

Township of Downe  
Cumberland County, New Jersey

Small Cities CDBG Program  
New Jersey Department of Community Affairs  
Division of Housing and Community Resources

Project #23-0351-00

Environmental Review Record  
Township-Wide Home Rehabilitation

November 2022  
revised August 2023

Michael Rothman  
Mayor

# Project Abstract

Name of Grantee:	Township of Downe
Grant Number:	#23-0351-00
From: January 1, 2023	To: June 30, 2025
Name and Title of Certifying Office	Michael Rothman, Mayor
Project Name:	Downe Township Housing Rehabilitation Program
Locations of Physical Development(s):	Scattered sites in Downe Township (Newport, Dividing Creek and Fortescue)
Lead Agency:	Downe Township
Address:	Downe Township Municipal Building, Township of Downe 288 Main Street Newport, NJ 08345
Project Representative:	Nadine Lockley, Municipal Clerk
Project Summary Description:	Downe Township proposes to continue a home rehabilitation project to provide home rehabilitation grants to low and moderate income homeowners. This project will be targeted to the Newport, Dividing Creek and Fortescue neighborhoods. This proposed project will enable low income homeowners to remain in their homes. Preference will be given to elderly, handicapped, single parents with dependent children and very low income families
	\$230.000 (\$200,000 CDBG for rehabilitation) (\$30,000 Local for administration and case management)

## Project Data

**Purpose of the Project:** Downe Township proposes to continue a home rehabilitation project to provide home rehabilitation grants to low and moderate income homeowners. This project will be targeted to the Newport, Dividing Creek and Fortescue neighborhoods. This proposed project will enable low income homeowners to remain in their homes.

**Status of the Project:** This project was approved by the NJ Department of Community Affairs in the amount of \$200,000. This project is designated as #23-0351-00. As of September 2023 the Township is soliciting eligible home rehabilitation applicants who would be aided by deferred loans.

**Project and Area Description:** Downe Township is a predominantly rural community located on the Delaware Bay. The Township is an agricultural community covering 52 square miles. Existing development is sparse and primarily linear along existing state, county and local roadways. The exceptions are the three neighborhoods of Fortescue Village, Dividing Creek and Gandy's Beach. Together these neighborhoods contain 57% of the Township's occupied housing stock.

Downe Township's 2010 population of 1,702 persons resided in 631 occupied units. In 2010 88% of occupied units were owner occupied units. An additional 418 units were defined as seasonal. An August 1998 windshield survey of exterior housing conditions throughout the Township revealed 729 dwelling units. Of these units 236 (36%) exhibited exterior deterioration. The survey indicated that much of the housing need for rehabilitation is concentrated in three localities. The Dividing Creek and Fortescue Village neighborhoods are well defined neighborhoods. A third location, Newport, is a more dispersed neighborhood exhibiting linear development on the roadways traversing the Township. These three neighborhoods are credible candidates for neighborhood based home rehabilitation assistance projects.

Downe Township's targeted areas are the Dividing Creek, Fortescue and Newport. Together these neighborhoods contain 86% of the Township's occupied housing stock. The balance is in the seasonal community of Gandy's Beach or along isolated rural roadways.

These three existing neighborhoods are described below:

Dividing Creek - A mid 19<sup>th</sup> century market village characterized by larger Victorian Period homes. This neighborhood is almost exclusively a year round community that is impacted only marginally by the sport fishing and resort industries. A disproportionate 50% of dwelling units exhibit exterior deterioration. The neighborhood is a concentration area for low and moderate income and elderly residents.

Fortescue Village - A former fishing village on the Delaware Bay that developed at the turn of the century. Formerly mostly seasonal but now evolving into a year round occupancy retirement community. Neighborhood exhibits a 30% rate of exterior housing deterioration.

Newport - Newport is a dispersed area of linear development along County and State roadways in western Downe Township adjacent to Lawrence Township. The Community is characterized by upland soils bounded by wetlands to the west and south.

Downe Township's housing stock mainly consists of single family owner occupied detached houses (88%) and rental units (12%).

**Existing Conditions and Trends:** Existing conditions and trends are described in detail below:

Land Use:

The Township is a primarily rural community covering 52 square miles. The Township contains three concentration areas for housing, those being Gandy's Beach, Fortescue and Dividing Creek.

Soil:

The Township's soil is primarily classed as Aura Series soils by the Soil Conservation Service. The Aura Series soils consist of nearly level or gently sloping well-drained soils. These soils formed under a hardwood forest on divides and knolls. Other soil types are indicative of extensive wetlands along the Delaware Bay shore. Refer to the soil maps and interpretation excerpts included with this environmental assessment.

