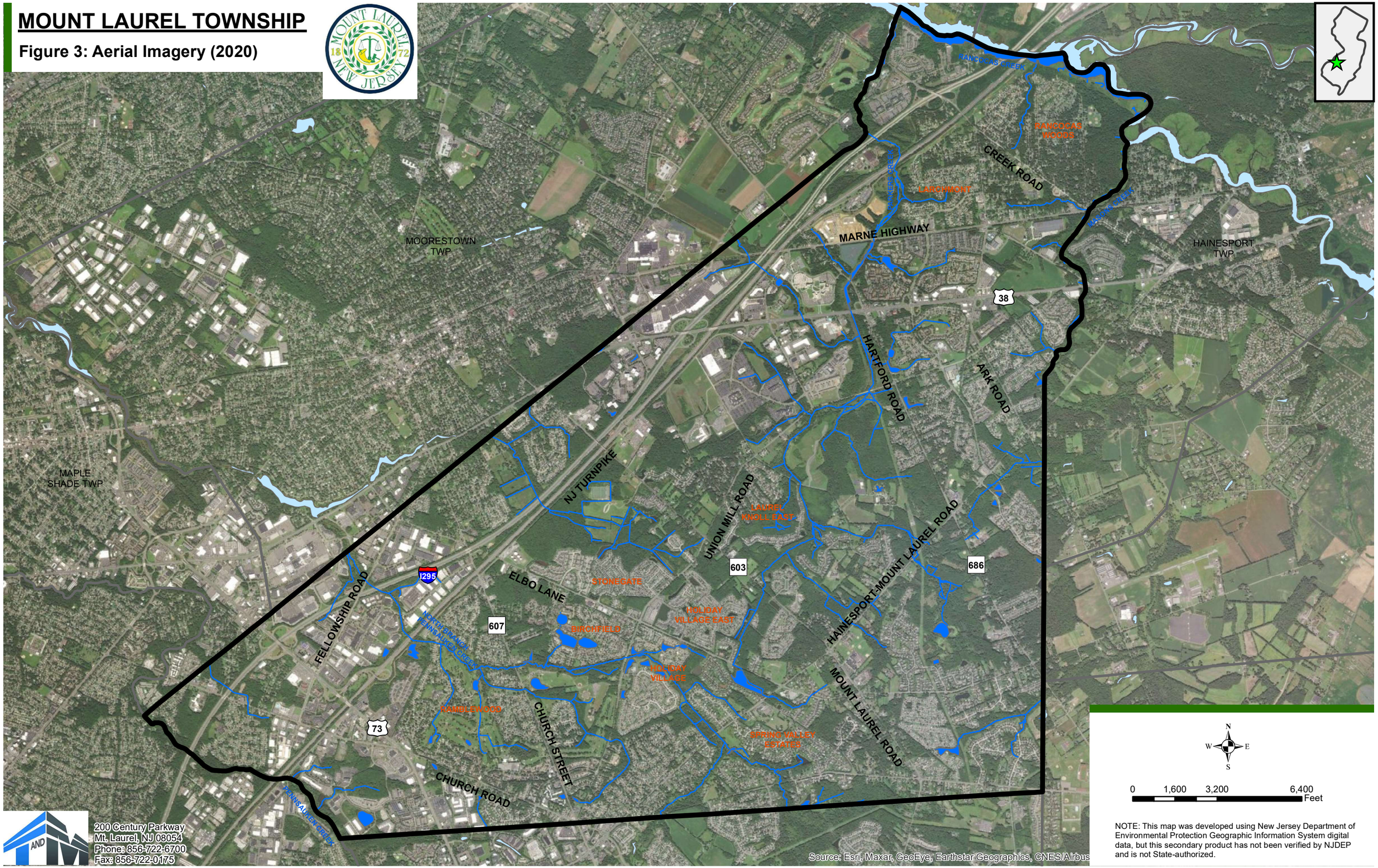
MOUNT LAUREL TOWNSHIP

Figure 3: Aerial Imagery (2020)



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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus

N W E S

0 1,600 3,200 6,400 Feet

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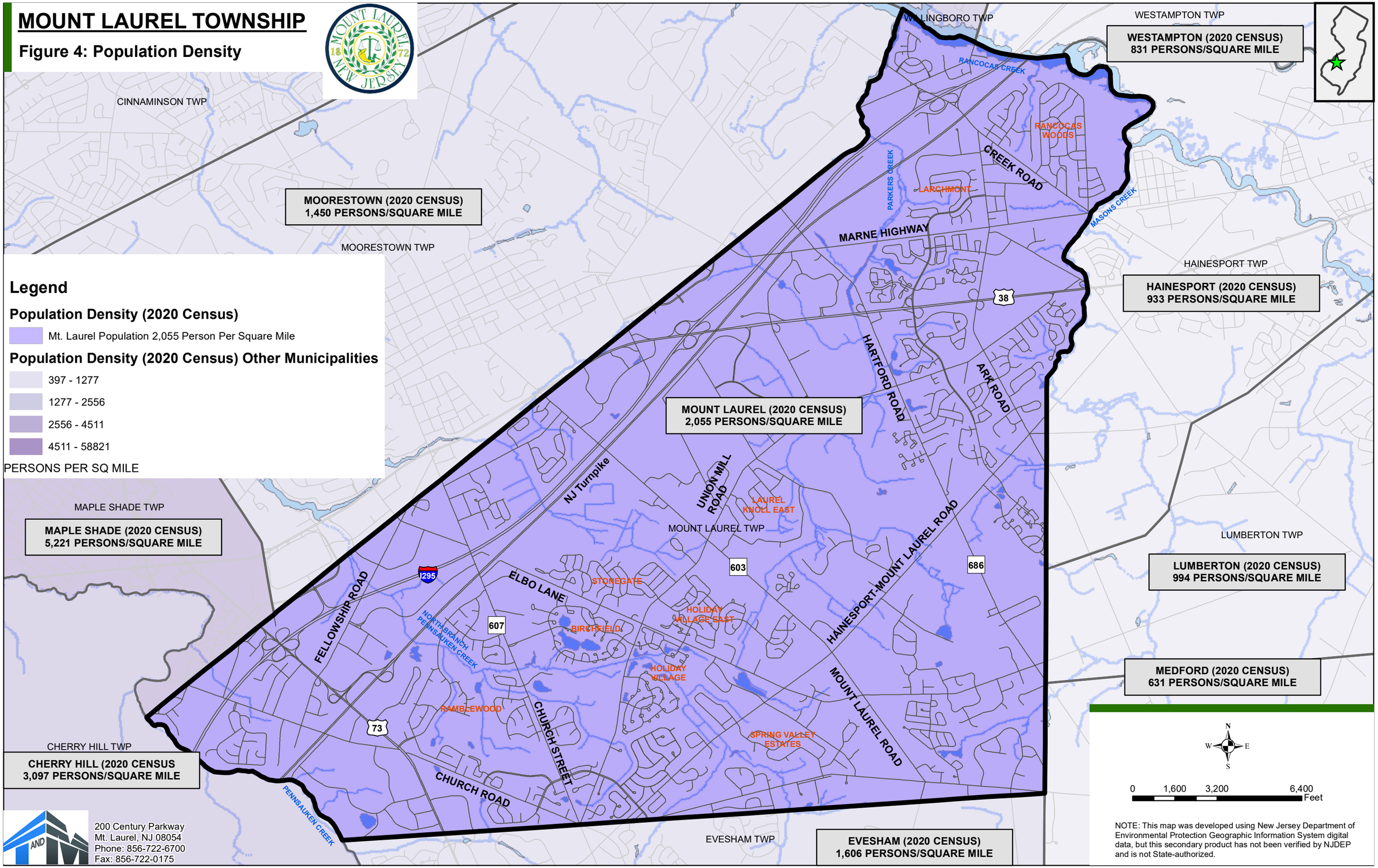
MOUNT LAUREL TOWNSHIP

Figure 4: Population Density



Legend

Population Density (2020 Census)

Mt. Laurel Population 2,055 Person Per Square Mile

Population Density (2020 Census) Other Municipalities

397 - 1277

1277 - 2556

2556 - 4511

4511 - 58821

PERSONS PER SQ MILE

N W E S

0 1,600 3,200 6,400 Feet

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HISTORY OF THE TOWNSHIP

EARLY SETTLERS

(Excerpt taken from https://www.mountlaurel.com/how_do_i/find_learn_about/township_history/early_settlers.php)

"Long before it became Mount Laurel Township, the earliest known history of this area began with the Lenni-Lenape Indians who lived throughout the Delaware Valley from around 1400 until the 1700s. Evidence is found of their farming and hunting villages along the banks of the Rancocas River. In fact, the "Great Road" of pioneer days began as an Indian trail. When the great road was laid out in 1765, many Indian hand tools were found along the way. Today part of this great road is known as Hainesport-Mount Laurel Road. Mount Laurel residents still claim to dig up Indian artifacts on their own properties.

The Indians helped many of the early European settlers who came here to escape religious persecution. The Dutch settlers of the early 17th century befriended the Indians and exchanged cloth, knives, furs, and liquors with them.

One prominent family with recorded history in the Mount Laurel area is the Evans family. In 1682, William Evans, his wife Jean, and their three children made the voyage from Wales to settle along the Rancocas Creek.

Although William Evans died in 1688, his namesake son continued to play a significant role in the settlement of Mount Laurel. William bought 300 acres of land at the "site of the Mount", which is the hill later to be called Mount Laurel at the intersection of Hainesport-Mount Laurel and Moorestown-Mount Laurel Roads. His deed is the earliest recorded transaction of the Township. Five years later, William married Elizabeth Hanke, a Quaker minister, and they lived in a cave by the mount. They called it "Mount Pray" and lived in this cave until a log cabin was built which stood where the Friends Meeting House is today on the other side of the intersection.

In 1698, William gave an acre of land to the Society of Friends and the Friends Meeting House was built with the help of Indians. Built of Jersey sandstone quarried from the mount, it is the oldest Meeting House in the County and is still in use today.

In 1700 William bought 1000 acres of land which lay southwest of Marlton, from Margaret Cook of Philadelphia. He also gave the Lenape king five pounds for the tract believing that the Indians were the true owners of the land. Today descendants of the Evans family still reside in Mount Laurel and Evesham.

By 1728 the Darnell family owned most of the land around the Mount. The Darnell homestead is located approximately 2 miles east of the Mount on Hainesport-Mount Laurel Road where PAWS, a wildlife preservation society had been operating since 1980. The Darnell family cemetery can still be found along one of the PAWS nature trails."

19TH CENTURY MOUNT LAUREL

(Excerpt taken from https://www.mountlaurel.com/how_do_i/find_learn_about/township_history/19th_century_mount_laurel.php)

"The 19th Century saw the establishment of Mount Laurel village, centrally located in the vicinity of William Evan's original homestead, Mount Pray. People settled near enough to be able to walk conveniently to the new meeting house. Other early buildings included a Wheelwright, a blacksmith shop, and a shoe shop. The first area post office was established in 1849 inside the General Store. The General Store was a very important building for the townspeople. It not only held the original post office, it also housed 500 volumes of the "Enterprise Library," the first lending library of the area. At one point there was even a stagecoach stop in the settlement. The "Mount Laurel Stage" made a stop here on its way to Philadelphia.

In 1863, the Burlington-Camden Railroad was built. Centerton, located near the Moorestown border, thrived because of its wharf along the Rancocas Creek, the lumber and coal yards, phosphorus factory, tavern, and the Centerton Hotel. Centerton was a popular vacation spot for families from Philadelphia seeking the tranquility of the countryside during the hot summer months in the city. Transportation of persons and goods occurred through ferry services and the operation of barges along the creek.

The Old Town Hall is another building of significance. The Farmer's Progressive Club built it in 1866; hence it was known as Farmers Hall. Following the incorporation of Mount Laurel in 1872, Farmer's Hall was used for annual election of Town officers. It was used as the official Town Hall from 1904 till 1969. Mount Laurel Township recently restored Farmer's Hall, which is located directly across the street from the Friends Meeting House at the base of Mount Laurel. In 1872, this busy intersection known as "Lower Evesham" became officially incorporated into its own village, Mount Laurel. The present Mount Laurel Township encompasses over 13,000 acres but the official village has nearly vanished." *Figure 5* shows the

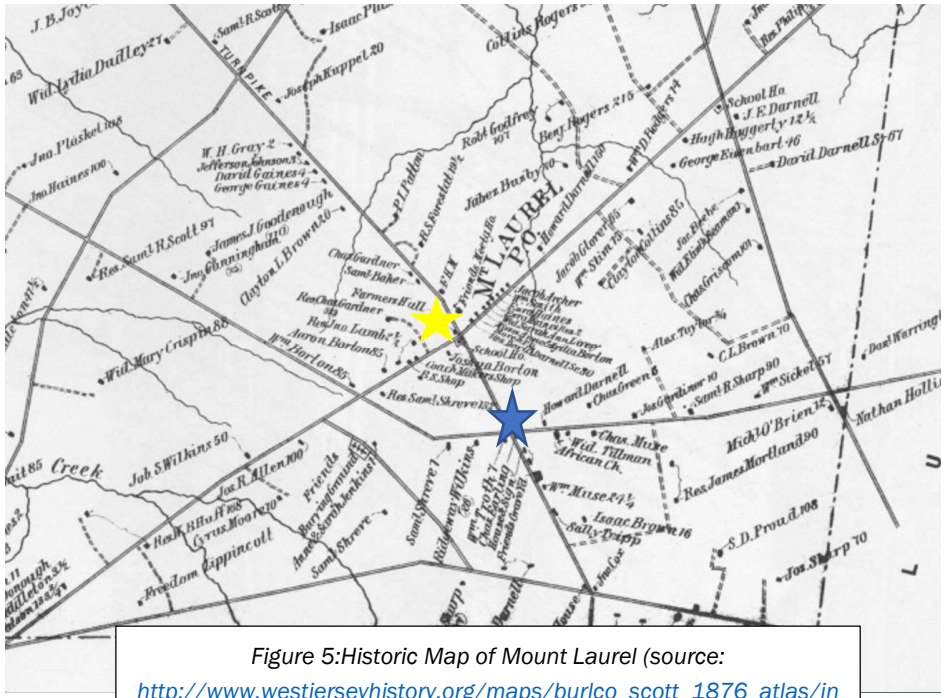

Figure 5:Historic Map of Mount Laurel (source: http://www.westjerseyhistory.org/maps/burlco_scott_1876_atlas/index11.shtml; J.D. Scotts Atlas Maps of Burlington County NJ 1876)

location of Farmer's Hall and Colemantown, circa 1876. "The Friends Meeting House and Farmer's Hall still stand on their original sites, faint reminders of the humble beginnings this town had over 300 years ago."

Colemantown is also a locale of importance as it was originally established as an antebellum African American community in 1828. Jacob's Chapel A. M.E. (African Methodist Episcopal) Property is in the Colemantown section of the Township. The property is historically significant as it contributes elements to the African American heritage and the property is listed on the National Register of Historic Places. The Chapel Property consists of the Colemantown Meeting House which was moved to the property in 1840, Jacob's Chapel which was constructed between 1866 and 1867, and Jacob's Chapel Cemetery which was established circa 1811. The Colemantown Meeting House is the oldest all-black schoolhouses in existence in New Jersey (National Park Service). The chapel was used as a stop on the Underground Railroad. The cemetery is one of the oldest African American burial grounds in New Jersey. Each of the elements exist on the property today.

LAND COVER AND LAND USE

Over the past few centuries, the Township has experienced population growth and land use changes. Land cover has been transformed from predominately fields, wooded, and wetland areas to lawn and landscaped areas. Land use within the Township include agricultural, barren lands, and urban lands among others. Much of the land cover in the Township is developed as urban lands which consist of commercial, industrial, and residential uses. The undeveloped areas include wetlands along the stream corridors of Parker's Creek and tributary of Pennsauken Creek North Branch, forests, open park lands, and some barren lands mixed throughout the remaining portions of the Township. Wetlands are special land areas which provide for recharge of groundwater and protection against upland flooding. Wetlands are found within the heart of the Township and are situated north of Elbo Lane, south of Union Mill Road, and east of Walton and Hartford Roads.

General land cover and uses are shown at ***Figure 6,*** while ***Table 2*** provides information on land use and cover within the Township (*source: NJ State GIS data, 2015*).

MOUNT LAUREL TOWNSHIP

Figure 6: Land Use/Land Cover (2015)

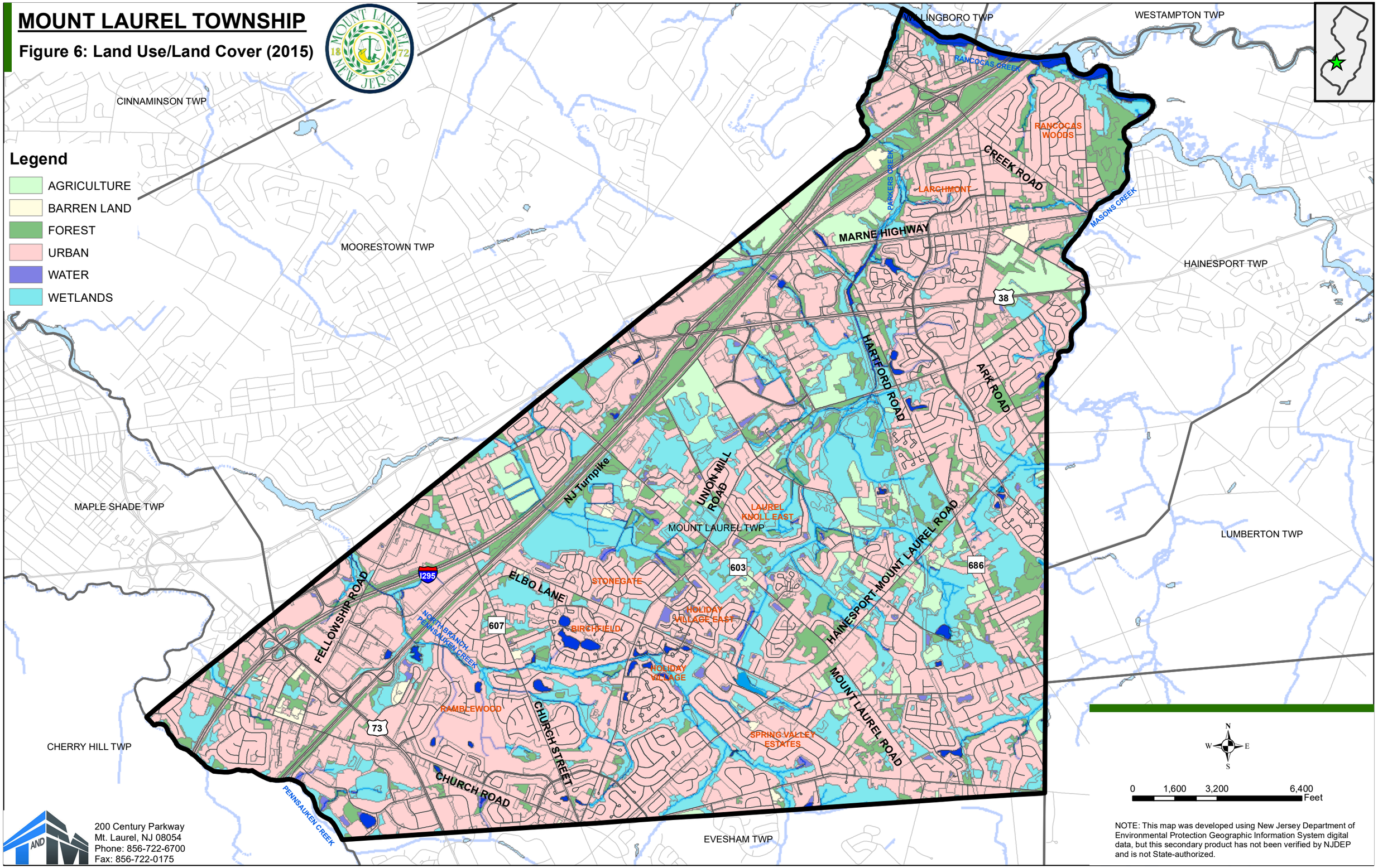

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Table 2: Land Use Category and General Land Type (source: State of New Jersey GIS data)

TABLE 2: LAND USE CATEGORY AND GENERAL LAND TYPE		
LAND USE CATEGORY	**ACRES**	**GENERAL LAND TYPE**
Agricultural Wetlands (Modified)	233	Wetlands
Altered Lands	13	Barren Land
Artificial Lakes	200	Water
Athletic Fields (Schools)	59	Urban
Bridge Over Water	3	Water
Cemetery	5	Urban
Commercial/Services	1,477	Urban
Coniferous Brush/Shrubland	11	Forest
Coniferous Forest (>50% Crown Closure)	92	Forest
Coniferous Forest (10-50% Crown Closure)	25	Forest
Cropland and Pastureland	921	Agriculture
Deciduous Brush/Shrubland	181	Forest
Deciduous Forest (>50% Crown Closure)	660	Forest
Deciduous Forest (10-50% Crown Closure)	157	Forest
Deciduous Scrub/Shrub Wetlands	231	Wetlands
Deciduous Wooded Wetlands	2,341	Wetlands
Disturbed Wetlands (Modified)	26	Wetlands

TABLE 2: LAND USE CATEGORY AND GENERAL LAND TYPE		
LAND USE CATEGORY	**ACRES**	**GENERAL LAND TYPE**
Former Agricultural Wetland (Successional)	8	Wetlands
Freshwater Tidal Marshes	72	Wetlands
Herbaceous Wetlands	71	Wetlands
Industrial	253	Urban
Industrial and Commercial Complexes	43	Urban
Major Roadway	963	Urban
Managed Wetland In Built-Up Maintained Rec Area	42	Wetlands
Managed Wetland In Maintained Lawn Greenspace	57	Wetlands
Mixed Deciduous/Coniferous Brush/Shrubland	132	Forest
Mixed Forest (>50% Coniferous with >50% Crown Closure)	73	Forest
Mixed Forest (>50% Coniferous with 10-50% Crown Closure)	23	Forest
Mixed Forest (>50% Deciduous with >50% Crown Closure)	63	Forest
Mixed Forest (>50% Deciduous with 10-50% Crown Closure)	26	Forest
Mixed Scrub/Shrub Wetlands (Coniferous Dom.)	10	Wetlands
Mixed Scrub/Shrub Wetlands (Deciduous Dom.)	46	Wetlands
Mixed Transportation Corridor Overlap Area	1	Urban
Mixed Wooded Wetlands (Coniferous Dom.)	12	Wetlands
Mixed Wooded Wetlands (Deciduous Dom.)	8	Wetlands
Old Field (< 25% Brush Covered)	124	Forest

TABLE 2: LAND USE CATEGORY AND GENERAL LAND TYPE		
LAND USE CATEGORY	**ACRES**	**GENERAL LAND TYPE**
Orchards/Vineyards/Nurseries/Horticultural Areas	37	Agriculture
Other Agriculture	41	Agriculture
Other Urban or Built-Up Land	931	Urban
Phragmites Dominate Interior Wetlands	13	Wetlands
Phragmites Dominate Old Field	6	Forest
Plantation	11	Forest
Railroads	40	Urban
Recreational Land	465	Urban
Residential, High Density or Multiple Dwelling	900	Urban
Residential, Rural, Single Unit	781	Urban
Residential, Single Unit, Low Density	1,238	Urban
Residential, Single Unit, Medium Density	2,446	Urban
Stormwater Basin	126	Urban
Streams and Canals	11	Water
Tidal Mud Flat	58	Water
Tidal Rivers, Inland Bays, and Other Tidal Waters	440	Water
Transitional Areas	78	Barren Land
Transportation/Communication/Utilities	253	Urban
Upland Rights-Of-Way Developed	6	Urban

TABLE 2: LAND USE CATEGORY AND GENERAL LAND TYPE		
LAND USE CATEGORY	**ACRES**	**GENERAL LAND TYPE**
Upland Rights-Of-Way Undeveloped	48	Urban
Wetland Rights-Of-Way	52	Wetlands

Table 2: Land Use Category and General Land Type (source: State of New Jersey GIS data)

As part of the Township planning process, a local zoning ordinance has been developed to divide the Township into districts or "zones". These zones consider the various land covers and uses such as buildings erected, relocated, or altered, accessory uses, utilities and roadways, and parks and open spaces among others. The creation of zone and districts have been developed through extensive planning by the governing body in an effort to situate complimentary uses together, while separating uses which would be incompatible or pose a conflict.

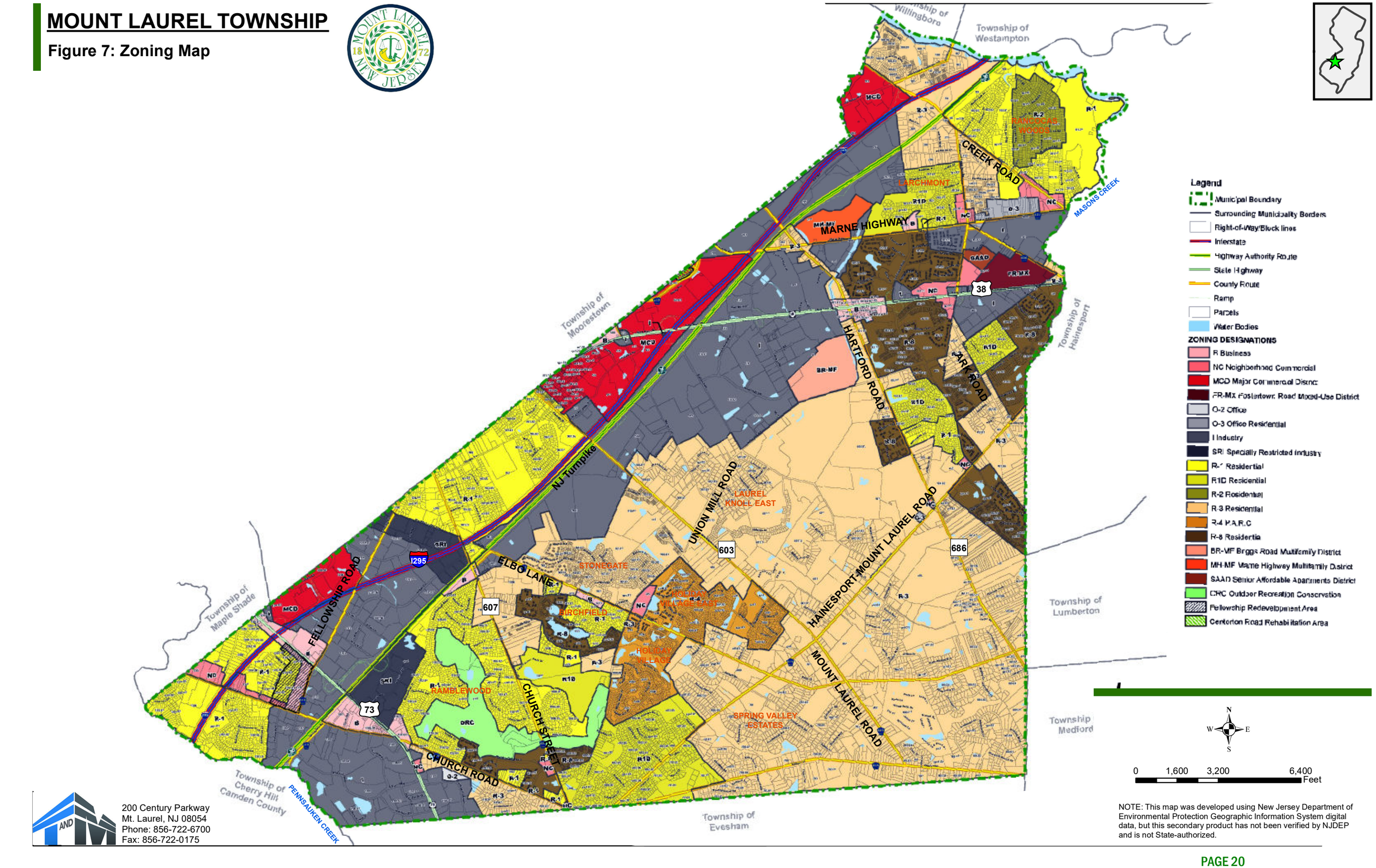
Chapter 154: Zoning of the Township Code provides legislation regarding zoning, citing the purposes:

- To promote the health, morals, and general welfare of the inhabitants of Mount Laurel Township.
- To improve the flow of traffic in Mount Laurel Township by reducing traffic and thus reducing traffic congestion. This will improve traffic safety, improve air quality by reducing motor vehicle emissions, reduce the consumption of gasoline and improve traffic flow. The result will be an improvement to public health and safety.
- To secure safety from fire, panic, and other dangers.
- To provide adequate light and air.
- To prevent the overcrowding of land or buildings.
- To avoid undue concentration of population.
- To conserve the value and desirability of property and encourage the most appropriate use of land.
- To acquire open space land for passive and active uses so as to implement the objectives of the Recreation and Open Space Plan set forth in the Master Plan.

Figure 7 illustrates the Zoning Map for the Township. General zoning districts are designated as business, neighborhood commercial, major commercial, mixed uses, office, industry, residential, outdoor conservation areas, and redevelopment areas.

MOUNT LAUREL TOWNSHIP

Figure 7: Zoning Map



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PHYSIOGRAPHY

Landscape of the area is defined through physiographic provinces or regions. These areas are landforms which have been created though the geologic process of erosion, deposition, and mountain building. In New Jersey, there are two (2) major physiographic provinces including the Appalachian Highlands and the Atlantic Slope. The Township lies within the Atlantic Slope which may be further classified as the Coastal Plain Province, including the Atlantic and Gulf Coastal Plains. The Coastal Plain is the largest of the physiographic provinces in New Jersey, covering an area of nearly 4,500 square miles. This province is situated on a fairly level plain and is found from coastal areas of Massachusetts southward to Florida (*Geology of Burlington County in Brief, New Jersey Geologic Survey, 1977*).

The geology of the Coastal Plain province is composed of a series of overlying and overlapping sediments which dip and thicken to the southeast. Sands, gravels, silts, and clays are the dominant materials composing the unconsolidated Coastal Plain sediments. See ***Figure 8*** for details on the mapped physiography.

GEOLOGIC FORMATIONS

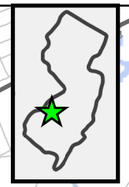
Geology is the study of the history, physical structure, and weathering process of the surface of the earth. An understanding of geology is important as it can help provide information on physical science characteristics such as natural resources and energy, climate change, water management, minerals, and understanding of natural hazards such as mudslides and erosion. This information can be used in the planning of development and infrastructure, while providing for the preservation of open spaces and lands. The unique landscape of Mount Laurel is the result of the geologic formations and surficial deposits.

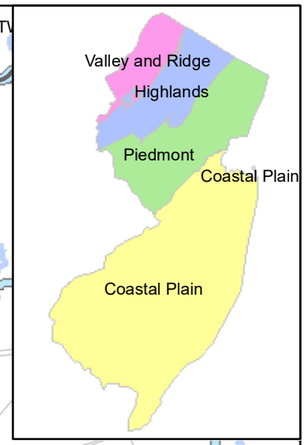
Geology within this portion of Burlington County, is comprised of seven (7) surficial formations. Within the Township, geology includes the Alluvium, Cape May Formation, Eolian Deposits, Pennsauken Formation, Salt-Marsh and Estuarine Deposits, Swamp and Marsh Deposits, Upland Gravel, Upland Gravel Lower Phase, Upper Stream Terrace Deposits, and Weathered Coastal Plain Formations. See ***Figure 9*** for mapping and ***Table 3*** of a brief description of the geologic formations within the Township.

Mount Laurel is situated within the Inner Coastal Plain (Rutgers, GIS maps) of New Jersey. Much of the surficial geology within the Township is mapped as the Pennsauken Formation (Qtu), Upland Gravel (Lower Phase (TQg), Alluvium (Qal), and Eolian Deposits (Qe). These formations and deposits were formed during the Cretaceous Period, between 135 to 65 million years ago, as sea levels rose and fell during cycles of glaciation and melting (Source: Geology of Burlington County in Brief, NJ Geological Survey). Generally, soils of the Inner Coastal Plain are more fertile than those soils found to the east in the Outer Coastal Plain. The unconsolidated sediments of the Inner Coastal Plain comprise aquifers which provide sources of freshwater water within this region.

MOUNT LAUREL TOWNSHIP

Figure 8: New Jersey's Physiographic Provinces





CINNAMINSON TWP

WILLINGBORO TWP

WESTAMPTON TWP

MOORESTOWN TWP

HAINESPORT TWP

MAPLE SHADE TWP

LUMBERTON TWP

CHERRY HILL TWP

EVESHAM TWP

MOUNT LAUREL TWP

RANCOCAS CREEK

RANCOCAS WOODS

PARKERS CREEK

LARCHMONT

CREEK ROAD

MASONS CREEK

MARNE HIGHWAY

38

HARTFORD ROAD

ARK ROAD

NJ TURNPIKE

UNION MILL ROAD

LAUREL KNOLL EAST

603

686

HAINESPORT-MOUNT LAUREL ROAD

MOUNT LAUREL ROAD

1295

ELBO LANE

STONEGATE

HOLIDAY VILLAGE EAST

607

BIRCHFIELD

FELLOWSHIP ROAD

NORTH BRANCH PENNSAUKEN CREEK

HOLIDAY VILLAGE

RAMBLEWOOD

CHURCH STREET

73

SPRING VALLEY ESTATES

CHURCH ROAD

PENNSAUKEN CREEK

Legend

Physiographic Province

Atlantic and Gulf Coastal Plains,Humid Plains on Sedimentary Lithology

0 1,600 3,200 6,400 Feet

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MOUNT LAUREL TOWNSHIP

Figure 9: Geology

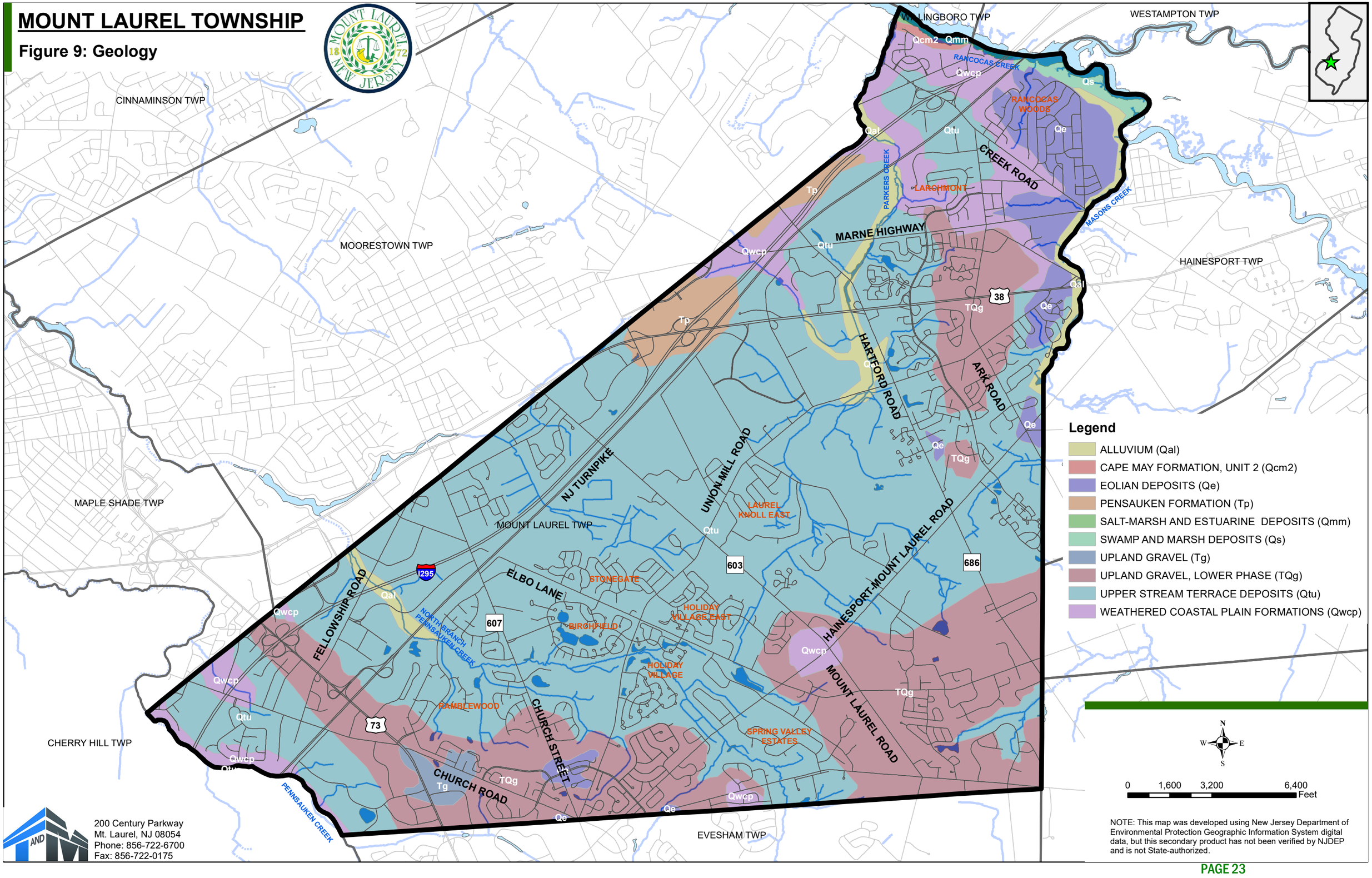

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Table 3 provides information on the Surficial Geologic Formations in Mount Laurel Township.

SURFICIAL GEOLOGY NAME	SYMBOL	DESCRIPTION
ALLUVIUM	Qal	SAND, GRAVEL SILT, MINOR CLAY AND PEAT, REDDISH BROWN, YELLOWISH BROWN, BROWN, GRAY, AS MUCH AS 20 FEET THICK; CONTAINS VARIABLE AMOUNT OR ORGANIC MATTER
CAPE MAY FORMATION, UNIT 2	Qcm2	SAND, PEBBLE GRAVEL, MINOR SILT, CLAY, PEAT, AND COBBLE GRAVEL; VERY PALE BROWN, YELLOW, REDDISH YELLOW, WHITE, OLIVE YELLOW, GRAY. AS MUCH AS 200 FEET THICK ON THE CAPE MAY PENINSULA, GENERALLY LESS THAN 50 FEET THICK ELSEWHERE; SUBSURFACE PARTS OF THE FORMATION ON THE CAPE MAY PENINSULA AND ALONG THE DELAWARE BAYSHORE
EOLIAN DEPOSITS	Qe	WINDBLOWN FINE SAND AND SILT; VERY PALE BROWN, YELLOWISH BROWN. AS MUCH AS 15 FEET THICK
PENNSAUKEN FORMATION	Tp	SAND, CLAYEY SAND, PEBBLE GRAVEL, MINOR SILT, CLAY, AND COBBLE GRAVEL; YELLOW, REDDISH YELLOW, WHITE. SAND TYPICALLY INCLUDES WEATHERED FELDSPAR. LOCALLY IRON-CEMENTED. AS MUCH AS 140 FEET THICK
SALT-MARSH AND ESTUARINE DEPOSITS	Qmm	SILT, SAND, PEAT, CLAY, MINOR PEBBLE GRAVEL; BROWN, DARK-BROWN, GRAY, BLACK. AS MUCH AS 300 FEET THICK IN THE HUDSON VALLEY, 100 FEET THICK ELSEWHERE
SWAMP AND MARSH DEPOSITS	Qs	PEAT AND ORGANIC CLAY, SILT, AND MINOR SAND; GRAY, BROWN, BLACK. AS MUCH AS 40 FEET THICK.
UPLAND GRAVEL	Tg	SAND, CLAYEY SAND, PEBBLE GRAVEL, MINOR COBBLE GRAVEL; YELLOW TO REDDISH YELLOW. LOCALLY IRON-CEMENTED. AS MUCH AS 20 FEET THICK
UPLAND GRAVEL, LOWER PHASE	TQg	SAND, CLAYEY SAND, AND PEBBLE GRAVEL, MINOR SILT; YELLOW TO REDDISH YELLOW. AS MUCH AS 20 FEET THICK
UPPER STREAM TERRACE DEPOSITS	Qtu	SAND AND PEBBLE GRAVEL, MINOR SILT AND COBBLE GRAVEL; YELLOW, REDDISH YELLOW, YELLOWISH BROWN. AS MUCH AS 20 FEET THICK.
WEATHERED COASTAL PLAIN FORMATIONS	Qwcp	EXPOSED SAND AND CLAY OF COASTAL PLAIN BEDROCK FORMATIONS. INCLUDES THIN, PATCHY ALLUVIUM AND COLLUVIUM, AND PEBBLES LEFT FROM EROSION OF SURFICIAL DEPOSITS

Table 3: Surficial Geologic Formations in Mount Laurel Township (source: New Jersey GIS Data)

SOILS

Soils are an important natural resource and are an essential element in both biological and chemical processes. This resource assists in carbon sequestering, supports plant growth, filters, and retains water and stormwater runoff, recycles nutrients, and among other purposes. There are many specific types of soils within the Township. However, there are two predominant soil types within Mount Laurel. These soils can be further classified as:

- Freehold-Holmdel-Adelphia association: Nearly level to steep, well-drained to somewhat poorly drained soils that are moderately and moderately slowly permeable and have a fine sandy loam to sandy clay loam subsoil
- Colemantown-Kresson-Marlton association: Nearly level to moderately sloping, poorly drained to moderately well drained, slowly permeable soils that have a sandy clay loam to sandy clay subsoil

Soil behavior and permeability are conditions which are used to describe the hydrologic soil type. The United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) is responsible for the evaluation and classification of soils in the Country. In New Jersey, it is the responsibility of the County Soil Conservation Service and the New Jersey Soil Service as well. Soil classification is determined based on biological and physical characteristics of the soils. This information is available through County Soil Surveys. These surveys are both published in paper format and available on-line at https://websoilsurvey.nrcs.usda.gov/app/ . Soil surveys include a variety of data such as soil descriptions and mapping of the soil units.

SOIL TYPES

Once a soil description is established at a specific site, this description is applied to all other soils of this type regardless of location. This description also establishes a specific name and is shown on mapping for further reference. The mapping is known as the Soil Taxonomy Classification Maps. In Mount Laurel there are two predominant soil types, as listed above. These soils can be further classified into more detailed descriptions including elements such as slope, permeability, and use. Soil mapping was originally published to assist agricultural development and uses. However, engineers, planners, and environmentalists use these descriptions for their site assessments. Field investigations are performed to confirm the accuracy of soil types found onsite.

The NRCS lists fifty-seven (57) different soils found in Mount Laurel. These fifty-seven (57) soils predominately fall into two (2) main categories of soil: sands and sandy loams. Other soil types are less predominant and include urban lands. The soil types are categorized below.