Climate:

Cumberland County's climate is mild on account of its southerly latitude, sea level elevation, and proximity to the moderating Atlantic Ocean. Winters are comparatively mild while summers are hot and humid. Yearly climatic data is shown below:

Mean Maximum Temperature (°F).....	61.0
Mean Minimum Temperature (°F).....	48.0
Mean Total Precipitation (in.).....	47.6
Mean Total Snowfall (in.).....	36.0

Air:

Local air quality is excellent. Cumberland County is primarily a an agricultural area - air emitters are scarce. Presence of water on directly south and west of Downe Township assists in dissipating air-borne pollutants.

#### Water:

The entire Township is within 5 miles of the Delaware Bay. No water bodies are present within the Township excepting wetlands and the Delaware Bay to the south and West. Public water is found in only a few urbanized sections of the Township such as the Fortescue and Dividing Creek neighborhoods. Well water is the source of potable water for residents in the balance.

#### Vegetation:

The Township displays a variety of vegetation types characteristic of second growth piedmont terrain. The Township contains a wide variety of upland and wetland vegetation including woodlots and saltmarsh. Excepting wetland areas, very little original natural vegetation is present.

#### Wildlife:

The project is not site specific. However the homes that are rehabilitated are not the home of any wildlife species. The Township is traversed by such migrants, but the residential neighborhoods served by this project are not a factor in the migration. The likelihood of endangered/threatened species being found in the project area is discussed within the statutory requirements section of this assessment.

#### Noise:

Route 553 is an local collector roadway in lower Cumberland. Vehicular traffic is a not a significant noise factor within the project area(s). No other significant noise emitters such as industrial plants, airports, or railroads are present. Downe Township's only industry, a sand factory is not a substantial noise generator.

#### Service Delivery Factors:

Downe Township provides fire, and emergency squad services. All such services are based at the municipal service center found on Route 553. Police protection is provided by the State Police.

#### Special and Economic Character:

The Township is predominantly agricultural and residential - consisting of single family homes. A substantial sports fishing industry is found along the Delaware Bay at Fortescue. Gandy's Beach is a substantial recreational seasonal community. Increasingly bird watching is becoming an important ecotourism industry in locations like Turkey Point.

#### Unique or Special Resources:

One unique or special resources exists within the project area. The Delaware Bay is well known for its annual shorebird migration in May. This migration patch along the Delaware Bay includes Downe Township. This factor is making bird watching an increasingly popular ecotourism draw for the Township.

#### **Project and Area Maps and Plans:**

This project will be conducted throughout Downe Township. See attached maps within this ERR which show the entirety of Downe Township.

# Statutory Checklist

A. Are all activities of this project **Exempt** from NEPA procedures? \_\_\_\_ Yes **X** No

B. Categorical Exclusions [58.35(a) and (b)]

1. Is this a Categorically Excluded (CE) project not subject to 58.5 [58.35(b)]?  
 \_\_\_\_ Yes **X** No

2. Is this a CE Project [58.35(a)] subject to 58.5 authorities? **X** Yes \_\_\_\_ No

All activities proposed by project #23-0351-00 are categorically excluded from environmental review requirements because they are listed as categorical exclusions in Section 58.35 consisting solely of: Section 58.35 consisting solely of: Provision of housing rehabilitation deferred loans to owner occupied homes.

3. Does project meet Compliance Threshold? **X** Yes \_\_\_\_ No

C. Does this project require an Environmental Assessment (EA)? \_\_\_\_ Yes **X** No

Project Name and Identification: Downe Township Housing Rehabilitation Program  
 23-0351-00

Area of Statutory or Regulatory Compliance	A No Circumstance Requiring Compliance	B Date Compliance Achieved	C References to Notes Providing Documentation, Sources, and Explanation of Checked Boxes
Air Quality	X		Rehabilitation of existing single family homes does not effect air quality.

Historic Properties		May 2021 Mini-Programmatic Agreement	Downe's project is not site specific so it is impossible to identify the precise homes to be selected for rehabilitation. The project will rehabilitate homes throughout the Township. Under such circumstances it is not practical to ask the State for a definitive clearance statement. Instead during implementation the Township will request SHPO clearance on a case by basis for homes built in 1973 or earlier. A copy of the Township's May 2021 Memorandum of Understanding (MOU) is appended to this Environmental Review Record
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Floodplain Management	X		<p>The FIRM Flood Insurance Rate Maps Panel for Downe Township indicates that the great majority of the Township is within the 100 year floodplain. Homes to be rehabilitated will be within the 100 year floodplain zone. Selected properties are likely to substantially predate floodplain regulations, at that time there were few constraints to where homes were built.</p> <p>Consequently Downe Township will comply with Executive Order 11988 and 11990 by requiring all effected applicants to provide evidence of flood insurance as a pre-requisite of assistance.</p>
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Wetlands Protection	X		Extensive wetlands are found within Downe Township. The individual homes to be rehabilitated will not impact on wetlands. The wetlands these homes may once have occupied have long since been filled during the construction process.
Coastal Zone	X		The project is consistent with State coastal zone policies. CAFRA is not applicable to rehabilitation of single family homes.
Sole Source Aquifers	X		The project site does not contain a sole source aquifer. Housing Rehabilitation will not effect groundwater.
Endangered Species	X		Housing rehabilitation will have no conceivable impact on endangered species as all work will occur within the footprint of existing single family homes.

Wild & Scenic Rivers	X		This factor is not applicable in the preparer's judgement since Downe Township does not contain any waterways designated as "wild and scenic". The Delaware Bay adjoins much of Downe Township but is not Wild and Scenic.
Farmland Protection	X		This factor in the preparer's judgement is not applicable. The proposed rehabilitation of existing residential properties will have no impact on farmlands protection. It is possible that some of the homes assisted will be situated on operating farms in Downe Township.

Noise (24 CFR Part 51B)	X		<p>Home rehabilitation proposed by Downe Township will have no impact on ambient, long-term noise levels. This statement can be made since only short-term impacts will be created by construction activity. The housing repairs proposed will not increase local noise levels.</p> <p>Ambient noise will have no conceivable impact upon the functionality of Downe Township's proposed home rehabilitation efforts. Therefore noise is seen as having no effect on the proposed project either as a positive or negative influence.</p>
Hazardous Facilities	X		<p>No such hazards exist within Downe Township. During numerous site visits no such hazards could be found. Therefore in the preparer's judgement, this factor is not applicable.</p>

Airport	X		The Downe Township project area is not close to any clear zone airfields. This factor is not applicable.
Toxic Chemicals & Radioactive Materials	X		No such hazards exist in Downe Township. This determination was based on numerous tours of Township roads (the latest in August 2021) taken by the preparer, Mark Blauer. This factor is not applicable.
Environmental Justice (EO 12898)	X		This factor is not applicable. This project will not introduce any adverse impacts into a low and moderate income or minority neighborhood. Instead low and moderate income homeowners will be assisted by assisting them to rehabilitate their homes.

Prepared By: \_\_\_\_\_ Title: President Date: Nov 18, 2022  
Rev August 21, 2023

# Other Requirements (Section 58.6) Checklist

Project Name - Township-Wide Housing Rehabilitation

Grant Number - #23-0351-00

(A) Federal Flood Insurance Purchase Requirements

- (1) Does the project involve acquisition or construction (including rehabilitation) in a community identified by the Federal Emergency Agency (FEMA) as having special flood hazard areas (100 year and 500 year flood plains)? Yes X No
- (2) Is the project located in 100 year flood plain (500 year floodplain for “critical” actions)? Yes      No X\*

Note\* - Downe Township will rehabilitate homes at scattered sites not yet identified. Some of these homes could be within the 100 year flood plain. Any homes in the 100 year flood plain will be required to demonstrate and maintain Federal Flood Insurance. Such a requirement is already a standard practice for the ongoing Downe Township Home Rehabilitation Program.

(B) Coastal Barriers Resources

Is the project to be undertaken located in the coastal Barrier Resources System, as amended by the Coastal Barrier Improvement Act of 1990 (16 U.S.C. 3501)?

Yes      No X

(C) Projects located in close proximity to airports contained on the HUD list of 24 CFR Part 51D Covered Airports

Does the project involve assistance, subsidy, or insurance for the purchase or sale of an existing property in a Runway Clear Zone or Clear Zone as defined in 24 CFR Part 51D?

Yes      No X

Prepared by: Mark Blauer dba Blauer Associates Title: President

Date: November 18, 2022 revised August 21, 2023

# **Statutory Checklist (Continued)**

## **Additional Studies Performed:**

No additional studies were performed.

## **Mitigation Measures Needed:**

No mitigation measures are necessary. There will be no significant negative environmental impacts resulting from this project as we will be rehabilitating individual homes throughout Downe Township. Apart from requiring homes within the 100 year flood zone to maintain Flood insurance and the ongoing need for NJ DEP SHPO review, no environmental conditions need to be put in place.

## **Summary of Findings and Conclusions:**

Downe Township's home rehabilitation project will have a significant net positive impact upon the safety of an estimated 12 households. Dangerous conditions in homes that could affect residents will be eliminated. There will be no negative long-term environmental impacts. Short-term traffic disruption to affected homeowners will occur but can be readily controlled by the home rehabilitation contractors selected by the Township.

There will be no significant negative environmental impacts resulting from this project. There will be short-term inconveniences to affected homeowners. No environmental conditions need to be put in place.

Based upon the foregoing environmental assessment, it is concluded that a request to the NJ Department of Community Affairs for a release of funds for the within project is not an action significantly affecting the quality of the human environment, and no Environmental Impact Statement is required.