Figure 10: Soil Boring into Mapped Aldelphia Soil – David Logar Memorial Field (Source: T&M)

- *Sands:* Individual rock or mineral fragments having diameters ranging from 0.05 millimeter (mm) to 2 mm.
    - WodB Woodstown loamy sand, 0 to 5 percent slopes
    - ThfB Tinton sand, 0 to 5 percent slopes
    - ThfC Tinton sand, 5 to 10 percent slopes
    - ThftB Tinton sand, thick surface, 0 to 5 percent slopes
    - PefB Pemberton sand, 0 to 5 percent slopes
    - PeftB Pemberton sand, thick surface , 0 to 5 percent slopes
    - KrbA Kresson loamy sand, 0 to 5 percent slopes
    - FrfB Freehold loamy sand, 0 to 5 percent slopes
    - FrfC Freehold loamy sand, 5 to 10 percent slopes
    - GabB Galestown sand, 0 to 5 percent slopes
    - HoaB Holmdel loamy sand, 0 to 5 percent slopes

- *Sandy Loams:* Soil composed of approximately 60% sand, 30% silt, and 10% clay.
    - AdmA Adelphia fine sandy loam, 0 to 2 percent slopes
    - AdmB Adelphia fine sandy loam, 2 to 5 percent slopes
    - AdmmA Adelphia high glauconite variant fine sandy loam, 0 to 2 percent slopes
    - AdotB Adelphia sandy clay loam, truncated, 0 to 5 percent slopes
    - ComA Collington fine sandy loam, 0 to 2 percent slopes
    - ComB Collington fine sandy loam, 2 to 5 percent slopes
    - ComC Collington fine sandy loam, 5 to 10 percent slopes
    - FanA Fallsington fine sandy loam, 0 to 2 percent slopes
    - FrkC3 Freehold sandy loam, 5 to 10 percent slopes, severely eroded
    - FrmA Freehold fine sandy loam, 0 to 2 percent slopes
    - FrmB Freehold fine sandy loam, 2 to 5 percent slopes
    - FrmC Freehold fine sandy loam, 5 to 10 percent slopes
    - FrmD Freehold fine sandy loam, 10 to 15 percent slopes
    - FrmE Freehold fine sandy loam, 15 to 25 percent slopes
    - HodA Holmdel fine sandy loam, 0 to 2 percent slopes
    - HodB Holmdel fine sandy loam, 2 to 5 percent slopes
    - HodkA Holmdel fine sandy loam, clayey substratum, 0 to 2 percent slopes
    - HodkB Holmdel fine sandy loam, clayey substratum, 2 to 5 percent slopes
    - KeaA Keansburg fine sandy loam, 0 to 2 percent slopes
    - KreA Kresson fine sandy loam, 0 to 2 percent slopes
    - MapA Marlton fine sandy loam, 0 to 2 percent slopes
    - MapB Marlton fine sandy loam, 2 to 5 percent slopes

- MapC Marlton fine sandy loam, 5 to 10 percent slopes
- MunA Mullica fine sandy loam, 0 to 2 percent slopes
- SaeA Sassafras fine sandy loam, 0 to 2 percent slopes
- SaeB Sassafras fine sandy loam, 2 to 5 percent slopes
- SaeC Sassafras fine sandy loam, 5 to 10 percent slopes
- ShsA Shrewsbury fine sandy loam, 0 to 2 percent slopes
- ShskA Shrewsbury fine sandy loam, clayey substratum, 0 to 2 percent slopes
- ShwA Shrewsbury ironstone substratum variant fine sandy loam, 0 to 2 percent slopes
- WofA Woodstown fine sandy loam, 0 to 2 percent slopes
- WofB Woodstown fine sandy loam, 2 to 5 percent slopes

- *Other:* Urban and other soil types, most are soils that have been disturbed, mixed, or consist of fill material.

  - CoeAs Colemantown loam, 0 to 2 percent slopes, occasionally flooded
  - DobA Donlonton loam, 0 to 2 percent slopes
  - FmhAt Fluvaquents, loamy, 0 to 3 percent slopes, frequently flooded
  - UdrB Udorthents, refuse substratum, 0 to 8 percent slopes
  - URSAAB Urban land, sandy, 0 to 8 percent slopes
  - URSACB Urban land, sandy over clayey, 0 to 8 percent slopes
  - WATER Water
  - SapB Sassafras-Urban land complex, 0 to 5 percent slopes
  - PHG Pits, sand and gravel
  - KrhA Kresson loam, 0 to 2 percent slopes
  - MakAt Manahawkin muck, 0 to 2 percent slopes, frequently flooded
  - MamnAv Mannington-Nanticoke complex, 0 to 1 percent slopes, very frequently flooded
  - HofB Holmdel-Urban land complex, 0 to 5 percent slopes

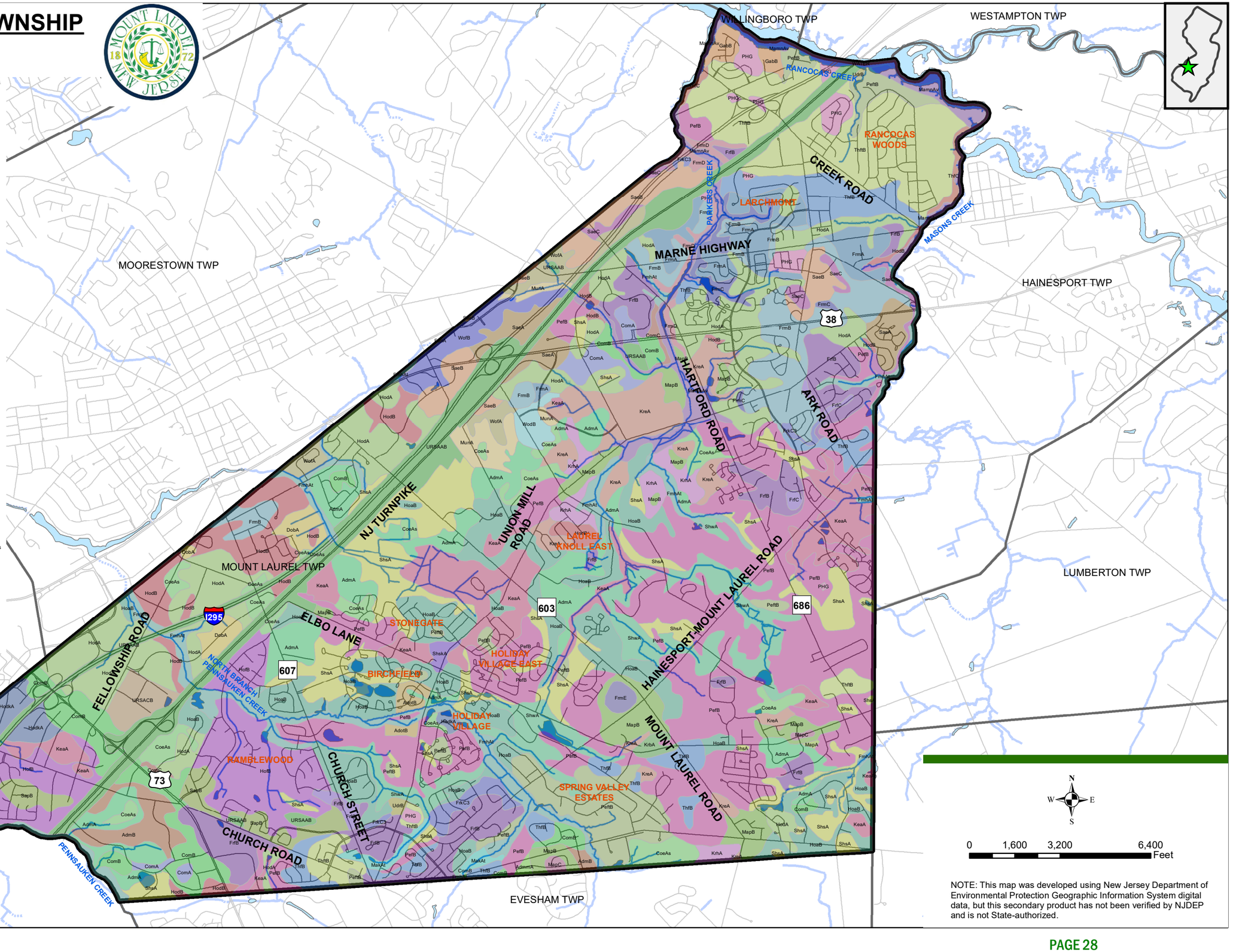
Please refer to the Soil Map ***(Figure 11)*** for the taxonomy classification and further details and location of soil orders and suborders.

MOUNT LAUREL TOWNSHIP

Figure 11: Soils Map

Legend

AdmA	Adelphia fine sandy loam, 0 to 2 percent slopes
AdmB	Adelphia fine sandy loam, 2 to 5 percent slopes
AdmmA	Adelphia high glauconite variant fine sandy loam, 0 to 2 percent slopes
AdotB	Adelphia sandy clay loam, truncated, 0 to 5 percent slopes
CoeAs	Colemantown loam, 0 to 2 percent slopes, occasionally flooded
ComA	Collington fine sandy loam, 0 to 2 percent slopes
ComB	Collington fine sandy loam, 2 to 5 percent slopes
ComC	Collington fine sandy loam, 5 to 10 percent slopes
DobA	Donlonton loam, 0 to 2 percent slopes
FanA	Fallsington fine sandy loam, 0 to 2 percent slopes
FmhAt	Fluvaquents, loamy, 0 to 3 percent slopes, frequently flooded
FrfB	Freehold fine sandy loam, 0 to 2 percent slopes
FrfC	Freehold fine sandy loam, 10 to 15 percent slopes
FrkC3	Freehold fine sandy loam, 15 to 25 percent slopes
FrmA	Freehold fine sandy loam, 2 to 5 percent slopes
FrmB	Freehold fine sandy loam, 5 to 10 percent slopes
FrmC	Freehold loamy sand, 0 to 5 percent slopes
FrmD	Freehold loamy sand, 5 to 10 percent slopes
FrmE	Freehold sandy loam, 5 to 10 percent slopes, severely eroded
GabB	Galestown sand, 0 to 5 percent slopes
HoaB	Holmdel fine sandy loam, 0 to 2 percent slopes
HodA	Holmdel fine sandy loam, 2 to 5 percent slopes
HodB	Holmdel fine sandy loam, clayey substratum, 0 to 2 percent slopes
HodkA	Holmdel fine sandy loam, clayey substratum, 2 to 5 percent slopes
HodkB	Holmdel loamy sand, 0 to 5 percent slopes
HofB	Holmdel-Urban land complex, 0 to 5 percent slopes
KeaA	Keansburg fine sandy loam, 0 to 2 percent slopes
KrbA	Kresson fine sandy loam, 0 to 2 percent slopes
KreA	Kresson loam, 0 to 2 percent slopes
KrhA	Kresson loamy sand, 0 to 5 percent slopes
MakAt	Manahawkin muck, 0 to 2 percent slopes, frequently flooded
MamnAv	Mannington-Nanticoke complex, 0 to 1 percent slopes, very frequently flooded
MapA	Marlton fine sandy loam, 0 to 2 percent slopes
MapB	Marlton fine sandy loam, 2 to 5 percent slopes
MapC	Marlton fine sandy loam, 5 to 10 percent slopes
MunA	Mullica fine sandy loam, 0 to 2 percent slopes
PHG	Pemberton sand, 0 to 5 percent slopes
PefB	Pemberton sand, thick surface , 0 to 5 percent slopes
PeftB	Pits, sand and gravel
SaeA	Sassafras fine sandy loam, 0 to 2 percent slopes
SaeB	Sassafras fine sandy loam, 2 to 5 percent slopes
SaeC	Sassafras fine sandy loam, 5 to 10 percent slopes
SapB	Sassafras-Urban land complex, 0 to 5 percent slopes
ShsA	Shrewsbury fine sandy loam, 0 to 2 percent slopes
ShskA	Shrewsbury fine sandy loam, clayey substratum, 0 to 2 percent slopes
ShwA	Shrewsbury ironstone substratum variant fine sandy loam, 0 to 2 percent slopes
ThfB	Tinton sand, 0 to 5 percent slopes
ThfC	Tinton sand, 5 to 10 percent slopes
ThftB	Tinton sand, thick surface, 0 to 5 percent slopes
URSAAB	Udorthents, refuse substratum, 0 to 8 percent slopes
URSACB	Urban land, sandy over clayey, 0 to 8 percent slopes
UdrB	Urban land, sandy, 0 to 8 percent slopes
WATER	Water
WodB	Woodstown fine sandy loam, 0 to 2 percent slopes
WofA	Woodstown fine sandy loam, 2 to 5 percent slopes
WofB	Woodstown loamy sand, 0 to 5 percent slopes



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AGRICULTURAL SOILS

According to the NRCS, 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."* Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. Within Mount Laurel, prime farmlands accounts for 38.5% of the land, or approximately 5,750 acres, and 18.2% (2,557 acres) are not classified as prime farmland. Farmland of local importance is 6% (849 acres). The remaining area is classified as farmland of statewide importance. This type of land, if properly drained, provides land of importance for agricultural purposes. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Figure 12: Preserved Farmland – Intersection of Mount Laurel and Union Mill Roads (Source T&M)

SEPTIC SUITABILITY

The primary factor in planning for the location of a septic system is to understand the soil characteristics in which the system will be situated. Wastewater flows from the system drain through the soils in the septic field and then percolate into the soil. Organisms in the soils, known as microbes, then provide final treatment by digestion to eliminate harmful bacteria, viruses, and excessive nutrients. Therefore, it is necessary to properly assess soils for suitability prior to construction of wastewater septic system.

A properly functioning system should be constructed in soils with high infiltration rates, shallow slopes, deep groundwater tables, and in areas which are located in upland areas away from floodplains. Proper siting will prevent contamination of groundwater, elimination of drinking water contaminants and pollution of nearby surface water; prevention of foul odors from unfiltered effluent; and reduction of toilet and septic system failures. Both the Township and the County review the design and construction of systems within the Township.

Figure 13: Test Pit Soil Profile (Source: T&M)

The Official Soil Series Descriptions (OSD) is national collection of soil series descriptions as served by USDA NRCS. This system is based on a soils classification system has been established based on land use among other sources. A total of eight (8) classes has been established and comprise Class I to Class VIII. Class I is defined as soils which have slight restrictions leading up to Class VIII which is defined as soils which have severe limitations which are unfavorable for use. Approximately 98.9% of the soils within Mount Laurel Township are *very limited (Class IV),* 0.1% of the soils are *somewhat limited* (*Class II*)(UdrB with slow water movement) and 1% of the soils are *null or not rated*. Additional information on rating of soils is available through the Web Soil Survey provided in the Soils Section above.

SOIL EROSION

Human activities, including farming and land clearing for development, typically expose soils and make them vulnerable to erosion. Since agricultural lands and development occur at various locations of Mount Laurel, soil erosion can occur. To ensure soil erosion is properly managed, control measure must be followed throughout the construction of development projects, farming practices, and during activities where land disturbances are a consequence.

Mount Laurel Township follows the principles authorized by Burlington County's Soil Conservation District to prevent soil erosion and runoff. The Township of Mount Laurel also has a strict Code regarding Soil Removal under Part II "General Legislation" under Chapter 132 Ordinance No. 1959-1 which establishes soil erosion and sediment control measures. Within this section, measures for soil removal and stormwater control are referenced. The Township Ordinance, at Chapter 133 also provides for testing of agricultural soils prior to a change in use.

TOPOGRAPHY

As noted above, the Township is situated on the Atlantic and Gulf Coastal Plain. Topography in this region is considered to be relatively level. Where the land meets area watercourses, these areas can be steep. Topographic relief in the Township ranges from 0 feet mean sea level (MSL) along areas such as the Rancocas and Pennsauken Creeks to approximately between 30 feet MSL to 50 feet MSL within the interior portions of the Township. See ***Figure 14*** which illustrates general topographic relief in the Township.

One of the tallest natural points in the Township is known as "the Mount" and is located near the intersection of Mount Laurel Road and Hainesport-Mount Laurel Road. Mount Laurel rises to an elevation of approximately 164 feet MSL. This feature is shown in red at ***Figure 14.*** The Mount is located within Mount Laurel State Park.

STEEP SLOPES

Moderately sloped lands are categorized as lands greater than 15 percent slope. Severe slopes are greater than 25 percent. Identification, protection, and proper design at or near these special areas are important. Slope management, as based on the Township ordinances at Section 134, 138, and 144, provides for:

- The regulation of stormwater runoff to reduce erosion and siltation into nearby streams and waterways;
- To decrease or prevent flooding and downstream sedimentation;
- To provide for slope stability and to prevent collapse of moderate and steep slopes;
- Protects waterflow in headwaters.

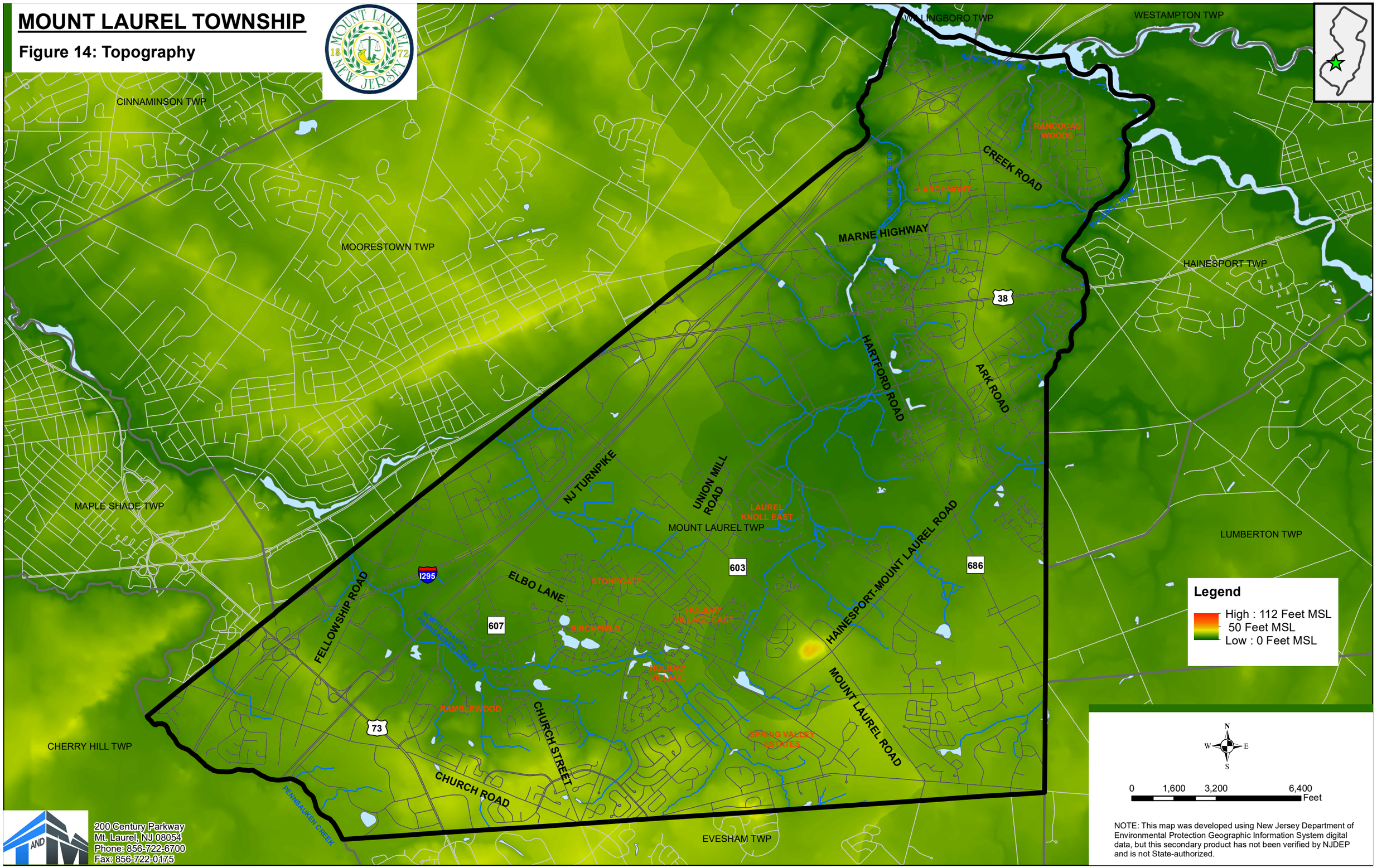
Figure 15 illustrates the location of steep slopes within the Township.

IMPERVIOUS COVERAGE

Impervious coverage is considered to be built lands or structures which do not allow for stormwater or natural water infiltration. Increased volumes of stormwater usually result from increased impervious surface within the Township. ***Figure 16*** illustrates areas of impervious cover.

MOUNT LAUREL TOWNSHIP

Figure 14: Topography



Legend

High : 112 Feet MSL
50 Feet MSL
Low : 0 Feet MSL

N
W E
S

0 1,600 3,200 6,400 Feet

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

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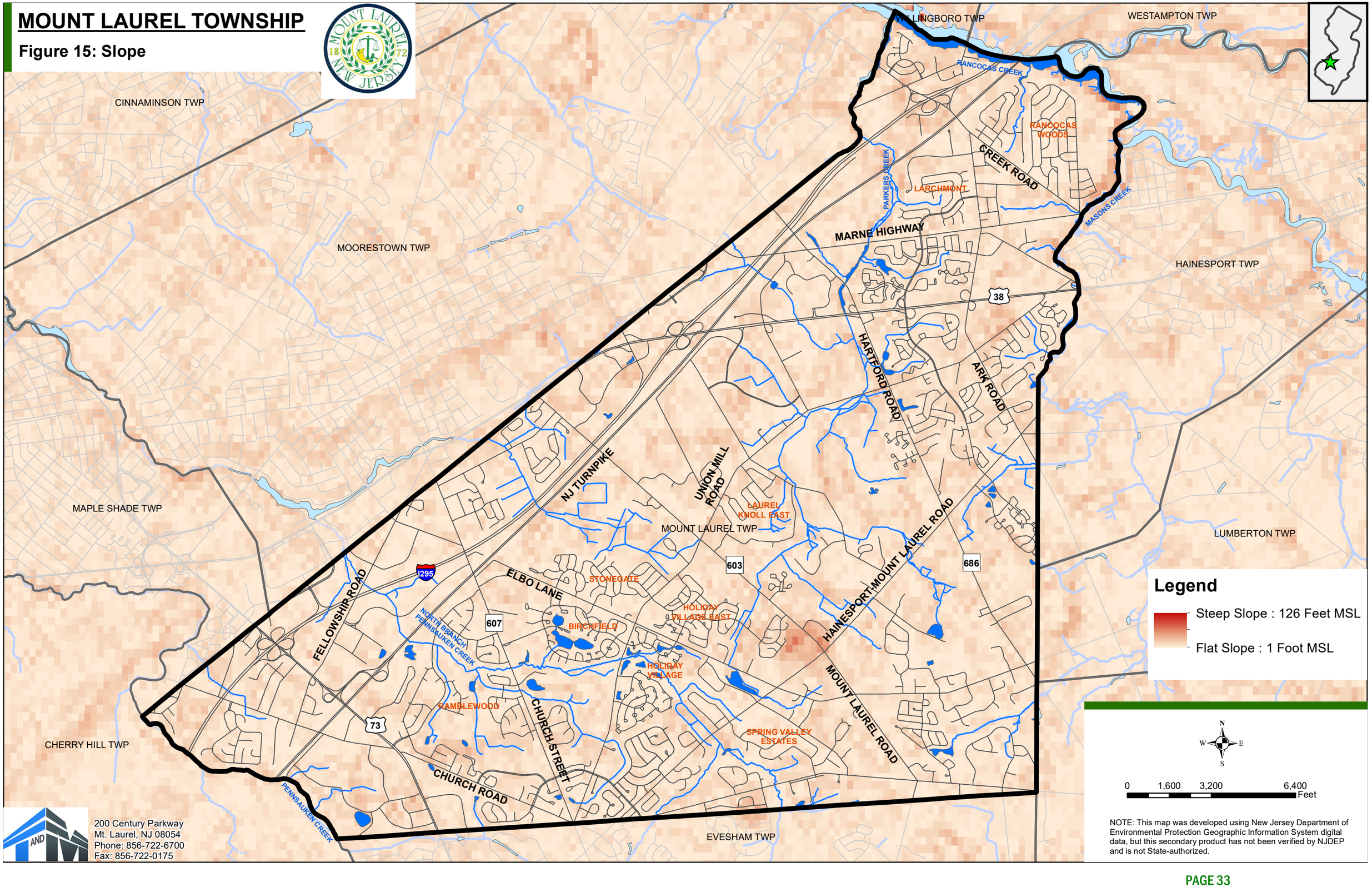
MOUNT LAUREL TOWNSHIP

Figure 15: Slope



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MOUNT LAUREL TOWNSHIP

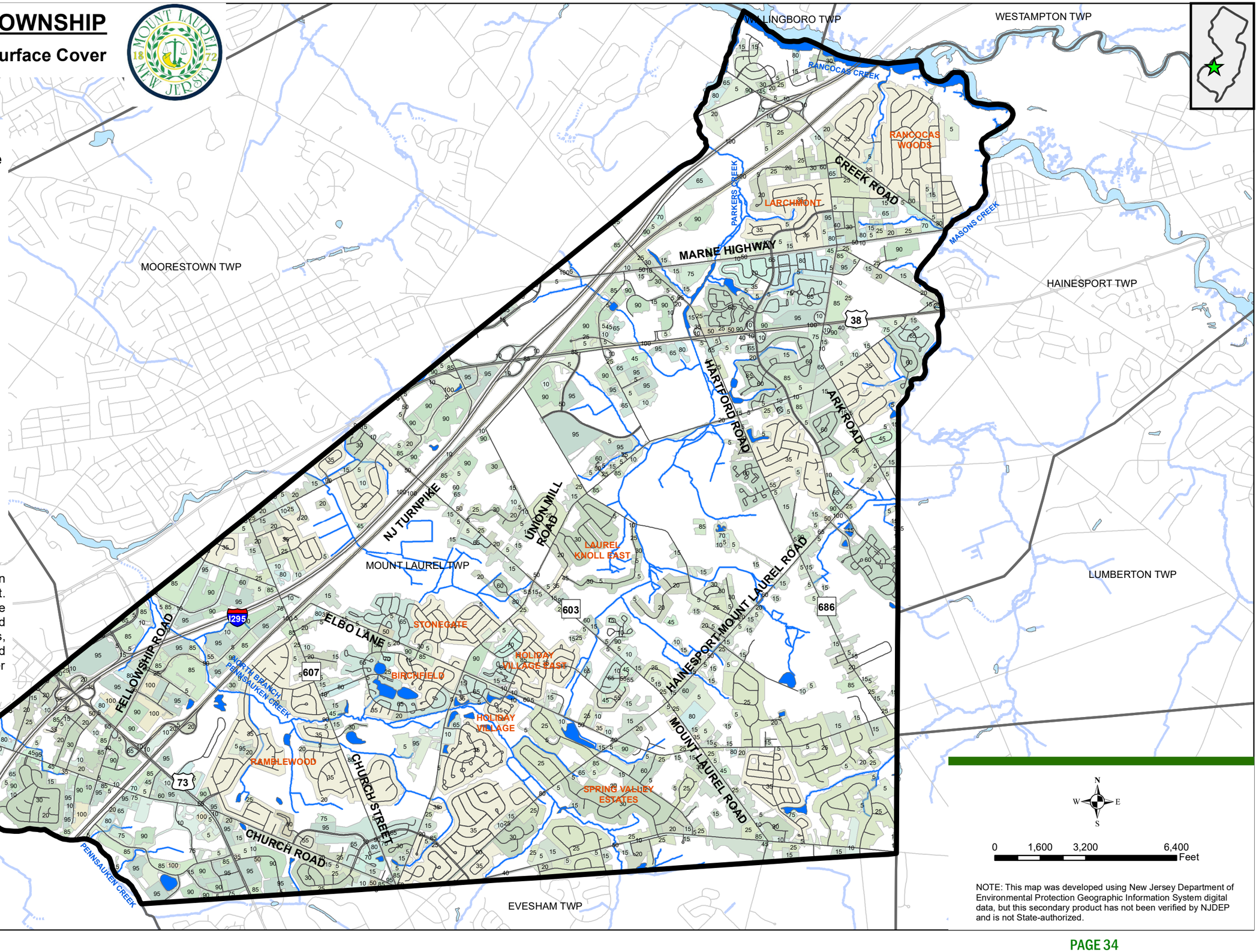
Figure 16: Impervious Surface Cover

Legend

Percent Impervious Coverage

- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40
- 45
- 50
- 55
- 60
- 65
- 70
- 75
- 80
- 85
- 90
- 95
- 100

The Impervious Surface layer is taken from the Land Use 2007 data set. What is meant by impervious surface is material such as concrete and asphalt that comprise roadways, parking areas, sidewalks and buildings. As the land use/land cover of each polygon was mapped from



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WATERS AND HYDROLOGIC RESOURCES

Mount Laurel Township has many water bodies within the borders of the municipality. Most significant bodies of water bordering the Township are the North Branch Pennsauken Creek at the southern portion of the Township and South Branch Rancocas Creek at the northern portion of the Township. The Township also has several other major waterways, including Masons Creek in the northern central portion of the Township, the South Branch Pennsauken Creek found at the southwest corner, Parkers Creek in the northern central portion of the Township, and Masons Creek located in the northern portion of the Township. In total there are 11 main body streams in Mount Laurel as shown in ***Table 4***, and 107 different types of water bodies throughout the Township.

NAME	LENGTH (KM)	TYPE
Masons Creek	0.31	Stream/River
Masons Creek tributary	0.191	Artificial Path
North Branch Pennsauken Creek	0.018	Connector
North Branch Pennsauken Creek tributary	0.244	Stream/River
Parkers Creek	0.388	Stream/River
Parkers Creek tributary	0.05	Artificial Path
Rancocas Creek tributary	0.095	Stream/River
South Branch Pennsauken Creek	0.017	Connector
South Branch Pennsauken Creek tributary	0.069	Artificial Path
South Branch Rancocas Creek	0.497	Artificial Path
South Branch Rancocas Creek tributary	0.031	Stream/River
Un-coded tributary	0.244	Stream/River

Table 4. Main Streams throughout Mount Laurel Township (source: New Jersey GIS Data)

SURFACE WATER

WATERSHEDS

A watershed is an area of land which is generally surrounded at the outer edge by higher ridges and slopes down into a basin. Waters from within this basin or watershed flow to a common location such as an outlet of a reservoir, stream, river, or bay. Watersheds can contain smaller basins or sub-watersheds. Watersheds are also unique areas and have distinct natural and physical characteristics.

Within the United States, classification of watersheds is designated by a hydrologic unit code, or HUC. The HUC code is a series of numerals to define the watershed. The fewer the number of digits in the HUC, the larger the size of the watershed. For example, a HUC-4 watershed has a four-digit code and is comprised of thousands of square miles in area. While a HUC-14 watershed, with 14-digit codes, are often less than 100 square miles in area. Smaller watersheds are found within larger watersheds.

The following data is taken from the NJDEP, Watershed Restoration web pages:

- *WMA 19, the Rancocas Creek Watershed, is the largest watershed in south central New Jersey and is comprised of Mill Creek and the North Branch, South Branch, and main stem of Rancocas Creek. Portions of Burlington, Camden and Ocean counties are within this management area covering about 360 square miles which reaches deep into the Pinelands Preservation Area.*
    - *Within WMA 19, the North Branch Rancocas Creek drains 167 square miles, and 144 miles is drained by the South Branch. The North Branch is fed by the Greenwood Branch, McDonalds Branch and Mount Misery Brook. The major tributaries of the South Branch include the Southwest Branch Rancocas Creek, Jade Run, Haynes Creek, and Friendship Creek. The South/Southwest Branches are approximately 13 miles long. The drainage area is 144 square miles.*
    - *The main stem of the Rancocas Creek flows approximately 8 miles and drains an area of about 49 square miles before emptying into the Delaware River at Delanco and Riverside. Tidal influence occurs for a distance upstream of the river confluence. The tidal influence extends the entire length of the main stem of the Rancocas Creek to the dam at Mount Holly on the North Branch, Vincentown on the South Branch, and Kirby Mills on the Southwest Branch. Land use within the Rancocas Creek Watershed is 40% forested, 30% is comprised of developed land and 17% is used for agricultural purposes, including cranberry cultivation.*
- *WMA 18 includes the Cooper River, Big Timber, Mantua, Newton, Oldmans, Pennsauken, Pompeston, Raccoon, Repaupo, and Woodbury Creeks, as well as Baldwin Run, Swede Run and Maple Swamp. WMA 18 covers parts of Burlington, Camden, and Gloucester counties, including 68 municipalities covering 391 square miles. Mount Laurel is located within a small portion of WMA 18.*
    - *The Pennsauken Creek drains 33 square miles of southwestern Burlington County and northern Camden County. This creek flows into the Delaware River near Palmyra. The North Branch of the Pennsauken is in*

Burlington County, while the South Branch is the boundary between Burlington and Camden Counties. Industry is concentrated at the mouth of the Pennsauken Creek at the Delaware River. Much of the watershed is developed as urban/suburban development, with the remainder divided between agricultural and forested land.

- *NJDEP monitors HUC-11 and HUC-14 watersheds in the state. New Jersey has 152 HUC-11 watersheds and over 900 HUC-14 sub-watersheds. The HUC-11 watersheds in New Jersey average about 60 square miles. HUC-14 watersheds are about nine square miles on average, so approximately six or seven HUC-14 watersheds would typically be nested within a single HUC-11 watershed.*

Based on the State of NJ GIS data, Mount Laurel Township is situated within four (4) HUC-11 watersheds. One is the Rancocas Creek Watershed Area located in the northwest portion of the Township which includes all of the land that drains into the Rancocas Creek (Watershed ID 19CA, Watershed Management Area No. 19 and Water Region is Lower Delaware, HUC 02040202080). The second is the SB Rancocas Creek (below Bobbys Run) Watershed Area to the northeast (Watershed ID 19BC, Watershed Management Area 19 and water region Lower Delaware, HUC 02040202070), the third is Pennsauken Creek Watershed Area located within the southern portion of the Township and which includes lands that drains into Pennsauken Creek (Watershed ID 18BA, Watershed Management Area 18, and also Lower Delaware region, HUC 02040202100) and the fourth is Rancocas Creek SB SW Branch (Watershed ID 19BA, HUC 02040202060). ***Figure 17*** illustrates the watershed in the Township and the divisions of between each watershed basin.

Within the township, ***Figure 18*** illustrates a portion of the Pennsauken Creek Watershed and ***Figure 19*** illustrates the Rancocas Creek watershed. All four (4) of the HUC-11 watersheds contain several HUC-14 watersheds within the Rancocas and Lower Delaware Watershed Management Area.

MOUNT LAUREL TOWNSHIP

Figure 17: Watersheds

Legend

WATERSHED NAME, HYDROLOGIC UNIT CODE (11DIGIT)

- Cooper River, 02040202110
- Pennsauken Creek, 02040202100
- Pompeston Creek / Swede Run, 02040202090
- Rancocas Creek NB (below New Lisbon dam), 02040202040
- Rancocas Creek SB SW Branch, 02040202060
- Rancocas Creek, 02040202080
- SB Rancocas Creek (below Bobbys Run), 02040202070

CINNAMINSON TWP
WILLINGBORO TWP
WESTAMPTON T
RANCOCAS CREEK
RANCOCAS WOODS
SEE FIGURE 19
MARKERS CREEK
LARCHMONT
CREEK ROAD
MASONS CREEK
MARNE HIGHWAY
HAINESPORT TWP
38
02040202080
02040202070
HARTFORD ROAD
ARK ROAD
UNION MILL ROAD
LAUREL KNOLL EAST
MOUNT LAUREL TWP
MOORESTOWN TWP
MAPLE SHADE TWP
NJ TURNPIKE
603
686
HAINESPORT-MOUNT LAUREL ROAD
LUMBERTON TWP
1295
ELBO LANE
STONEGATE
FELLOWSHIP ROAD
02040202100
607
NORTH BRANCH PENNSAUKEN CREEK
BIRCHFIELD
HOLIDAY VILLAGE EAST
HOLIDAY VILLAGE
SEE FIGURE 18
RAMBLEWOOD
73
CHURCH STREET
MOUNT LAUREL ROAD
SPRING VALLEY ESTATES
CHERRY HILL TWP
CHURCH ROAD
PENNSAUKEN CREEK
02040202060
EVESHAM TWP

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0 1,600 3,200 6,400 Feet

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

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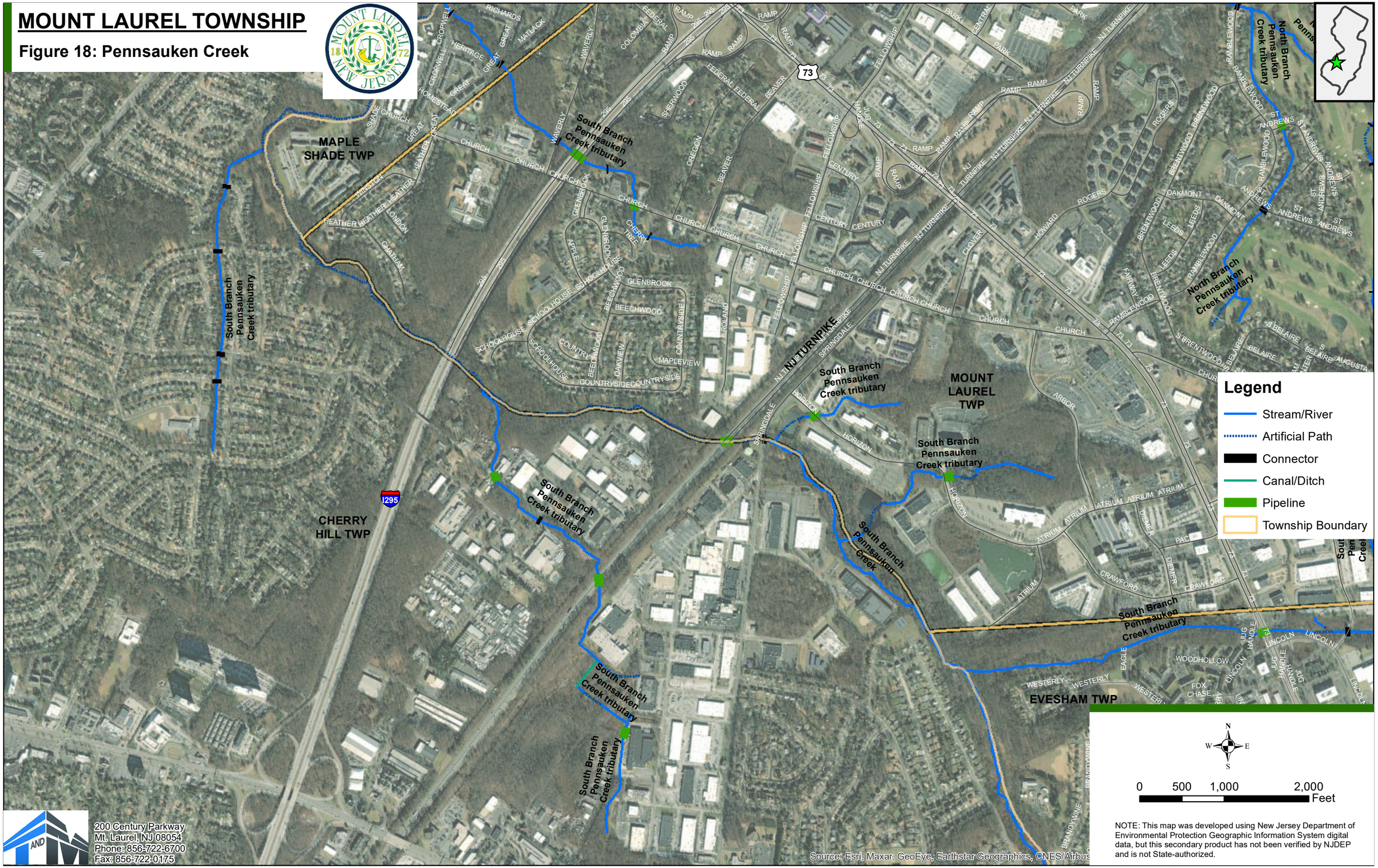
MOUNT LAUREL TOWNSHIP

Figure 18: Pennsauken Creek



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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus

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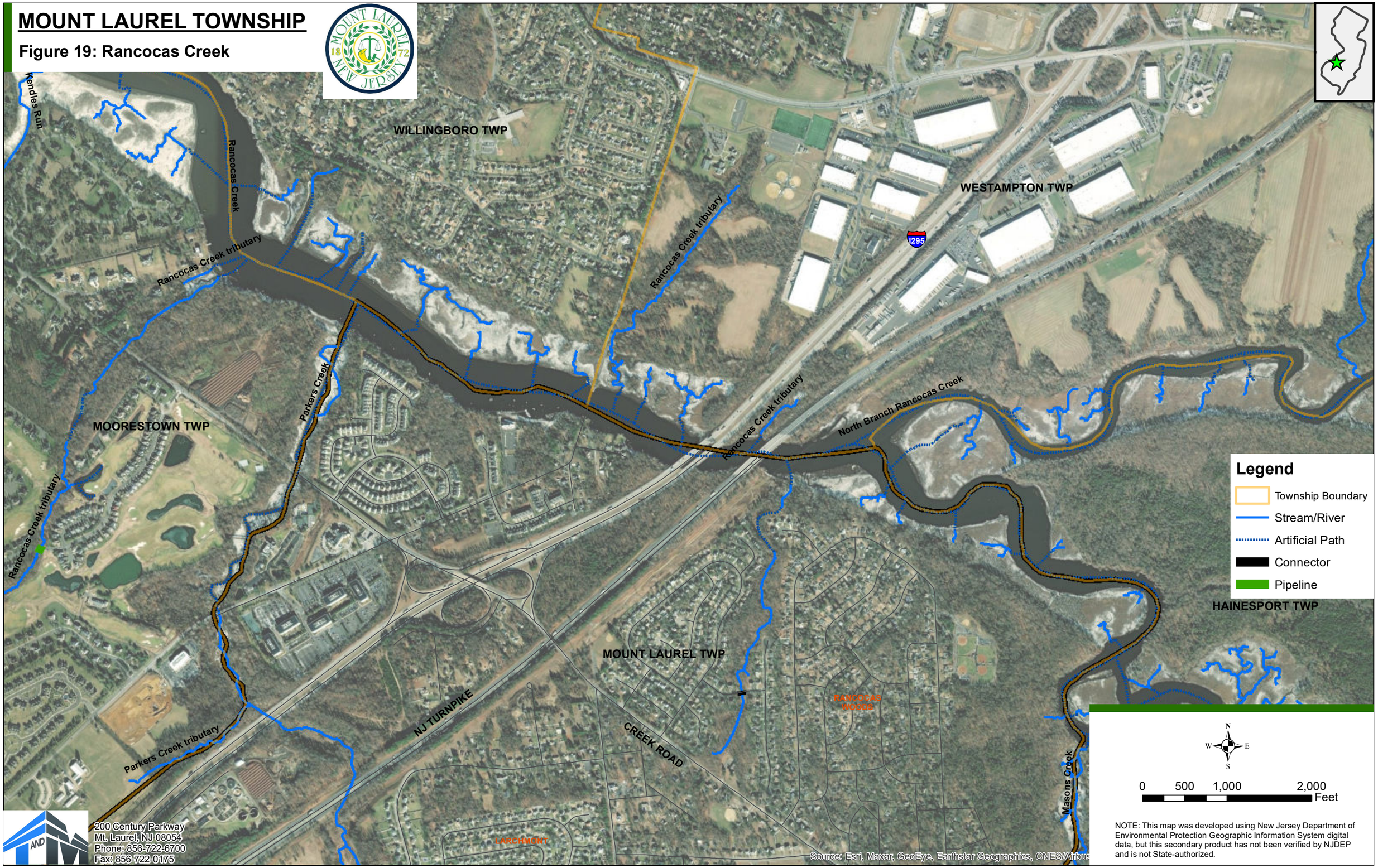
MOUNT LAUREL TOWNSHIP

Figure 19: Rancocas Creek



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STREAMS

Mount Laurel contains or is adjacent to fifty-eight (58) named streams and waterbodies. These are outlined below in ***Table 5*** and illustrated at ***Figure 20***.