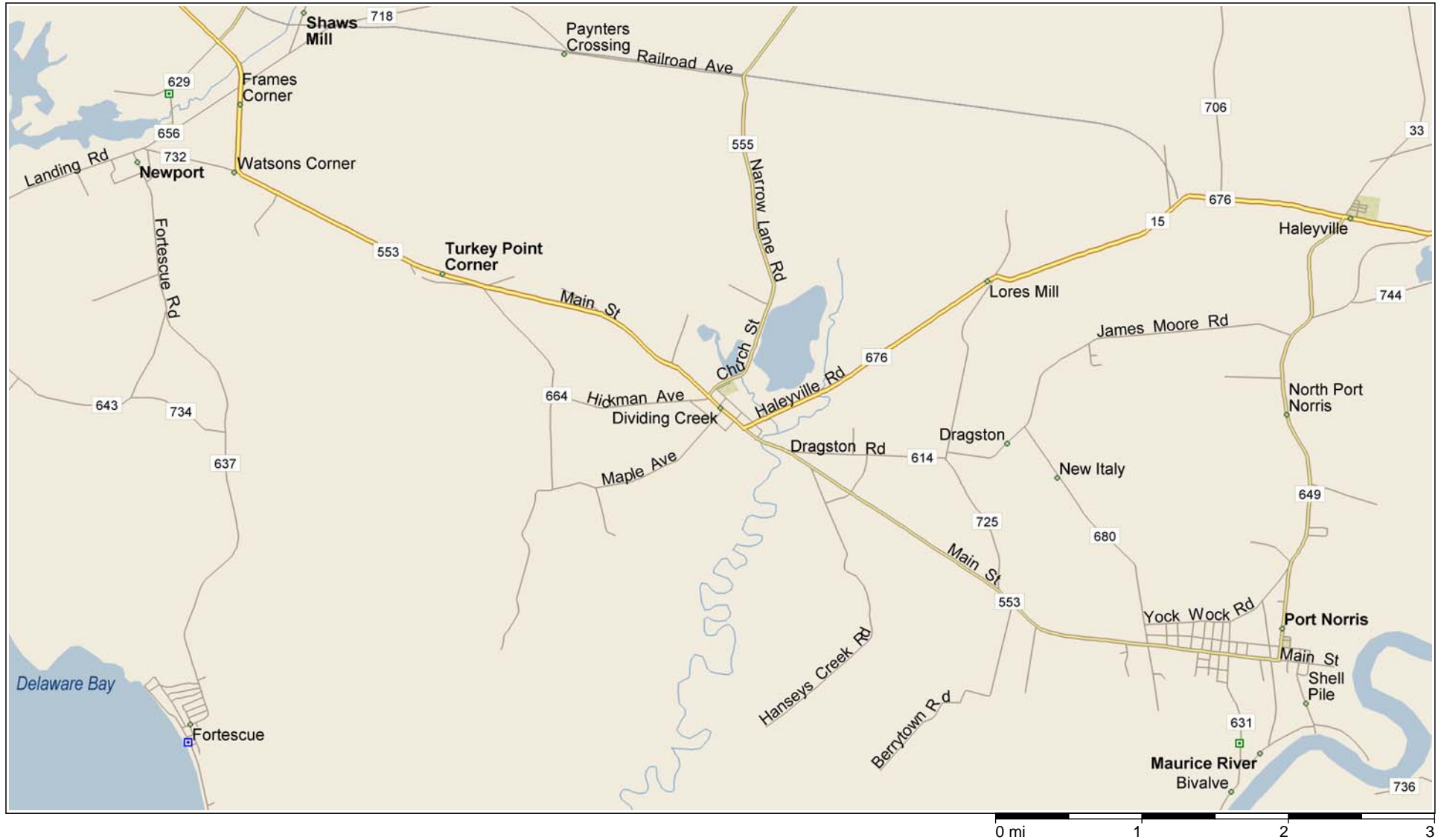
A notice of Downe Township's "Notice of Intent to Request for Release of Funds" will be published on August 29, 2023 and a true copy of the notice is attached to this assessment following this page.

## **List of Attached Source Documents**

1. Downe Township Project Area Street Map;
2. Flood Map Newport neighborhood;
3. Flood Map Dividing Creek neighborhood;
4. Flood Map Fortescue neighborhood;
5. Soil interpretation data, Soil Conservation Service;
6. Newport Historic District Map; and
7. May 5, 2021 SHPO Mini-Programmatic Agreement.



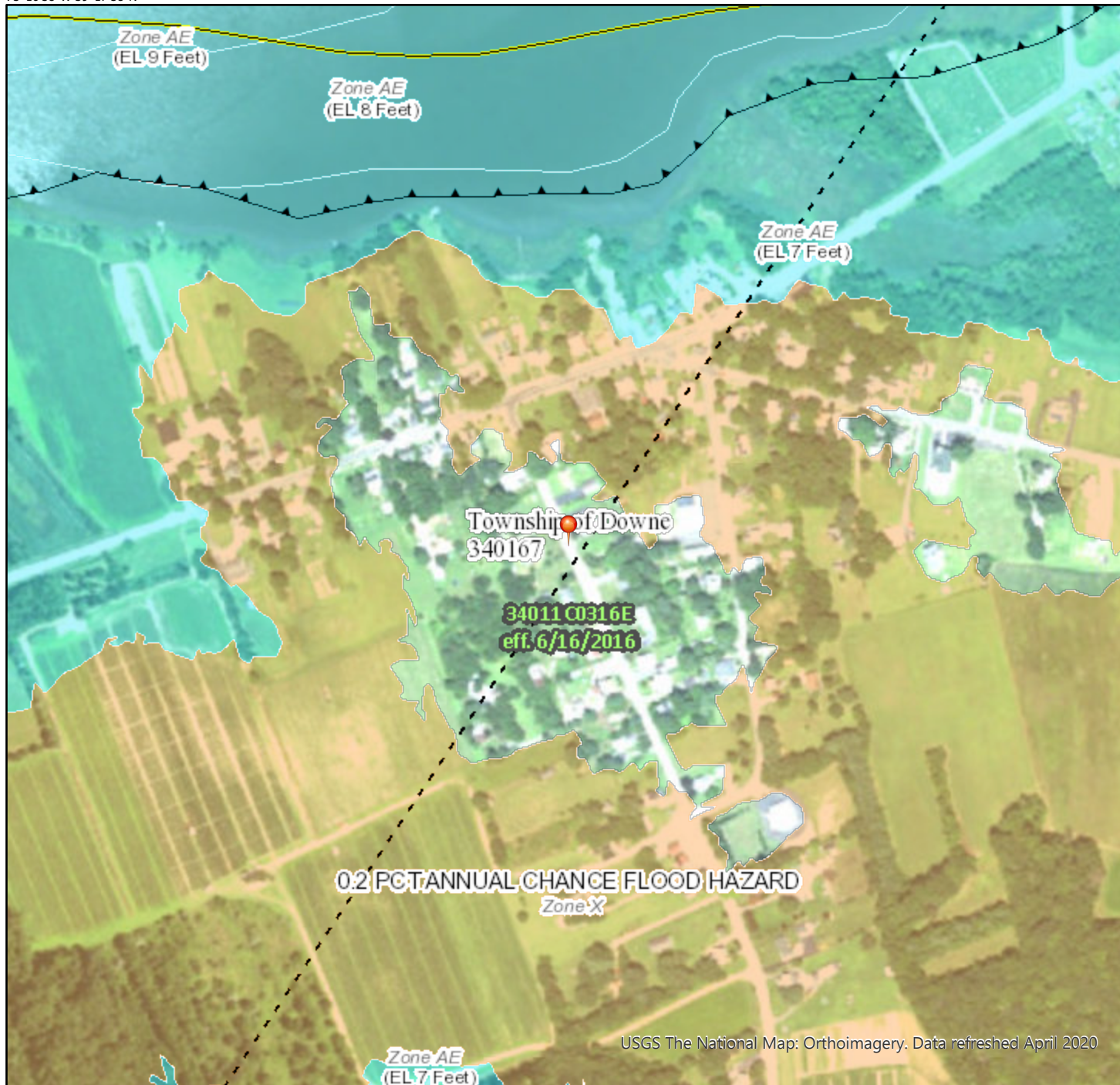
## Downe Township - Newport, Dividing Creek and Fortescue



# National Flood Hazard Layer FIRMMette



75°10'58"W 39°17'58"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

75°10'21"W 39°17'30"N

USGS The National Map: Orthoimagery. Data refreshed April 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/31/2020 at 6:28 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