TABLE 5: STREAMS AND WATERBODIES	
NAME	TYPE
Annaricken Brook	Connector
Assiscunk Branch	Stream/River
Assiscunk Creek	Pipeline
Barkers Brook	Stream/River
Beaverdam Creek	Artificial Path
Bisphams Mill Creek	Stream/River
Blacks Creek	Artificial Path
Bobby's Run	Canal/Ditch
Boundary Creek	Artificial Path
Bowkers Run	Artificial Path
Bowkers Run Tributary	Connector
Budd Run	Artificial Path/stream/pipeline
Buttonwood Run	Stream/River
Cannon Run	Stream/River
Cedar Run	Artificial Path
Chandlers Run	Canal/Ditch
Cooper River	Artificial Path
Crafts Creek	Connector
Delaware River	Stream/River
Friendship Creek	Connector

TABLE 5: STREAMS AND WATERBODIES	
NAME	TYPE
Goldys Run	Canal/Ditch
Greenwood Branch	Connector
Gum Spring	Connector
Indian Run	Artificial Path
Jacks Run	Canal/Ditch
Jade Run	Connector
Jade Run tributary	Stream/River
Kendles Run	Pipeline
Larkins Run	Artificial Path
Laurel Run	Stream/River
Little Creek	Artificial Path
Masons Creek	Stream/River
Mill Creek	Connector
Mill Race	Canal/Ditch
Mount Misery Brook	Stream/River
Newbold Run	Artificial Path
Newton Creek	Artificial Path
North Branch Cooper River	Stream/River
North Branch Newton Creek	Stream/River
North Branch Pennsauken Creek	Artificial Path
North Branch Rancocas Creek	Stream/River
North Run	Stream/River
Ong Run	Stream/River
Parkers Creek	Stream/River

TABLE 5: STREAMS AND WATERBODIES	
NAME	TYPE
Pennsauken Creek	Connector
Pochack Creek	Artificial Path
Pole Bridge Branch	Stream/River
Pompeston Creek	Artificial Path
Powells Run	Canal/Ditch
Rancocas Creek	Connector
Sharps Run	Stream/River
South Branch Mill Creek	Connector
South Branch Pennsauken Creek	Stream/River
South Branch Rancocas Creek	Stream/River
South Run	Stream/River
SW Branch South Branch Rancocas Creek	Connector
Swede Run	Stream/River
Tanners Run	Canal/Ditch

Table 5. Streams and water bodies within Mount Laurel Township (source: New Jersey GIS Data)

MOUNT LAUREL TOWNSHIP

Figure 20: Waterbodies and Streams

Legend

- Head of Tide (HOT) for New Jersey Watercourses
- Lake/Pond
- Reservoir
- Stream/River
- Spillway
- Canal/Ditch
- Estuary
- Sea/Ocean

CINNAMINSON TWP
MOORESTOWN TWP
WESTAMPTON TWP
HAINESPORT TWP
LUMBERTON TWP
MAPLE SHADE TWP
MOUNT LAUREL TWP
CHERRY HILL TWP
EVESHAM TWP

Swede Run
Swede Run UNT
Kendles Run
Strawbridge Lake
Peasston Creek
RANCOCAS CREEK
RANCOCAS WOODS
Parkers Creek UNT
Parkers Creek
CREEK ROAD
LARCHMONT
MARNE HIGHWAY
Masons Creek
38
Parkers Creek UNT
HARTFORD ROAD
ARK ROAD
Masons Creek UNT
NJ TURNPIKE
UNION MILL ROAD
LAUREL KNOLL EAST
Parkers Creek UNT
HAINESPORT-MOUNT LAUREL ROAD
686
603
ELBO LANE
STONEGATE
HOLIDAY VILLAGE EAST
SIRCHFIELD
607
FELLOWSHIP ROAD
NORTH BRANCH PENNSAUKEN CREEK
295
HOLIDAY VILLAGE
RAMBLEWOOD
CHURCH STREET
73
CHURCH ROAD
SPRING VALLEY ESTATES
MOUNT LAUREL ROAD
Masons Creek
Masons Creek UNT
PENNSAUKEN CREEK

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Streams within the Township are comprised of either freshwater or tidal waters. The Delaware River is a tidal waterway and waters flowing from the river to a point known as the "head of tide" are considered tidal waters. The head of tide is a location on the stream in which waters downstream are considered tidal and waters upstream are considered freshwater and are non-tidal. These areas are defined by either the natural topographic relief or a structure such as a dam. Mount Laurel contains over 37 stream miles within its boundaries, and about 20 of them (35 percent) are first- or second-order streams. First-order streams are the beginning of a waterway with no contributing streams. Second-order streams are stream channels formed from only one branching section of tributaries.

First- and second-order streams are known as "headwater" streams in which surface water or groundwater begin to flow into the stream. Headwaters are naturally important since they can contain a diversity of aquatic species, and the physical and chemical components of these waters affects the downstream water quality. As streams travel from the headwaters, drainage to the stream increase. Floodplains or flood hazard areas, as illustrated in ***Figure 21,*** are formed. This zone is discussed further below.

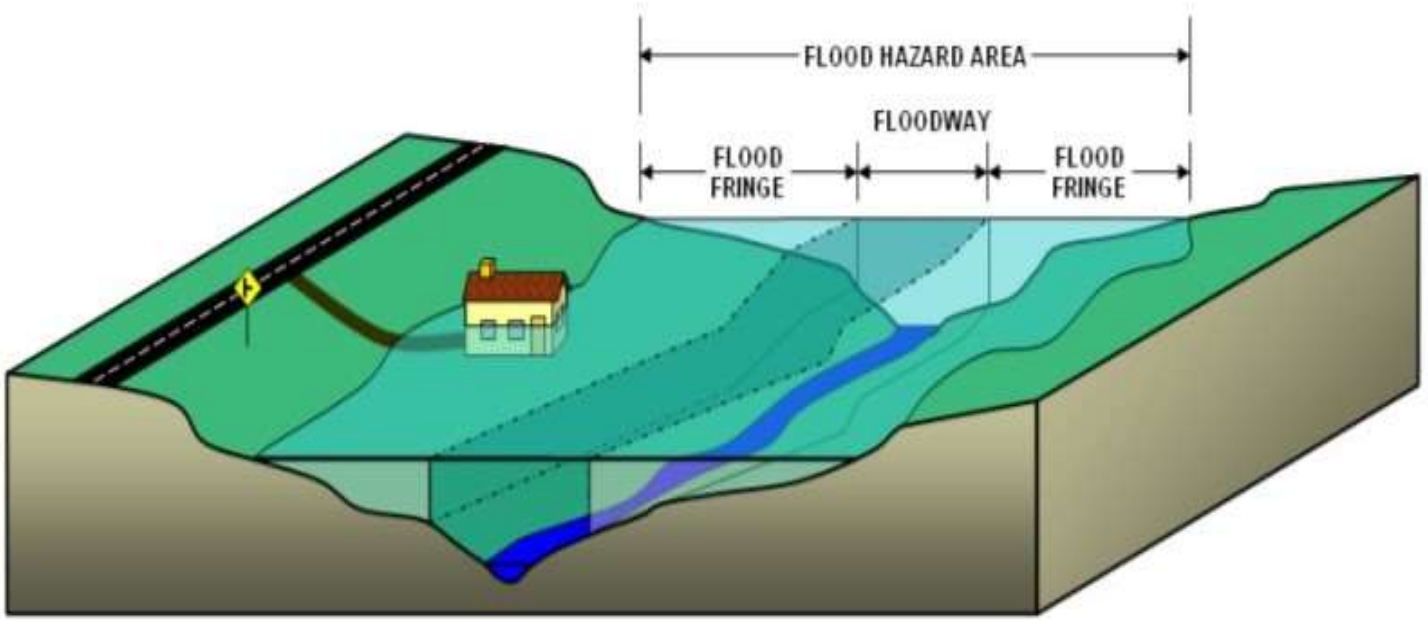

Figure 21: Flood zones (Source: NJDEP Flood Hazard Area Technical Manual)

LAKES AND PONDS

Mount Laurel contains 4,265 acres of lakes and water impoundments. Most are less than one acre in area. There are 48 lakes within Mount Laurel Township. Of these, 45 of those are designated as “artificial lakes” while 1 is natural and 2 are tidal waters. Lakes make up approximately 4,070 acres of area within the Township. There are 188 “waterbodies” within Mount Laurel which include lakes and ponds (NJDEP State GIS Data, August 2022). Laurel Acres Pond, which is 4 acres in size, is a popular place for fishing. It is located within Laurel Acres Park, and is east of South Church Street.

WETLANDS

Wetlands are special land areas which may be inundated for a portion of the year, or which may be completely inundated for the entire year. The general location of wetlands within the Township are mapped by the NJDEP and are shown at ***Figure 22***. The Township has a total of 3,241 total mapped wetlands areas within the municipal limits. The largest area of wetlands is located in the central portion of the Township. These are situated around the streams that meander through the central portion of the township. *Wetland boundaries shown at **Figure 22** have not been field verified and they may not necessarily exhibit all the characteristics of wetland areas. This map should only be used as a guide and not for regulatory or development purposes.*

Wetlands mapped throughout the Township fall under several categories and include: managed wetland in maintained lawn greenspace, wetland rights-of-way, agricultural wetlands (modified), deciduous scrub/shrub wetlands, deciduous wooded wetlands, disturbed wetlands (modified), former agricultural wetland (becoming shrubby, not built-up), freshwater tidal marshes, herbaceous wetlands, managed wetland in built-up maintained rec area, managed wetland in maintained lawn greenspace, mixed scrub/shrub wetlands (coniferous dominant), mixed scrub/shrub wetlands (deciduous dominant), mixed wooded wetlands (coniferous dominant), mixed wooded wetlands (deciduous dominant), phragmites dominate interior wetlands and wetlands rights-of-way. See ***Table 6*** for wetland categories within the Township.

MOUNT LAUREL TOWNSHIP

Figure 22: Freshwater Wetlands

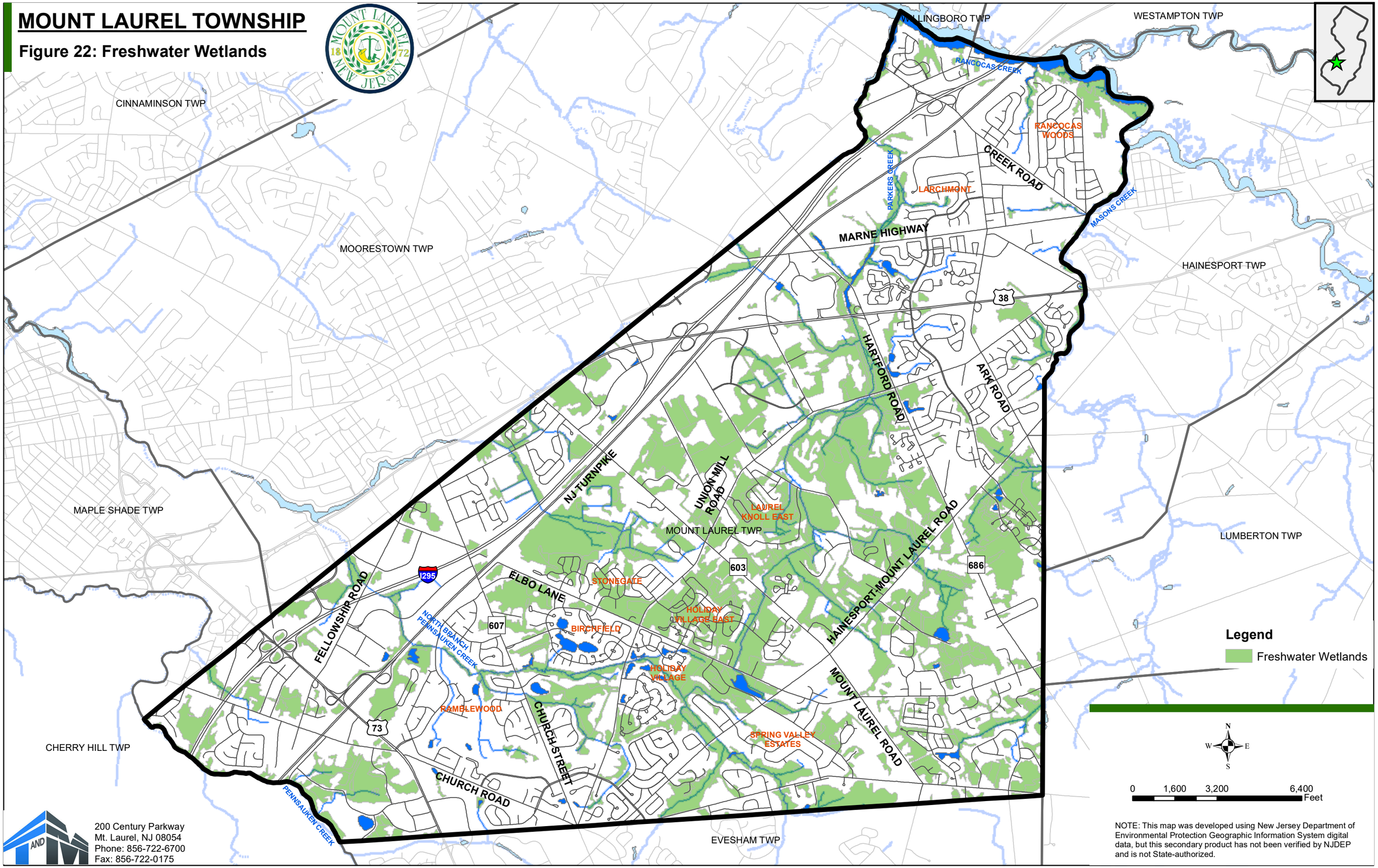

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TABLE 6: DESCRIPTION OF WETLANDS		
TYPE OF VEGETATION	NJDEP 2012 LAND COVER CATEGORIES	ACRES
Wetlands—Phragmites Dominate	Phragmites Dominate Interior Wetlands	11.0
Wetlands—Wooded Mixed (Deciduous Dominate)	Mixed Wooded Wetlands (Deciduous Dominant)	7.9
Wetlands—Wooded Mixed (Coniferous Dominate)	Mixed Wooded Wetlands (Coniferous Dominant)	12.2
Wetlands—Scrub/Shrub	Mixed Scrub/Shrub Wetlands (Deciduous Dominant)	20.0
Wetlands—Scrub/Shrub	Mixed Scrub/Shrub Wetlands (Coniferous Dominant)	11.5
Wetlands (Modified)	Managed Wetland In Built-Up Maintained Rec Area	41.3
Wetlands—Herbaceous	Herbaceous Wetlands	85.0
Tidal Marshes—Freshwater	Freshwater Tidal Marshes	64.1
Wetlands—Scrub/Shrub	Former Agricultural Wetland (Successional)	79.9
Wetlands (Modified)	Disturbed Wetlands (Modified)	37.9
Wetland —Wooded—Deciduous	Deciduous Wooded Wetlands	2350.6
Wetlands—Scrub/Shrub	Deciduous Scrub/Shrub Wetlands	149.7
Wetlands—Modified	Agricultural Wetlands (Modified)	237.1

Table 6. Description of the wetlands within Mount Laurel Township (source: New Jersey GIS Data)

In the State of New Jersey, impacts to wetlands are regulated under the Division of Land Resource Protection (DLRP) Freshwater Wetlands Program, N.J.A.C 7:7A et seq. Freshwater Wetland Protection Act. Most wetlands are also protected by a wetland buffer or transition area. The buffer consists of a strip of land located adjacent to the wetland. Development within transition areas or buffer is prohibited unless a permit is obtained from the NJDEP prior to land disturbance. The guide to New Jersey's Freshwater Wetlands permitting program is found at *https://www.nj.gov/dep/landuse/fww/fww_main.html.*

Most of the wetlands within the Township are expected to be classified as intermediate resource value under N.J.A.C.7:7A-2.4. Intermediate value wetlands lack the presence of threatened and endangered species or their habitats. Therefore, the standard width of the transition area adjacent to a freshwater wetland of intermediate resource value is fifty (50) feet unless modified by a NJDEP DLRP permit.

AGRICULTURAL WETLANDS

As depicted in ***Table 6,*** agricultural wetlands are the second most predominant form of wetlands within the Township. Agricultural wetlands are wetlands which have been created or modified through farming activities and are lands which are currently under cultivation. Lands which remain in agricultural use are exempt from New Jersey Freshwater Wetlands Protection Act Rules N.J.A.C. 7:7A et seq. However, agricultural wetlands removed from cultivation and agricultural production for more than five years can lose their exempt status.

Mount Laurel Township has 56 mapped agricultural wetland and 19 mapped former agricultural wetlands (becoming shrubby, not built-up) throughout the Township.

Historically, to allow wet or saturated lands to become more productive, farmers installed tile drains to remove excess water from the land. The drains were usually installed at a depth between three (3) to six (6) below the land surface and were used to convey waters to the nearby ditches or waterways.

Through time, these features are known to also convey lawn and agricultural chemicals, as well as runoff from nearby septic fields to the local waterways. In an effort to prevent negative impacts from these sources, the NRCS sponsors the Agricultural Conservation Easement Program. This is a voluntary program that bundles multiple funding programs to assist landowners in the removal of the drains and restoration of the agricultural wetlands to their natural state. The NRCS prioritizes applications based the potential for protecting and enhancing habitat for migratory birds and other wildlife.

FLOODPLAINS AND STORMWATER

FLOODPLAINS

As noted above, areas naturally subject to flooding are called floodplains or Flood Hazard Areas. See ***Figure 21*** for an illustration of the floodplain. Floodplains are comprised areas known as the floodway and flood fringe. The floodway is subject to waters with high velocities and includes the stream channel. The flood fringe area is adjacent to the floodway and carries excess water during overflow of the normal stream channel.

The 100-year floodplain is an area that is inundated by floodwaters having a 1 percent chance of occurring in any given year (the 100-year flood). The 500-year floodplain is an area that is inundated by floodwaters having a 0.2 percent chance of occurring in any given year. The

probability of flooding is computed based on historical river flows and flood events. In New Jersey, the flood hazard area design flood elevation is a flood equal to the 100-year/1-percent flood, plus an additional amount of water in fluvial areas to account for possible future increases in flows due to development or other factors.

Floodplains are protected from development as they serve to reduce impacts to properties resulting from flood loss, promote the protection of local water quality, and to minimize flood damage in the future. The State of New Jersey regulates construction in the flood hazard area under the Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq., and as promulgated at N.J.A.C. 7:13. The areas of the floodplain regulated by this law are depicted in ***Figure 21***. Full text of the Flood Hazard Area Control rules and additional information on regulated floodplain activities is available from NJDEP Division of Land Resource Protection website found at *https://www.nj.gov/dep/landuse/* .

Mount Laurel also manages development within to local floodplains through Burlington County's Hazard Mitigation Plan Update – 2019 Plan Section 9.25. Local floodplain development is also managed under the municipal Flood Damage Prevention Code in the Township code. The Township has appointed the Zoning Official to administer the Flood Damage Prevention Code. All development that is subject to review under the New Jersey Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.) or the New Jersey Uniform Construction Code (NJAC 5:23) must comply with the Flood Damage Prevention Ordinance, the New Jersey Flood Hazard Area Control Act, and the Federal Standards at Section 60.3 of the Nation Flood Insurance Program (NFIP).

Floodplains within the Township are depicted in ***Figure 23.*** Floodplains are mapped using digital coverage from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs). The boundaries of the 100-year and 500-year floodplains (flood level which has a 0.2 percent chance of occurring in any given year) shown on the FIRMs were digitized from aerial maps. It is important to note that flooding within these floodplains can occur every year. Most of the Township is within a FEMA Flood Zone X area which indicates minimal flood hazard. However, in the central region of the Township around the main streams and in the northern region along the Rancocas Creek, there are Flood Zone Areas mapped as zones A and AE. These flood zone designations indicates where flooding is more prominent.

FLOODING ISSUES

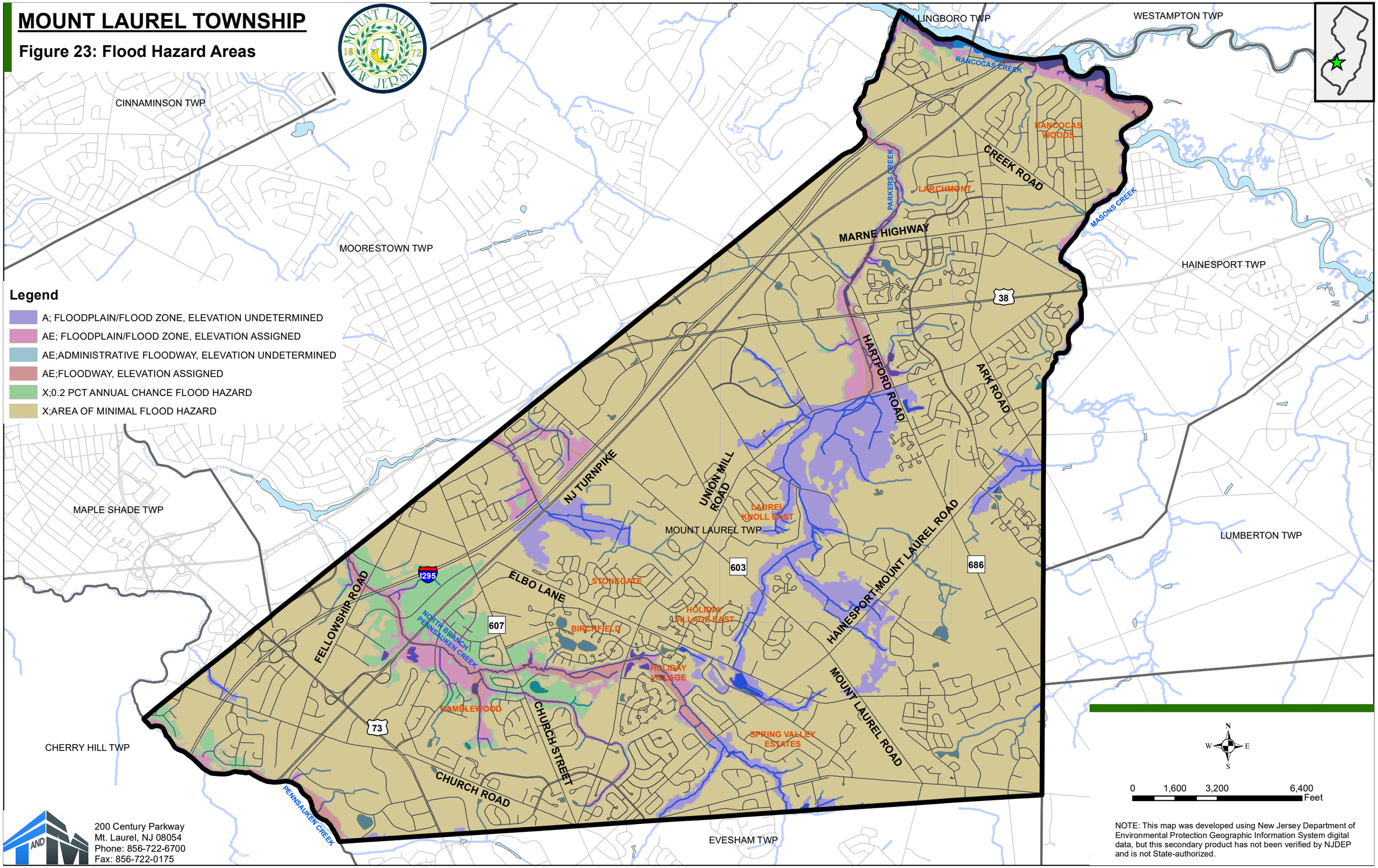
Overall, the Township does not have severe flood risk because most of the area is at a minimal flood factor as noted as Flood Zone Designation X. Some areas are high risk as mapped and designated as Zones A and AE. Development within these areas require special consideration and must confirm with the floodplain management rules specified above to protect and minimize flood damage to structures. Areas within the floodplain and floodway within the Township are presented at ***Table 7*** **and** ***Figure 23.*** It is that the mapping does not calculate the actual risk of flooding but does provide information regarding the location of flood prone areas. Flooding can still happen in Zone X areas. Flooding within all areas is generally influenced by the presence of impervious surfaces, such as pavement and structures, changes in stream flow, infrastructure which may fail or is poorly maintained, and increased rainfall intensities.

AREA OF FLOOD HAZARD ZONES	FLOOD ZONE DESIGNATION	ACREAGE
100 YEAR FLOODPLAIN/FLOOD ZONE, ELEVATION UNDETERMINED	A	887
100 YEAR FLOODPLAIN/FLOOD ZONE, ELEVATION ASSIGNED	AE	361
ADMINISTRATIVE FLOODWAY, ELEVATION UNDETERMINED	AE	16
FLOODWAY, ELEVATION DETERMINED	AE	400
500 YEAR FLOOD HAZARD AREA/0.2% ANNUAL CHANCE	X	483
AREA OF MINIMAL FLOOD HAZARD	X	11,900

Table 7. Floodplain Areas within Mount Laurel Township (source: New Jersey GIS Data/FEMA)

MOUNT LAUREL TOWNSHIP

Figure 23: Flood Hazard Areas



Legend

- A; FLOODPLAIN/FLOOD ZONE, ELEVATION UNDETERMINED
- AE; FLOODPLAIN/FLOOD ZONE, ELEVATION ASSIGNED
- AE;ADMINISTRATIVE FLOODWAY, ELEVATION UNDETERMINED
- AE;FLOODWAY, ELEVATION ASSIGNED
- X;0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- X;AREA OF MINIMAL FLOOD HAZARD

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0 1,600 3,200 6,400 Feet

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

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SURFACE WATER QUALITY

Water quality standards are established by United States Environmental Protection Agency (EPA) and State governments to ensure that surface and groundwater are suitable for its intended use. The federal Clean Water Act (P.L. 95-217) requires that, wherever possible, water quality standards provide water suitable for various uses, including fisheries and shellfish harvesting, recreational uses, and as potable drinking water. The NJDEP also evaluates water quality by examining the health of aquatic life in a stream.

The NJDEP established a water quality monitoring network known as the Ambient Biomonitoring Network (AMNET). There are over 800 AMNET sites throughout the state of New Jersey to document the health of the state water sources. These sites are sampled for invertebrates by NJDEP on a five-year cycle. Based on this data, streams are classified as non-impaired, moderately impaired, or severely impaired. The AMNET provides information on the quality but not the source of surface water contaminants. The data is used to generate a New Jersey Impairment Score (NJIS) as a rating scale. The data is also used to compile the New Jersey Integrated Water Quality Monitoring and Assessment Report, 305(b) and 303(d) are required by the Federal Clean Water Act. The report identifies waters that are impaired within each watershed area.

There are two (2) AMNET sites in Mount Laurel, one on Parkers Creek at Walton Avenue and one on Pennsauken Creek North Branch at Church Road. The AMNET sites within the Township are shown in ***Figures 24 and 25***. The Pennsauken Creek North Branch station at Church Road is in poor impairment with a moderate impairment rating for benthic macro invertebrates. The Parkers Creek station at Walton Avenue has a fair impaired rating for benthic macro invertebrates.

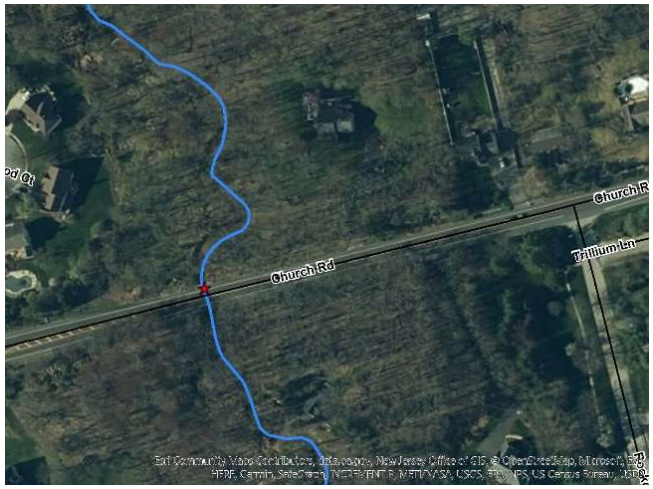


Figure 24: Pennsauken Creek AMNET Station

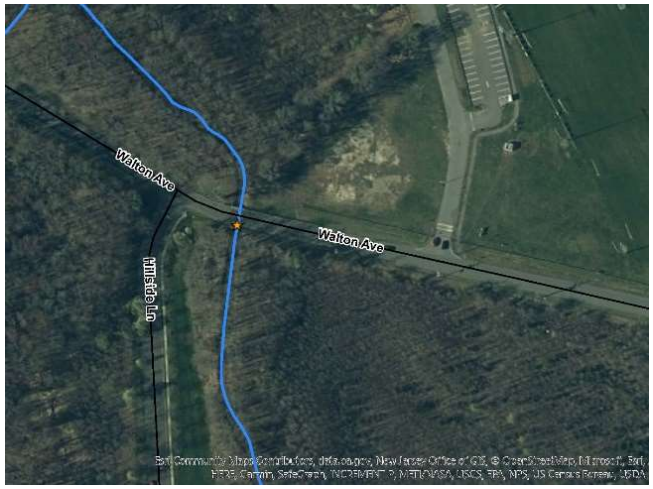


Figure 25: Parkers Creek AMNET Station

TMDL's

The total maximum daily load, abbreviated TMDL, is a pollutant budget for the impaired waterway. It is the maximum pollutant load of a contaminant on the waterway in which the feature can still meet the designated water quality standards. An implementation plan is developed to identify how the various pollutant sources can be reduced to the designated allocations. Implementation strategies may include improved stormwater treatment plants, adoption of ordinances, reforestation of stream corridors, retrofitting stormwater systems, and other best management practices or BMPs.

There have been several TMDL reports issued for Watershed Management Areas (WMA) 18 and 19 applicable for the Township. This information may be found at the NJDEP Bureau of Stormwater Permitting Website at *https://www.nj.gov/dep/dwq/tmdl/0324.html* , and is listed as noted below:

MUNICIPALITY AND COUNTY
Mount Laurel Township, Burlington County

TOTAL MAXIMUM DAILY LOAD (TMDL) INFORMATION FOR SELECTED MUNICIPALITY:

APPLICABLE STREAM TMDL(S)

- Total Maximum Daily Loads for Fecal Coliform to Address 27 Streams in the Lower Delaware Water Region

  Fecal Coliform - 2003 : Pennsauken Creek N and S Br : https://www.nj.gov/dep/wms/bears/docs/Lower%20Delaware%20FC.pdf

- Total Maximum Daily Loads for Fecal Coliform to Address 27 Streams in the Lower Delaware Water Region

  Fecal Coliform - 2003 : Sharps Run : https://www.nj.gov/dep/wms/bears/docs/Lower%20Delaware%20FC.pdf

- Total Maximum Daily Load for Mercury Impairments Based on Concentration in Fish Tissue Caused Mainly by Air Deposition to Addre HUC 14s Statewide

  Mercury - 2010 : Pennsauken Ck NB (incl StrwbrdgLk-NJTPK)
  : https://www.nj.gov/dep/wms/bears/docs/TMDL%20HG%20document%20final%20version%209-8-09_formated%20for%20web%20posting%20js.pdf

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Parkers Creek (above Marne Highway) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDe

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Pennsauken Ck NB (above NJTPK) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Pennsauken Ck NB (incl StrwbrdgLk-NJTPK) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Pennsauken Ck SB (above Rt 41) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Rancocas Ck SW Branch (below Medford br) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Rancocas Creek (Martins Beach to NB/SB) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf

- Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) for Zones 2 - 5 of the Tidal Delaware River

  Polychlorinated Biphenyls (PCBs) - 2003 : Rancocas Creek SB (below Rt 38) : https://www.nj.gov/drbc/library/documents/TMDL/FinalRptDec2003.pdf

APPLICABLE LAKE TMDL(S)

- Total Maximum Daily Loads for Pathogens to Address 17 Lakes in the Lower Delaware Water Region

  Fecal Coliform - 2007 : Lake Coxtoxen : https://www.nj.gov/dep/wms/bears/docs/adopted_lowerdelaware_fecal_lake.pdf

- Report on the Establishment of Total Maximum Daily Load (TMDL) For Phosphorus in Strawbridge Lake, Moorestown Township, Burlington County, NJ Amendment to the Tri-County Water Quality Management Plan

  Total Phosphorus - 2000 : Strawbridge Lake : https://www.nj.gov/dep/wms/bears/docs/FINAL-ST.pdf

APPLICABLE SHELLFISH TMDL(S)

None

SURFACE WATER QUALITY STANDARDS – WATERWAY DESIGNATIONS

All water bodies in New Jersey are classified by NJDEP as either freshwater (FW), pinelands water (PL), saline estuarine water (SE), or saline coastal water (SC). Freshwater is further categorized as freshwater that originates and is wholly within federal or state parks, forests, or fish and wildlife lands (FW1); and all other freshwater (FW2). Freshwater bodies (FW1 and FW2) are further broken down into trout-producing (TP), trout-maintaining (TM), or nontrout waters (NT). The water quality for each of these groups must be able to support designated uses that are assigned to each water body classification in Surface Water Quality Standards N.J.A.C 7:9B-1.12.

Rancocas Creek – FW2-NT

Pennsauken Creek –- FW2-NT

Parkers Creek – FW2-NT

All of the three major streams and their tributaries within Mount Laurel are classified as FW2–NT, which means that they are freshwater, nontrout-producing, nontrout-maintaining waters. It should also be noted there are no Category 1 waters within Mount Laurel Township.

POTENTIAL CAUSES OF WATER QUALITY IMPAIRMENTS

POINT SOURCES

Discharge from point sources come from a single source or "point," such as an industrial pipe discharge, are regulated by NJDEP through the New Jersey Pollution Discharge Elimination System (NJPDES) Program. New Jersey created the NJPDES Program in response to the Federal Clean Water Act of 1972. This Act required each state to develop water quality standards and regulate pollution entering waterbodies. The act classified pollution into two categories: "point source" pollution derived from a single source, such as a wastewater pipe from a commercial facility; and "nonpoint source" pollution, which is derived from several sources. While the Federal Clean Water Act only required states to regulate point sources, New Jersey also regulates nonpoint sources under the NJPDES rules.

NJDEP, through the Division of Water Quality and the Bureau of Point Source Permitting, administers the NJPDES program (N.J.A.C. 7:14A). Under the NJPDES Program, any facility discharging domestic or industrial wastewater directly into surface water or groundwater (usually through a septic system) must apply for and obtain a permit for discharging.

As of November 2021, 74 active NJPDES permits for point source discharges were issued for activities in Mount Laurel. Three (3) are for 5G2 general permits for basic industrial stormwater, 63 are for 5G3 general permits for construction activities, 2 are GPK2 for dental facilities onsite wastewater treatment systems, two are discharge to GW, one is R11 public complex stormwater general, one is sanitary

wastewater, one is GP S4G for sludge quality category 4, one is GP B for a swimming pool discharging, and one is a R9 for Tier A municipal stormwater (Township's Municipal Permit). Additional information on each facility is available at NJDEP's Data Miner portal.

NONPOINT SOURCES

Nonpoint source pollution is derived from a wide variety of sources. This type of pollution has a negative effect on the water waterways within the Township. These sources can be difficult to identify and remediate due to the various potential sources.

Nonpoint source pollution in Mount Laurel is derived from stormwater drainage off paved surfaces, such as streets and parking lots, commercial/industrial areas, residential sites (with and without detention basins). It may also come from lawns and from agricultural fields within the Township. Some runoff may come from similar sources in upstream townships.

Nonpoint source pollutants contained in stormwater runoff may include excess fertilizers from residential lawns and agricultural lands; oil, grease, and other chemicals from automobiles; acid rain and mercury from fossil fuel-fired energy production; soil erosion from construction sites, agricultural lands, and eroding streambanks, pet wastes, and malfunctioning septic systems.

Currently, the Township is permitted under a Tier A Municipal Stormwater Permit. This permit authorizes discharge of stormwater from the municipal stormwater system. Under this permit, the Township maintains a Stormwater Pollution Prevention Plan and a Stormwater Management Plan. Copies of these documents are found under the Stormwater Management page of the Township website at: *https://www.mountlaurel.com/department/public_works_department/stormwater_management.php*

Mount Laurel Township also addresses the NJPDES permit requirements with its Stormwater Management Plan, which adopted the performance standards set out in N.J.A.C. 7:8-5. Mount Laurel enacted its stormwater control ordinance, "Pollution Prevention Plan," in 2005 (Revised 2010), which addresses topics such as erosion and sedimentation on major construction sites, regulating the design of storm drain inlets, yard waste, and outfall pipes.

IMPERVIOUS COVERAGE

Impervious coverage is land with pervious surface of less than 5%. An increase volume of stormwater runoff draining to a stream affects the condition of the stream channel. Generally, levels of impervious cover of 10 percent or greater within a sub-watershed can increase stormwater runoff and erosion, can cause higher stream temperatures, and lowers water quality and the aquatic diversity of the stream. When impervious cover reaches 25 percent or greater, waterways can become severely degraded. Therefore, it is important to regulate the percent of impervious surfaces on sites. See ***Figure 16: Impervious Surface Cover.***

Figure 26: Stormwater Runoff Source – Inlet

STREAM BUFFERS AND GREENWAYS

A stream buffer is an area situated adjacent to the stream channel. It may also be referred as a riparian zone. Vegetated riparian zones or stream buffers are effective in mitigating the impacts of stormwater runoff to the local waterways. These areas serve to protect the water

from upland impacts or may protect upland areas from flooding. It is noted that a riparian zone does not exist along coastal ocean waters, or along manmade features such as canals or raceways.

Land Use/Land Cover (2015) shows that most of the streams in Mount Laurel Township have a degree of border by vegetated riparian buffers, although a few are very narrow or even nonexistent in some locations. The best-protected areas are nearest to Pennsauken and Rancocas Creek; farther inland, most of the creeks have fewer riparian zones areas.

Figure 27: Irrigation Well (Source: T&M)

GROUNDWATER

The geology of the New Jersey Coastal Plain is divided into strata. These strata are formed in layers of gravels, sands, silts, and clays. Areas of saturated gravel and sand layers comprise groundwater aquifers. This is the layer from which groundwater is drawn for potable, irrigation, and commercial and industrial uses. The layers of silt and clay sediments impede the movement of water and are known as the confining beds.

In southern New Jersey, aquifers tilt toward the southeast and descend deeper as they approach the Atlantic Ocean. The area in which each aquifer emerges at the land surface is known as an outcrop area. The Potomac-Raritan-Magothy (PRM) formation, is the deepest and most abundant aquifer and is a major water source for Inner Coastal Plain communities, including Mount Laurel.

AQUIFERS AND CONFINING UNITS

The PRM aquifer is the primary source of drinking water to New Jersey residents in southwestern New Jersey. Since this aquifer received high usage, the levels of water in this aquifer declined to such low levels that NJDEP established the region as a water supply critical area (Critical Area Number 2). Water supply companies and authorities within the critical water supply area have annual limits on water withdrawals from the aquifer.

The Bedrock aquifer regions within Mount Laurel include the: Composite confining unit, Englishtown aquifer system, Mt. Laurel-Wenonah, and Marshalltown-Wenonah confining unit.

GROUNDWATER RECHARGE

Groundwater recharge to the regional aquifers is important due to the critical dependence for drinking water supply and agricultural use and irrigation. Precipitation entering an aquifer to become groundwater is affected by many factors.

New Jersey Geological Survey (NJGS) developed a methodology to estimate the amount of groundwater recharge into the aquifers. This methodology is also used by the NJDEP. The measure of recharge is presented as inches per year.

In Mount Laurel Township, about 27% percent of the land experiences moderate recharge, at a rate of 8 to 10 inches per year. Some lands experience recharge rates (between 11 and 15 inches per year) and comprise approximately 24% percent of the land. Mount Laurel has

many areas of wetlands, open water, hydric soil, or no recharge, as demonstrated in the table below. There is only one area in the Township that has a groundwater recharge of 16-23 inches and that accounts for only 0.19% of the entire township. These areas are often located in wetlands and have a low recharge rate because they are already saturated. Urban areas also experience very low recharge because of their impervious surface cover. ***Table 8*** illustrates the area of groundwater recharge and percent cover of the Township.

GROUNDWATER RECHARGE AREAS	PERCENTAGE OF MOUNT LAUREL AREA (%)
1-7inches	12.23
8-10 inches	27.06
11-15 inches	23.84
16-23 inches (only 1 area)	0.19
Wetland/Open Water/Hydric Soil/No Recharge	37

Table 8: Groundwater Recharge Area in Mount Laurel Township (source: New Jersey GIS Data).

Best Management Practices, such as bioswales, green infrastructure, infiltration basins, and porous pavement can be used to capture and infiltrate precipitation into the groundwater. These features are encouraged as part of site design.

POTABLE WATER

PUBLIC WATER SUPPLY WELLS

Potable water is defined as drinkable water and may be provided by public and private well systems. Public water supply wells are defined as those wells serving at least 25 people or provide 15 service connections for minimum of 60 days per year. According to the EPA, public water supply wells serve 90 percent of people in the United States with drinking water. Nearly all Mount Laurel residents receive potable water from public water supply wells. The public wells in the Township are shown on ***Figure 28: Public Water Supply Wells.***

Public water supply wells are monitored by NJDEP on a regular basis. It is the responsibility of the licensed operator to ensure proper monitoring is performed for the distribution system and each point of entry is monitored for all parameters. The Code of Federal Regulations (40 CFR 141) and the New Jersey Safe Drinking Water Act Regulations (N.J.A.C. 7:10) provide additional information on the type and frequency of the sampling and reporting of testing data.