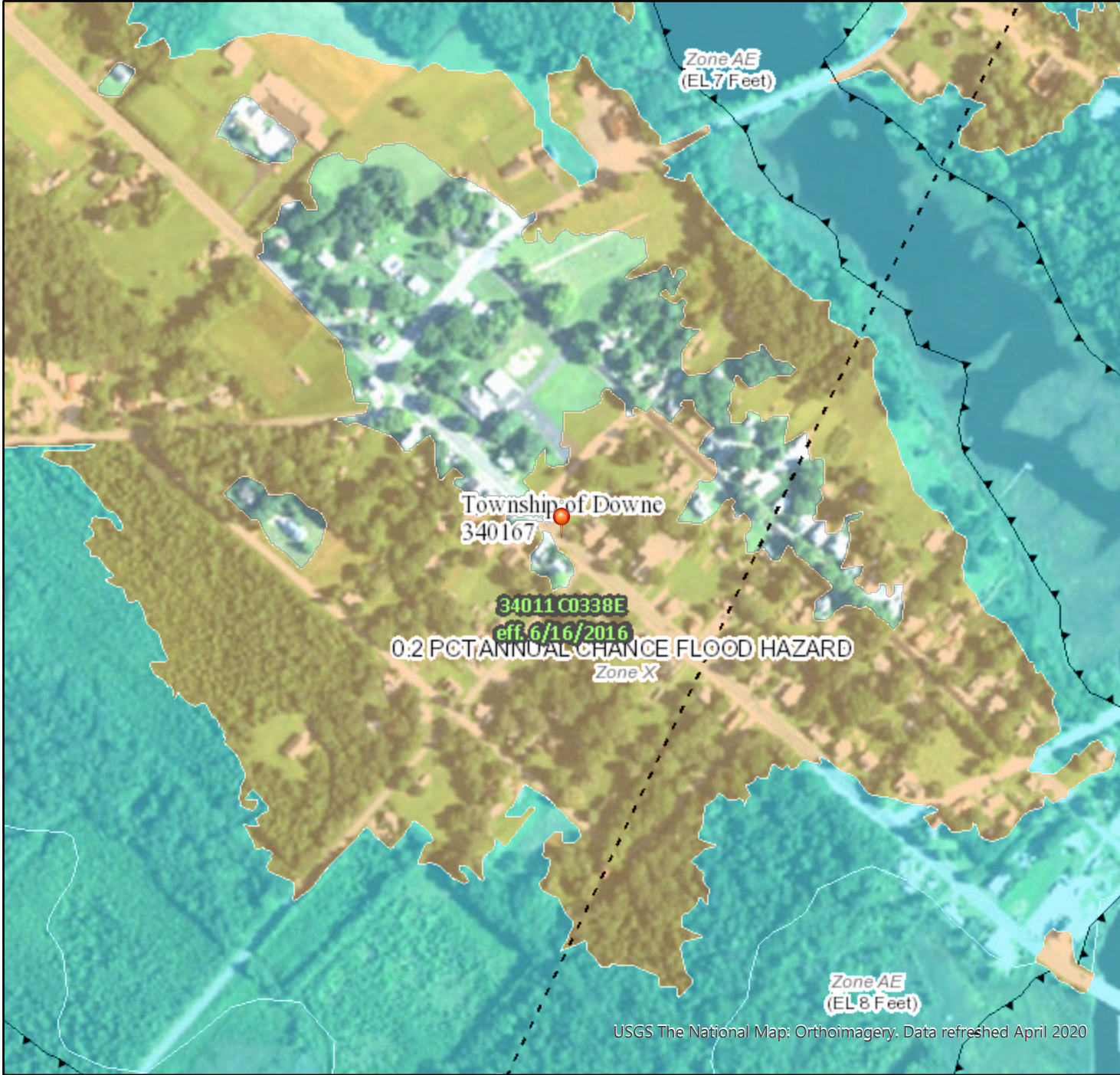
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



# National Flood Hazard Layer FIRMMette



75°6'24"W 39°16'28"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

75°5'46"W 39°16'N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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# National Flood Hazard Layer FIRMette



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



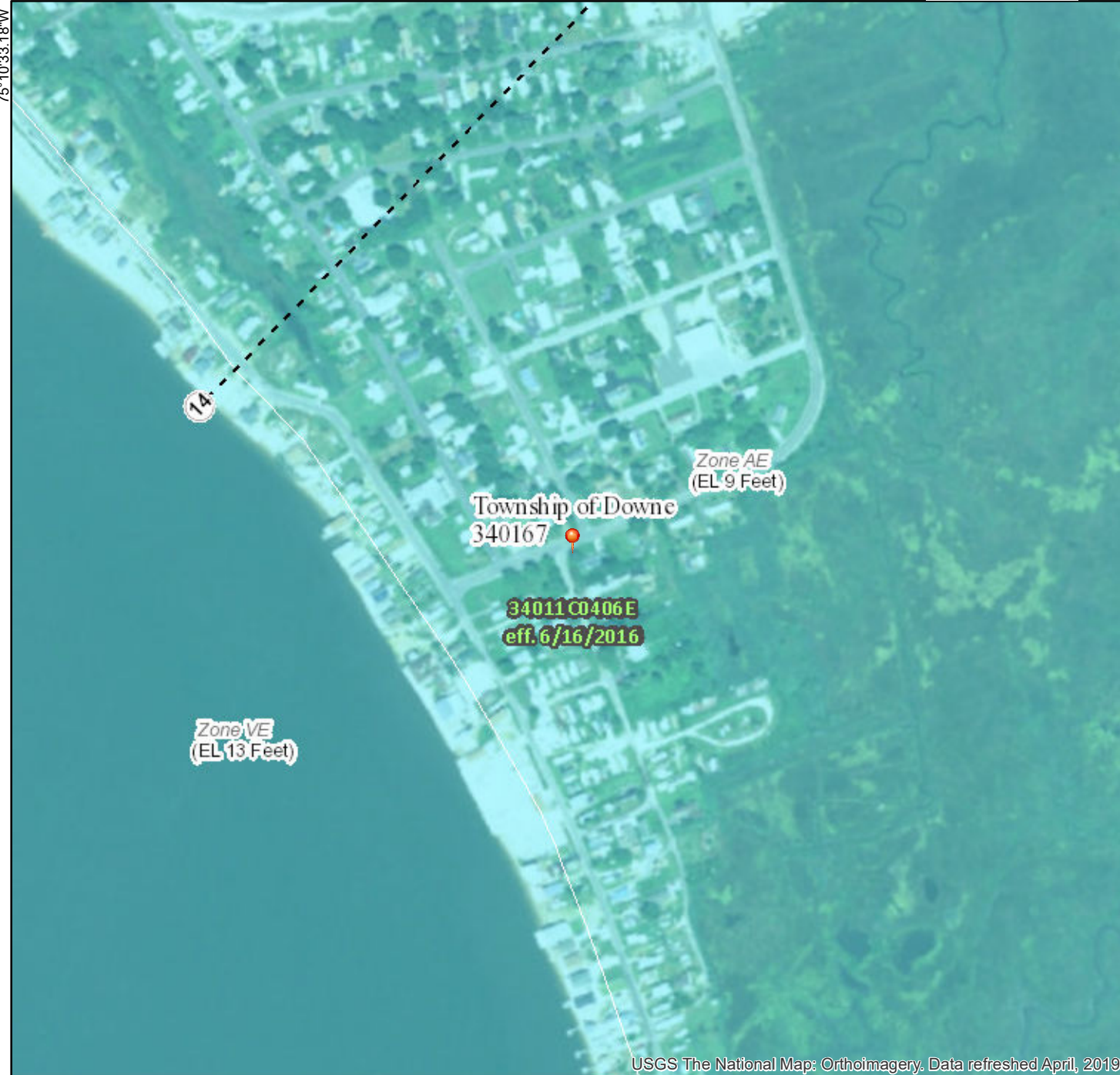
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39°14'32.75"N



USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

39°14'4.88"N

75°9'55.72"W



United States  
Department of  
Agriculture

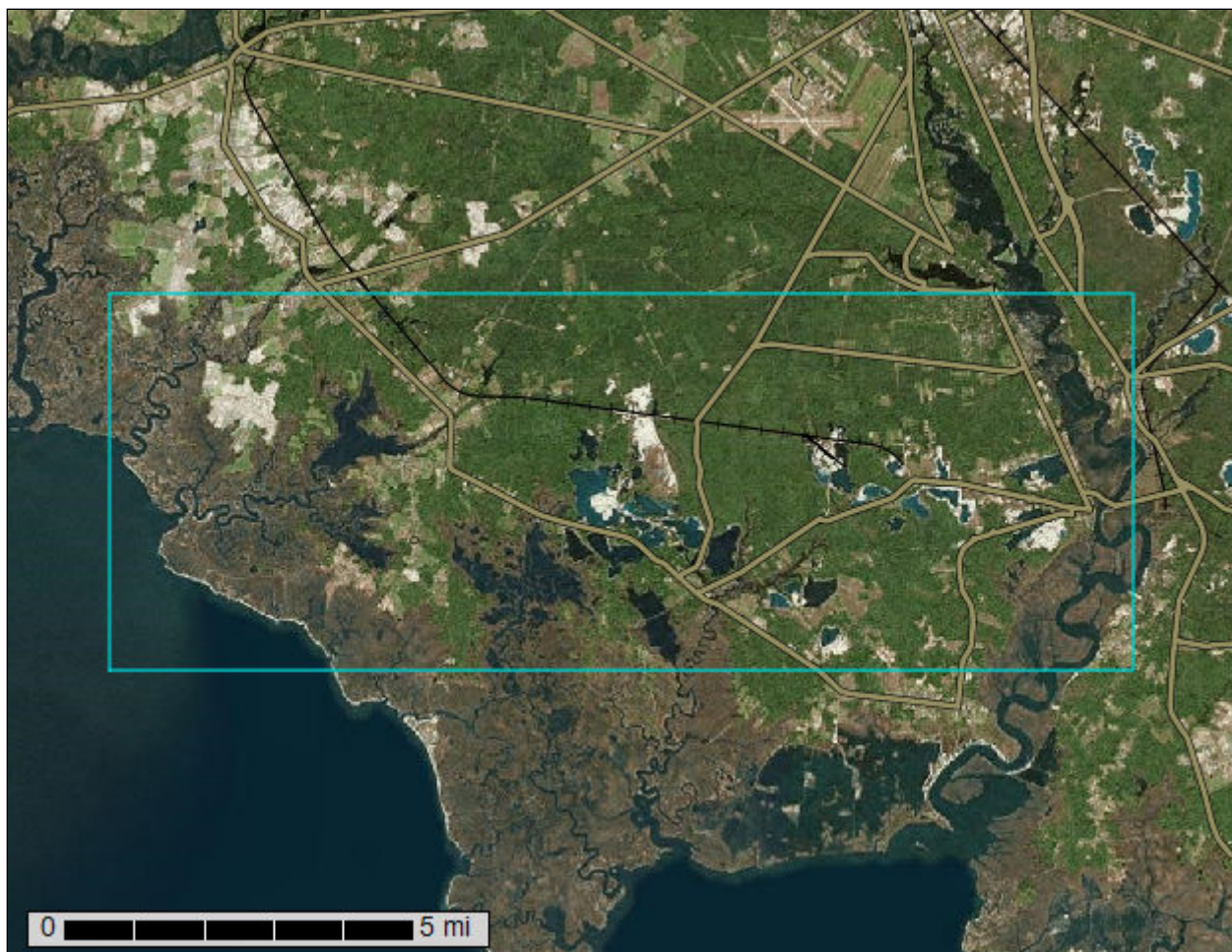
NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Cumberland County, New Jersey**