DRINKING WATER

There are five (5) well heads located within the Township that are designated as well head protection areas for public non-community water supply wells. There are no designated well head protection areas for public community water supply wells in New Jersey, as shown in ***Figure 28.***

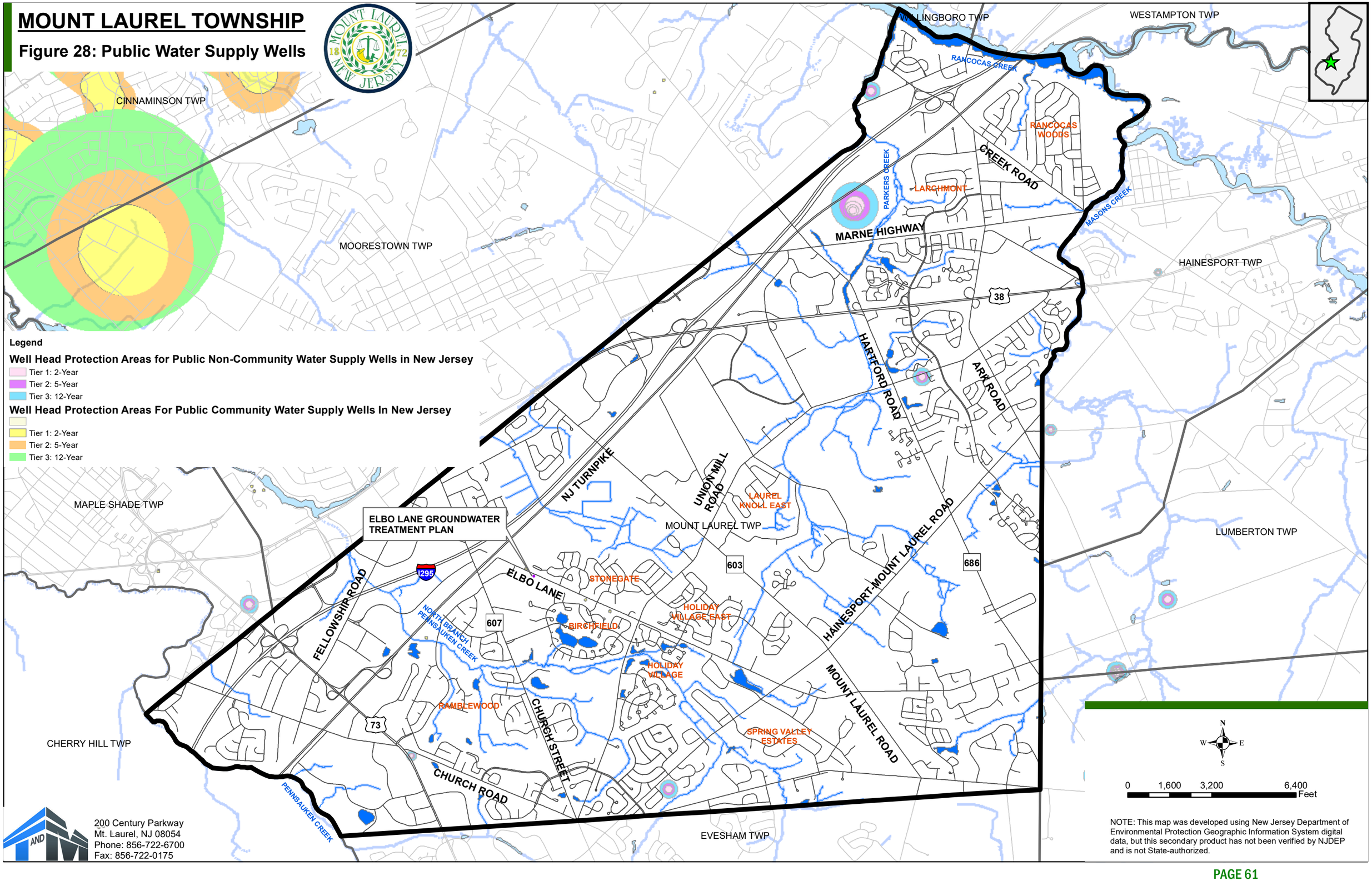
Mount Laurel Township receives its drinking water from a blend of sources including Mount Laurel MUA, Willingboro MUA, and the NJ American Water Company per the Mount Laurel Municipal Utilities Authority. Each of these systems relies on groundwater wells. The Township uses three (3) deep wells for groundwater. The Township also purchases additional groundwater from the New Jersey American Water Company. The Willingboro MUA obtains its water from wells in the PRM aquifer and operates several water treatment facilities. An outline of the three (3) sources is below as detailed by the Mount Laurel MUA:

- ***Mount Laurel MUA*** (MLTMUA) pumps water from three deep (600-700') wells within the lower Potomac-Raritan-Magothy (PRM) aquifer. This water is treated at the water treatment facility on Elbo Lane using a mixed media filter system with pH adjustment, chlorine disinfection and fluoridation. In 2004 a fourth MLTMUA well was converted from a supply source to an underground storage source using aquifer storage and recovery (ASR) technology.
- ***Willingboro MUA*** (WMUA) obtains water from wells in the PRM aquifer and operates several water treatment facilities.
- ***NJ American Water Company*** (NJAWC) supplies water from three sources: Surface water from the Delaware River Delran Plant and ground water wells from the PRM and Mount Laurel-Wenonah aquifers.

Drinking water is distributed to the Township via MLTMUA extensive underground infrastructure network. Due to the number of water supply source locations and interconnectivity, it is possible that drinking water may be distributed from a mixture of the sources listed above (MLTMUA, WMUA and NJAWC).

MOUNT LAUREL TOWNSHIP

Figure 28: Public Water Supply Wells



Legend

Well Head Protection Areas for Public Non-Community Water Supply Wells in New Jersey

- Tier 1: 2-Year
- Tier 2: 5-Year
- Tier 3: 12-Year

Well Head Protection Areas For Public Community Water Supply Wells In New Jersey

- Tier 1: 2-Year
- Tier 2: 5-Year
- Tier 3: 12-Year

N
W E
S

0 1,600 3,200 6,400 Feet

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

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As required by state and federal regulations, most notably the 1974 federal Safe Drinking Water Act, the drinking water quality of all utilities is regularly monitored for a variety of chemical and biological contaminants. Monitored chemical contaminants include inorganic compounds, radionuclides (i.e., radioactive compounds), and synthetic organic chemicals. The synthetic organic chemicals monitored include volatile organic chemicals (i.e., organic chemicals that readily become gases), pesticides, herbicides, and disinfection by-products. Biological contaminants that are monitored include coliform and *Legionella* bacteria, as well as parasites, such as *Giardia* and *Cryptosporidium*. Turbidity (or cloudiness) is also tested. Lead and copper are also tested at a sample number of locations.

Drinking water supplies are rated for their susceptibility to contamination by different parameters, a rating that reflects the potential for contamination rather than its existence. Wells vary in their susceptibility to the tested contaminants, and each of Mount Laurel's municipal sources has different types of susceptibility. Overall, the drinking water from the three municipal systems does not have a high degree of susceptibility to tested contaminants.

The 2002 Private Well Testing Act (PWTA) requires testing of potable water from private wells prior to the sale of a residential property. The testing must be completed by a State Certified laboratory prior to the sale. The Act also requires landlords to test the private well water supplied to their tenants. Laboratory results from both types of testing must be provided to the prospective buyer or the tenant. The data is also provided to the NJDEP Bureau of Safe Drinking Water for consideration and assessment. When parameters are found in excess of the maximum contaminant level, the laboratory must notify the NJDEP, local health department, and the respective owner/buyer. While the Act does not require homeowners to treat private well water if an exceedance is identified, the local health department may require the installation of treatment equipment.

SANITARY SEWER

The Township maintains a network of sanitary sewers to manage and collect wastewater for treatment. Wastewater treatment is provided through several publicly owned water treatment facilities (POWT). These facilities are important as they provide for both primary and secondary treatment to remove suspended solids, nutrients, and contaminants. The State of New Jersey provides and regulates wastewater levels to ensure the waters are treated properly before being released into the environment. ***Figure 29*** illustrates the sewer service areas within Mount Laurel.

Where residences, commercial, and industrial uses are not connected to a POTW, facilities use individual septic systems, as regulated by the Burlington County Health Department. See the Septic Suitability Section as described above for further information.

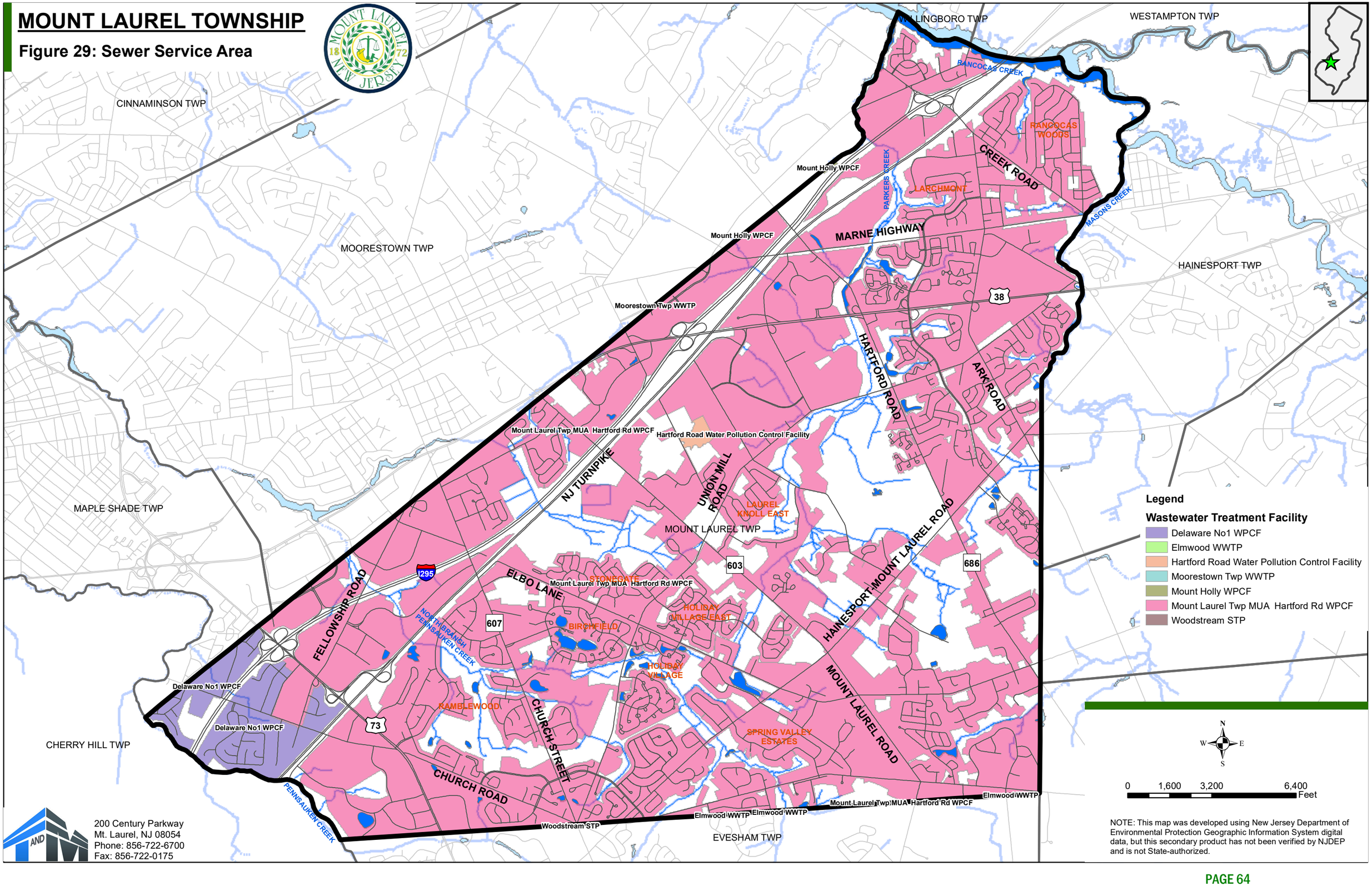
BIOLOGICAL RESOURCES

Biological resources pertain to categories of the environment which include living organisms such as wildlife, invertebrates, fish, avian species, and terrestrial and aquatic plants. Biodiversity of species or a community can be used as an indicator to gauge the condition of ecosystems. Maintaining biodiversity in natural systems provides a benefit to the human environment and health, crop production, and ecosystem sustainability or vigor. Factors and environmental risks such as water quality, pollution, land cover changes, demographics and resource use also impact biological resources.

The information provided in the following sections details the local resources and species found within the Township.

MOUNT LAUREL TOWNSHIP

Figure 29: Sewer Service Area



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

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NATIVE AND LOCAL VEGETATION

Southern New Jersey is home to many native forest and field plant species. Plants provide many benefits to an ecosystem such as providing nectar for pollinators, filter water, purify air, provide shelter and food for wildlife and humans. Native plants provide additional benefits such as:

- *Low maintenance:*
  Once established, native plants generally require little maintenance.
- *Beauty:*
  Many native plants offer beautiful showy flowers, produce abundant colorful fruits and seeds, and brilliant seasonal changes in colors from the pale, thin greens of early spring, to the vibrant yellows and reds of autumn.
- *Healthy Places for People:*
  Lawns and the ubiquitous bark-mulched landscapes are notorious for requiring profuse amounts of artificial fertilizers and synthetic chemical pesticides and herbicides. The traditional suburban lawn, on average, has 10x more chemical pesticides per acre than farmland. By choosing native plants for your landscaping, you are not only helping wildlife, but you are creating a healthier place for yourself, your family, and your community.
- *Helping the Climate:*
  Landscaping with native plants can combat climate change. In addition to the reduced noise and carbon pollution from lawn mower exhaust, many native plants, especially long-living trees like oaks and maples, are effective at storing the greenhouse gas carbon dioxide.
- *Conserving Water:*
  Because native plants are adapted to local environmental conditions, they require far less water, saving time, money, and perhaps the most valuable natural resource, water.
- *Wildlife*
  In addition to providing vital habitat for birds, many other species of wildlife benefits as well. The colorful array of butterflies and moths, including the iconic monarch, the swallowtails, tortoiseshells, and beautiful blues, are all dependent on very specific native plant species. Native plants provide nectar for pollinators including hummingbirds, native bees, butterflies, moths, and bats. They provide protective shelter for many mammals. The native nuts, seeds, and fruits produced by these plants offer essential foods for all forms of wildlife.

  (Excerpt taken from https://www.audubon.org/content/why-native-plants-matter)

The USDA maintains a Plant Hardiness Zone Map. The hardiness map was developed to illustrate the minimum winter temperature, on average, within each zone. It can also be used to develop and understanding of which plant species are viable for a particular zone. Based on a review of the map, Mount Laurel is situated within Plant Hardiness Zone 7a (0 to 5°F).

As shown at ***Figure 30***, there are six (6) general landscape/land cover categories, or habitats, are mapped within the Township according to the NJ GIS data. These include upland agriculture, barren lands, forest, urban, water and wetlands.

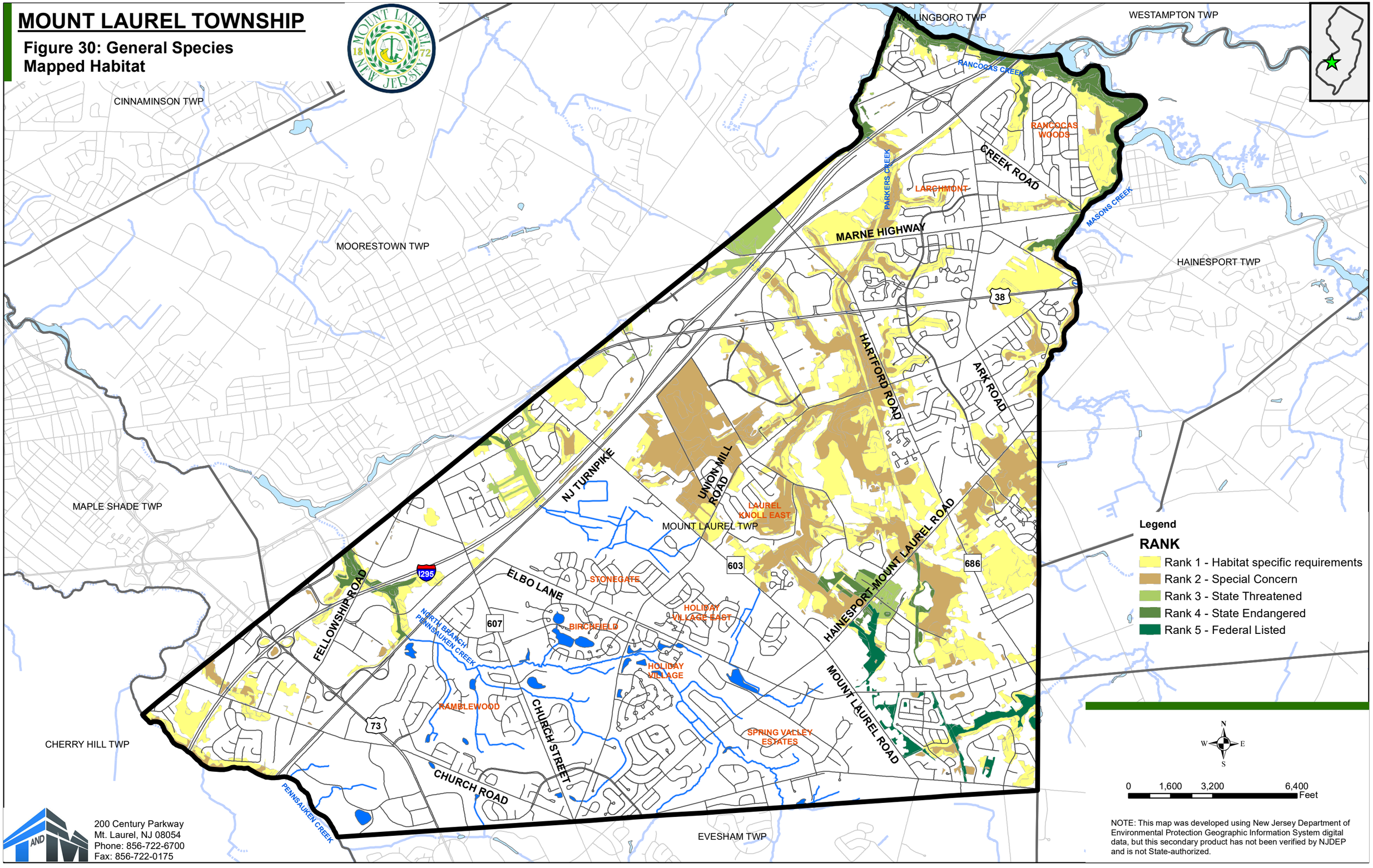
The basis for the development of the landscape categories is through land-use and land-cover. Combining this information with actual occurrences of threatened and endangered species, the landscape categories are assigned ranks according to the rarity of species or ecological communities found within the landscape type. This ranking system, as developed by the Endangered and Non-Game Species Program, is used to prioritize management efforts for the protection of habitats, species, and ecological communities. Rankings range from an index of 1 through 5, with 1 representing species or elements which are demonstrably secure in numbers to 5 representing species or elements critically imperiled due rarity.

Each of the landscape categories is further classified to contain the following vegetative communities:

- Upland Forest
- Mixed Hardwoods
- Forested Wetlands
- Freshwater/Palustrine Forested Wetland
- Emergent Wetlands
- Tidal High Marsh
- Freshwater/Palustrine Emergent Wetland
- Grasslands
- Late Successional Field
- Other Urban Lands
- Lawn
- Riparian Zone

MOUNT LAUREL TOWNSHIP

Figure 30: General Species Mapped Habitat



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

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These communities are described as follows:

Mixed Hardwood

This type of forest is found along the periphery of the roadway and consists of canopy coverage. Species typically include sassafras (*Sassafras albidum*), black cherry (*Prunus serotina*), white poplar (*Populus alba*), Eastern red cedar (*Juniperus virginiana*), sweetgum (*Liquidambar styracflua*), willow oak (*Quercus phellos*), white oak (*Quercus alba*), American holly (*Ilex opaca*), and southern red oak (*Quercus falcate*).

Figure 31: American Holly (Ilex opaca) (Source T&M)

Freshwater/Palustrine Forested Wetland

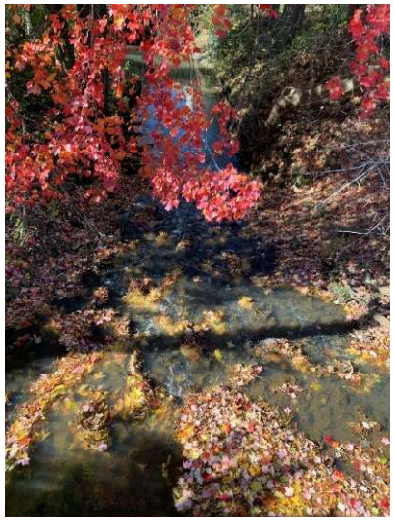
Palustrine forested wetlands are generally characterized as those vegetated freshwater wetland habitats which contain woody vegetation at heights greater than 20 feet and canopy coverage greater than 30 percent. The water regime within a freshwater or palustrine system contains waters in which the ocean-derived salts are less than 0.05 percent (Cowardin et al, 1979). This habitat is found along the high marsh/upland forest interface. It contains black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), and willow oak (*Quercus phellos*).

Figure 32: Sweet gum (Liquidambar styraciflua) (Source T&M)

Tidal High Marsh

This habitat type is associated with Rancocas Creek. Dominant vegetation within these areas includes salt meadow grass and phragmites. The shrub layer includes goldenrod (*Solidago spp*) and poison ivy (*Toxicodendron radicans*) at the interface between the uplands and wetlands. Some of the high marsh areas are dominated by common reed (*phragmites*).

Freshwater/Palustrine Emergent Wetland



These areas are located along the fringe of the marshes. Emergent wetlands area areas with little or no wood vegetation, and are usually dominated by rushes, sedges, and/or grasses. Common dominant species include switchgrass (*Panicum virgatum*), bushy broomsedge, woolgrass, common cattail (*Typha latifolia*), soft rush (*Juncus effusus*), and bur-reed (*Sparganium americanum*).

Figure 33: Red maple at North Branch Pennsauken Creek (Source T&M)

Late Successional Field

This type of field is established over several years. In this region, succession generally occurs from a cleared or lawn area which has been left to grow and change in community structure through time. Late successional field include Eastern red cedar, black cherry, persimmon (*Diaspyros virginiana*), and winged sumac (*Rhus coppallinum*). The shrub and ground cover layers consisted of privet (*Ligistrum*), Virginia creeper (*Parthenocissus quinquefolia*), and poison ivy.

Figure 34: Sunflower (Helianthus spp.) (Source T&M)

Lawn

Lawn areas are manicured grass and fields located along the highway and medians, and as landscaped areas. These areas are periodically mowed. Grasses and other herbaceous species dominate them, including grass (*Poa* sp.), sweet white clover (*Melilotus alba*), mugwort (*Ambrosia vulgaris*), English plantain (*Plantago lanceolata*), bracted plantain (*Plantago aristata*), and common plantain (*Plantago major*). These areas may also have a small component (less than 15%) of woody vegetation, such as Eastern red cedar (*Juniperus virginiana*), sassafras (*Sassafras albidum*), pitch pine (*Pinus rigida*), and white poplar (*Populus alba*).

Table 9 presents the common plant species within the Township. Listings of New Jersey trees and shrubs, and vascular plants for Burlington County is provided at ***Appendix 1.***

TABLE 9: COMMON PLANT SPECIES	
TREES	**SCIENTIFIC NAME**
Red Maple	*Acer rubrum*
American Holly	*Ilex opaca*
Eastern Red Cedar	*Juniperus virginiana*
Sweet gum	*Liquidambar styracflua*
Blackgum	*Nyssa sylvatica*
Pitch Pine	*Pinus rigida*
White Pine	*Pinus strobus*
White Poplar	*Populus alba*
Black Cherry	*Prunus serotina*
White Oak	*Quercus alba*
Spanish Oak	*Quercus falcate*
Willow Oak	*Quercus phellos*
Black Willow	*Salix nigra*

TABLE 9: COMMON PLANT SPECIES	
TREES	**SCIENTIFIC NAME**
Sassafras	*Sassafras albidum*
SHRUBS	**SCIENTIFIC NAME**
Groundsel Tree	*Baccharis halimifolia*
Persimmon	*Diaspyros virginiana*
Marsh Elder	*Iva frutescens*
Bayberry	*Myrica pensylvania*
Winged Sumac	*Rhus coppallinum*
Common Greenbrier	*Smilax rotundifolia*
Highbush Blueberry	*Vaccinium corymbosum*
Cranberry	*Vaccinium macrocarpon*
Lowbush Blueberry	*Vaccinium pallidum*
HERBACEOUS	**SCIENTIFIC NAME**
Mugwort	*Ambrosia vulgaris*
Soft Rush	*Juncus effusus*
Switchgrass	*Panicum virgatum*
Virginia creeper	*Parthenocissus quinquefolia*
Common Reed Grass	*Phragmites australis*
Common Plantain	*Plantago major*
English Plantain	*Plantago lanceolata*
Privet	*Ligistrum*
HERBACEOUS	**SCIENTIFIC NAME**
Grass	*Poa sp.*

TABLE 9: COMMON PLANT SPECIES	
Woolgrass	*Scirpus cyperinus*
Common Cattail	*Typha latifolia*

Table 9: Common Plant Species.

SENSITIVE LANDSCAPE AND PRIORITY HABITATS

Critical wildlife habitats are specific areas known to serve an essential role in maintaining wildlife, particularly in wintering, breeding, and migrating. Rookeries for colonial nesting birds, such as herons, egrets, ibis, terns, gulls, and skimmers; stop-overs for migratory birds; and natural corridors for wildlife movement merit special management approaches. The Township is located inland of the Delaware River but is bounded to the northern boundary by the Rancocas Creek and to the south by the Pennsauken Creek. The Rancocas Creek is tidal along most of the reach, where Pennsauken Creek is fluvial freshwater waterway. In general, the creeks and other waterways in the area may be considered refuge corridor for wintering, breeding, migrating, and movement for wildlife.

Ecotones, or edges between two types of habitats, are a particularly valuable critical wildlife habitat. Many critical wildlife habitats, such as waterfowl wintering areas, and muskrat habitats, are singled out as water or water's edge areas. ***Table 10*** provides a summary of potential rare species habitat as summarized from the State of New Jersey GIS data.

POTENTIAL RARE SPECIES HABITAT	ACREAGE
Artificial Lakes	368
Agricultural Wetlands (Modified)	504
Coniferous Forest (10-50% Crown Closure)	98

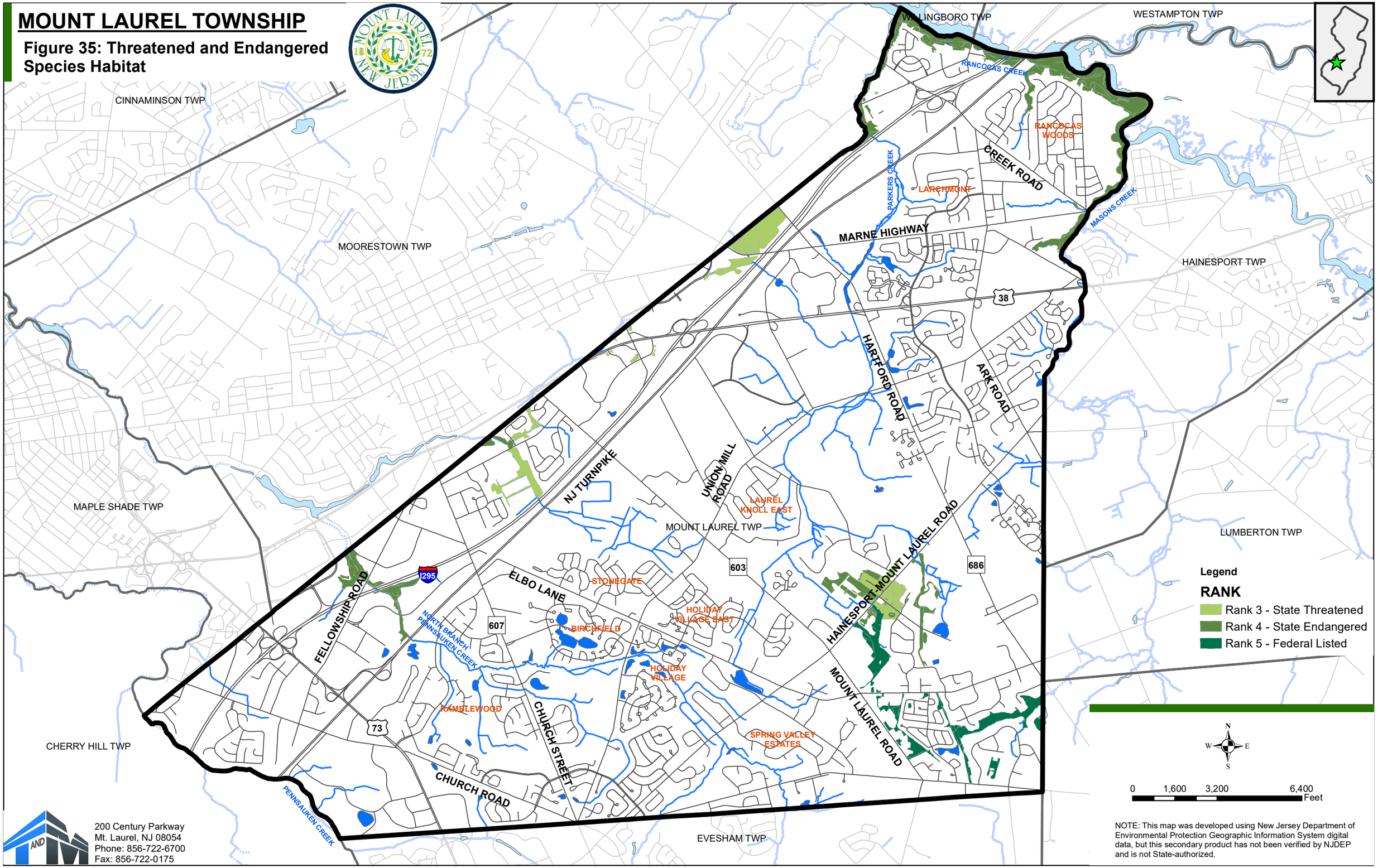
Table 10: Potential Rare Species Habitat (source: New Jersey GIS Data)

As noted above, the NJDEP Endangered and Non-Game Species Program has developed a ranking system to prioritize management efforts for the protection of habitats, species, and ecological communities. Rankings range from a Rank of 1 through 5, with 1 representing species or elements which are demonstrably secure in numbers to rank 5 which represents species or elements critically imperiled due to

rarity. *Figure 35* shows the rank of the Landscape Project Priority Habitats, as ranked 3 through 5. *Table 11* provides a listing of rare wildlife species found within Mount Laurel Township.

MOUNT LAUREL TOWNSHIP

Figure 35: Threatened and Endangered Species Habitat



200 Century Parkway
Mt. Laurel, NJ 08054
Phone: 856-722-6700
Fax: 856-722-0175

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

RARE WILDLIFE SPECIES	SCIENTIFIC NAME
Bald eagle *(Figure 36)*	*Haliaeetus leucocephalus*
Great blue heron	*Ardea herodias*
Black-crowed night heron	*Nycticorax nycticorax*
Savannah sparrow	*Passerculus sandwichensis*
Northern long-eared bat	*Myotis septentriolis*

Table 11: Rare Wildlife Species found within Mount Laurel (source: New Jersey GIS Data)

Figure 36: Bald eagle (Haliaeetus leucocephalus) (Source T&M)

WILDLIFE

Several wildlife species have been observed throughout the Township, while others are anticipated based on the type of landscape and land cover. Common mammal, bird, reptile, amphibian, and fish species which may be found to inhabit the areas of the Township are presented below. While most species may permanently inhabit certain habitats within the Township, others migrate to or frequent the available area to forage for food. Wildlife species expected to be found in the Township include those species which typically co-habitate with humans such as white-tail deer, eastern cottontail rabbit, gray squirrel, eastern chipmunk, opossum, and groundhog, along with a wide variety of avian (bird) species. *Tables 12, 13, 14*, and *15* provide a list of common species in the Township.

MAMMALS

COMMON NAME	SCIENTIFIC NAME
Eastern cottontail	*Sylvilagus floridanus*
White-footed mouse	*Peromysccus leucopus*
Deer mouse	*Peromyscus maniculatus*
Meadow vole	*Microtus pennsylanicus*
Meadow jumping mouse	*Zapus hudsonius*
Red fox	*Vulpes fulva*
Eastern chipmunk	*Tamias striatus*
Gray squirrel	*Sciurus carolinensis*
White-tailed deer *(Figure 36)*	*Odocoileus virginianus*
Striped skunk	*Mephitis mephitis*
Opossum	*Didelphia marsupialis*
Eastern Mole	*Scalopus aquaticus*
Starnose Mole	*Condylura cristata*
Silver-haired bat	*Lasionycteris noctivagans*
Raccoon	*Procyon lotor*
Woodchuck *(Figure 38)*	*Marmota monax*

Table 12: Common Mammal Species found within Mount Laurel

Figure 37: White-tailed deer (Odocoileus virginianus) (Source T&M)

Figure 38: Woodchuck (Marmota monax) (Source: Rutgers)

BIRDS

Figure 39: Goldfinch (Spinus tristis) (Source NJ.com)

Figure 40: Kildeer (Charadrius vociferus) (Source NJ.com)

TABLE 13: COMMON BIRD SPECIES	
COMMON NAME	**SCIENTIFIC NAME**
American robin	*Turdus migratorius*
American goldfinch *(Figure 39)*	*Carduelis tristis*
Tufted titmouse	*Parus bicolor*
Blackcapped chickadee	*Parus atricapillus*
Dark-eyed junco	*Junco hyemalis*
Downy woodpecker	*Picoides pubescens*
Red-breasted nuthatch	*Sitta canadensis*
Great blue heron	*Ardea herodias*
Song sparrow	*Melospiza melodia*
Mourning dove	*Zenaida macroura*
American crow	*Corvus brachyrhynchos*
Starling	*Sturnidae spp*
Common grackle	*Quiscalus quiscula*
House finch	*Haemorhous mexicanus*
Chipping sparrow	*Spizella passerina*
Double crested cormorant	*Phalacrocorax auritus*
Great egret	*Casmerodius albus*
Canada goose	*Branta canadensis*
Mallard	*Anas platyrhynchos*
Killdeer *(Figure 40)*	*Charadrius vociferus*
Laughing gull	*Larus atricilla*
Northern bobwhite	*Colinus virginianus*

TABLE 13: COMMON BIRD SPECIES (CONT.)	
COMMON NAME	**SCIENTIFIC NAME**
Ring necked pheasant	*Phasianus colchicus*
Northern flicker	*Colaptes auratus*
Rock dove	*Columba livia*
Red-tailed hawk	*Buteo janaicensis*
Turkey vulture	*Cathartes aura*
Eastern kingbird	*Tyrannus tryannus*
Blue jay	*Cyanocitta cristata*
House wren	*Troglodytes aedon*
Marsh wren	*Cistothorus palustris*
Wood thrush	*Hylocichla mustelina*
Gray catbird	*Dumetella carolinensis*
Northern mockingbird	*Mimus polyglottos*
European starling	*Sturnus vulgaris*
Northern cardinal	*Cardinalis*
Indigo bunting	*Passerina cyanea*
Rufous-sided towhee	*Pipilo erythrophthalmus*
Red-winged blackbird	*Agelaius phoeniceus*
Common grackle	*Quiscalus quiscula*
Brown-headed cowbird	*Molothrus ater*
Northern oriole	*Icterus galbula*
House sparrow	*Passer domesticus*
American goldfinch	*Carduelis tristis*

TABLE 13: COMMON BIRD SPECIES (CONT.)	
COMMON NAME	**SCIENTIFIC NAME**
American black duck	*Anas rubripes*
Green-winged teal	*Anas crecca*
Northern pintail	*Anas acuta*
Blue-winged teal	*Anas discors*
Bald eagle	*Haliaeetus leucocephalus*
Northern harrier	*Circus cyaneus*
Cooper's hawk	*Accipiter cooperii*
Red-shouldered hawk	*Buteo lineatus*
Broad-winged hawk	*Buteo platypterus*

Table 13: Common Bird Species found within Mount Laurel

FISH

COMMON NAME	SCIENTIFIC NAME
Channel catfish	*Ictalurus punctatus*
Largemouth bass	*Micropterus salmoides*
Pickerel	*Esox niger*
Blue Gill	*Lepomis macrochirus*
Sunfish	*Centrarchidae*
Silvery minnow	*Hybognathus nuchalis*

Table 14: Common Fish Species found within Mount Laurel

REPTILES AND AMPHIBIANS

COMMON NAME	SCIENTIFIC NAME
REPTILES	
Common snapping turtle	*Chelydra serpentina*
Eastern painted turtle	*Chrysemys picta*
Eastern box turtle *(Figure 41)*	*Terrapene carolina*
Eastern garter snake	*Thamnophis sirtalis*
Northern black racer	*Coluber constrictor*
AMPHIBIANS	
Green frog	*Clamitans melanota*
Fowler's toad	*Anaxyrus fowleri*
Bull frog	*Rana catesbeiana*
Green frog	*Rana clamitans*
Southern leopard frog	*Rana utricularia*

Table 15: Common Reptile and Amphibian Species found within Mount Laurel

Figure 41: Eastern box turtle (Terrapene carolina carolina) (Source T&M)

INVERTEBRATES

Invertebrates include a class of animals which are lacking a vertebral column or backbone. These animals may be found on land and in waterbodies, creeks, rivers, and the ocean. They comprise most of the species on earth and comprise five (5) main groups such as protozoans, annelids, echinoderms, mollusks, and anthropods. The growth rate of invertebrates is dependent on environmental temperatures, climate, and pollution. Some of the well-known invertebrates include ants, bees, butterflies, spiders, bivalves, and earthworms. ***Figure 42*** illustrates the New Jersey State Butterfly as the Black swallowtail butterfly.

Figure 42: Black swallowtail butterfly (Papilio polyxenes) (Source T&M)

BUILT STRUCTURES AND THE ENVIRONMENT

HISTORICAL SITES

Both the State of New Jersey and the federal government have developed listings or a Register of Historic Places and Sites. The NJ State Historic Preservation Office (HPO) maintains the listing of properties found on the State and Federal Registers. Our review of the NJ HPO list of New Jersey and National Registers of Historic Places (last revised July 2022), reveals several historic sites listed in Mount Laurel Township. This listing includes resources which have received Certifications of Eligibility (COE), opinions of eligibility as a historic place by the State Historic Preservation officer (SHPO opinion), or a Determination of Eligibility (DOE) by the Keeper of the National Register. ***Table 16*** provides a listing of the historic sites in the Township.

See ***Figure 43*** for the location of the Historic Districts and ***Figure 44*** for the location of the Historic Sites in the Township.

TABLE 16: HISTORIC SITES IN MOUNT LAUREL TOWNSHIP

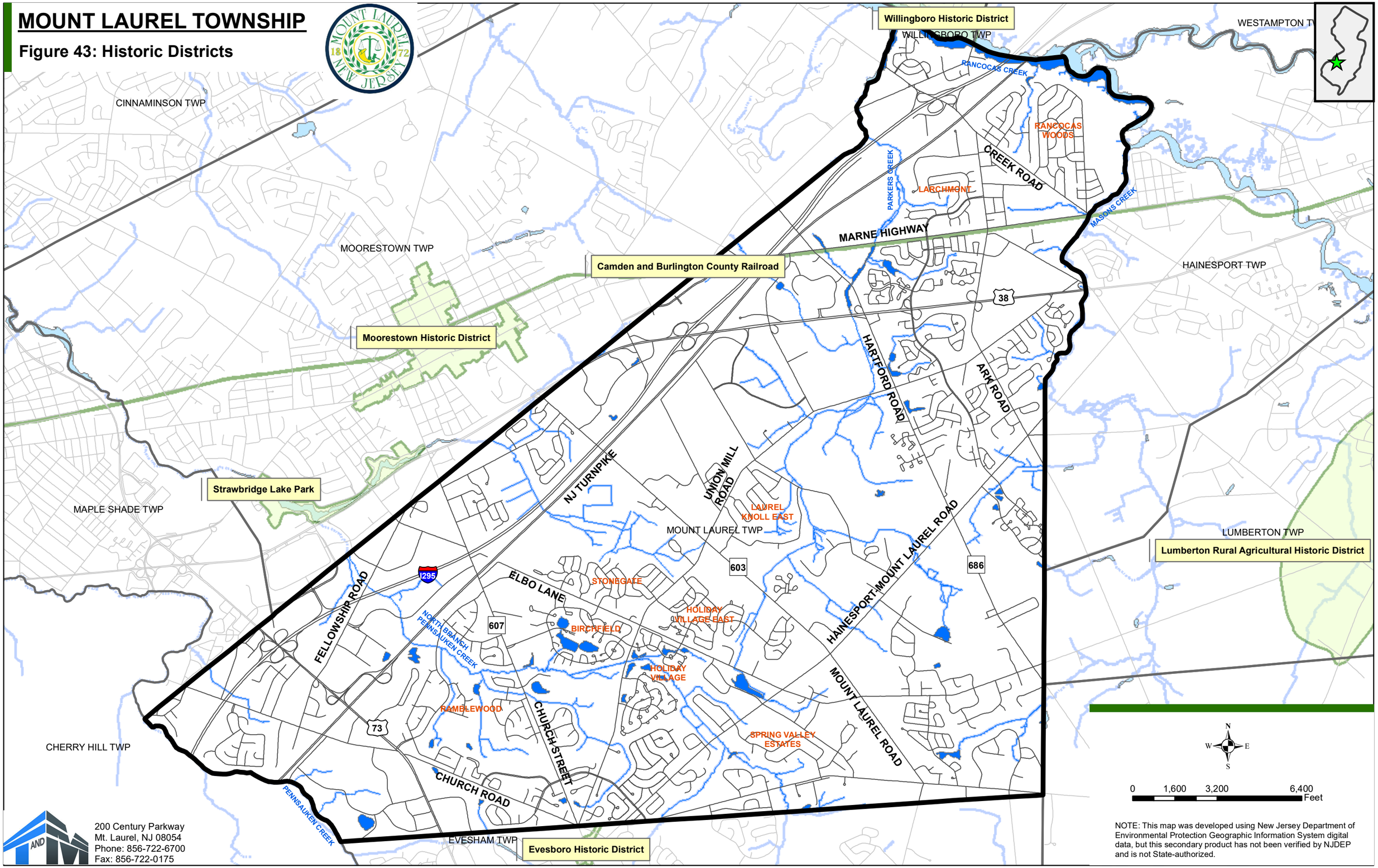
HISTORIC SITE OR DISTRICT NAME	NATIONAL AND STATE REGISTER DATA
Archaeological Site (28-Bu-169) (ID#845)	SHPO Opinion: 10/17/1984
Archaeological Site (28-Bu-241) (ID#846)	SHPO Opinion: 4/24/1992
Parkers Creek Prehistoric Site (28-Bu-309) (ID#2995)	SHPO Opinion: 1/16/1992
Archaeological Site (28-Bu-343) (ID#847)	SHPO Opinion: 10/21/1988
Archaeological Site (28-Bu-165) (ID#844)	SHPO Opinion: 10/17/1984
Archaeological Site (28-Bu-440) (ID#2996)	SHPO Opinion: 11/21/1995
Archaeological Site, Locus D (28-Bu-348) (ID#1420)	SHPO Opinion: 10/21/1988
Camden and Burlington County Railroad (ID#4588) Right-of-Way between Camden City, Camden County and Mount Holly Township, Burlington County	SHPO Opinion: 2/22/2006
Caryatid Prehistoric Site (28-Bu-276) (ID#2990)	SHPO Opinion: 2/27/1987
Centerton Bridge (SI&A # 03C4004) (ID#5467) County Route 635 Bridge over Rancocas Creek (demolished 2019)	COE: 10/5/2015

TABLE 16: HISTORIC SITES IN MOUNT LAUREL TOWNSHIP	
HISTORIC SITE OR DISTRICT NAME	**NATIONAL AND STATE REGISTER DATA**
Thomas Smith House (General Clinton House) (ID#848) 1645 Hainesport-Mount Laurel Road	NR: 9/27/1990 (NR Reference #: 90001437) SR: 1/22/1990
Evesham Friends Meeting House (ID#849) Located at junction for Moorestown- Mount Laurel Road and Evesboro Road	NR: 4/22/1982 (NR Reference #: 82003268) SR: 4/21/1981
Farmers Hall (ID#850) Corner of Hainesport-Mount Laurel Road and Moorestown-Mount Laurel Road	NR: 8/1/1979 (NR Reference #: 79003248) SR: 3/10/1976
Hemlock Hall (ID#3893) 134 Hartford Road	SHPO Opinion: 7/7/1997
Jacob's Chapel AME Church (ID#49) 318 Elbo Lane	NR: 11/10/2015 (NR Reference #: 13000137) SR: 1/31/2013 COE: 4/18/2000 (Coleman Meetinghouse)
Mount Laurel Road Historic site (28-Bu-917) (ID#5534)	SHPO Opinion: 1/6/2017
Alice Paul Birthplace (Paulsdale) (NHL, ID#851) 118 Hooten Road	NHL: 12/4/1991 NR: 7/5/1989 (NR Reference #89000774) SR: 5/22/1989
Periglacial Basin Site (ID#3808)	SHPO Opinion: 2/25/1997
Sunnyside Farm (ID#4903) 142 Hooton Road	COE: 5/5/2009
Votta Farm House Site (ID#3807)	SHPO Opinion: 2/25/1997
William Woolman House (ID#3894) 3015 Marne Highway	SHPO Opinion: 3/12/1998

Table 16: Historic Sites found within Mount Laurel (Source: New Jersey and National Registers of Historic Places, July 15, 2022)

MOUNT LAUREL TOWNSHIP

Figure 43: Historic Districts



200 Century Parkway
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Fax: 856-722-0175

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

MOUNT LAUREL TOWNSHIP

Figure 44: Historic Properties

CINNAMINSON TWP
MOORESTOWN TWP
MAPLE SHADE TWP
CHERRY HILL TWP
WILLINGBORO TWP
WESTAMPTON TWP
HAINESPORT TWP
LUMBERTON TWP
EVESHAM TWP
MOUNT LAUREL TWP
MOUNT LAUREL

Centerton Bridge (SI&A # 834004)
RANCOCAS CREEK
RANCOCAS WOODS
CREEK ROAD
PARKERS CREEK
LARCHMONT
William Woolman House
Conrail Undergrade Bridge 5.15 over Mason's Creek
MASONS CREEK
Vice Admiral James H. Doyle Combat System Engineering Development Site
MARNE HIGHWAY
Hemlock Hall
38
HARTFORD ROAD
ARK ROAD
Darnell Homestead
County Bridge # C4.44
343 WALTON AVE
345 WALTON AVE
349 WALTON AVE
605 UNION MILL RD
LAUREL KNOLL EAST
140 W ROUTE 38
Alice Paul Birthplace (Paulsdale)
Sunnyside Farm
600 South Church Street
NJ TURNPIKE
UNION MILL ROAD
603
686
HAINESPORT-MOUNT LAUREL ROAD
I295
ELBO LANE
STONEGATE
HOLIDAY VILLAGE EAST
607
BIRCHFIELD
FELLOWSHIP ROAD
161 GAITHER DR
528 FELLOWSHIP RD
912 RT 73
923 RT 73
568 FELLOWSHIP RD
1104 RT 73
1124 RT 73
73
RAMBLEWOOD
100 BRENTWOOD DR
534 S BRENTWOOD DR
4167 CHURCH RD
258 TAM O'SHANTER RD
264 TAM O'SHANTER RD
1215 RT 73
4300 CHURCH RD
CHURCH ROAD
CHURCH STREET
127 CHURCH ROAD
NORTH BRANCH PENNSAUKEN CREEK
PENNSAUKEN CREEK
HOLIDAY VILLAGE
Evesham Friends Meeting House
Farmers Hall
Samuel Shreve House
MOUNT LAUREL ROAD
Jacob's Chapel AME Church
SPRING VALLEY ESTATES
Boyne's Tavern
Charles Ballinger House
Thomas Smith House (General Clinton House)
Thomas & Susannah Ballinger House
39 OREGON AVE
1E COLUMBIA AVE

N
W E
S

0 1,600 3,200 6,400 Feet

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

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Fax: 856-722-0175

SIGNIFICANT STRUCTURES

The Township provides many services for businesses and residents of the community. Several of the Township Service buildings are listed below.

MOUNT LAUREL MUNICIPAL BUILDING

750 Centerton Road
Mount Laurel, NJ 08054
P | 856.234.0001
The Mount Laurel Municipal Building is located at the northwestern corner of the Township near the intersection of Centerton Road with Creek Road.
The Township website is: *https://www.mountlaurel.com/*

MOUNT LAUREL COMMUNITY CENTER *(Figure 45)*

100 Mount Laurel Road
Mount Laurel, NJ 08054
P | 856.234.0001
The Mount Laurel Community Center is available to residents of the Township. The Township website is: *https://www.mountlaurel.com/*

Figure 45: Mount Laurel Community Building (Source: T&M)

MOUNT LAUREL SCHOOLS AND DAYCARES

In addition to these municipal and federal offices, ***Figure 46*** provides the location of the local schools and daycares based on the NJDEP Geoweb GIS mapping.

MOUNT LAUREL TOWNSHIP

Figure 46: Schools and Daycare Facilities

Legend

- School Point Locations of NJ (Public, Private and Charter)
- Child Care Centers of New Jersey

CINNAMINSON TWP
WILLINGBORO TWP
WESTAMPTON T
RANCOCAS CREEK
RANCOCAS WOODS
CREEK ROAD
PARKERS CREEK
LARCHMONT
Fleetwood Elementary School
KinderCare Learning Center(#578
MASONS CREEK
MARNE HIGHWAY
HAINESPORT TWP
Burlington County Alternative High School
YMCA Childcare at Mt. Laurel
Bright Beginnings Child Care Cente
38
Smith-Carmichael Academy Of Learning
The Goddard School of Mount Laurel
The Goddard School Of Mt. Laurel
Larchmont Elementary School
Just Children
Just Children
HARTFORD ROAD
ARK ROAD
MOORESTOWN TWP
Creme De La Creme
Creme De Le Creme
UNION MILL ROAD
NJ TURNPIKE
LAUREL KNOLL EAST
Hartford School
MAPLE SHADE TWP
MOUNT LAUREL TWP
603
686
MOUNT LAUREL ROAD
LUMBERTON TWP
I295
ELBO LANE
The Learning Experience
STONEGATE
Margaret Donnelly O'Connor Education and Wellness Center
FELLOWSHIP ROAD
607
BIRCHFIELD
HOLIDAY VILLAGE EAST
Springville Elementary School
Hillside Elementary School
HAINESPORT-MOUNT LAUREL ROAD
NORTH BRANCH PENNSAUKEN CREEK
League Bound Academy
Parkway Elementary School
HOLIDAY VILLAGE
Montessori Art Academy
Adath Emanu-EL ECC
Thomas E. Harrington Middle School
RAMBLEWOOD
Countryside Elementary School
The Lau Tree Academy
73
CHURCH STREET
Little Darlings of Mt. Laurel, Inc
The Early Childhood Center at Adath Emanu-el
SPRING VALLEY ESTATES
CHURCH ROAD
CHERRY HILL TWP
The Schoolhouse Nursery School and Kindergarten
Schoolhouse Nursery School and Kindergarten, The
Just Children
Apple Montessori Schools
Apple Montessori Schools
South Jersey Childcare Corp dba Lighbridge Academy
Jellybean
The Kings Christian School
PENNSAUKEN CREEK
EVESHAM TWP

N
W
E
S

0 1,600 3,200 6,400 Feet

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

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Fax: 856-722-0175

MOUNT LAUREL POLICE STATION

100 Mount Laurel Road
Mount Laurel, NJ 08054
P | 856.234.8300

The Mount Laurel Township Police Department is a Law Enforcement Agency that is dedicated to the protection of life, property, and the constitutional rights of all its citizens. The Department will strive to enhance the quality of life, preserve the peace, reduce fear and provide for a safe and secure environment for the people who live, work, and visit the Mount Laurel community.
The Mount Laurel Police Department website is: *http://www.mountlaurelpd.org/*

MOUNT LAUREL LIBRARY (*FIGURE 47*)

100 Walt Whitman Ave.
Mount Laurel, NJ 08054
P | 856.234.7319
F | 856.234.6916
The Mount Laurel Library is located across the street from the Township Police Department. To obtain directions and information library services additional information is provided on the website.
The Mount Laurel Library website is: *https://www.mountlaurellibrary.org*

Figure 47: Mount Laurel Library (Source: Mount Laurel Library)

MOUNT LAUREL POST OFFICE

200 Walt Whitman Ave.
Mount Laurel, NJ 08054-9998
P | (800) ASK-USPS

The Mount Laurel Post Office is located adjacent to the Mount Laurel Library and across the street from the Township Police Department. To obtain directions and information on services additional information is provided on their website.
The post office information can be accessed via the website: *http://www.usps.com/*

CONTAMINATION AND KNOWN CONTAMINATED SITES

The State of New Jersey maintains a list of Known Contaminated Sites (NJKCS) which includes former factory sites, landfills, locations of current or former leaking underground storage tanks, chemicals or wastes disposal or discharge sites, and facilities or properties of which spills and pollution discharge have occurred. Contamination may have impacted groundwater and surface waters, soils, air, or a combination these features. Also listed include those properties which are included on the National Priorities List (NPL), otherwise known as Superfund sites. Cleanup oversight for sites on the NPL is reported to the USEPA while cleanup for sites on the NJKCS list are reported to the NJDEP.

As of November 15, 2020, there were 49 active known contaminated sites within Mount Laurel Township, (see ***Table 17***: Known Contaminated Sites and ***Figure 48***: Known Contaminated Sites). Active sites have confirmed contamination of the soil, groundwater, and/or surface water, and have one or more active cases, potentially alongside additional pending and closed cases.

TABLE 17: KNOWN CONTAMINATED SITES

SITE ID	PI NUMBER	PI NAME	ADDRESS
10651	005693	BANI ENTERPRISES LLC	4525 CHURCH RD
10652	001157	JOHNSON & TOWERS INC	2021 BRIGGS RD
10664	016424	SUNOCO 0012-2697	721 CHURCH ST
10666	013304	TMD #2	NEW JERSEY TPKE MM 38.0 N
10667	743398	AMELIAS CLEANERS	200 LARCHMONT BLVD
10671	007823	BARCLAY CITGO LLC	1201 RT 73
10675	003003	MOUNT LAUREL FUEL ISLAND	100 MT LAUREL RD
10677	007453	MT LAUREL AMERA	3530 RT 38 & MARTER AVE
10704	007611	SHELL SERVICE STATION 138434	RT 73 S & GRANITE RD
10705	007208	LUKOIL #57700	921 FELLOWSHIP RD
10706	007863	912 RT 73 S MOUNT LAUREL NJ 0071	912 RT 73
10718	009483	RAMBLEWOOD CLEANERS @ RAMBLEWOOD SHOPPING	1155 RT 73

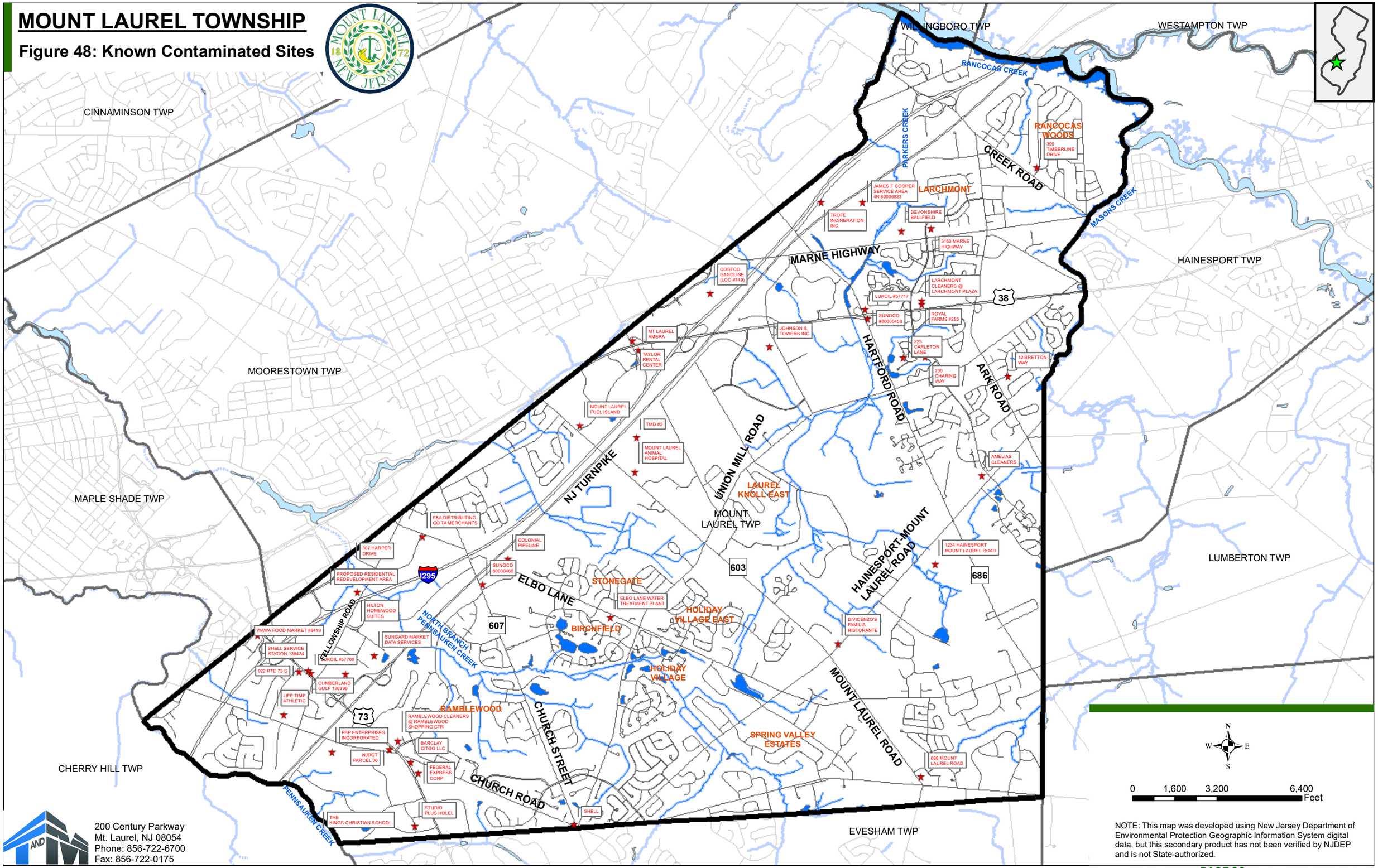
TABLE 17: KNOWN CONTAMINATED SITES			
SITE ID	PI NUMBER	PI NAME	ADDRESS
10721	022315	LUKOIL #57717	RT 38 & HARTFORD RD
15519	006750	CUMBERLAND GULF 126398	919 RT 73
15520	014829	SUNOCO 0012-1350	3240 RT 38
15910	196506	COLONIAL PIPELINE	10 ELBO LN
19101	013303	JAMES F COOPER SERVICE AREA 4N	NJ TPKE MM 39.3
21299	014655	F&A DISTRIBUTING CO TA MERCHANTS	901 PLEASANT VALLEY AVE
43464	005751	TAYLOR RENTAL CENTER	3531 RT 38
46514	008580	ELBO LANE WATER TREATMENT PLANT	85 ELBO LN
47639	014416	FEDERAL EXPRESS CORP	1205 RT 73
49676	026269	NJDOT PARCEL 36	RT 73 & CHURCH RD
50363	012682	TROFE INCINERATION INC	100 PIKE RD
56106	030483	DIVICENZO'S FAMILIA RISTORANTE	1373 HAINESPORT MT LAUREL RD
56106	030483	DIVICENZO'S FAMILIA RISTORANTE	1373 HAINSPORT-MT LAUREL RD
62271	546694	TRACK & TURF MOTEL	809 RT 73
65387	G000029019	DEVONSHIRE BALLFIELD	MARNE HWY & LARCHMONT BLVD
73292	G000033414	PBP ENTERPRISES INCORPORATED	4102 CHURCH RD
73697	G000035539	STUDIO PLUS HOLEL	500 DIEMER DR
74201	G000037858	225 CARLETON LANE	225 CARLETON LN
74220	G000038038	922 RTE 73 S	922 RT 73
75073	G000042244	GREYHOUND BUS TERMINAL	538 FELLOWSHIP RD

TABLE 17: KNOWN CONTAMINATED SITES			
SITE ID	PI NUMBER	PI NAME	ADDRESS
75523	G000044330	230 CHARING WAY	230 CHARING WAY
87613	G000061283	10 DICKENS LANE	10 DICKENS LN
127106	168302	CENTERTON SQUARE SHOPPING CENTER	2 4 & 6 TO 74 CENTERTON RD
149923	223170	HILTON HOMEWOOD SUITES	1422 NIXON RD
181407	237489	218 CHARING WAY	218 CHARING WAY
196233	257599	300 TIMBERLINE DRIVE	300 TIMBERLINE DR
218022	564717	LARCHMONT CLEANERS @ LARCHMONT PLAZA	3131 RT 38
220673	634014	COSTCO GASOLINE (LOC #749)	100 CENTERTON RD
223360	291668	688 MOUNT LAUREL ROAD	688 MT LAUREL RD
227226	602105	LIFETIME ATHLETIC	3939 CHURCH RD
228696	299258	216 CHARING WAY	216 CHARING WAY
447407	562434	9 VICTORIA COURT	9 VICTORIA CT
482080	608172	12 BRETTON WAY	12 BRETTON WAY
572140	746223	ROYAL FARMS #285	3121 3123 RT 38
593197	745098	THE RENAISSANCE CLUB	101 LINDALE DR
659907	917514	PSE&G TRANSFORMER IFO 2508B YARMOUTH LANE	YARMOUTH LN
668568	935614	BMW OF MOUNT LAUREL	1220 RT 73

Table 17: Description of known contaminated sites within Mount Laurel Township. *(Source: New Jersey GIS Data)*

MOUNT LAUREL TOWNSHIP

Figure 48: Known Contaminated Sites



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

Among the known contaminated sites in Mount Laurel Township, sites include chemical and pharmaceutical companies, other manufacturing facilities, gas stations, fuel utilities, and residential properties. Thirty-three (33) of these sites are regulated at the state level. No sites are regulated at the federal level as an EPA-designated Superfund site.

Table 17 and ***Figure 48*** bring together information from two sources: the New Jersey Contaminated Sites Geographic Information Systems (GIS) dataset from the "State of New Jersey – GIS Open Data" site, which was last updated in November 2021 but is a static dataset, and a "live" report, "Known Contaminated Sites by County," from NJDEP DataMiner gathered in September 2021. The list of contaminated sites includes the PI and Site ID numbers for further details available upon DataMiner, site addresses, and site names. Further information is available through NJDEP website regarding LSRP oversight, activity, and current contamination.

UNDERGROUND STORAGE TANKS

Throughout the Township, underground storage tanks are used to store heating fuel oil, or in the case of gas stations, gasoline, or diesel fuel. Older storage tanks are likely to have outdated leak control and corrosion prevention measures, so they must be periodically monitored for emissions and leaks. Corrosion and leakage from underground storage tanks can be a source of contamination to groundwater and surrounding soils. As such, Mount Laurel Township has a designated Underground Storage Tank Inspector.

Sites with underground storage tanks are monitored under an NJDEP program called the Bureau of Underground Storage Tanks. Sites and tanks are registered with the NJDEP, receive permits, and are the tanks are monitored for leaks at regular intervals. As of the publication of this ERI, the Township has 164 underground storage tank facilities within its borders. These include 7 which are duplicates, 81 are terminated, 3 are pending termination, 55 had inspections conducted and are in the oversight process, 1 has an expired UST registration, and the remaining 17 are effective. ***Table 18*** provides a listing of the effective USTs as presented below.

Some homeowners in Mount Laurel Township may also have underground storage tanks, which on residential properties are used primarily to hold home heating oil. Those private residences are not publicly listed by NJDEP unless they pose a health hazard.

Figure 49: Above Ground Storage Tank (Source: T&M)

TABLE 18: LISTING OF UNDERGROUND STORAGE TANKS			
SITE ID	STATUS	NAME	LOCATION
10671	Effective	BARCLAY CITGO LLC	1201 RT 73
10670	Effective	REPUBLIC SERVICES OF NJ LLC	4100 CHURCH RD
259948	Effective	WAWA FOOD MARKET #960	1115 RT 73
10705	Effective	LUKOIL #57700	921 RT 73
47715	Effective	SURGICAL CENTER OF SOUTH JERSEY	130 GAITHER DR - STE 160
10661	Effective	MT LAUREL TOWNSHIP BOE	330 MOUNT LAUREL RD
10666	Effective	TMD #2	NJ TPKE MM 38.0
182372	Effective	NFL PRODUCTIONS LLC DBA NFL FILMS	4000 LEADENHALL RD
553461	Effective	WAWA FOOD MARKET #8321	RT 38 & MARTER AVE
15520	Effective	SUNOCO 0012-1350	3240 RT 38 & HARTFORD RD
10721	Effective	LUKOIL #57717	3231 RT 38 & HARTFORD RD
572140	Effective	ROYAL FARMS #285	3121 3123 RT 38
10678	Effective	SABIR INC NJ 0046	3051 RT 38
220673	Effective	COSTCO GASOLINE (LOC #749)	100 CENTERTON RD
19101	Effective	JAMES F COOPER SERVICE AREA 4N	NJ TPKE MM 39.3
10657	Effective	HARTFORD RD WPCF	200 PIKE RD & RT 295
10687	Effective	MOUNT LAUREL EXXON	799 CENTERTON & CREEK ROADS

Table 18: Listing of Current Effective USTs and their locations (source: New Jersey GIS Data).

GROUNDWATER CONTAMINATION

There are 18 sites within Mount Laurel that have evidence of groundwater contamination from various sources, see ***Table 19***. These sites are restricted by a Classification Exception Area (CEA) designation. The CEA is an area in which the local groundwater resources are known to be contaminated (i.e., the water quality concentrations exceed the drinking water and groundwater quality standards). A CEA can be established if state drinking water quality standards are not met because of: (1) natural groundwater quality, (2) discharges from an NJPDES permitted site, or (3) pollution caused by human activity.

Activity	CEA Name	Address	Program
LSR150001	Colonial Pipeline Co	Elbo Ln & NJ Turnpike	LSRP
RAP150001	Trofe Incineration Inc	100 Pk Rd	RAP
LSR120001	Mount Laurel Twp MUA - Elbo Lane Water Plant	85 Elbo Ln	LSRP
PFR000001	Mount Laurel Municipal Complex / Public Works	100 N Mount Laurel Rd	POST
LSR110001	922 Route 73 South	922 Route 73 S	LSRP
LSR120001	Ramblewood Cleaners	1155 Route 73 & Ramblewood Parkway	LSRP
RAP200001	Merchant's Wine & Liquor Co	901 Pleasant Valley Ave	RAP
LSR110001	Larchmont Cleaners at Larchmont Plaza	3131 Route 38	LSRP
LSR100001	Mobil Service Station - Mount Laurel	3231 Route 38 & Hartford Rd	LSRP
LSR110001	Cumberland Farms Service Station #126398	919 Route 73	LSRP
RAP180001	Texaco Service Station #100223 - Mount Laurel	3530 Route 38 & Marter Ave	RAP
RAP180001	1201 Route 73 Mount Laurel LLC	1201 Route 73	RAP
RAP160001	James F Cooper Services Area 4N	New Jersey Turnpike MM 39.3	RAP
LSR100001	Lukoil Service Station #57700	921 Route 73	LSRP
RAP190001	Sunoco Service Station #0012-1350 (Former)	3240 Route 38 & Hartford Rd	RAP
LSR120001	Johnson & Towers Inc	2021 Briggs Rd & Route 38	LSRP
RAP190002	Taylor Rental Center - VOC CEA	3531 Route 38	RAP
LSR150002	NJDOT - Mount Laurel (Parcel 36)	Route 73 & Church Rd	LSRP

Table 19: List of CEAs within Mount Laurel Township.

All 18 CEAs within the Township belong to class II A waterways, and are within the Englishtown, Glacial drift, Marshalltown, Mount Laurel, Wenonah, and Woodbury formations. Under a CEA designation, aquifer use is suspended in the affected areas until state drinking water standards are met. It is intended to be an institutional control established in conjunction with an approved site remediation plan. NJDEP may revise or establish a CEA at any time to reflect existing groundwater conditions.

Before a CEA can expire, the site remediation professional must collect and analyze groundwater samples from at least two (2) rounds of sampling. These events must be reflective of different seasonal fluctuations in the groundwater table and represents the extent of the groundwater in the CEA. Should the rounds of sampling show contaminant concentrations have decreased below the respective standard, the permittee can request removal of the CEA from NJDEP. If the CEA is removed from the site, the permit is terminated. If the contaminants are not reduced, the licensed site remediation professional must undertake active remediation and request that the NJDEP extend the CEA. As necessary, a CKE can be set in place to detail the spatial extent of the of Groundwater Contamination (CKE). No CKEs currently exist within the Township.

HISTORIC LANDFILLS

As of 2014, when NJDEP most recently updated its landfill records, Mount Laurel has no historic landfills listed.

AIR QUALITY

Since it was originally passed in 1955, the Clean Air Act (CAA) had been the primary basis for regulating air pollutant emissions. Amendments to the CAA were passed in 1970 (Clean Air Act Amendments; CAAA) that allowed the USEPA to delegate responsibility to state and local governing bodies, giving them the opportunity to prevent and control air pollution at the source. The CAAA mandated that the USEPA establish ceilings for certain pollutants based upon the identifiable effects each pollutant may have on public health and welfare. Subsequently, the USEPA promulgated the revised regulations that set National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), lead (Pb), sulfur dioxide (SO_2), total suspended particulates (TSP), inhalable particle matter smaller than 10 micrometers (PM_{10}), and in 1997, a new particulate standard; $PM_{2.5}$; (inhalable particulate matter smaller than 2.5 micrometers; 2.5 x 10^{-6}). National TSP standards have been revoked. However ,they are still in effect within New Jersey.

Section 107 of the 1970 Clean Air Act Amendments requires the USEPA and states throughout the country to identify those areas not meeting the NAAQS. An area which does not meet a standard is referred to as being in nonattainment. NJDEP continuously monitors each criteria pollutant throughout the State of New Jersey. Major objectives of monitoring air quality are to provide an early warning system for pollutant concentrations, assess air quality in light of public health and welfare standards, and also track trends or changes in these pollutant levels.

The nearest and most representative NJDEP fine particulate matter ($PM_{2.5}$) and O_3 monitoring station is located at the Pennsauken Township Air Monitoring Station approximately five (5) miles west of the Township. Pollutants sampled and closely monitored include the

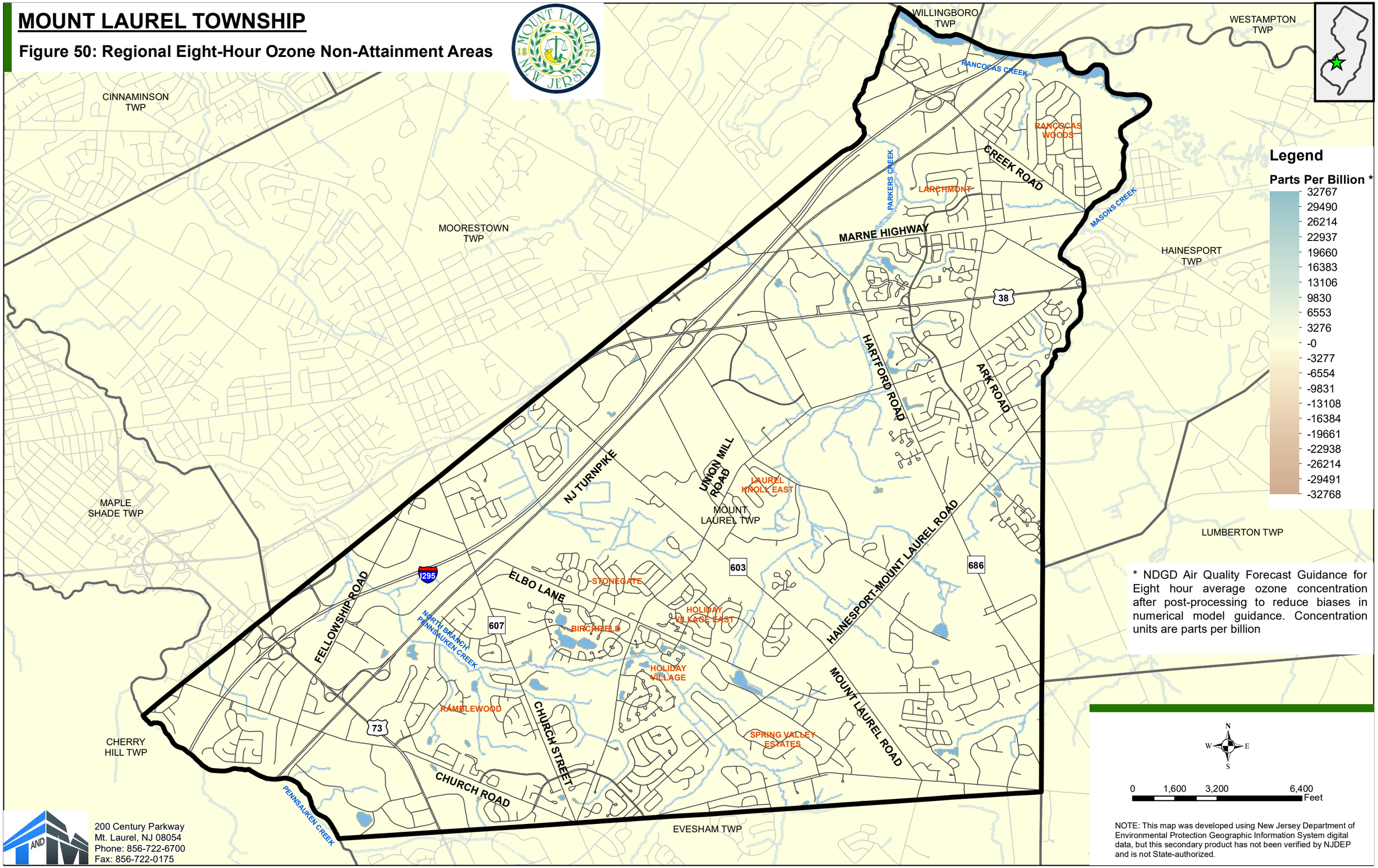
fine particulate matter and ozone. Burlington County is in a non-attainment area for ozone as illustrated at ***Figure 50.*** The annual average of fine particulate matter ($PM_{2.5}$) in micrograms per cubic meter within the Township is shown at ***Figure 51***.

Fine particulate matter (PM) is a general term to mean smoke, soot, dirt, and liquid droplets. This category of particulates is a concern as they enter into the blood stream through the lungs. Health effects of this pollutant can result in heart attacks, asthma, and premature deaths. In Mount Laurel, PM is concentrated along the State Route 38 corridor just east of the New Jersey Turnpike. Levels generally range between 18 to 78 ug/m3. According to the NAAQS, levels below 100 ug/m3 are considered safe.

The entire state of New Jersey is in eight-hour O_3 nonattainment, including Burlington County. Naturally occurring O_3 in the upper atmosphere protects the population from harmful ultraviolet rays. Ground-level O_3 is created when nitrogen oxides (NO_x) and volatile organic compounds (VOC) react in the presence of sunlight and heat. Ground-level O_3 can cause serious adverse health effects by damaging cells that line our airways. Therefore, O_3 can aggravate respiratory disease and cause the public to be more susceptible to respiratory infections. The incomplete combustion of fossil fuel, power plants and other sources of combustion emit the primary source of NO_x. In recent years documented O_3 levels had been decreasing. In 2008, the USEPA created a new, more stringent O_3 standard, and therefore precursors (NO_x and VOCs) are monitored very carefully.

MOUNT LAUREL TOWNSHIP

Figure 50: Regional Eight-Hour Ozone Non-Attainment Areas



* NDGD Air Quality Forecast Guidance for Eight hour average ozone concentration after post-processing to reduce biases in numerical model guidance. Concentration units are parts per billion

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

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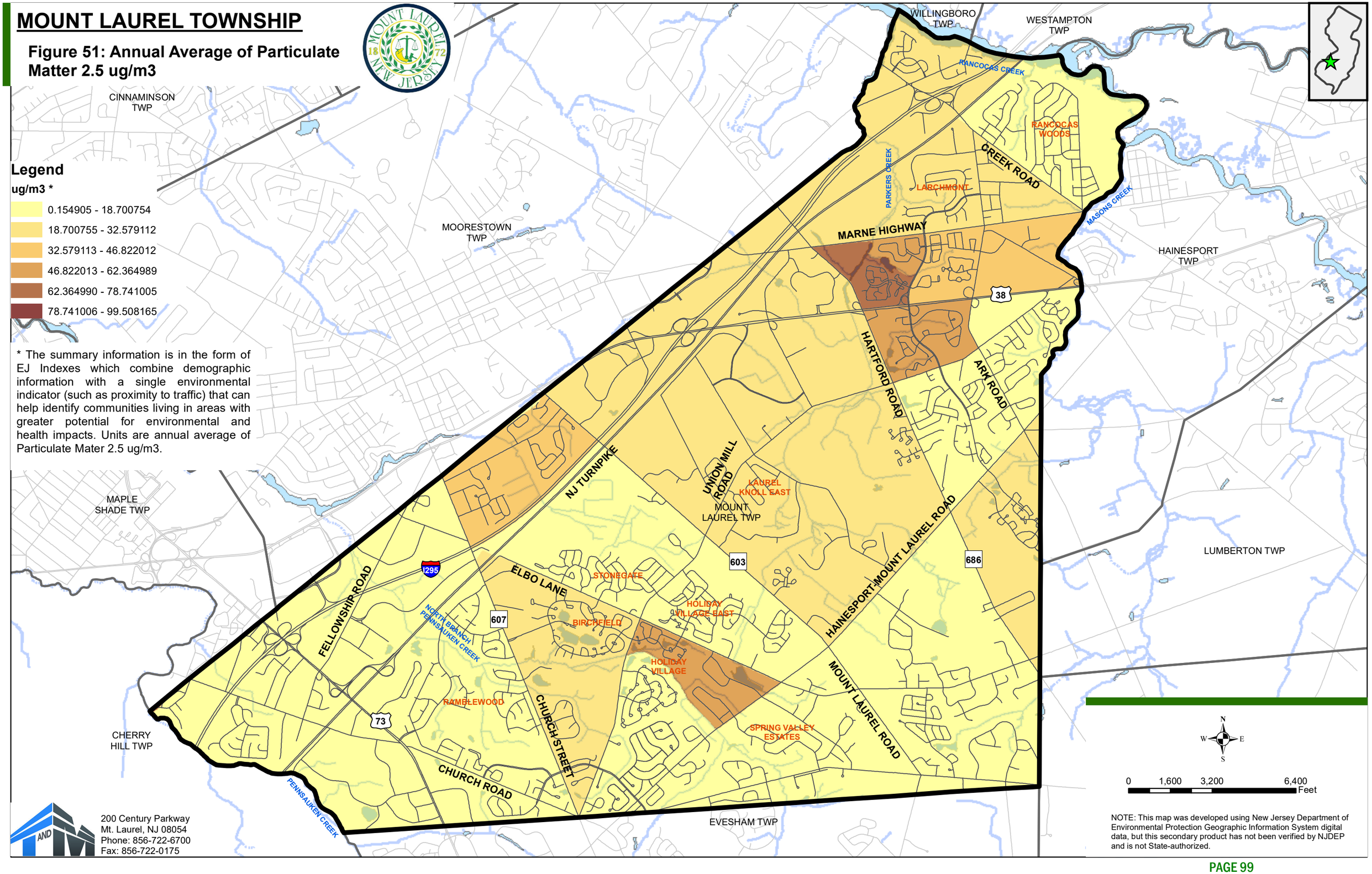
Figure 51: Annual Average of Particulate Matter 2.5 ug/m3



* The summary information is in the form of EJ Indexes which combine demographic information with a single environmental indicator (such as proximity to traffic) that can help identify communities living in areas with greater potential for environmental and health impacts. Units are annual average of Particulate Mater 2.5 ug/m3.

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CLIMATE

Mount Laurel is located within the northeastern climate region of the United States. Climatological data for the Township was taken from the National Oceanic and Atmospheric Administration (NOAA) Annual Climatological Summary for the Trenton, NJ weather station. This NOAA weather station is situated 16 miles north and is the nearest station to the Township. Information regarding recent and historical data was obtained from the 2021 NOAA Annual Summary for Trenton, NJ.

The local climate can be characterized as moderate and is influenced by the Atlantic Ocean and Delaware estuary, and the Appalachian Mountains to the west. Sustained periods (more than 3-4 days) of either extreme low or high temperatures are rare, due to fairly rapidly changing weather conditions. The highest recorded temperature in the locale was 106°F in August 1918 and July 2011. The lowest recorded temperature of -14°F occurred in February 1934. The annual mean temperature in the area is 55.1°F. The prevailing wind direction is from the west/southwest with a mean speed of 6.6 miles per hour (mph). Winds of destructive force rarely occur and are usually associated with summer thunderstorms or hurricanes. Intense precipitation events are associated with hurricanes and summer thunderstorms.

Generally distributed evenly throughout the year, precipitation annually averages about 41.67 inches, although abnormally low precipitation conditions occasionally occur and last up to four months at a time. The lowest monthly precipitation for 2021 is about 0.11 inches; the highest, 5.60 inches (September 2021). Single snowstorm events resulting in snowfall of 10 inches or more generally occur only once in five years.

Generally, winters are cold with snow and summers are hot and humid. Temperatures on average range from 25 °F in the winter to about 86°F in the summer (Weatherspark.com). Clear skies are usual from the end of June until November. The clearest month is in September with the cloudiest period typically during January.

RADON

Radon is a radioactive gas that comes from the natural decay of uranium found in nearly all soils. It moves up through the ground to the air above, and into homes through cracks and other holes in foundations. A buildup of radon-contaminated air within a home can pose a long-term health hazard to residents, potentially causing lung cancer. The only method of detection is to conduct a test for alpha particles in the air within a home. The State of New Jersey has developed a Tiered Classification to note general radon levels, as shown in ***Figure 52***.

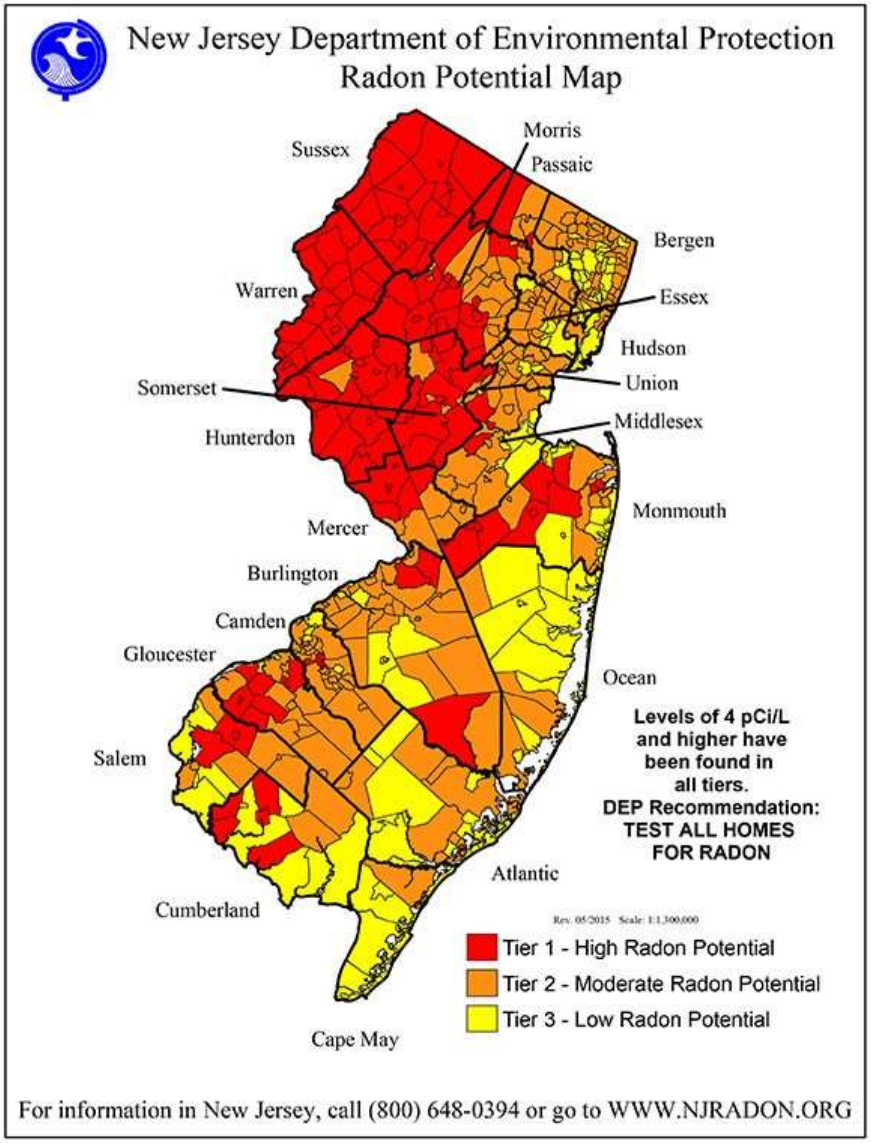

Figure 52: Radon Tiers Map– State of New Jersey (Source: NJDEP)

All radon test results conducted in the state are reported to the NJDEP by certified companies. These companies perform the tests or manufacture the test kits. This data is used to classify municipalities into a three-tier system, which identifies the potential for homes with indoor radiation problems.

As of 2021, the most recent date listed on the NJDEP website, Mount Laurel was listed as a Tier 2 municipality; that is, a municipality with moderate potential of having high radon levels in homes. The criteria for a Tier 2 municipality designation includes at least 25 homes tested in the municipality, between 5 and 24 percent have radon concentrations greater than or equal to 4.0 picocuries per liter in the air. A 4.0 picocurie measurement is the level at which homeowners should take immediate action to remove the radon in their homes.

The state does not require radon preventative measures in new homes outside of Tier 1 areas but encourages these homeowners to test for radon and mitigate it.

MOUNT LAUREL'S ENERGY USE

The Delaware Valley Regional Planning Commission (DVRPC) conducted an energy study of the various counties in the region in 2018. The study summarized energy use per sector, and types of energy use within specific sectors. The sectors are classified as residential, commercial & industrial, mobile-highway, and mobile-transit. Energy consumption is classified into five (5) energy sources including electricity, natural gas, fuel oil, liquid petroleum gas (LPG), and various other fuels.

Energy use by sector found that the Mobile-Highway sector (automotive travel) consumed the most energy at 2,297 BBTU (billion British Thermal Units (BTU)) and represented 37 % of the energy consumed within the Township. This was followed by the commercial & industrial sector at 2,003 BBTU or 32%. See ***Table 20*** for additional details.

SECTOR	ENERGY USE (BBTU)	PERCENT (%)
Residential	1,868	30
Commercial & Industrial	2,003	32
Mobile-Highway	2,297	37
Mobile-Transit	6	<1
TOTAL	**6,173**	**100**

Table 20: Mount Laurel Energy Use by Sector (DVRPC, 2018)

Energy use by the residential sector found that natural gas was highest type of energy consumed at 1,210 BBTU, or 65 percent. Electricity was the second highest type of energy consumed at 596 BBTU or 32%. See ***Table 21*** for additional details.

ENERGY SOURCE	ENERGY USE (BBTU)	PERCENT (%)
Electricity	596	32
Natural Gas	1,210	65
Fuel Oil	55	3
LPG	7	<1
Other Fuels	0	<1
TOTAL	**1,868**	**100**

Table 21: Mount Laurel Residential Energy Use by Type (DVRPC, 2018)

Energy use by the commercial & industrial sector found that electric was highest type of energy consumed at 1,231 BBTU, or 61 percent. Natural gas was the second highest type of energy consumed at 703 BBTU or 35%. See ***Table 22*** for additional details.

ENERGY SOURCE	ENERGY USE (BBTU)	PERCENT (%)
Electricity	1,231	61
Natural Gas	703	35
Fuel Oil	66	3
LPG	4	<1
Other Fuels	0	<1
TOTAL	**2,003**	**100**

Table 22: Mount Laurel Commercial & Industrial Energy Use by Type (DVRPC, 2018)

Several community solar projects have been constructed at public facilities as well as various Township schools. ***Figure 53*** shows the location of Solar PV at public facilities throughout Mount Laurel. In addition, one (1) solar grid installation has also been constructed and is shown at ***Figure 53.***

HOMEOWNER'S ASSOCIATIONS (HOAs)

Several developments within Mount Laurel Township are maintained by a homeowner association (HOA). These associations were formed in an effort to maintain the lands and provide for services for the residents. Each HOA agreement provides covenant, restrictions, and conditions in which the property owners must abide and may be recorded on the deeds of the properties. *Table 23* provides a listing of HOAs in the Township.

TABLE 23: LIST OF HOMEOWNERS ASSOCIATIONS	
DEVELOPMENT NAME	**STREET**
Birchfield	Birchfield Court
Brittany Commons Condominium Association	Abderdeen Drive
Brittany Lakes and Meadows	Chadbury Drive
Chateaux	Union Mill Road
The Commons at Delancey Place Condominiums	Larchmont Boulevard & Willow Turn
The Commons at Laurel Creek Condominiums	Union Mill Road & Route 38
The Commons at Stonegate	Oliphant Lane & Saw Mill Drive
Country Club Villas	Country Club Parkway
Daisy Lane Condominiums	1000 Birchfield Drive
Eagle Pointe	Augusta Circle
Essex Place	101 Coventry Way
Gatewood Park Manor	500 Willow Turn
Holiday Village Condo (CSA)	1 Holiday Boulevard
Holiday Village East I	Amaryllis Drive
Holiday Village East II	101 Amaryllis Drive
Holiday Village East III	Staghorn Drive & Bluegrass Drive
Lakes at Larchmont	Forest Lake Drive
Laurel Place Condos	Larchmont Boulevard & Sedgefield

TABLE 23: LIST OF HOMEOWNERS ASSOCIATIONS	
DEVELOPMENT NAME	**STREET**
LeClub I	101 Arden Court
Le Club II	101 Ralston Drive
Madison Place Condos	Saxony Drive
Northwoods I Condo	Bluebell Lane & Lake Drive North
Northwoods II Condo	Sumac Court & Lake Drive South
Park Place	Normandy Drive
Ramblewood Mews	Cypress Point Circle
Renaissance Club	Lindale Drive
Springwood Green Condo Assoc	100 Camber Lane
Treehouses I	Kelly Cove
Treehouses II, Village of Ramblewood	Mulberry Cove
Mount Laurel Crossing	1 Larchmont Place
Ramblewood Village Apartments	601 A Country Club Pkwy
Stirling Court	Hastings Way
Summit Apts	901 Bradley Court
Roger's Walk, LLC	2100 Deal Road
Tricia Meadows	8000 Sagemore Drive

Table 23: Mount Laurel List of Homeowners Associations (Mount Laurel Township, 2022)

MOUNT LAUREL TOWNSHIP

Figure 53: Solar PV Grid Installations and at Community Facilities

Legend

- Public Solar Facilities of New Jersey
- Solar PV Grid Supply Installations of New Jersey

CINNAMINSON TWP
WILLINGBORO TWP
WESTAMPTON T
RANCOCAS CREEK
RANCOCAS WOODS
CREEK ROAD
PARKERS CREEK
LARCHMONT
MOUNT LAUREL BOARD OF EDUCATION
MASONS CREEK
MARNE HIGHWAY
CLEANLIGHT ENERGY LLC
HAINESPORT TWP
38
LARCHMONT ELEMENTARY SCHOOL
HARTFORD ROAD
ARK ROAD
MOORESTOWN TWP
NJ TURNPIKE
UNION MILL ROAD
LAUREL KNOLL EAST
MOUNT LAUREL TWP
MOUNT LAUREL EOE
MAPLE SHADE TWP
603
686
HAINESPORT-MOUNT LAUREL ROAD
LUMBERTON TWP
I295
ELBO LANE
STONEGATE
FELLOWSHIP ROAD
MT LAUREL TWP MUNI UTILITIES AUT
NORTH BRANCH PENNSAUKEN CREEK
607
BIRCHFIELD
HOLIDAY VILLAGE EAST
HILLSIDE ELEMENTARY SCHOOL
THOMAS E HARRINGTON MIDDLE SCH
MOUNT LAUREL BOARD OF EDUCATION
MOUNT LAUREL BOARD OF EDUCATION
HOLIDAY VILLAGE
RAMBLEWOOD
COUNTRYSIDE ELEMENTARY SCHOOL
CHURCH STREET
MOUNT LAUREL ROAD
73
SPRING VALLEY ESTATES
CHERRY HILL TWP
CHURCH ROAD
PENNSAUKEN CREEK
EVESHAM TWP

N
W
E
S

0 1,600 3,200 6,400 Feet

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

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OPEN SPACE AND RECREATION

Mount Laurel has recently prepared an Open Space and Recreation Plan, prepared by Pennoni adopted November 2021.

A copy of the plan is found here:

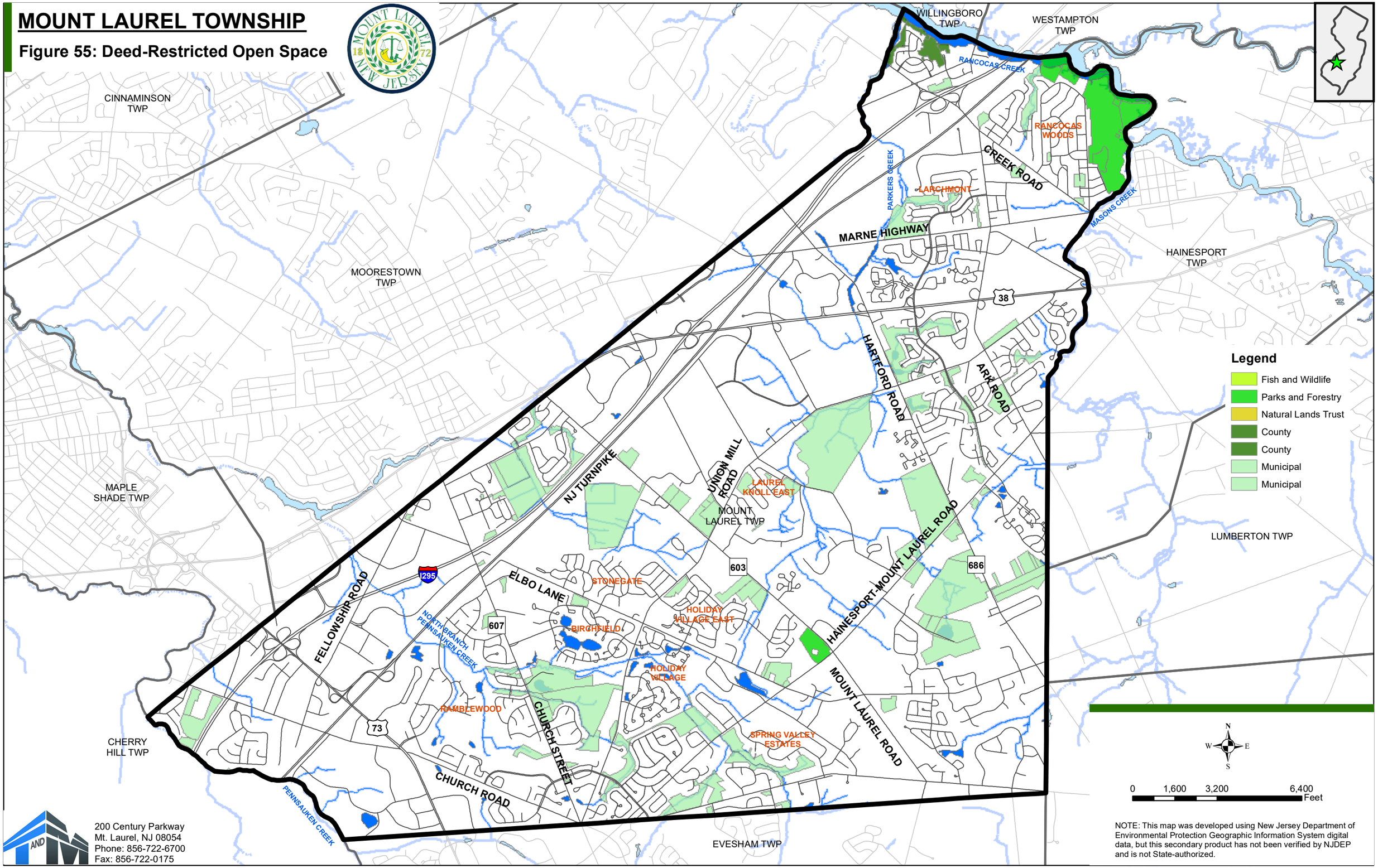
https://cms7files.revize.com/mountlaurel/OpenSpacePlan-FINAL_webres_2022.pdf

Figure 54: David Logar Memorial Field (Source T&M)

See ***Figure 55*** for the location of Deed Restricted Open Space.

MOUNT LAUREL TOWNSHIP

Figure 55: Deed-Restricted Open Space



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The Township also maintains a Recreation and Open Space Inventory, dated July 2017. A copy of the inventory is found here: https://cms7files.revize.com/mountlaurel/Document%20Center/How%20Do%20I/Find%20Learn%20About/Recreationinventory.pdf

Figure 55: Laurel Acres Park (Source: Mount Laurel Township)

DEVELOPMENT CONSTRAINTS

Since the middle of last century, Mount Laurel has grown from a rural, agricultural area to a suburban community. There are still several locations within the Township which remain undeveloped. Some of these lands contain conditions which could limit the type or potential of development. In addition, developed areas may also require a regulatory review and approvals from the Federal, State, and local governments for future development as development can be regulated in specific areas. Several factors are considered in the evaluation of a property which may cause limiting factors, such as:

- Soil types
- Steep Slopes
- Surface waters
- Floodplains
- Groundwater
- Infrastructure availability
- Threatened and endangered species and habitats
- Known contaminated sites
- Radon
- Open space lands

An assessment of these conditions and others may be helpful to evaluate land development potential or to consider the property for other uses such as preservation.

SUMMARY

This ERI has been developed to provide a general background and listing of natural settings, environmental conditions, and developed elements located within the Township. The ERI is intended to be a reference and a basis on which to plan for development and to protect natural resources. It does not replace data which can be obtained through onsite testing and assessments. The ERI will be made available to the Township residents to through the Township website and in hardcopy at the Township office and municipal library.

Appendices

Appendix 1:
Listing of Plant Species Found In Burlington County

Scientific Name	Common Name	Category	Duration	Growth Habit	National Wetland Indicator Status
Acalypha gracilens	slender threeseed mercury	Dicot	Annual	Forb/herb	
Acalypha rhomboidea	common threeseed mercury	Dicot	Annual	Forb/herb	UPL, FAC-
Acalypha virginica	Virginia threeseed mercury	Dicot	Annual	Forb/herb	UPL, FACU
Acer negundo	boxelder	Dicot	Perennial	Tree	FAC, FACW
Acer rubrum	red maple	Dicot	Perennial	Tree	FAC
Acorus calamus	calamus	Monocot	Perennial	Forb/herb	OBL
Actaea pachypoda	white baneberry	Dicot	Perennial	Forb/herb	
Actaea racemosa	black baneberry	Dicot	Perennial	Forb/herb	
Adiantum pedatum	northern maidenhair	Fern	Perennial	Forb/herb	FACU, FAC
Aeschynomene virginica	Virginia jointvetch	Dicot	Annual	Forb/herb	FACW, OBL
Aesculus flava	yellow buckeye	Dicot	Perennial	Tree, Shrub	
Agalinis purpurea	purple false foxglove	Dicot	Annual	Forb/herb	FAC, FACW
Agalinis setacea	threadleaf false foxglove	Dicot	Annual	Forb/herb	
Agalinis tenuifolia	slenderleaf false foxglove	Dicot	Annual	Forb/herb	FACU, FACW
Agastache nepetoides	yellow giant hyssop	Dicot	Perennial	Subshrub, Forb/herb	FACU, FAC
Ageratina altissima	white snakeroot	Dicot	Perennial	Forb/herb	UPL, FAC
Ageratina aromatica	lesser snakeroot	Dicot	Perennial	Forb/herb	
Agrimonia parviflora	harvestlice	Dicot	Perennial	Forb/herb	FAC, FACW
Agrimonia pubescens	soft agrimony	Dicot	Perennial	Forb/herb	
Agrimonia rostellata	beaked agrimony	Dicot	Perennial	Forb/herb	FACU, FAC
Agrimonia striata	roadside agrimony	Dicot	Perennial	Forb/herb	FACU-, FAC
Agrostis hyemalis	winter bentgrass	Monocot	Perennial	Graminoid	FACU, FACW
Agrostis perennans	upland bentgrass	Monocot	Perennial	Graminoid	FACU, FACW
Aletris farinosa	white colicroot	Monocot	Perennial	Forb/herb	FAC, FAC+
Alisma subcordatum	American water plantain	Monocot	Perennial	Forb/herb	OBL
Allium canadense	meadow garlic	Monocot	Perennial	Forb/herb	FACU-, FACU
Allium tricoccum	ramp	Monocot	Perennial	Forb/herb	FACU, FAC
Alnus incana	gray alder	Dicot	Perennial	Tree, Shrub	FACU, FACW
Alnus serrulata	hazel alder	Dicot	Perennial	Tree, Shrub	FACW+, OBL
Amaranthus cannabinus	tidalmarsh amaranth	Dicot	Perennial	Forb/herb	OBL
Amaranthus hybridus	slim amaranth	Dicot	Annual	Forb/herb	
Ambrosia artemisiifolia	annual ragweed	Dicot	Annual	Forb/herb	UPL, FACU+
Ambrosia trifida	great ragweed	Dicot	Annual	Subshrub, Forb/herb	FAC, FACW
Amelanchier arborea	common serviceberry	Dicot	Perennial	Tree, Shrub	FACU, FAC
Amelanchier canadensis	Canadian serviceberry	Dicot	Perennial	Tree, Shrub	FACU, FAC
Amelanchier obovalis	coastal serviceberry	Dicot	Perennial	Shrub	FACU, FACW
Amelanchier stolonifera	running serviceberry	Dicot	Perennial	Shrub	
Amianthium muscitoxicum	flypoison	Monocot	Perennial	Forb/herb	FAC
Amorpha fruticosa	desert false indigo	Dicot	Perennial	Shrub	FAC, OBL
Amphicarpaea bracteata	American hogpeanut	Dicot	Annual, Perennial	Vine, Forb/herb	FACU, FACW
Amphicarpum purshii	blue maidencane	Monocot	Annual, Perennial	Graminoid	FACW
Anaphalis margaritacea	western pearly everlasting	Dicot	Perennial	Forb/herb	
Andropogon gerardii	big bluestem	Monocot	Perennial	Graminoid	FACU, FAC
Andropogon ternarius	splitbeard bluestem	Monocot	Perennial	Graminoid	FACU
Andropogon virginicus	broomsedge bluestem	Monocot	Perennial	Graminoid	UPL, FAC
Anemone virginiana	tall thimbleweed	Dicot	Perennial	Forb/herb	NI
Angelica atropurpurea	purplestem angelica	Dicot	Perennial	Forb/herb	OBL
Angelica venenosa	hairy angelica	Dicot	Perennial	Forb/herb	
Antennaria neglecta	field pussytoes	Dicot	Perennial	Forb/herb	
Antennaria plantaginifolia	woman's tobacco	Dicot	Perennial	Forb/herb	
Apios americana	groundnut	Dicot	Perennial	Vine, Forb/herb	FAC, FACW
Apocynum Ã—floribundum		Dicot	Perennial	Forb/herb	
Apocynum androsaemifolium	spreading dogbane	Dicot	Perennial	Forb/herb	
Apocynum cannabinum	Indianhemp	Dicot	Perennial	Forb/herb	FACU, FAC+
Aquilegia canadensis	red columbine	Dicot	Perennial	Forb/herb	FAC-, FACW
Arabis laevigata	smooth rockcress	Dicot	Biennial	Forb/herb	
Aralia nudicaulis	wild sarsaparilla	Dicot	Perennial	Subshrub, Forb/herb	FACU, FAC
Aralia racemosa	American spikenard	Dicot	Perennial	Subshrub, Forb/herb	
Arctostaphylos uva-ursi	kinnikinnick	Dicot	Perennial	Subshrub, Shrub	UPL, FACU
Arethusa bulbosa	dragon's mouth	Monocot	Perennial	Forb/herb	OBL
Argemone mexicana	Mexican pricklypoppy	Dicot	Annual	Forb/herb	
Arisaema dracontium	green dragon	Monocot	Perennial	Forb/herb	FACW
Arisaema triphyllum	Jack in the pulpit	Monocot	Perennial	Forb/herb	FAC, FACW
Aristida dichotoma	churchmouse threeawn	Monocot	Annual	Graminoid	UPL, FACU
Aristida lanosa	woollysheath threeawn	Monocot	Perennial	Graminoid	
Aristida longespica	slimspike threeawn	Monocot	Annual	Graminoid	
Aristida oligantha	prairie threeawn	Monocot	Annual	Graminoid	
Aristida purpurascens	arrowfeather threeawn	Monocot	Perennial	Graminoid	
Aristida tuberculosa	seaside threeawn	Monocot	Annual	Graminoid	
Aristolochia serpentaria	Virginia snakeroot	Dicot	Perennial	Forb/herb	UPL, FACU
Arnoglossum atriplicifolium	pale Indian plantain	Dicot	Perennial	Forb/herb	
Artemisia campestris	field sagewort	Dicot	Biennial, Perennial	Forb/herb	
Artemisia ludoviciana	white sagebrush	Dicot	Perennial	Subshrub, Forb/herb	UPL, FACU

Asarum canadense	Canadian wildginger	Dicot	Perennial	Forb/herb	
Asclepias amplexicaulis	clasping milkweed	Dicot	Perennial	Forb/herb	
Asclepias exaltata	poke milkweed	Dicot	Perennial	Forb/herb	FACU
Asclepias incarnata	swamp milkweed	Dicot	Perennial	Forb/herb	FACW+, OBL
Asclepias lanceolata	fewflower milkweed	Dicot	Perennial	Forb/herb	OBL
Asclepias purpurascens	purple milkweed	Dicot	Perennial	Forb/herb	FACU, FACU+
Asclepias rubra	red milkweed	Dicot	Perennial	Forb/herb	OBL
Asclepias syriaca	common milkweed	Dicot	Perennial	Forb/herb	
Asclepias tuberosa	butterfly milkweed	Dicot	Perennial	Forb/herb	
Asclepias variegata	redring milkweed	Dicot	Perennial	Forb/herb	FACU
Asclepias verticillata	whorled milkweed	Dicot	Perennial	Forb/herb	
Asimina triloba	pawpaw	Dicot	Perennial	Tree, Shrub	FACU+, FAC
Asplenium platyneuron	ebony spleenwort	Fern	Perennial	Forb/herb	FACU-, FACU
Athyrium filix-femina	common ladyfern	Fern	Perennial	Forb/herb	FAC, FAC+
Aureolaria pedicularia	fernleaf yellow false foxglove	Dicot	Annual	Forb/herb	
Aureolaria virginica	downy yellow false foxglove	Dicot	Perennial	Forb/herb	
Baccharis halimifolia	eastern baccharis	Dicot	Perennial	Tree, Shrub	FAC, FACW
Baptisia tinctoria	horseflyweed	Dicot	Perennial	Forb/herb	
Bartonia paniculata	twining screwstem	Dicot	Annual, Biennial	Vine, Forb/herb	OBL
Bartonia virginica	yellow screwstem	Dicot	Annual	Forb/herb	FACW, FACW+
Betula lenta	sweet birch	Dicot	Perennial	Tree	FACU
Betula nigra	river birch	Dicot	Perennial	Tree	FACW, OBL
Betula papyrifera	paper birch	Dicot	Perennial	Tree	FACU, FACU+
Betula populifolia	gray birch	Dicot	Perennial	Tree	FAC
Bidens aristosa	bearded beggarticks	Dicot	Annual, Biennial	Forb/herb	FACW-, FACW
Bidens bidentoides	Delmarva beggarticks	Dicot	Annual	Forb/herb	FACW
Bidens bipinnata	Spanish needles	Dicot	Annual	Forb/herb	
Bidens cernua	nodding beggartick	Dicot	Annual	Forb/herb	FACW+, OBL
Bidens coronata	crowned beggarticks	Dicot	Annual	Forb/herb	OBL
Bidens frondosa	devil's beggartick	Dicot	Annual	Forb/herb	FACW, FACW+
Bidens tripartita	threelobe beggarticks	Dicot	Annual	Forb/herb	FACW, OBL
Boehmeria cylindrica	smallspike false nettle	Dicot	Perennial	Forb/herb	FACW, OBL
Boltonia asteroides	white doll's daisy	Dicot	Perennial	Forb/herb	FACW, OBL
Botrychium dissectum	cutleaf grapefern	Fern	Perennial	Forb/herb	FAC
Botrychium matricariifolium	matricary grapefern	Fern	Perennial	Forb/herb	FACU
Botrychium virginianum	rattlesnake fern	Fern	Perennial	Forb/herb	FACU
Brachyelytrum erectum	bearded shorthusk	Monocot	Perennial	Graminoid	
Brasenia schreberi	watershield	Dicot	Perennial	Forb/herb	OBL
Brickellia eupatorioides	false boneset	Dicot	Perennial	Subshrub, Forb/herb	
Bromus latiglumis	earlyleaf brome	Monocot	Perennial	Graminoid	FACW-, FACW+
Bromus pubescens	hairy woodland brome	Monocot	Perennial	Graminoid	
Buchnera americana	American bluehearts	Dicot	Annual, Biennial, Perennial	Forb/herb	FACU, FAC
Bulbostylis capillaris	densetuft hairsedge	Monocot	Annual, Perennial	Graminoid	UPL, FAC
Cabomba caroliniana	Carolina fanwort	Dicot	Perennial	Forb/herb	OBL
Calamagrostis canadensis	bluejoint	Monocot	Perennial	Graminoid	FAC, OBL
Calamagrostis coarctata	arctic reedgrass	Monocot	Perennial	Graminoid	
Calamagrostis pickeringii	Pickering's reedgrass	Monocot	Perennial	Graminoid	FACW
Calamovilfa brevipilis	pine barren sandreed	Monocot	Perennial	Graminoid	OBL
Calopogon tuberosus	tuberous grasspink	Monocot	Perennial	Forb/herb	FACW+, OBL
Caltha palustris	yellow marsh marigold	Dicot	Perennial	Forb/herb	OBL
Calystegia spithamaea	low false bindweed	Dicot	Perennial	Vine, Forb/herb	
Cardamine bulbosa	bulbous bittercress	Dicot	Perennial	Forb/herb	OBL
Cardamine concatenata	cutleaf toothwort	Dicot	Perennial	Forb/herb	FACU
Cardamine diphylla	crinkleroot	Dicot	Perennial	Forb/herb	FACU, FAC
Cardamine longii	Long's bittercress	Dicot	Perennial	Forb/herb	OBL
Cardamine pensylvanica	Pennsylvania bittercress	Dicot	Annual, Biennial, Perennial	Forb/herb	FAC, OBL
Carex abscondita	thicket sedge	Monocot	Perennial	Graminoid	FACU, FACW
Carex aggregata	glomerate sedge	Monocot	Perennial	Graminoid	
Carex alata	broadwing sedge	Monocot	Perennial	Graminoid	
Carex albolutescens	greenwhite sedge	Monocot	Perennial	Graminoid	FAC+, FACW
Carex annectens	yellowfruit sedge	Monocot	Perennial	Graminoid	FAC+, FACW+
Carex atlantica	prickly bog sedge	Monocot	Perennial	Graminoid	FACW, OBL
Carex barrattii	Barratt's sedge	Monocot	Perennial	Graminoid	OBL
Carex bullata	button sedge	Monocot	Perennial	Graminoid	OBL
Carex canescens	silvery sedge	Monocot	Perennial	Graminoid	FACW+, OBL
Carex caroliniana	Carolina sedge	Monocot	Perennial	Graminoid	FACU, OBL
Carex cephalophora	oval-leaf sedge	Monocot	Perennial	Graminoid	UPL, OBL
Carex collinsii	Collins' sedge	Monocot	Perennial	Graminoid	OBL
Carex comosa	longhair sedge	Monocot	Perennial	Graminoid	OBL
Carex conjuncta	soft fox sedge	Monocot	Perennial	Graminoid	FAC, FACW
Carex crinita	fringed sedge	Monocot	Perennial	Graminoid	FACW+, OBL
Carex cristatella	crested sedge	Monocot	Perennial	Graminoid	FAC, FACW+
Carex davisii	Davis' sedge	Monocot	Perennial	Graminoid	FACU, FAC+
Carex debilis	white edge sedge	Monocot	Perennial	Graminoid	FAC, OBL

Carex digitalis	slender woodland sedge	Monocot	Perennial	Graminoid	UPL, FACU
Carex echinata	star sedge	Monocot	Perennial	Graminoid	OBL
Carex exilis	coastal sedge	Monocot	Perennial	Graminoid	OBL
Carex festucacea	fescue sedge	Monocot	Perennial	Graminoid	FAC, FACW
Carex folliculata	northern long sedge	Monocot	Perennial	Graminoid	
Carex glaucodea	blue sedge	Monocot	Perennial	Graminoid	
Carex granularis	limestone meadow sedge	Monocot	Perennial	Graminoid	FACW, OBL
Carex grayi	Gray's sedge	Monocot	Perennial	Graminoid	FACW, FACW+
Carex grisea	inflated narrow-leaf sedge	Monocot	Perennial	Graminoid	
Carex hirtifolia	pubescent sedge	Monocot	Perennial	Graminoid	
Carex hystericina	bottlebrush sedge	Monocot	Perennial	Graminoid	OBL
Carex intumescens	greater bladder sedge	Monocot	Perennial	Graminoid	FACW, OBL
Carex lacustris	hairy sedge	Monocot	Perennial	Graminoid	OBL
Carex laevivaginata	smoothsheath sedge	Monocot	Perennial	Graminoid	OBL
Carex lasiocarpa	woollyfruit sedge	Monocot	Perennial	Graminoid	OBL
Carex laxiculmis	spreading sedge	Monocot	Perennial	Graminoid	
Carex laxiflora	broad looseflower sedge	Monocot	Perennial	Graminoid	UPL, FACU
Carex leptalea	bristlystalked sedge	Monocot	Perennial	Graminoid	OBL
Carex livida	livid sedge	Monocot	Perennial	Graminoid	OBL
Carex lupulina	hop sedge	Monocot	Perennial	Graminoid	FACW+, OBL
Carex lurida	shallow sedge	Monocot	Perennial	Graminoid	FACW+, OBL
Carex muehlenbergii	Muhlenberg's sedge	Monocot	Perennial	Graminoid	
Carex nigromarginata	black edge sedge	Monocot	Perennial	Graminoid	UPL, FACU
Carex normalis	greater straw sedge	Monocot	Perennial	Graminoid	FACU, OBL
Carex pensylvanica	Pennsylvania sedge	Monocot	Perennial	Graminoid	
Carex prasina	drooping sedge	Monocot	Perennial	Graminoid	OBL
Carex projecta	necklace sedge	Monocot	Perennial	Graminoid	FACW, FACW+
Carex rosea	rosy sedge	Monocot	Perennial	Graminoid	
Carex scoparia	broom sedge	Monocot	Perennial	Graminoid	FACW
Carex seorsa	weak stellate sedge	Monocot	Perennial	Graminoid	FACW, FACW+
Carex squarrosa	squarrose sedge	Monocot	Perennial	Graminoid	FACW, OBL
Carex stipata	awlfruit sedge	Monocot	Perennial	Graminoid	OBL
Carex straminea	eastern straw sedge	Monocot	Perennial	Graminoid	OBL
Carex striata	Walter's sedge	Monocot	Perennial	Graminoid	
Carex stricta	upright sedge	Monocot	Perennial	Graminoid	OBL
Carex styloflexa	bent sedge	Monocot	Perennial	Graminoid	FAC, OBL
Carex swanii	Swan's sedge	Monocot	Perennial	Graminoid	UPL, FACU
Carex tribuloides	blunt broom sedge	Monocot	Perennial	Graminoid	FACW, OBL
Carex trichocarpa	hairyfruit sedge	Monocot	Perennial	Graminoid	OBL
Carex trisperma	threeseeded sedge	Monocot	Perennial	Graminoid	OBL
Carex umbellata	parasol sedge	Monocot	Perennial	Graminoid	
Carex venusta	darkgreen sedge	Monocot	Perennial	Graminoid	FACW+, OBL
Carex vesicaria	blister sedge	Monocot	Perennial	Graminoid	OBL
Carex vestita	velvet sedge	Monocot	Perennial	Graminoid	
Carex virescens	ribbed sedge	Monocot	Perennial	Graminoid	
Carex vulpinoidea	fox sedge	Monocot	Perennial	Graminoid	OBL
Carpinus caroliniana	American hornbeam	Dicot	Perennial	Tree, Shrub	FAC
Carya alba	mockernut hickory	Dicot	Perennial	Tree	
Carya cordiformis	bitternut hickory	Dicot	Perennial	Tree	FACU+, FAC
Carya glabra	pignut hickory	Dicot	Perennial	Tree	FACU-, FACU
Carya ovalis	red hickory	Dicot	Perennial	Tree	UPL, FACU
Carya ovata	shagbark hickory	Dicot	Perennial	Tree	FACU-, FACU+
Carya pallida	sand hickory	Dicot	Perennial	Tree	
Castanea dentata	American chestnut	Dicot	Perennial	Tree	
Castilleja coccinea	scarlet Indian paintbrush	Dicot	Annual	Forb/herb	FACU, FAC
Catalpa bignonioides	southern catalpa	Dicot	Perennial	Tree	UPL, FAC-
Ceanothus americanus	New Jersey tea	Dicot	Perennial	Subshrub, Shrub	
Celastrus scandens	American bittersweet	Dicot	Perennial	Vine	UPL, FACU
Celtis tenuifolia	dwarf hackberry	Dicot	Perennial	Tree, Shrub	
Cenchrus longispinus	mat sandbur	Monocot	Annual	Graminoid	
Cenchrus tribuloides	sanddune sandbur	Monocot	Annual	Graminoid	UPL, FACU
Cephalanthus occidentalis	common buttonbush	Dicot	Perennial	Tree, Shrub	OBL
Cerastium nutans	nodding chickweed	Dicot	Annual, Perennial	Forb/herb	FACU, FAC
Cercis canadensis	eastern redbud	Dicot	Perennial	Tree, Shrub	UPL, FACU
Chaerophyllum procumbens	spreading chervil	Dicot	Annual	Forb/herb	FAC, FACW
Chamaecrista fasciculata	partridge pea	Dicot	Annual	Forb/herb	
Chamaecrista nictitans	sensitive partridge pea	Dicot	Annual, Perennial	Subshrub, Forb/herb	
Chamaecyparis thyoides	Atlantic white cedar	Gymnosperm	Perennial	Tree	OBL
Chamaedaphne calyculata	leatherleaf	Dicot	Perennial	Shrub	FACW, OBL
Chamaelirium luteum	fairywand	Monocot	Perennial	Forb/herb	FACU-, FAC
Chamaesyce maculata	spotted sandmat	Dicot	Annual	Forb/herb	
Chamaesyce nutans	eyebane	Dicot	Annual, Perennial	Forb/herb	
Chamaesyce vermiculata	wormseed sandmat	Dicot	Annual	Forb/herb	
Chamerion angustifolium	fireweed	Dicot	Perennial	Forb/herb	

Chasmanthium laxum	slender woodoats	Monocot	Perennial	Graminoid	FAC, FACW
Chelone glabra	white turtlehead	Dicot	Perennial	Forb/herb	OBL
Chenopodium standleyanum	Standley's goosefoot	Dicot	Annual	Forb/herb	
Chimaphila maculata	striped prince's pine	Dicot	Perennial	Subshrub	
Chimaphila umbellata	pipsissewa	Dicot	Perennial	Subshrub	
Chloris verticillata	tumble windmill grass	Monocot	Perennial	Graminoid	
Chrysopsis mariana	Maryland goldenaster	Dicot	Perennial	Forb/herb	
Chrysosplenium americanum	American golden saxifrage	Dicot	Perennial	Forb/herb	OBL
Cicuta maculata	spotted water hemlock	Dicot	Biennial, Perennial	Forb/herb	OBL
Cinna arundinacea	sweet woodreed	Monocot	Perennial	Graminoid	FACW, FACW+
Circaea lutetiana	broadleaf enchanter's nightshade	Dicot	Perennial	Forb/herb	FACU
Cirsium discolor	field thistle	Dicot	Biennial, Perennial	Forb/herb	
Cirsium horridulum	yellow thistle	Dicot	Annual, Biennial	Forb/herb	FACU-, FAC+
Cirsium pumilum	pasture thistle	Dicot	Perennial	Forb/herb	
Cirsium virginianum	Virginia thistle	Dicot	Biennial	Forb/herb	FACW, OBL
Cladium mariscoides	smooth sawgrass	Monocot	Perennial	Graminoid	OBL
Claytonia virginica	Virginia springbeauty	Dicot	Perennial	Forb/herb	FACU-, FACU
Cleistes divaricata	rosebud orchid	Monocot	Perennial	Forb/herb	FAC, FAC+
Clematis virginiana	devil's darning needles	Dicot	Perennial	Vine	FACU, FAC+
Clethra alnifolia	coastal sweetpepperbush	Dicot	Perennial	Shrub	FAC+, FACW
Clinopodium vulgare	wild basil	Dicot	Perennial	Forb/herb	
Collinsonia canadensis	richweed	Dicot	Perennial	Forb/herb	FAC, FAC+
Comandra umbellata	bastard toadflax	Dicot	Perennial	Subshrub, Forb/herb	UPL, FACU
Comptonia peregrina	sweet fern	Dicot	Perennial	Subshrub, Shrub	
Conyza canadensis	Canadian horseweed	Dicot	Annual, Biennial	Forb/herb	UPL, FAC
Corallorhiza odontorhiza	autumn coralroot	Monocot	Perennial	Forb/herb	
Corallorhiza trifida	yellow coralroot	Monocot	Perennial	Forb/herb	
Corema conradii	broom crowberry	Dicot	Perennial	Subshrub, Shrub	
Coreopsis rosea	pink tickseed	Dicot	Perennial	Forb/herb	FACW
Cornus alternifolia	alternateleaf dogwood	Dicot	Perennial	Tree, Shrub	
Cornus amomum	silky dogwood	Dicot	Perennial	Shrub	FACW, FACW+
Cornus florida	flowering dogwood	Dicot	Perennial	Tree, Shrub	FACU-, FACU
Cornus foemina	stiff dogwood	Dicot	Perennial	Tree, Shrub	FAC, FACW
Cornus racemosa	gray dogwood	Dicot	Perennial	Shrub	
Corydalis flavula	yellow fumewort	Dicot	Annual	Forb/herb	FACU, FAC
Corylus americana	American hazelnut	Dicot	Perennial	Shrub	UPL, FACU
Crataegus crus-galli	cockspur hawthorn	Dicot	Perennial	Tree, Shrub	FACU, FAC
Crataegus intricata	Copenhagen hawthorn	Dicot	Perennial	Tree, Shrub	
Crataegus pedicellata	scarlet hawthorn	Dicot	Perennial	Tree, Shrub	
Crataegus pruinosa	waxyfruit hawthorn	Dicot	Perennial	Tree, Shrub	
Crataegus uniflora	dwarf hawthorn	Dicot	Perennial	Tree, Shrub	
Crotalaria sagittalis	arrowhead rattlebox	Dicot	Annual, Perennial	Subshrub, Forb/herb	
Croton glandulosus	vente conmigo	Dicot	Annual	Subshrub, Forb/herb	
Croton willdenowii	Willdenow's croton	Dicot	Annual	Forb/herb	
Cryptotaenia canadensis	Canadian honewort	Dicot	Perennial	Forb/herb	FACU, FAC+
Cuphea viscosissima	blue waxweed	Dicot	Annual	Forb/herb	UPL, FAC
Cuscuta cephalanthi	buttonbush dodder	Dicot	Perennial	Vine, Forb/herb	
Cuscuta compacta	compact dodder	Dicot	Perennial	Vine, Forb/herb	
Cuscuta coryli	hazel dodder	Dicot	Perennial	Vine, Forb/herb	
Cuscuta gronovii	scaldweed	Dicot	Perennial	Vine, Forb/herb	
Cuscuta pentagona	fiveangled dodder	Dicot	Annual, Perennial	Vine, Forb/herb	
Cuscuta polygonorum	smartweed dodder	Dicot	Perennial	Vine, Forb/herb	
Cycloloma atriplicifolium	winged pigweed	Dicot	Annual	Forb/herb	UPL, FAC
Cyperus bipartitus	slender flatsedge	Monocot	Annual	Graminoid	
Cyperus dentatus	toothed flatsedge	Monocot	Perennial	Graminoid	FACW+, OBL
Cyperus echinatus	globe flatsedge	Monocot	Perennial	Graminoid	
Cyperus erythrorhizos	redroot flatsedge	Monocot	Annual, Perennial	Graminoid	FACW+, OBL
Cyperus filicinus	fern flatsedge	Monocot	Annual, Perennial	Graminoid	FACW+, OBL
Cyperus flavescens	yellow flatsedge	Monocot	Annual	Graminoid	OBL
Cyperus grayi	Gray's flatsedge	Monocot	Perennial	Graminoid	
Cyperus lancastriensis	manyflower flatsedge	Monocot	Perennial	Graminoid	FACU, FAC+
Cyperus lupulinus	Great Plains flatsedge	Monocot	Perennial	Graminoid	
Cyperus polystachyos	manyspike flatsedge	Monocot	Annual, Perennial	Graminoid	FAC, FACW
Cyperus pseudovegetus	marsh flatsedge	Monocot	Perennial	Graminoid	FACW
Cyperus retrofractus	rough flatsedge	Monocot	Perennial	Graminoid	
Cyperus retrorsus	pine barren flatsedge	Monocot	Perennial	Graminoid	FACU+, FAC
Cyperus strigosus	strawcolored flatsedge	Monocot	Perennial	Graminoid	FACW
Cypripedium acaule	moccasin flower	Monocot	Perennial	Forb/herb	FACU, FACW
Cystopteris tenuis	upland brittle bladderfern	Fern	Perennial	Forb/herb	
Danthonia sericea	downy danthonia	Monocot	Perennial	Graminoid	FACU-, FACU
Danthonia spicata	poverty oatgrass	Monocot	Perennial	Graminoid	
Decodon verticillatus	swamp loosestrife	Dicot	Perennial	Subshrub, Shrub	OBL
Dennstaedtia punctilobula	eastern hayscented fern	Fern	Perennial	Forb/herb	
Deparia acrostichoides	silver false spleenwort	Fern	Perennial	Forb/herb	

Deschampsia flexuosa	wavy hairgrass	Monocot	Perennial	Graminoid	
Desmodium canadense	showy ticktrefoil	Dicot	Perennial	Forb/herb	FACU, FAC
Desmodium canescens	hoary ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium ciliare	hairy small-leaf ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium glabellum	Dillenius' ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium laevigatum	smooth ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium marilandicum	smooth small-leaf ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium nudiflorum	nakedflower ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium obtusum	stiff ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium paniculatum	panicledleaf ticktrefoil	Dicot	Perennial	Forb/herb	UPL, FAC-
Desmodium pauciflorum	fewflower ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium rotundifolium	prostrate ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium sessilifolium	sessileleaf ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium strictum	pine barren ticktrefoil	Dicot	Perennial	Forb/herb	
Desmodium viridiflorum	velvetleaf ticktrefoil	Dicot	Perennial	Subshrub, Forb/herb	
Dicentra cucullaria	dutchman's breeches	Dicot	Perennial	Forb/herb	
Dichanthelium aciculare	needleleaf rosette grass	Monocot	Perennial	Graminoid	FACU-, FACU
Dichanthelium acuminatum	tapered rosette grass	Monocot	Perennial	Graminoid	FACU-, FACW
Dichanthelium boscii	Bosc's panicgrass	Monocot	Perennial	Graminoid	
Dichanthelium clandestinum	deertongue	Monocot	Perennial	Graminoid	FAC+, FACW
Dichanthelium commutatum	variable panicgrass	Monocot	Perennial	Graminoid	FACU+, FAC
Dichanthelium depauperatum	starved panicgrass	Monocot	Perennial	Graminoid	
Dichanthelium dichotomum	cypress panicgrass	Monocot	Perennial	Graminoid	FAC-, FAC
Dichanthelium latifolium	broadleaf rosette grass	Monocot	Perennial	Graminoid	FACU-, FACU
Dichanthelium leucothrix	rough panicgrass	Monocot	Perennial	Graminoid	
Dichanthelium meridionale	matting rosette grass	Monocot	Perennial	Graminoid	
Dichanthelium oligosanthes	Heller's rosette grass	Monocot	Perennial	Graminoid	FACU, FAC
Dichanthelium ovale	eggleaf rosette grass	Monocot	Perennial	Graminoid	FACU-, FACU
Dichanthelium sabulorum	hemlock rosette grass	Monocot	Perennial	Graminoid	FACU, FAC
Dichanthelium scabriusculum	woolly rosette grass	Monocot	Perennial	Graminoid	OBL
Dichanthelium scoparium	velvet panicum	Monocot	Perennial	Graminoid	FAC, FACW
Dichanthelium sphaerocarpon	roundseed panicgrass	Monocot	Perennial	Graminoid	FACU
Dichanthelium spretum	Eaton's rosette grass	Monocot	Perennial	Graminoid	
Dichanthelium villosissimum	whitehair rosette grass	Monocot	Perennial	Graminoid	
Dichanthelium wrightianum	Wright's rosette grass	Monocot	Perennial	Graminoid	
Digitaria cognata	fall witchgrass	Monocot	Perennial	Graminoid	
Digitaria filiformis	slender crabgrass	Monocot	Annual, Perennial	Graminoid	
Digitaria sanguinalis	hairy crabgrass	Monocot	Annual	Graminoid	FACU-, FAC-
Diodia teres	poorjoe	Dicot	Annual, Perennial	Forb/herb	UPL, FACU
Dioscorea villosa	wild yam	Monocot	Perennial	Vine, Forb/herb	FACU, FAC+
Diospyros virginiana	common persimmon	Dicot	Perennial	Tree	FACU, FAC
Doellingeria umbellata	parasol whitetop	Dicot	Perennial	Forb/herb	
Draba reptans	Carolina draba	Dicot	Annual	Forb/herb	
Drosera filiformis	threadleaf sundew	Dicot	Perennial	Forb/herb	OBL
Drosera intermedia	spoonleaf sundew	Dicot	Perennial	Forb/herb	OBL
Drosera rotundifolia	roundleaf sundew	Dicot	Perennial	Forb/herb	OBL
Dryopteris carthusiana	spinulose woodfern	Fern	Perennial	Forb/herb	
Dryopteris cristata	crested woodfern	Fern	Perennial	Forb/herb	FACW, OBL
Dryopteris marginalis	marginal woodfern	Fern	Perennial	Forb/herb	FACU-, FACU
Dulichium arundinaceum	threeway sedge	Monocot	Perennial	Graminoid	OBL
Echinochloa muricata	rough barnyardgrass	Monocot	Annual	Graminoid	FAC, OBL
Echinocystis lobata	wild cucumber	Dicot	Annual	Vine, Forb/herb	FACU, FACW-
Echinodorus tenellus	mudbabies	Monocot	Perennial	Forb/herb	
Elatine americana	American waterwort	Dicot	Annual	Forb/herb	OBL
Elatine minima	small waterwort	Dicot	Annual	Forb/herb	OBL
Eleocharis acicularis	needle spikerush	Monocot	Annual, Perennial	Graminoid	OBL
Eleocharis fallax	creeping spikerush	Monocot	Perennial	Graminoid	OBL
Eleocharis flavescens	yellow spikerush	Monocot	Perennial	Graminoid	OBL
Eleocharis halophila	saltmarsh spikerush	Monocot	Perennial	Graminoid	OBL
Eleocharis melanocarpa	blackfruit spikerush	Monocot	Perennial	Graminoid	FACW, FACW+
Eleocharis microcarpa	smallfruit spikerush	Monocot	Annual	Graminoid	OBL
Eleocharis ovata	ovate spikerush	Monocot	Annual	Graminoid	OBL
Eleocharis palustris	common spikerush	Monocot	Perennial	Graminoid	OBL
Eleocharis parvula	dwarf spikerush	Monocot	Annual, Perennial	Graminoid	OBL
Eleocharis robbinsii	Robbins' spikerush	Monocot	Perennial	Graminoid	OBL
Eleocharis tenuis	slender spikerush	Monocot	Perennial	Graminoid	FACW, FACW+
Eleocharis tortilis	twisted spikerush	Monocot	Perennial	Graminoid	FACW, FACW+
Eleocharis tricostata	three-angle spikerush	Monocot	Perennial	Graminoid	FACW+, OBL
Eleocharis tuberculosa	cone-cup spikerush	Monocot	Perennial	Graminoid	FACW+, OBL
Elodea nuttallii	western waterweed	Monocot	Perennial	Forb/herb	OBL
Elymus canadensis	Canada wildrye	Monocot	Perennial	Graminoid	FACU, FAC+
Elymus hystrix	eastern bottlebrush grass	Monocot	Perennial	Graminoid	
Elymus riparius	riverbank wildrye	Monocot	Perennial	Graminoid	FACW
Elymus villosus	hairy wildrye	Monocot	Perennial	Graminoid	FACU-, FACU

Elymus virginicus	Virginia wildrye	Monocot	Perennial	Graminoid	FAC, FACW
Epifagus virginiana	beechdrops	Dicot	Annual	Forb/herb	
Epigaea repens	trailing arbutus	Dicot	Perennial	Subshrub, Shrub	
Epilobium coloratum	purpleleaf willowherb	Dicot	Perennial	Forb/herb	OBL
Epilobium strictum	downy willowherb	Dicot	Perennial	Forb/herb	OBL
Equisetum arvense	field horsetail	Horsetail	Perennial	Forb/herb	FACU, FACW-
Equisetum fluviatile	water horsetail	Horsetail	Perennial	Forb/herb	OBL
Equisetum hyemale	scouringrush horsetail	Horsetail	Perennial	Forb/herb	FAC+, FACW
Eragrostis capillaris	lace grass	Monocot	Annual	Graminoid	
Eragrostis pectinacea	tufted lovegrass	Monocot	Annual, Perennial	Graminoid	FACU, FAC
Eragrostis pilosa	Indian lovegrass	Monocot	Annual	Graminoid	FACU, FAC
Eragrostis spectabilis	purple lovegrass	Monocot	Perennial	Graminoid	UPL, FACU
Erechtites hieraciifolia	American burnweed	Dicot	Annual	Forb/herb	FACU, FAC
Erigeron annuus	eastern daisy fleabane	Dicot	Annual	Forb/herb	FACU, FAC
Erigeron pulchellus	robin's plantain	Dicot	Perennial	Forb/herb	FACU, FACU+
Erigeron strigosus	prairie fleabane	Dicot	Annual, Biennial, Perennial	Forb/herb	FACU, FAC
Eriocaulon aquaticum	sevenangle pipewort	Monocot	Perennial	Forb/herb	
Eriocaulon compressum	flattened pipewort	Monocot	Perennial	Forb/herb	OBL
Eriocaulon decangulare	tenangle pipewort	Monocot	Perennial	Forb/herb	OBL
Eriocaulon parkeri	estuary pipewort	Monocot	Perennial	Forb/herb	OBL
Eriophorum gracile	slender cottongrass	Monocot	Perennial	Graminoid	OBL
Eriophorum tenellum	fewnerved cottongrass	Monocot	Perennial	Graminoid	OBL
Eriophorum virginicum	tawny cottongrass	Monocot	Perennial	Graminoid	OBL
Eryngium aquaticum	rattlesnakemaster	Dicot	Biennial	Forb/herb	OBL
Eubotrys racemosa	swamp doghobble	Dicot	Perennial	Shrub	
Euonymus americanus	bursting-heart	Dicot	Perennial	Forb/herb, Subshrub	
Euonymus atropurpureus	burningbush	Dicot	Perennial	Shrub, Tree	
Eupatoriadelphus dubius	coastal plain joe pye weed	Dicot	Perennial	Forb/herb	FACW
Eupatoriadelphus maculatus	spotted trumpetweed	Dicot	Perennial	Forb/herb, Subshrub	FACW-, OBL
Eupatorium album	white thoroughwort	Dicot	Perennial	Forb/herb	
Eupatorium capillifolium	dogfennel	Dicot	Perennial	Forb/herb	FACU-, FACU
Eupatorium hyssopifolium	hyssopleaf thoroughwort	Dicot	Perennial	Forb/herb	
Eupatorium leucolepis	justiceweed	Dicot	Perennial	Forb/herb	FACW+
Eupatorium perfoliatum	common boneset	Dicot	Perennial	Forb/herb	FACW+, OBL
Eupatorium resinosum	pine barren thoroughwort	Dicot	Perennial	Forb/herb	OBL
Eupatorium rotundifolium	roundleaf thoroughwort	Dicot	Perennial	Forb/herb	FAC-, FAC
Eupatorium serotinum	lateflowering thoroughwort	Dicot	Perennial	Forb/herb	FAC-, FAC+
Euphorbia ipecacuanhae	American ipecac	Dicot	Perennial	Forb/herb	
Eurybia compacta	slender aster	Dicot	Perennial	Forb/herb, Subshrub	
Eurybia divaricata	white wood aster	Dicot	Perennial	Forb/herb	
Eurybia schreberi	Schreber's aster	Dicot	Perennial	Forb/herb	
Eurybia spectabilis	eastern showy aster	Dicot	Perennial	Forb/herb	
Euthamia caroliniana	slender goldentop	Dicot	Perennial	Forb/herb	
Euthamia graminifolia	flat-top goldentop	Dicot	Perennial	Forb/herb	FAC, FACW
Fagus grandifolia	American beech	Dicot	Perennial	Tree	FACU
Festuca subverticillata	nodding fescue	Monocot	Perennial	Graminoid	
Fimbristylis autumnalis	slender fimbry	Monocot	Annual	Graminoid	FACW+, OBL
Fimbristylis caroliniana	Carolina fimbry	Monocot	Perennial	Graminoid	FACU, FACW+
Fimbristylis castanea	marsh fimbry	Monocot	Perennial	Graminoid	FACW, OBL
Floerkea proserpinacoides	false mermaidweed	Dicot	Annual	Forb/herb	FAC, OBL
Fragaria vesca	woodland strawberry	Dicot	Perennial	Forb/herb	
Fragaria virginiana	Virginia strawberry	Dicot	Perennial	Forb/herb	UPL, FAC
Fraxinus americana	white ash	Dicot	Perennial	Tree	FACU
Fraxinus nigra	black ash	Dicot	Perennial	Tree	FACW, FACW+
Fraxinus pennsylvanica	green ash	Dicot	Perennial	Tree	FAC, FACW
Froelichia floridana	plains snakecotton	Dicot	Annual	Forb/herb	
Froelichia gracilis	slender snakecotton	Dicot	Annual	Forb/herb	
Galactia regularis	eastern milkpea	Dicot	Perennial	Forb/herb, Vine	
Galactia volubilis	downy milkpea	Dicot	Perennial	Vine, Forb/herb	
Galearis spectabilis	showy orchid	Monocot	Perennial	Forb/herb	
Galium aparine	stickywilly	Dicot	Annual	Vine, Forb/herb	FACU, FAC-
Galium circaezans	licorice bedstraw	Dicot	Perennial	Subshrub, Forb/herb	UPL, FACU-
Galium lanceolatum	lanceleaf wild licorice	Dicot	Perennial	Forb/herb	
Galium pilosum	hairy bedstraw	Dicot	Perennial	Forb/herb	
Galium trifidum	threepetal bedstraw	Dicot	Perennial	Vine, Forb/herb	FACW, OBL
Galium triflorum	fragrant bedstraw	Dicot	Perennial	Forb/herb, Vine	FACU, FACU+
Gamochaeta purpurea	spoonleaf purple everlasting	Dicot	Annual, Biennial	Forb/herb	UPL, FACU
Gaultheria procumbens	eastern teaberry	Dicot	Perennial	Subshrub, Shrub	FACU
Gaylussacia baccata	black huckleberry	Dicot	Perennial	Shrub	FACU
Gaylussacia dumosa	dwarf huckleberry	Dicot	Perennial	Subshrub, Shrub	FAC
Gaylussacia frondosa	blue huckleberry	Dicot	Perennial	Shrub	FAC
Gentiana autumnalis	pine barren gentian	Dicot	Perennial	Forb/herb	FACW, FACW+
Gentiana clausa	bottle gentian	Dicot	Perennial	Forb/herb	FAC, FACW+
Gentiana saponaria	harvestbells	Dicot	Perennial	Forb/herb	FACW-, FACW

Gentianopsis crinita	greater fringed gentian	Dicot	Annual, Biennial	Forb/herb	FACW+, OBL
Geranium carolinianum	Carolina geranium	Dicot	Annual, Biennial	Forb/herb	
Geranium maculatum	spotted geranium	Dicot	Perennial	Forb/herb	FACU
Geum canadense	white avens	Dicot	Perennial	Forb/herb	FACU, FAC
Geum vernum	spring avens	Dicot	Perennial	Forb/herb	FACU-, FAC
Geum virginianum	cream avens	Dicot	Perennial	Forb/herb	FACU-, FACW-
Gillenia trifoliata	Bowman's root	Dicot	Perennial	Forb/herb, Subshrub	
Glyceria canadensis	rattlesnake mannagrass	Monocot	Perennial	Graminoid	OBL
Glyceria laxa	limp mannagrass	Monocot	Perennial	Graminoid	
Glyceria obtusa	Atlantic mannagrass	Monocot	Perennial	Graminoid	OBL
Glyceria striata	fowl mannagrass	Monocot	Perennial	Graminoid	OBL
Goodyera pubescens	downy rattlesnake plantain	Monocot	Perennial	Forb/herb	UPL, FAC
Gratiola aurea	golden hedgehyssop	Dicot	Perennial	Forb/herb	OBL
Gratiola neglecta	clammy hedgehyssop	Dicot	Annual	Forb/herb	OBL
Gratiola virginiana	roundfruit hedgehyssop	Dicot	Annual, Biennial	Forb/herb	OBL
Gymnocarpium dryopteris	western oakfern	Fern	Perennial	Forb/herb	UPL, FAC
Gymnopogon ambiguus	bearded skeletongrass	Monocot	Perennial	Graminoid	
Hackelia virginiana	beggarslice	Dicot	Biennial, Perennial	Forb/herb	FACU, FAC+
Hamamelis virginiana	American witchhazel	Dicot	Perennial	Tree, Shrub	FACU, FAC-
Hedeoma pulegioides	American false pennyroyal	Dicot	Annual	Forb/herb	
Helenium autumnale	common sneezeweed	Dicot	Perennial	Forb/herb	FACW-, OBL
Helianthemum bicknellii	hoary frostweed	Dicot	Perennial	Subshrub, Forb/herb	
Helianthemum canadense	longbranch frostweed	Dicot	Perennial	Subshrub, Forb/herb	
Helianthus Ã—laetiflorus	cheerful sunflower	Dicot	Perennial	Forb/herb	
Helianthus angustifolius	swamp sunflower	Dicot	Perennial	Forb/herb	FAC, FACW
Helianthus decapetalus	thinleaf sunflower	Dicot	Perennial	Forb/herb	UPL, FACU
Helianthus divaricatus	woodland sunflower	Dicot	Perennial	Forb/herb	
Helianthus giganteus	giant sunflower	Dicot	Perennial	Forb/herb	FACW
Helianthus mollis	ashy sunflower	Dicot	Perennial	Forb/herb	
Helianthus strumosus	paleleaf woodland sunflower	Dicot	Perennial	Forb/herb	
Helianthus tuberosus	Jerusalem artichoke	Dicot	Perennial	Forb/herb	FACU, FAC
Heliopsis helianthoides	smooth oxeye	Dicot	Perennial	Forb/herb	
Helonias bullata	swamppink	Monocot	Perennial	Forb/herb	OBL
Hepatica nobilis	hepatica	Dicot	Perennial	Forb/herb	
Heracleum maximum	common cowparsnip	Dicot	Perennial	Forb/herb	
Heteranthera multiflora	bouquet mudplantain	Monocot	Annual	Forb/herb	
Heteranthera reniformis	kidneyleaf mudplantain	Monocot	Perennial	Forb/herb	OBL
Heterotheca subaxillaris	camphorweed	Dicot	Annual	Forb/herb	UPL, FACU
Heuchera americana	American alumroot	Dicot	Perennial	Forb/herb	FACU-, FACU
Hibiscus moscheutos	crimsoneyed rosemallow	Dicot	Annual, Perennial	Subshrub, Forb/herb	OBL
Hieracium gronovii	queendevil	Dicot	Perennial	Forb/herb	UPL, FACU
Hieracium scabrum	rough hawkweed	Dicot	Perennial	Forb/herb	
Hieracium venosum	rattlesnakeweed	Dicot	Perennial	Forb/herb	
Houstonia caerulea	azure bluet	Dicot	Perennial	Forb/herb	FACU, FAC
Hudsonia ericoides	pine barren goldenheather	Dicot	Perennial	Subshrub, Shrub	
Hudsonia tomentosa	woolly beachheather	Dicot	Perennial	Subshrub, Shrub	
Huperzia lucidula	shining clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	
Hydrangea arborescens	wild hydrangea	Dicot	Perennial	Shrub	UPL, FACU
Hydrocotyle americana	American marshpennywort	Dicot	Perennial	Forb/herb	OBL
Hydrocotyle umbellata	manyflower marshpennywort	Dicot	Perennial	Forb/herb	OBL
Hypericum adpressum	creeping St. Johnswort	Dicot	Perennial	Forb/herb	OBL
Hypericum ascyron	great St. Johnswort	Dicot	Perennial	Forb/herb	
Hypericum boreale	northern St. Johnswort	Dicot	Perennial	Forb/herb	OBL
Hypericum canadense	lesser Canadian St. Johnswort	Dicot	Annual	Forb/herb	FACW
Hypericum crux-andreae	St. Peterswort	Dicot	Perennial	Subshrub, Shrub	
Hypericum densiflorum	bushy St. Johnswort	Dicot	Perennial	Shrub	FAC+, FACW-
Hypericum denticulatum	coppery St. Johnswort	Dicot	Perennial	Forb/herb	FACW-, FACW
Hypericum ellipticum	pale St. Johnswort	Dicot	Perennial	Forb/herb	FACW, OBL
Hypericum gentianoides	orangegrass	Dicot	Annual	Forb/herb	UPL, FACU
Hypericum gymnanthum	claspingleaf St. Johnswort	Dicot	Perennial	Forb/herb	FACW, OBL
Hypericum hypericoides	St. Andrew's cross	Dicot	Perennial	Subshrub, Shrub	
Hypericum mutilum	dwarf St. Johnswort	Dicot	Annual, Perennial	Forb/herb	FACW, FACW+
Hypericum punctatum	spotted St. Johnswort	Dicot	Perennial	Forb/herb	FACU, FAC+
Ilex glabra	inkberry	Dicot	Perennial	Shrub	FACW-, FACW
Ilex laevigata	smooth winterberry	Dicot	Perennial	Tree, Shrub	FACW+, OBL
Ilex opaca	American holly	Dicot	Perennial	Tree, Shrub	FACU, FAC-
Ilex verticillata	common winterberry	Dicot	Perennial	Tree, Shrub	FACW, OBL
Impatiens capensis	jewelweed	Dicot	Annual	Forb/herb	FACW, FACW+
Impatiens pallida	pale touch-me-not	Dicot	Annual	Forb/herb	FACW
Ionactis linariifolius	flaxleaf whitetop aster	Dicot	Perennial	Forb/herb	
Ipomoea pandurata	man of the earth	Dicot	Perennial	Vine, Forb/herb	FACU, FAC-
Iris prismatica	slender blue iris	Monocot	Perennial	Forb/herb	OBL
Iris versicolor	harlequin blueflag	Monocot	Perennial	Forb/herb	OBL
Isoetes engelmannii	Appalachian quillwort	Quillwort	Perennial	Graminoid	OBL

Isoetes riparia	shore quillwort	Quillwort	Perennial	Graminoid	OBL
Isoetes tenella	spiny-spore quillwort	Quillwort	Perennial	Graminoid	
Isotria verticillata	large whorled pogonia	Monocot	Perennial	Forb/herb	FACU, FAC
Itea virginica	Virginia sweetspire	Dicot	Perennial	Shrub	FACW+, OBL
Juglans cinerea	butternut	Dicot	Perennial	Tree	FACU-, FACU+
Juglans nigra	black walnut	Dicot	Perennial	Tree	FACU
Juncus acuminatus	tapertip rush	Monocot	Perennial	Graminoid	OBL
Juncus biflorus	bog rush	Monocot	Perennial	Graminoid	FACW
Juncus bufonius	toad rush	Monocot	Annual	Graminoid	FACW, OBL
Juncus caesariensis	New Jersey rush	Monocot	Perennial	Graminoid	OBL
Juncus canadensis	Canadian rush	Monocot	Perennial	Graminoid	OBL
Juncus debilis	weak rush	Monocot	Annual, Perennial	Graminoid	FACW, OBL
Juncus dichotomus	forked rush	Monocot	Perennial	Graminoid	FACW
Juncus effusus	common rush	Monocot	Perennial	Graminoid	FACW+, OBL
Juncus gerardii	saltmeadow rush	Monocot	Perennial	Graminoid	FAC, OBL
Juncus greenei	Greene's rush	Monocot	Perennial	Graminoid	FAC
Juncus marginatus	grassleaf rush	Monocot	Perennial	Graminoid	FACW, FACW+
Juncus militaris	bayonet rush	Monocot	Perennial	Graminoid	OBL
Juncus pelocarpus	brownfruit rush	Monocot	Perennial	Graminoid	OBL
Juncus scirpoides	needlepod rush	Monocot	Perennial	Graminoid	FACW, FACW+
Juncus secundus	lopsided rush	Monocot	Perennial	Graminoid	FACU, FAC
Juncus subcaudatus	woodland rush	Monocot	Perennial	Graminoid	FAC, OBL
Juncus tenuis	poverty rush	Monocot	Perennial	Graminoid	FAC-, OBL
Juniperus virginiana	eastern redcedar	Gymnosperm	Perennial	Tree	FACU-, FACU
Justicia americana	American water-willow	Dicot	Perennial	Forb/herb	OBL
Kalmia angustifolia	sheep laurel	Dicot	Perennial	Shrub	FAC
Kalmia latifolia	mountain laurel	Dicot	Perennial	Tree, Shrub	FACU-, FACU
Krigia biflora	twoflower dwarfdandelion	Dicot	Perennial	Forb/herb	UPL, FACU
Krigia virginica	Virginia dwarfdandelion	Dicot	Annual	Forb/herb	UPL, FACU-
Kyllinga brevifolia	shortleaf spikesedge	Monocot	Perennial	Graminoid	
Kyllinga pumila	low spikesedge	Monocot	Annual, Perennial	Graminoid	
Lachnanthes caroliana	Carolina redroot	Monocot	Perennial	Forb/herb	OBL
Lactuca biennis	tall blue lettuce	Dicot	Annual, Biennial	Forb/herb	FACU, FAC+
Lactuca canadensis	Canada lettuce	Dicot	Annual, Biennial	Forb/herb	FACU-, FAC+
Lactuca floridana	woodland lettuce	Dicot	Annual, Biennial	Forb/herb	FACU-, FAC+
Lactuca hirsuta	hairy lettuce	Dicot	Biennial	Forb/herb	
Laportea canadensis	Canadian woodnettle	Dicot	Perennial	Forb/herb	FAC, FACW
Lathyrus palustris	marsh pea	Dicot	Perennial	Vine, Forb/herb	FAC, OBL
Lechea maritima	beach pinweed	Dicot	Perennial	Subshrub, Forb/herb	
Lechea minor	thymeleaf pinweed	Dicot	Perennial	Forb/herb	
Lechea mucronata	hairy pinweed	Dicot	Perennial	Forb/herb	
Lechea pulchella	Leggett's pinweed	Dicot	Perennial	Forb/herb	
Lechea racemulosa	Illinois pinweed	Dicot	Perennial	Forb/herb	
Leersia oryzoides	rice cutgrass	Monocot	Perennial	Graminoid	OBL
Leersia virginica	whitegrass	Monocot	Perennial	Graminoid	FACW
Leiophyllum buxifolium	sandmyrtle	Dicot	Perennial	Subshrub, Shrub	FACU-
Lemna minor	common duckweed	Monocot	Perennial	Forb/herb	OBL
Lemna perpusilla	minute duckweed	Monocot	Perennial	Forb/herb	OBL
Lepidium densiflorum	common pepperweed	Dicot	Annual, Biennial	Forb/herb	FACU, FAC
Lepidium virginicum	Virginia pepperweed	Dicot	Annual, Biennial, Perennial	Forb/herb	UPL, FAC-
Lespedeza Ã—brittonii		Dicot	Perennial	Forb/herb	
Lespedeza Ã—nuttallii		Dicot	Perennial	Forb/herb	
Lespedeza angustifolia	narrowleaf lespedeza	Dicot	Perennial	Forb/herb	FACU, FAC
Lespedeza capitata	roundhead lespedeza	Dicot	Perennial	Forb/herb	UPL, FACU
Lespedeza frutescens	shrubby lespedeza	Dicot	Perennial	Forb/herb	
Lespedeza hirta	hairy lespedeza	Dicot	Perennial	Forb/herb	
Lespedeza procumbens	trailing lespedeza	Dicot	Perennial	Forb/herb	
Lespedeza repens	creeping lespedeza	Dicot	Perennial	Forb/herb	
Lespedeza violacea	violet lespedeza	Dicot	Perennial	Forb/herb	
Lespedeza virginica	slender lespedeza	Dicot	Perennial	Forb/herb	
Liatris pilosa	shaggy blazing star	Dicot	Perennial	Forb/herb	
Liatris spicata	dense blazing star	Dicot	Perennial	Forb/herb	FACU, FAC+
Lilaeopsis chinensis	eastern grasswort	Dicot	Perennial	Forb/herb	OBL
Lilium canadense	Canada lily	Monocot	Perennial	Forb/herb	FAC, FACW
Lilium superbum	turk's-cap lily	Monocot	Perennial	Forb/herb	FACW, FACW+
Limosella australis	Welsh mudwort	Dicot	Annual	Forb/herb	
Lindera benzoin	northern spicebush	Dicot	Perennial	Tree, Shrub	FACW-, FACW
Lindernia dubia	yellowseed false pimpernel	Dicot	Annual, Biennial	Forb/herb	FACW, OBL
Linum intercursum	sandplain flax	Dicot	Perennial	Forb/herb	
Linum striatum	ridged yellow flax	Dicot	Perennial	Forb/herb	FACW-, FACW+
Linum virginianum	woodland flax	Dicot	Perennial	Forb/herb	FACU, FACW
Liparis liliifolia	brown widelip orchid	Monocot	Perennial	Forb/herb	FACU-, FACU
Liparis loeselii	yellow widelip orchid	Monocot	Perennial	Forb/herb	FACW-, OBL
Liquidambar styraciflua	sweetgum	Dicot	Perennial	Tree	FAC, FACW

Liriodendron tulipifera	tuliptree	Dicot	Perennial	Tree	FACU, FAC
Listera australis	southern twayblade	Monocot	Perennial	Forb/herb	FACW
Lobelia canbyi	Canby's lobelia	Dicot	Perennial	Forb/herb	OBL
Lobelia cardinalis	cardinalflower	Dicot	Perennial	Forb/herb	FACW+, OBL
Lobelia inflata	Indian-tobacco	Dicot	Annual	Forb/herb	FACU-, FAC
Lobelia nuttallii	Nuttall's lobelia	Dicot	Perennial	Forb/herb	FACW
Lobelia puberula	downy lobelia	Dicot	Perennial	Forb/herb	FACW-, FACW
Lobelia siphilitica	great blue lobelia	Dicot	Perennial	Forb/herb	FACW+, OBL
Lobelia spicata	palespike lobelia	Dicot	Perennial	Forb/herb	FAC-, FAC
Lonicera dioica	limber honeysuckle	Dicot	Perennial	Vine	FACU
Lonicera sempervirens	trumpet honeysuckle	Dicot	Perennial	Vine	FACU, FAC
Lophiola aurea	goldencrest	Monocot	Perennial	Forb/herb	
Ludwigia alternifolia	seedbox	Dicot	Perennial	Forb/herb	FACW+, OBL
Ludwigia hirtella	spindleroot	Dicot	Perennial	Forb/herb	FACW+, OBL
Ludwigia linearis	narrowleaf primrose-willow	Dicot	Perennial	Forb/herb	OBL
Ludwigia palustris	marsh seedbox	Dicot	Perennial	Forb/herb	OBL
Ludwigia sphaerocarpa	globefruit primrose-willow	Dicot	Perennial	Forb/herb	OBL
Lupinus perennis	sundial lupine	Dicot	Perennial	Forb/herb	
Luzula echinata	hedgehog woodrush	Monocot	Perennial	Graminoid	FACU, FAC
Lycopodiella alopecuroides	foxtail clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	
Lycopodiella caroliniana	slender clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	
Lycopodiella inundata	inundated clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	
Lycopodium clavatum	running clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	UPL, FACW+
Lycopodium digitatum	fan clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	
Lycopodium obscurum	rare clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	FACU-, FACU
Lycopodium tristachyum	deeproot clubmoss	Lycopod	Perennial	Subshrub, Forb/herb	
Lycopus americanus	American water horehound	Dicot	Perennial	Forb/herb	OBL
Lycopus amplectens	clasping water horehound	Dicot	Perennial	Forb/herb	OBL
Lycopus uniflorus	northern bugleweed	Dicot	Perennial	Forb/herb	OBL
Lycopus virginicus	Virginia water horehound	Dicot	Perennial	Forb/herb	OBL
Lygodium palmatum	American climbing fern	Fern	Perennial	Vine, Forb/herb	FACW-, FACW
Lyonia ligustrina	maleberry	Dicot	Perennial	Shrub	FACW
Lyonia mariana	piedmont staggerbush	Dicot	Perennial	Shrub	FACU-, FAC
Lysimachia Ã—producta		Dicot	Perennial	Forb/herb	FAC
Lysimachia hybrida	lowland yellow loosestrife	Dicot	Perennial	Forb/herb	OBL
Lysimachia quadrifolia	whorled yellow loosestrife	Dicot	Perennial	Forb/herb	UPL, FACU
Lysimachia terrestris	earth loosestrife	Dicot	Perennial	Forb/herb	OBL
Lythrum lineare	wand lythrum	Dicot	Perennial	Forb/herb	OBL
Magnolia acuminata	cucumber-tree	Dicot	Perennial	Tree	
Magnolia tripetala	umbrella-tree	Dicot	Perennial	Tree	FACU, FAC
Magnolia virginiana	sweetbay	Dicot	Perennial	Tree, Shrub	FACW+, OBL
Maianthemum canadense	Canada mayflower	Monocot	Perennial	Forb/herb	FACU, FAC
Maianthemum racemosum	feathery false lily of the valley	Monocot	Perennial	Forb/herb	
Malaxis unifolia	green adder's-mouth orchid	Monocot	Perennial	Forb/herb	FAC, FAC+
Malus coronaria	sweet crab apple	Dicot	Perennial	Tree, Shrub	
Matteuccia struthiopteris	ostrich fern	Fern	Perennial	Forb/herb	FACW
Medeola virginiana	Indian cucumber	Monocot	Perennial	Forb/herb	
Melampyrum lineare	narrowleaf cowwheat	Dicot	Annual	Forb/herb	FACU, FAC
Menispermum canadense	common moonseed	Dicot	Perennial	Vine	FAC
Mentha Ã—piperita	peppermint	Dicot	Perennial	Forb/herb	FACW, OBL
Mentha arvensis	wild mint	Dicot	Perennial	Forb/herb	FAC, FACW
Menyanthes trifoliata	buckbean	Dicot	Perennial	Forb/herb	OBL
Mertensia virginica	Virginia bluebells	Dicot	Perennial	Forb/herb	FAC+, FACW
Micranthemum micranthemoides	Nuttall's mudflower	Dicot	Annual	Forb/herb	
Mikania scandens	climbing hempvine	Dicot	Perennial	Vine, Forb/herb	FACU, OBL
Mimulus alatus	sharpwing monkeyflower	Dicot	Perennial	Forb/herb	OBL
Minuartia caroliniana	pine barren stitchwort	Dicot	Perennial	Forb/herb	
Mirabilis nyctaginea	heartleaf four o'clock	Dicot	Perennial	Forb/herb	UPL, FACU
Mitchella repens	partridgeberry	Dicot	Perennial	Subshrub, Forb/herb	FACU, FAC
Mollugo verticillata	green carpetweed	Dicot	Annual	Forb/herb	FAC-, FAC
Monarda punctata	spotted beebalm	Dicot	Annual, Biennial, Perennial	Subshrub, Forb/herb	UPL, FAC
Monotropa hypopithys	pinesap	Dicot	Perennial	Forb/herb	
Monotropa uniflora	Indianpipe	Dicot	Perennial	Forb/herb	UPL, FACU
Morella caroliniensis	southern bayberry	Dicot	Perennial	Tree, Shrub	
Morella cerifera	wax myrtle	Dicot	Perennial	Tree, Subshrub, Shrub	
Morella pensylvanica	northern bayberry	Dicot	Perennial	Tree, Shrub	
Morus rubra	red mulberry	Dicot	Perennial	Tree	FACU, FAC
Muhlenbergia mexicana	Mexican muhly	Monocot	Perennial	Graminoid	FAC, FACW
Muhlenbergia schreberi	nimblewill	Monocot	Perennial	Graminoid	FACU, FAC
Muhlenbergia tenuiflora	slimflower muhly	Monocot	Perennial	Graminoid	
Muhlenbergia torreyana	New Jersey muhly	Monocot	Perennial	Graminoid	FACW, FACW+
Muhlenbergia uniflora	bog muhly	Monocot	Perennial	Graminoid	OBL
Myosotis laxa	bay forget-me-not	Dicot	Annual, Biennial, Perennial	Forb/herb	OBL
Myosotis verna	spring forget-me-not	Dicot	Annual, Biennial	Forb/herb	FAC-, FAC

Myriophyllum heterophyllum	twoleaf watermilfoil	Dicot	Perennial	Forb/herb	OBL
Myriophyllum humile	low watermilfoil	Dicot	Perennial	Forb/herb	OBL
Myriophyllum pinnatum	cutleaf watermilfoil	Dicot	Perennial	Forb/herb	OBL
Najas flexilis	nodding waternymph	Monocot	Annual	Forb/herb	OBL
Najas gracillima	slender waternymph	Monocot	Annual	Forb/herb	OBL
Najas guadalupensis	southern waternymph	Monocot	Annual	Forb/herb	OBL
Narthecium americanum	yellow asphodel	Monocot	Perennial	Forb/herb	FACW+
Nelumbo lutea	American lotus	Dicot	Perennial	Forb/herb	OBL
Nuphar lutea	yellow pond-lily	Dicot	Perennial	Forb/herb	OBL
Nuttallanthus canadensis	Canada toadflax	Dicot	Annual, Biennial	Forb/herb	
Nymphaea odorata	American white waterlily	Dicot	Perennial	Forb/herb	OBL
Nymphoides cordata	little floatingheart	Dicot	Perennial	Forb/herb	OBL
Nyssa sylvatica	blackgum	Dicot	Perennial	Tree	FAC
Oclemena nemoralis	bog aster	Dicot	Perennial	Forb/herb	
Oenothera biennis	common evening primrose	Dicot	Biennial	Forb/herb	FACU-, FACU+
Oenothera fruticosa	narrowleaf evening primrose	Dicot	Perennial	Forb/herb	FACU, FAC
Oenothera laciniata	cutleaf evening primrose	Dicot	Annual, Perennial	Forb/herb	FACU-, FAC
Oenothera parviflora	northern evening primrose	Dicot	Biennial	Forb/herb	FACU-, FACU
Oenothera perennis	little evening primrose	Dicot	Perennial	Forb/herb	FAC-, FAC
Oldenlandia uniflora	clustered mille graines	Dicot	Annual	Subshrub, Forb/herb	FACW-, FACW+
Onoclea sensibilis	sensitive fern	Fern	Perennial	Forb/herb	FACW
Onosmodium virginianum	wild Job's tears	Dicot	Perennial	Forb/herb	
Ophioglossum pusillum	northern adderstongue	Fern	Perennial	Forb/herb	
Ophioglossum vulgatum	southern adderstongue	Fern	Perennial	Forb/herb	FAC, FACW
Opuntia humifusa	devil's-tongue	Dicot	Perennial	Shrub	
Orobanche uniflora	oneflowered broomrape	Dicot	Annual	Forb/herb	UPL, FACU
Orontium aquaticum	goldenclub	Monocot	Perennial	Forb/herb	OBL
Orthilia secunda	sidebells wintergreen	Dicot	Perennial	Subshrub	
Osmorhiza longistylis	longstyle sweetroot	Dicot	Perennial	Forb/herb	FACU-, FACW
Osmunda cinnamomea	cinnamon fern	Fern	Perennial	Forb/herb	FACW, OBL
Osmunda claytoniana	interrupted fern	Fern	Perennial	Forb/herb	FAC, FAC+
Osmunda regalis	royal fern	Fern	Perennial	Forb/herb	OBL
Ostrya virginiana	hophornbeam	Dicot	Perennial	Tree, Shrub	FACU-, FACU+
Oxalis corniculata	creeping woodsorrel	Dicot	Annual, Perennial	Forb/herb	UPL, FACU
Oxalis dillenii	slender yellow woodsorrel	Dicot	Perennial	Forb/herb	
Oxalis stricta	common yellow oxalis	Dicot	Perennial	Forb/herb	
Oxalis violacea	violet woodsorrel	Dicot	Perennial	Forb/herb	
Oxypolis rigidior	stiff cowbane	Dicot	Perennial	Forb/herb	OBL
Packera aurea	golden ragwort	Dicot	Perennial	Forb/herb	
Packera paupercula	balsam groundsel	Dicot	Perennial	Forb/herb	
Panax trifolius	dwarf ginseng	Dicot	Perennial	Forb/herb	
Panicum amarum	bitter panicgrass	Monocot	Perennial	Graminoid	FACU-, FAC
Panicum anceps	beaked panicgrass	Monocot	Perennial	Graminoid	FAC-, FACW
Panicum dichotomiflorum	fall panicgrass	Monocot	Annual	Graminoid	FACU, FACW
Panicum philadelphicum	Philadelphia panicgrass	Monocot	Annual	Graminoid	
Panicum rigidulum	redtop panicgrass	Monocot	Perennial	Graminoid	FAC, OBL
Panicum verrucosum	warty panicgrass	Monocot	Annual	Graminoid	FACW-, FACW
Panicum virgatum	switchgrass	Monocot	Perennial	Graminoid	UPL, FACW
Parthenocissus quinquefolia	Virginia creeper	Dicot	Perennial	Vine	FACU, FAC
Paspalum dissectum	mudbank crowngrass	Monocot	Perennial	Graminoid	OBL
Paspalum laeve	field paspalum	Monocot	Perennial	Graminoid	FAC, FACW-
Paspalum setaceum	thin paspalum	Monocot	Perennial	Graminoid	UPL, FAC
Pedicularis canadensis	Canadian lousewort	Dicot	Perennial	Subshrub, Forb/herb	FACU, FAC+
Pedicularis lanceolata	swamp lousewort	Dicot	Perennial	Forb/herb	FACW, OBL
Peltandra virginica	green arrow arum	Monocot	Perennial	Forb/herb	OBL
Penstemon digitalis	talus slope penstemon	Dicot	Perennial	Forb/herb	FAC-, FACW-
Penstemon hirsutus	hairy beardtongue	Dicot	Perennial	Forb/herb	
Penstemon laevigatus	eastern smooth beardtongue	Dicot	Perennial	Forb/herb	FACU, FAC
Penstemon pallidus	pale beardtongue	Dicot	Perennial	Forb/herb	UPL, FACU
Penthorum sedoides	ditch stonecrop	Dicot	Perennial	Forb/herb	OBL
Phalaris arundinacea	reed canarygrass	Monocot	Perennial	Graminoid	FACW, OBL
Phegopteris hexagonoptera	broad beechfern	Fern	Perennial	Forb/herb	
Phlox maculata	wild sweetwilliam	Dicot	Perennial	Forb/herb	FAC, FACW+
Phlox pilosa	downy phlox	Dicot	Perennial	Subshrub, Shrub, Forb/herb	FACU, FAC
Phlox subulata	moss phlox	Dicot	Perennial	Subshrub, Shrub, Forb/herb	
Phoradendron leucarpum	oak mistletoe	Dicot	Perennial	Subshrub, Shrub	
Photinia floribunda	purple chokeberry	Dicot	Perennial	Shrub	
Photinia melanocarpa	black chokeberry	Dicot	Perennial	Shrub	
Photinia pyrifolia	red chokeberry	Dicot	Perennial	Shrub	
Phragmites australis	common reed	Monocot	Perennial	Subshrub, Shrub, Graminoid	FACW, OBL
Phryma leptostachya	American lopseed	Dicot	Perennial	Forb/herb	UPL, FAC
Physalis heterophylla	clammy groundcherry	Dicot	Perennial	Forb/herb	
Physalis longifolia	longleaf groundcherry	Dicot	Perennial	Forb/herb	
Physocarpus opulifolius	common ninebark	Dicot	Perennial	Shrub	UPL, FACW-

Phytolacca americana	American pokeweed	Dicot	Perennial	Forb/herb	FACU+, FAC
Pilea fontana	lesser clearweed	Dicot	Annual	Forb/herb	FACW, OBL
Pilea pumila	Canadian clearweed	Dicot	Annual	Forb/herb	FAC, FACW
Pinus echinata	shortleaf pine	Gymnosperm	Perennial	Tree	
Pinus pungens	Table Mountain pine	Gymnosperm	Perennial	Tree	
Pinus rigida	pitch pine	Gymnosperm	Perennial	Tree	FACU-, FACU
Pinus strobus	eastern white pine	Gymnosperm	Perennial	Tree	FACU
Pinus virginiana	Virginia pine	Gymnosperm	Perennial	Tree	
Piptochaetium avenaceum	blackseed speargrass	Monocot	Perennial	Graminoid	
Pityopsis falcata	sickleleaf silkgrass	Dicot	Perennial	Forb/herb	
Plantago aristata	largebracted plantain	Dicot	Annual, Perennial	Forb/herb	
Plantago maritima	goose tongue	Dicot	Perennial	Forb/herb	UPL, FACW+
Plantago pusilla	dwarf plantain	Dicot	Annual	Forb/herb	UPL, FAC
Plantago rugelii	blackseed plantain	Dicot	Perennial	Forb/herb	FACU, FAC
Plantago virginica	Virginia plantain	Dicot	Annual, Biennial	Forb/herb	UPL, FACW
Platanthera blephariglottis	white fringed orchid	Monocot	Perennial	Forb/herb	OBL
Platanthera ciliaris	yellow fringed orchid	Monocot	Perennial	Forb/herb	FACW
Platanthera clavellata	small green wood orchid	Monocot	Perennial	Forb/herb	FACW+, OBL
Platanthera cristata	crested yellow orchid	Monocot	Perennial	Forb/herb	FACW+, OBL
Platanthera integra	yellow fringeless orchid	Monocot	Perennial	Forb/herb	OBL
Platanthera lacera	green fringed orchid	Monocot	Perennial	Forb/herb	FACW
Platanus occidentalis	American sycamore	Dicot	Perennial	Tree	FAC, FACW
Pluchea odorata	sweetscent	Dicot	Annual, Perennial	Subshrub, Forb/herb	FAC, OBL
Poa cuspidata	early bluegrass	Monocot	Perennial	Graminoid	
Podophyllum peltatum	mayapple	Dicot	Perennial	Forb/herb	FACU-, FACU
Pogonia ophioglossoides	snakemouth orchid	Monocot	Perennial	Forb/herb	OBL
Polanisia dodecandra	redwhisker clammyweed	Dicot	Annual	Forb/herb	UPL, FACU
Polemonium reptans	Greek valerian	Dicot	Perennial	Subshrub, Forb/herb	FACU, FAC
Polygala brevifolia	littleleaf milkwort	Dicot	Annual	Forb/herb	OBL
Polygala cruciata	drumheads	Dicot	Annual	Forb/herb	FACW+, OBL
Polygala lutea	orange milkwort	Dicot	Biennial	Forb/herb	FACW+
Polygala mariana	Maryland milkwort	Dicot	Annual	Forb/herb	FACW
Polygala nuttallii	Nuttall's milkwort	Dicot	Annual	Forb/herb	FAC
Polygala sanguinea	purple milkwort	Dicot	Annual	Forb/herb	FACU, FACW
Polygala verticillata	whorled milkwort	Dicot	Annual	Forb/herb	UPL, FAC-
Polygonatum biflorum	smooth Solomon's seal	Monocot	Perennial	Forb/herb	UPL, FAC-
Polygonatum pubescens	hairy Solomon's seal	Monocot	Perennial	Forb/herb	
Polygonella articulata	coastal jointweed	Dicot	Annual	Subshrub, Forb/herb	
Polygonum arifolium	halberdleaf tearthumb	Dicot	Annual	Vine, Forb/herb	OBL
Polygonum careyi	Carey's smartweed	Dicot	Annual	Forb/herb	FACW, FACW+
Polygonum hydropiperoides	swamp smartweed	Dicot	Perennial	Forb/herb	OBL
Polygonum pensylvanicum	Pennsylvania smartweed	Dicot	Annual	Forb/herb	FACW-, OBL
Polygonum punctatum	dotted smartweed	Dicot	Annual, Perennial	Forb/herb	FACW, OBL
Polygonum ramosissimum	bushy knotweed	Dicot	Annual	Forb/herb	FACU-, FACW
Polygonum robustius	stout smartweed	Dicot	Perennial	Forb/herb	OBL
Polygonum sagittatum	arrowleaf tearthumb	Dicot	Annual, Perennial	Vine, Forb/herb	OBL
Polygonum tenue	pleatleaf knotweed	Dicot	Annual	Forb/herb	
Polygonum virginianum	jumpseed	Dicot	Annual, Perennial	Forb/herb	FAC, FACW
Polypodium virginianum	rock polypody	Fern	Perennial	Forb/herb	
Polystichum acrostichoides	Christmas fern	Fern	Perennial	Forb/herb	UPL, FAC
Pontederia cordata	pickerelweed	Monocot	Perennial	Forb/herb	OBL
Populus deltoides	eastern cottonwood	Dicot	Perennial	Tree	FAC, FACW
Populus grandidentata	bigtooth aspen	Dicot	Perennial	Tree	FACU-, FACU
Populus tremuloides	quaking aspen	Dicot	Perennial	Tree	
Potamogeton amplifolius	largeleaf pondweed	Monocot	Perennial	Forb/herb	OBL
Potamogeton confervoides	Tuckerman's pondweed	Monocot	Perennial	Forb/herb	OBL
Potamogeton diversifolius	waterthread pondweed	Monocot	Perennial	Forb/herb	OBL
Potamogeton epihydrus	ribbonleaf pondweed	Monocot	Perennial	Forb/herb	OBL
Potamogeton oakesianus	Oakes' pondweed	Monocot	Perennial	Forb/herb	OBL
Potamogeton pulcher	spotted pondweed	Monocot	Perennial	Forb/herb	OBL
Potamogeton spirillus	spiral pondweed	Monocot	Perennial	Forb/herb	OBL
Potentilla arguta	tall cinquefoil	Dicot	Perennial	Subshrub, Forb/herb	UPL, FACU+
Potentilla canadensis	dwarf cinquefoil	Dicot	Perennial	Forb/herb	
Potentilla norvegica	Norwegian cinquefoil	Dicot	Annual, Biennial, Perennial	Forb/herb	FACU, FAC
Potentilla simplex	common cinquefoil	Dicot	Perennial	Forb/herb	UPL, FACU
Prenanthes alba	white rattlesnakeroot	Dicot	Biennial, Perennial	Forb/herb	FACU
Prenanthes altissima	tall rattlesnakeroot	Dicot	Perennial	Forb/herb	UPL, FACU
Prenanthes autumnalis	slender rattlesnakeroot	Dicot	Perennial	Forb/herb	FAC
Prenanthes serpentaria	cankerweed	Dicot	Perennial	Forb/herb	
Prenanthes trifoliolata	gall of the earth	Dicot	Perennial	Forb/herb	
Proserpinaca intermedia	intermediate mermaidweed	Dicot	Perennial	Forb/herb	OBL
Proserpinaca palustris	marsh mermaidweed	Dicot	Perennial	Forb/herb	OBL
Proserpinaca pectinata	combleaf mermaidweed	Dicot	Perennial	Forb/herb	OBL
Prunella vulgaris	common selfheal	Dicot	Perennial	Forb/herb	FACU, FACW

Prunus americana	American plum	Dicot	Perennial	Tree, Shrub	UPL, FACU
Prunus angustifolia	Chickasaw plum	Dicot	Perennial	Tree, Shrub	
Prunus maritima	beach plum	Dicot	Perennial	Shrub	
Prunus serotina	black cherry	Dicot	Perennial	Tree, Shrub	FACU
Prunus virginiana	chokecherry	Dicot	Perennial	Tree, Shrub	FACU-, FAC
Pseudognaphalium obtusifolium	rabbit-tobacco	Dicot	Annual, Biennial	Forb/herb	
Ptelea trifoliata	common hoptree	Dicot	Perennial	Tree, Shrub	UPL, FAC
Pteridium aquilinum	western brackenfern	Fern	Perennial	Forb/herb	FACU-, FAC-
Ptilimnium capillaceum	herbwilliam	Dicot	Annual	Forb/herb	FACW, OBL
Pycnanthemum incanum	hoary mountainmint	Dicot	Perennial	Forb/herb	
Pycnanthemum muticum	clustered mountainmint	Dicot	Perennial	Forb/herb	UPL, FACW
Pycnanthemum setosum	awned mountainmint	Dicot	Perennial	Forb/herb	FACU, FAC
Pycnanthemum tenuifolium	narrowleaf mountainmint	Dicot	Perennial	Forb/herb	FAC-, FACW
Pycnanthemum verticillatum	whorled mountainmint	Dicot	Perennial	Forb/herb	UPL, FAC
Pycnanthemum virginianum	Virginia mountainmint	Dicot	Perennial	Forb/herb	FAC, FACW+
Pyrola americana	American wintergreen	Dicot	Perennial	Subshrub	
Pyrola chlorantha	greenflowered wintergreen	Dicot	Perennial	Subshrub	UPL, FACW
Pyrola elliptica	waxflower shinleaf	Dicot	Perennial	Subshrub	
Pyxidanthera barbulata	flowering pixiemoss	Dicot	Perennial	Subshrub, Forb/herb	FACU-, FAC
Quercus alba	white oak	Dicot	Perennial	Tree	FACU-, FACU+
Quercus bicolor	swamp white oak	Dicot	Perennial	Tree	FACW+, OBL
Quercus coccinea	scarlet oak	Dicot	Perennial	Tree	
Quercus falcata	southern red oak	Dicot	Perennial	Tree	FACU-, FACU
Quercus ilicifolia	bear oak	Dicot	Perennial	Tree, Shrub	
Quercus imbricaria	shingle oak	Dicot	Perennial	Tree	FACU, FAC
Quercus lyrata	overcup oak	Dicot	Perennial	Tree	OBL
Quercus macrocarpa	bur oak	Dicot	Perennial	Tree, Shrub	FACU, FAC
Quercus marilandica	blackjack oak	Dicot	Perennial	Tree, Shrub	
Quercus michauxii	swamp chestnut oak	Dicot	Perennial	Tree	FACW-, FACW
Quercus palustris	pin oak	Dicot	Perennial	Tree	FAC, FACW
Quercus phellos	willow oak	Dicot	Perennial	Tree	FAC+, FACW
Quercus prinoides	dwarf chinkapin oak	Dicot	Perennial	Tree, Shrub	UPL, FACU-
Quercus prinus	chestnut oak	Dicot	Perennial	Tree	UPL, FACU-
Quercus rubra	northern red oak	Dicot	Perennial	Tree	FACU-, FACU+
Quercus stellata	post oak	Dicot	Perennial	Tree	UPL, FACU
Quercus velutina	black oak	Dicot	Perennial	Tree	
Ranunculus abortivus	littleleaf buttercup	Dicot	Biennial, Perennial	Forb/herb	FAC, FACW
Ranunculus ambigens	waterplantain spearwort	Dicot	Perennial	Forb/herb	OBL
Ranunculus hispidus	bristly buttercup	Dicot	Perennial	Forb/herb	FAC, FACW
Ranunculus longirostris	longbeak buttercup	Dicot	Perennial	Forb/herb	OBL
Ranunculus pensylvanicus	Pennsylvania buttercup	Dicot	Annual, Perennial	Forb/herb	FACW, OBL
Ranunculus pusillus	low spearwort	Dicot	Annual	Forb/herb	FACW+, OBL
Ranunculus recurvatus	blisterwort	Dicot	Perennial	Forb/herb	FAC, FACW+
Ranunculus sceleratus	cursed buttercup	Dicot	Annual, Perennial	Forb/herb	OBL
Ranunculus trichophyllus	threadleaf crowfoot	Dicot	Perennial	Forb/herb	OBL
Rhexia mariana	Maryland meadowbeauty	Dicot	Perennial	Forb/herb	FACW+, OBL
Rhexia virginica	handsome Harry	Dicot	Perennial	Forb/herb	FACW+, OBL
Rhododendron maximum	great laurel	Dicot	Perennial	Tree, Shrub	FAC-, FAC
Rhododendron periclymenoides	pink azalea	Dicot	Perennial	Shrub	FAC
Rhododendron prinophyllum	early azalea	Dicot	Perennial	Shrub	FAC, FAC+
Rhododendron viscosum	swamp azalea	Dicot	Perennial	Shrub	FACW+, OBL
Rhus copallinum	winged sumac	Dicot	Perennial	Tree, Shrub	UPL, NI
Rhus glabra	smooth sumac	Dicot	Perennial	Tree, Shrub	
Rhus typhina	staghorn sumac	Dicot	Perennial	Shrub, Tree	
Rhynchospora alba	white beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora capitellata	brownish beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora cephalantha	bunched beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora chalarocephala	loosehead beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora filifolia	threadleaf beaksedge	Monocot	Perennial	Graminoid	FAC, FACW-
Rhynchospora fusca	brown beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora gracilenta	slender beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora inundata	narrowfruit horned beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora knieskernii	Knieskern's beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora macrostachya	tall horned beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora microcephala	smallhead beaksedge	Monocot	Perennial	Graminoid	FACW+, OBL
Rhynchospora oligantha	featherbristle beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora pallida	pale beaksedge	Monocot	Perennial	Graminoid	OBL
Rhynchospora torreyana	Torrey's beaksedge	Monocot	Perennial	Graminoid	FACW+, OBL
Ribes cynosbati	eastern prickly gooseberry	Dicot	Perennial	Shrub	
Ribes hirtellum	hairystem gooseberry	Dicot	Perennial	Shrub	FAC, FACW
Robinia hispida	bristly locust	Dicot	Perennial	Tree, Shrub	
Robinia pseudoacacia	black locust	Dicot	Perennial	Tree	UPL, FAC
Rosa blanda	smooth rose	Dicot	Perennial	Subshrub	FACU-, FACU
Rosa palustris	swamp rose	Dicot	Perennial	Subshrub	OBL

Rotala ramosior	lowland rotala	Dicot	Annual	Forb/herb	OBL
Rubus allegheniensis	Allegheny blackberry	Dicot	Perennial	Subshrub	UPL, FACW
Rubus argutus	sawtooth blackberry	Dicot	Perennial	Subshrub	FACU-, FAC-
Rubus canadensis	smooth blackberry	Dicot	Perennial	Subshrub	
Rubus cuneifolius	sand blackberry	Dicot	Perennial	Subshrub	UPL, FACU
Rubus flagellaris	northern dewberry	Dicot	Perennial	Subshrub	UPL, FACU-
Rubus hispidus	bristly dewberry	Dicot	Perennial	Subshrub	FACW
Rubus occidentalis	black raspberry	Dicot	Perennial	Subshrub	
Rubus pensilvanicus	Pennsylvania blackberry	Dicot	Perennial	Subshrub	
Rudbeckia hirta	blackeyed Susan	Dicot	Annual, Biennial, Perennial	Forb/herb	FACU-, FACU
Rudbeckia laciniata	cutleaf coneflower	Dicot	Perennial	Subshrub, Forb/herb	FACU, FACW+
Rumex verticillatus	swamp dock	Dicot	Perennial	Forb/herb	FACW, OBL
Sabatia angularis	rosepink	Dicot	Annual	Forb/herb	FAC, FAC+
Sabatia campanulata	slender rose gentian	Dicot	Perennial	Forb/herb	FACW
Sabatia difformis	lanceleaf rose gentian	Dicot	Perennial	Forb/herb	OBL
Sabatia dodecandra	marsh rose gentian	Dicot	Perennial	Forb/herb	OBL
Sabatia stellaris	rose of Plymouth	Dicot	Annual	Forb/herb	FACW+, OBL
Saccharum alopecuroides	silver plumegrass	Monocot	Perennial	Graminoid	
Saccharum giganteum	sugarcane plumegrass	Monocot	Perennial	Graminoid	
Sagittaria australis	longbeak arrowhead	Monocot	Perennial	Forb/herb	
Sagittaria calycina	hooded arrowhead	Monocot	Perennial	Forb/herb	OBL
Sagittaria engelmanniana	Engelmann's arrowhead	Monocot	Perennial	Forb/herb	OBL
Sagittaria latifolia	broadleaf arrowhead	Monocot	Perennial	Forb/herb	OBL
Sagittaria rigida	sessilefruit arrowhead	Monocot	Perennial	Forb/herb	OBL
Sagittaria subulata	awl-leaf arrowhead	Monocot	Perennial	Forb/herb	OBL
Sagittaria teres	slender arrowhead	Monocot	Perennial	Forb/herb	
Salix discolor	pussy willow	Dicot	Perennial	Tree, Shrub	FACW
Salix eriocephala	Missouri River willow	Dicot	Perennial	Tree, Shrub	FACW
Salix humilis	prairie willow	Dicot	Perennial	Shrub	FACU
Salix interior	sandbar willow	Dicot	Perennial	Shrub, Tree	
Salix nigra	black willow	Dicot	Perennial	Tree	UPL, OBL
Salix sericea	silky willow	Dicot	Perennial	Tree, Shrub	OBL
Salvia lyrata	lyreleaf sage	Dicot	Perennial	Forb/herb	UPL, FACW-
Sanguisorba canadensis	Canadian burnet	Dicot	Perennial	Forb/herb	FACW, FACW+
Sanicula odorata	clustered blacksnakeroot	Dicot	Perennial	Forb/herb	
Sarracenia purpurea	purple pitcherplant	Dicot	Perennial	Subshrub, Forb/herb	OBL
Sassafras albidum	sassafras	Dicot	Perennial	Tree, Shrub	FACU-, FACU
Saururus cernuus	lizard's tail	Dicot	Perennial	Forb/herb	OBL
Saxifraga pensylvanica	eastern swamp saxifrage	Dicot	Perennial	Forb/herb	OBL
Saxifraga virginiensis	early saxifrage	Dicot	Perennial	Forb/herb	FAC-, FAC
Schizachyrium scoparium	little bluestem	Monocot	Perennial	Graminoid	FACU-, FACU+
Schizaea pusilla	little curlygrass fern	Fern	Perennial	Forb/herb	OBL
Schoenoplectus americanus	chairmaker's bulrush	Monocot	Perennial	Graminoid	
Schoenoplectus fluviatilis	river bulrush	Monocot	Perennial	Graminoid	
Schoenoplectus maritimus	cosmopolitan bulrush	Monocot	Perennial	Graminoid	
Schoenoplectus novae-angliae	New England bulrush	Monocot	Perennial	Graminoid	
Schoenoplectus smithii	Smith's bulrush	Monocot	Annual	Graminoid	
Schoenoplectus subterminalis	swaying bulrush	Monocot	Perennial	Graminoid	
Schoenoplectus tabernaemontani	softstem bulrush	Monocot	Perennial	Graminoid	
Schoenoplectus torreyi	Torrey's bulrush	Monocot	Perennial	Graminoid	
Schwalbea americana	chaffseed	Dicot	Perennial	Forb/herb	UPL, FAC
Scirpus atrovirens	green bulrush	Monocot	Perennial	Graminoid	OBL
Scirpus cyperinus	woolgrass	Monocot	Perennial	Graminoid	FACW+, OBL
Scirpus expansus	woodland bulrush	Monocot	Perennial	Graminoid	OBL
Scirpus longii	Long's bulrush	Monocot	Perennial	Graminoid	OBL
Scirpus pendulus	rufous bulrush	Monocot	Perennial	Graminoid	OBL
Scirpus polyphyllus	leafy bulrush	Monocot	Perennial	Graminoid	OBL
Scleria minor	slender nutrush	Monocot	Perennial	Graminoid	FACW-, FACW
Scleria pauciflora	fewflower nutrush	Monocot	Perennial	Graminoid	FACU, FACW
Scleria reticularis	netted nutrush	Monocot	Annual	Graminoid	OBL
Scleria triglomerata	whip nutrush	Monocot	Perennial	Graminoid	FACU+, FACW
Sclerolepis uniflora	pink bogbutton	Dicot	Perennial	Forb/herb	OBL
Scrophularia lanceolata	lanceleaf figwort	Dicot	Perennial	Forb/herb	UPL, FACW
Scrophularia marilandica	carpenter's square	Dicot	Perennial	Subshrub, Forb/herb	FACU-
Scutellaria elliptica	hairy skullcap	Dicot	Perennial	Forb/herb	
Scutellaria galericulata	marsh skullcap	Dicot	Perennial	Forb/herb	FACW+, OBL
Scutellaria integrifolia	helmet flower	Dicot	Perennial	Forb/herb	FAC, FACW
Scutellaria lateriflora	blue skullcap	Dicot	Perennial	Forb/herb	FACW, OBL
Scutellaria nervosa	veiny skullcap	Dicot	Perennial	Forb/herb	FAC
Selaginella apoda	meadow spikemoss	Lycopod	Perennial	Forb/herb	FACW-, FACW+
Senna hebecarpa	American senna	Dicot	Perennial	Forb/herb	
Sericocarpus asteroides	toothed whitetop aster	Dicot	Perennial	Forb/herb	
Sericocarpus linifolius	narrowleaf whitetop aster	Dicot	Perennial	Forb/herb	
Setaria parviflora	marsh bristlegrass	Monocot	Perennial	Graminoid	

Silene antirrhina	sleepy silene	Dicot	Annual	Forb/herb	
Silene caroliniana	sticky catchfly	Dicot	Perennial	Forb/herb	
Silene stellata	widowsfrill	Dicot	Perennial	Forb/herb	
Sisyrinchium angustifolium	narrowleaf blue-eyed grass	Monocot	Perennial	Forb/herb	FACU, FACW-
Sisyrinchium atlanticum	eastern blue-eyed grass	Monocot	Perennial	Forb/herb	FACW-, FACW
Sisyrinchium fuscatum	coastal plain blue-eyed grass	Monocot	Perennial	Forb/herb	
Sisyrinchium mucronatum	needletip blue-eyed grass	Monocot	Perennial	Forb/herb	FAC+, FACW-
Sium suave	hemlock waterparsnip	Dicot	Perennial	Forb/herb	OBL
Smilax glauca	cat greenbrier	Monocot	Perennial	Shrub, Vine	UPL, FAC
Smilax laurifolia	laurel greenbrier	Monocot	Perennial	Shrub, Vine	FACW+, OBL
Smilax rotundifolia	roundleaf greenbrier	Monocot	Perennial	Shrub, Vine	FAC
Smilax tamnoides	bristly greenbrier	Monocot	Perennial	Shrub, Vine	FAC, FAC+
Smilax walteri	coral greenbrier	Monocot	Perennial	Shrub, Vine	OBL
Solanum carolinense	Carolina horsenettle	Dicot	Perennial	Subshrub, Forb/herb	UPL, FACU
Solanum ptycanthum	West Indian nightshade	Dicot	Annual	Forb/herb	
Solidago arguta	Atlantic goldenrod	Dicot	Perennial	Forb/herb	
Solidago bicolor	white goldenrod	Dicot	Perennial	Forb/herb	
Solidago canadensis	Canada goldenrod	Dicot	Perennial	Forb/herb	FACU, FACU+
Solidago erecta	showy goldenrod	Dicot	Perennial	Forb/herb	
Solidago fistulosa	pine barren goldenrod	Dicot	Perennial	Forb/herb	FAC+, FACW
Solidago gigantea	giant goldenrod	Dicot	Perennial	Forb/herb	FAC, FACW
Solidago juncea	early goldenrod	Dicot	Perennial	Forb/herb	
Solidago latissimifolia	Elliott's goldenrod	Dicot	Perennial	Forb/herb	
Solidago nemoralis	gray goldenrod	Dicot	Perennial	Forb/herb	
Solidago odora	anisescented goldenrod	Dicot	Perennial	Forb/herb	
Solidago puberula	downy goldenrod	Dicot	Perennial	Forb/herb	FACU-, FACU
Solidago rugosa	wrinkleleaf goldenrod	Dicot	Perennial	Forb/herb	FAC, FAC+
Solidago sempervirens	seaside goldenrod	Dicot	Perennial	Forb/herb	FACW-, FACW
Solidago stricta	wand goldenrod	Dicot	Perennial	Forb/herb	FACW-, OBL
Solidago uliginosa	bog goldenrod	Dicot	Perennial	Forb/herb	OBL
Sorghastrum nutans	Indiangrass	Monocot	Perennial	Graminoid	UPL, FACW
Sparganium americanum	American bur-reed	Monocot	Perennial	Forb/herb	OBL
Spartina pectinata	prairie cordgrass	Monocot	Perennial	Graminoid	FACW, OBL
Spergularia salina	salt sandspurry	Dicot	Annual, Biennial, Perennial	Forb/herb	
Sphenopholis intermedia	slender wedgescale	Monocot	Perennial	Graminoid	
Sphenopholis nitida	shiny wedgescale	Monocot	Perennial	Graminoid	
Sphenopholis pensylvanica	swamp wedgescale	Monocot	Perennial	Graminoid	OBL
Spiraea alba	white meadowsweet	Dicot	Perennial	Shrub	FACW, FACW+
Spiraea tomentosa	steeplebush	Dicot	Perennial	Shrub	FACW
Spiranthes cernua	nodding lady's tresses	Monocot	Perennial	Forb/herb	FACW-, FACW+
Spiranthes lacera	northern slender lady's tresses	Monocot	Perennial	Forb/herb	FACU-, FAC+
Spiranthes laciniata	lacelip lady's tresses	Monocot	Perennial	Forb/herb	FACW+, OBL
Spiranthes lucida	shining lady's tresses	Monocot	Perennial	Forb/herb	FACW, FACW+
Spiranthes tuberosa	little lady's tresses	Monocot	Perennial	Forb/herb	
Spiranthes vernalis	spring lady's tresses	Monocot	Perennial	Forb/herb	FAC, FACW-
Spirodela polyrrhiza	common duckmeat	Monocot	Perennial	Forb/herb	
Sporobolus clandestinus	rough dropseed	Monocot	Perennial	Graminoid	
Sporobolus compositus	composite dropseed	Monocot	Perennial	Graminoid	
Sporobolus cryptandrus	sand dropseed	Monocot	Perennial	Graminoid	UPL, FACU
Sporobolus vaginiflorus	poverty dropseed	Monocot	Annual	Graminoid	UPL, FACU
Stachys hyssopifolia	hyssopleaf hedgenettle	Dicot	Annual	Forb/herb	FACW+, OBL
Stachys palustris	marsh hedgenettle	Dicot	Perennial	Forb/herb	FACW, OBL
Stachys tenuifolia	smooth hedgenettle	Dicot	Perennial	Forb/herb	FACW-, OBL
Staphylea trifolia	American bladdernut	Dicot	Perennial	Tree, Shrub	FAC
Stellaria alsine	bog chickweed	Dicot	Annual	Forb/herb	FAC, OBL
Stellaria longifolia	longleaf starwort	Dicot	Perennial	Forb/herb	FAC, OBL
Strophostyles helvola	amberique-bean	Dicot	Annual	Vine, Forb/herb	
Strophostyles umbellata	pink fuzzybean	Dicot	Perennial	Vine, Forb/herb	FACU, FAC-
Stylisma pickeringii	Pickering's dawnflower	Dicot	Perennial	Vine, Forb/herb	
Stylosanthes biflora	sidebeak pencilflower	Dicot	Perennial	Forb/herb	
Symphoricarpos orbiculatus	coralberry	Dicot	Perennial	Shrub	UPL, FAC-
Symphyotrichum concolor	eastern silver aster	Dicot	Perennial	Forb/herb	
Symphyotrichum dumosum	rice button aster	Dicot	Perennial	Forb/herb	
Symphyotrichum lanceolatum	white panicle aster	Dicot	Perennial	Forb/herb	
Symphyotrichum lateriflorum	calico aster	Dicot	Perennial	Forb/herb	
Symphyotrichum novae-angliae	New England aster	Dicot	Perennial	Forb/herb	
Symphyotrichum novi-belgii	New York aster	Dicot	Perennial	Forb/herb	
Symphyotrichum patens	late purple aster	Dicot	Perennial	Forb/herb	
Symphyotrichum pilosum	hairy white oldfield aster	Dicot	Perennial	Forb/herb	
Symphyotrichum undulatum	wavyleaf aster	Dicot	Perennial	Forb/herb	
Symplocarpus foetidus	skunk cabbage	Monocot	Perennial	Forb/herb	OBL
Tephrosia virginiana	Virginia tephrosia	Dicot	Perennial	Subshrub, Forb/herb	
Thalictrum dioicum	early meadow-rue	Dicot	Perennial	Forb/herb	FACU+, FACW
Thalictrum pubescens	king of the meadow	Dicot	Perennial	Forb/herb	FAC, FACW+

Thalictrum thalictroides	rue anemone	Dicot	Perennial	Forb/herb	
Thaspium trifoliatum	purple meadowparsnip	Dicot	Perennial	Forb/herb	
Thelypteris noveboracensis	New York fern	Fern	Perennial	Forb/herb	FAC, FAC+
Thelypteris palustris	eastern marsh fern	Fern	Perennial	Forb/herb	
Thelypteris simulata	bog fern	Fern	Perennial	Forb/herb	FACW
Tipularia discolor	crippled cranefly	Monocot	Perennial	Forb/herb	FACU-, FAC
Torreyochloa pallida	pale false mannagrass	Monocot	Perennial	Graminoid	
Toxicodendron radicans	eastern poison ivy	Dicot	Perennial	Shrub, Forb/herb, Subshrub	FACU, FACW
Toxicodendron vernix	poison sumac	Dicot	Perennial	Tree, Shrub	OBL
Tradescantia virginiana	Virginia spiderwort	Monocot	Perennial	Forb/herb	UPL, FAC+
Triadenum virginicum	Virginia marsh St. Johnswort	Dicot	Perennial	Forb/herb	OBL
Triantha racemosa	coastal false asphodel	Monocot	Perennial	Forb/herb	
Trichostema dichotomum	forked bluecurls	Dicot	Annual	Forb/herb	
Tridens flavus	purpletop tridens	Monocot	Perennial	Graminoid	UPL, FACU
Trientalis borealis	starflower	Dicot	Perennial	Forb/herb	FAC, FAC+
Trillium cernuum	whip-poor-will flower	Monocot	Perennial	Forb/herb	FAC, FACW
Trillium erectum	red trillium	Monocot	Perennial	Forb/herb	UPL, FACU
Triodanis perfoliata	clasping Venus' looking-glass	Dicot	Annual	Forb/herb	UPL, FAC
Triosteum angustifolium	yellowfruit horse-gentian	Dicot	Perennial	Forb/herb	
Triplasis purpurea	purple sandgrass	Monocot	Annual	Graminoid	
Tsuga canadensis	eastern hemlock	Gymnosperm	Perennial	Tree	FACU
Typha latifolia	broadleaf cattail	Monocot	Perennial	Forb/herb	OBL
Ulmus americana	American elm	Dicot	Perennial	Tree	FAC, FACW
Ulmus rubra	slippery elm	Dicot	Perennial	Tree	FAC
Utricularia cornuta	horned bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia geminiscapa	hiddenfruit bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia gibba	humped bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia juncea	southern bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia macrorhiza	common bladderwort	Dicot	Perennial	Forb/herb	OBL
Utricularia purpurea	eastern purple bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia radiata	little floating bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia resupinata	lavender bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Utricularia striata	striped bladderwort	Dicot	Perennial	Forb/herb	
Utricularia subulata	zigzag bladderwort	Dicot	Annual, Perennial	Forb/herb	OBL
Uvularia perfoliata	perfoliate bellwort	Monocot	Perennial	Forb/herb	FACU
Uvularia puberula	mountain bellwort	Monocot	Perennial	Forb/herb	FACU, FAC-
Uvularia sessilifolia	sessileleaf bellwort	Monocot	Perennial	Forb/herb	FACU-, FAC+
Vaccinium angustifolium	lowbush blueberry	Dicot	Perennial	Subshrub, Shrub	FACU-, FACU
Vaccinium caesariense	New Jersey blueberry	Dicot	Perennial	Shrub	OBL
Vaccinium corymbosum	highbush blueberry	Dicot	Perennial	Shrub	FACW-, FACW
Vaccinium fuscatum	black highbush blueberry	Dicot	Perennial	Shrub	FAC+
Vaccinium macrocarpon	cranberry	Dicot	Perennial	Subshrub, Shrub	OBL
Vaccinium pallidum	Blue Ridge blueberry	Dicot	Perennial	Subshrub, Shrub	
Vaccinium stamineum	deerberry	Dicot	Perennial	Shrub	FACU-, FACU+
Valerianella radiata	beaked cornsalad	Dicot	Annual	Forb/herb	FAC-, FAC+
Vallisneria americana	American eelgrass	Monocot	Perennial	Forb/herb	OBL
Veratrum virginicum	Virginia bunchflower	Monocot	Perennial	Forb/herb	
Veratrum viride	green false hellebore	Monocot	Perennial	Forb/herb	FACU, OBL
Verbena hastata	swamp verbena	Dicot	Biennial, Perennial	Forb/herb	FAC, FACW+
Verbena simplex	narrowleaf vervain	Dicot	Perennial	Forb/herb	
Verbena urticifolia	white vervain	Dicot	Perennial	Forb/herb	UPL, FAC+
Verbesina alternifolia	wingstem	Dicot	Perennial	Forb/herb	FAC, FACW
Vernonia noveboracensis	New York ironweed	Dicot	Perennial	Forb/herb	FAC+, FACW+
Veronica americana	American speedwell	Dicot	Perennial	Forb/herb	OBL
Viburnum acerifolium	mapleleaf viburnum	Dicot	Perennial	Shrub, Subshrub	UPL, FACU
Viburnum dentatum	southern arrowwood	Dicot	Perennial	Tree, Shrub	FAC
Viburnum nudum	possumhaw	Dicot	Perennial	Tree, Shrub	FACW+, OBL
Viburnum prunifolium	blackhaw	Dicot	Perennial	Tree, Shrub	FACU, FACU+
Viburnum rafinesqueanum	downy arrowwood	Dicot	Perennial	Shrub	
Vicia americana	American vetch	Dicot	Perennial	Vine, Forb/herb	FAC?
Viola Ã—palmata	early blue violet	Dicot	Perennial	Forb/herb	
Viola Ã—primulifolia		Dicot	Perennial	Forb/herb	FAC, FACW+
Viola affinis	sand violet	Dicot	Annual, Perennial	Forb/herb	FACW
Viola bicolor	field pansy	Dicot	Annual	Forb/herb	UPL, FAC
Viola blanda	sweet white violet	Dicot	Perennial	Forb/herb	FACW-, FACW
Viola brittoniana	northern coastal violet	Dicot	Perennial	Forb/herb	FAC
Viola cucullata	marsh blue violet	Dicot	Perennial	Forb/herb	FACW+, OBL
Viola hirsutula	southern woodland violet	Dicot	Perennial	Forb/herb	
Viola labradorica	alpine violet	Dicot	Perennial	Forb/herb	FAC
Viola lanceolata	bog white violet	Dicot	Perennial	Forb/herb	OBL
Viola macloskeyi	small white violet	Dicot	Perennial	Forb/herb	FACW+, OBL
Viola pedata	birdfoot violet	Dicot	Perennial	Forb/herb	UPL, FACU
Viola pubescens	downy yellow violet	Dicot	Perennial	Forb/herb	FACU-, FAC-
Viola rotundifolia	roundleaf yellow violet	Dicot	Perennial	Forb/herb	FAC, FAC+

Viola sagittata	arrowleaf violet	Dicot	Perennial	Forb/herb	FAC-, FACW
Viola sororia	common blue violet	Dicot	Annual, Perennial	Forb/herb	FAC-, FAC
Viola striata	striped cream violet	Dicot	Perennial	Forb/herb	FACW-, FACW
Viola triloba	three-lobe violet	Dicot	Perennial	Forb/herb	
Vitis aestivalis	summer grape	Dicot	Perennial	Vine	UPL, FAC
Vitis labrusca	fox grape	Dicot	Perennial	Vine	FACU, FAC+
Vitis riparia	riverbank grape	Dicot	Perennial	Vine	FACU, FACW
Vulpia octoflora	sixweeks fescue	Monocot	Annual	Graminoid	UPL, FACU+
Woodsia ilvensis	rusty woodsia	Fern	Perennial	Forb/herb	
Woodsia obtusa	bluntlobe cliff fern	Fern	Perennial	Forb/herb	
Woodwardia areolata	netted chainfern	Fern	Perennial	Forb/herb	FACW+, OBL
Woodwardia virginica	Virginia chainfern	Fern	Perennial	Forb/herb	OBL
Xanthium strumarium	rough cocklebur	Dicot	Annual	Forb/herb	UPL, FAC+
Xerophyllum asphodeloides	eastern turkeybeard	Monocot	Perennial	Forb/herb	
Xyris caroliniana	Carolina yelloweyed grass	Monocot	Perennial	Forb/herb	FACW, OBL
Xyris fimbriata	fringed yelloweyed grass	Monocot	Perennial	Forb/herb	OBL
Xyris smalliana	Small's yelloweyed grass	Monocot	Perennial	Forb/herb	OBL
Xyris torta	slender yelloweyed grass	Monocot	Perennial	Forb/herb	OBL
Zannichellia palustris	horned pondweed	Monocot	Perennial	Forb/herb	OBL
Zigadenus leimanthoides	pine barren deathcamas	Monocot	Perennial	Forb/herb	FACW, OBL
Zizania aquatica	annual wildrice	Monocot	Annual	Graminoid	OBL

Scientific Name	Common Name	Category	Growth Habit
Acer negundo	boxelder	Dicot	Tree
Acer rubrum	red maple	Dicot	Tree
Aesculus flava	yellow buckeye	Dicot	Tree, Shrub
Alnus incana	gray alder	Dicot	Tree, Shrub
Alnus serrulata	hazel alder	Dicot	Tree, Shrub
Amelanchier arborea	common serviceberry	Dicot	Tree, Shrub
Amelanchier canadensis	Canadian serviceberry	Dicot	Tree, Shrub
Asimina triloba	pawpaw	Dicot	Tree, Shrub
Baccharis halimifolia	eastern baccharis	Dicot	Tree, Shrub
Betula lenta	sweet birch	Dicot	Tree
Betula nigra	river birch	Dicot	Tree
Betula papyrifera	paper birch	Dicot	Tree
Betula populifolia	gray birch	Dicot	Tree
Carpinus caroliniana	American hornbeam	Dicot	Tree, Shrub
Carya alba	mockernut hickory	Dicot	Tree
Carya cordiformis	bitternut hickory	Dicot	Tree
Carya glabra	pignut hickory	Dicot	Tree
Carya ovalis	red hickory	Dicot	Tree
Carya ovata	shagbark hickory	Dicot	Tree
Carya pallida	sand hickory	Dicot	Tree
Castanea dentata	American chestnut	Dicot	Tree
Catalpa bignonioides	southern catalpa	Dicot	Tree
Celtis tenuifolia	dwarf hackberry	Dicot	Tree, Shrub
Cephalanthus occidentalis	common buttonbush	Dicot	Tree, Shrub
Cercis canadensis	eastern redbud	Dicot	Tree, Shrub
Chamaecyparis thyoides	Atlantic white cedar	Gymnosperm	Tree
Cornus alternifolia	alternateleaf dogwood	Dicot	Tree, Shrub
Cornus florida	flowering dogwood	Dicot	Tree, Shrub
Cornus foemina	stiff dogwood	Dicot	Tree, Shrub
Crataegus crus-galli	cockspur hawthorn	Dicot	Tree, Shrub
Crataegus intricata	Copenhagen hawthorn	Dicot	Tree, Shrub
Crataegus pedicellata	scarlet hawthorn	Dicot	Tree, Shrub
Crataegus pruinosa	waxyfruit hawthorn	Dicot	Tree, Shrub
Crataegus uniflora	dwarf hawthorn	Dicot	Tree, Shrub
Diospyros virginiana	common persimmon	Dicot	Tree
Fagus grandifolia	American beech	Dicot	Tree
Fraxinus americana	white ash	Dicot	Tree
Fraxinus nigra	black ash	Dicot	Tree
Fraxinus pennsylvanica	green ash	Dicot	Tree
Hamamelis virginiana	American witchhazel	Dicot	Tree, Shrub
Ilex laevigata	smooth winterberry	Dicot	Tree, Shrub
Ilex opaca	American holly	Dicot	Tree, Shrub
Ilex verticillata	common winterberry	Dicot	Tree, Shrub
Juglans cinerea	butternut	Dicot	Tree
Juglans nigra	black walnut	Dicot	Tree
Juniperus virginiana	eastern redcedar	Gymnosperm	Tree

Kalmia latifolia	mountain laurel	Dicot	Tree, Shrub
Lindera benzoin	northern spicebush	Dicot	Tree, Shrub
Liquidambar styraciflua	sweetgum	Dicot	Tree
Liriodendron tulipifera	tuliptree	Dicot	Tree
Magnolia acuminata	cucumber-tree	Dicot	Tree
Magnolia tripetala	umbrella-tree	Dicot	Tree
Magnolia virginiana	sweetbay	Dicot	Tree, Shrub
Malus coronaria	sweet crab apple	Dicot	Tree, Shrub
Morella caroliniensis	southern bayberry	Dicot	Tree, Shrub
Morella pensylvanica	northern bayberry	Dicot	Tree, Shrub
Morus rubra	red mulberry	Dicot	Tree
Nyssa sylvatica	blackgum	Dicot	Tree
Ostrya virginiana	hophornbeam	Dicot	Tree, Shrub
Pinus echinata	shortleaf pine	Gymnosperm	Tree
Pinus pungens	Table Mountain pine	Gymnosperm	Tree
Pinus rigida	pitch pine	Gymnosperm	Tree
Pinus strobus	eastern white pine	Gymnosperm	Tree
Pinus virginiana	Virginia pine	Gymnosperm	Tree
Platanus occidentalis	American sycamore	Dicot	Tree
Populus deltoides	eastern cottonwood	Dicot	Tree
Populus grandidentata	bigtooth aspen	Dicot	Tree
Populus tremuloides	quaking aspen	Dicot	Tree
Prunus americana	American plum	Dicot	Tree, Shrub
Prunus angustifolia	Chickasaw plum	Dicot	Tree, Shrub
Prunus serotina	black cherry	Dicot	Tree, Shrub
Prunus virginiana	chokecherry	Dicot	Tree, Shrub
Ptelea trifoliata	common hoptree	Dicot	Tree, Shrub
Quercus alba	white oak	Dicot	Tree
Quercus bicolor	swamp white oak	Dicot	Tree
Quercus coccinea	scarlet oak	Dicot	Tree
Quercus falcata	southern red oak	Dicot	Tree
Quercus ilicifolia	bear oak	Dicot	Tree, Shrub
Quercus imbricaria	shingle oak	Dicot	Tree
Quercus lyrata	overcup oak	Dicot	Tree
Quercus macrocarpa	bur oak	Dicot	Tree, Shrub
Quercus marilandica	blackjack oak	Dicot	Tree, Shrub
Quercus michauxii	swamp chestnut oak	Dicot	Tree
Quercus palustris	pin oak	Dicot	Tree
Quercus phellos	willow oak	Dicot	Tree
Quercus prinoides	dwarf chinkapin oak	Dicot	Tree, Shrub
Quercus prinus	chestnut oak	Dicot	Tree
Quercus rubra	northern red oak	Dicot	Tree
Quercus stellata	post oak	Dicot	Tree
Quercus velutina	black oak	Dicot	Tree
Rhododendron maximum	great laurel	Dicot	Tree, Shrub
Rhus copallinum	winged sumac	Dicot	Tree, Shrub
Rhus glabra	smooth sumac	Dicot	Tree, Shrub

Robinia hispida	bristly locust	Dicot	Tree, Shrub
Robinia pseudoacacia	black locust	Dicot	Tree
Salix discolor	pussy willow	Dicot	Tree, Shrub
Salix eriocephala	Missouri River willow	Dicot	Tree, Shrub
Salix nigra	black willow	Dicot	Tree
Salix sericea	silky willow	Dicot	Tree, Shrub
Sassafras albidum	sassafras	Dicot	Tree, Shrub
Staphylea trifolia	American bladdernut	Dicot	Tree, Shrub
Toxicodendron vernix	poison sumac	Dicot	Tree, Shrub
Tsuga canadensis	eastern hemlock	Gymnosperm	Tree
Ulmus americana	American elm	Dicot	Tree
Ulmus rubra	slippery elm	Dicot	Tree
Viburnum dentatum	southern arrowwood	Dicot	Tree, Shrub
Viburnum nudum	possumhaw	Dicot	Tree, Shrub
Viburnum prunifolium	blackhaw	Dicot	Tree, Shrub

Appendix 2:
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