## Downe Township Soils Map





# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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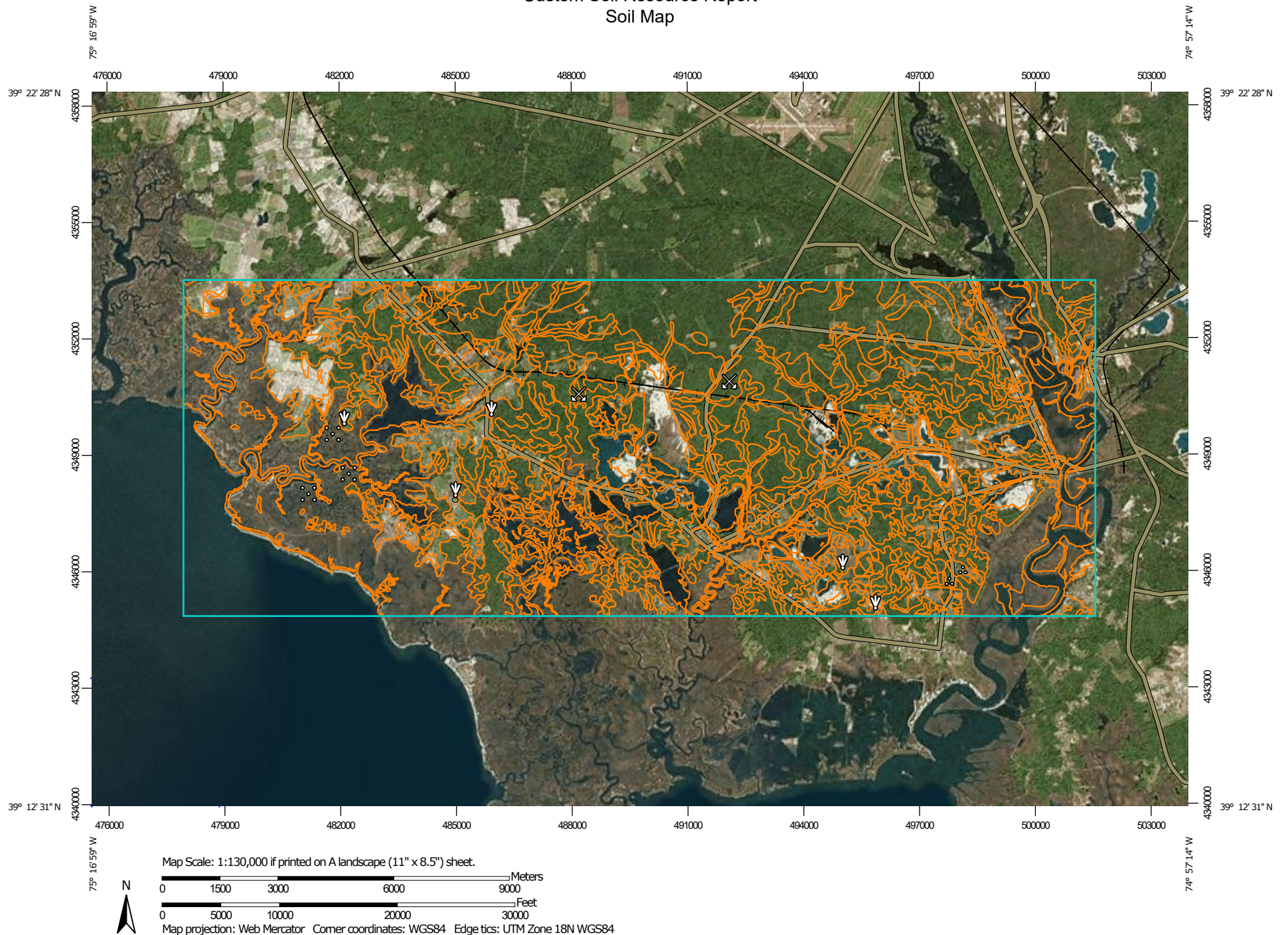
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


# Custom Soil Resource Report Soil Map



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## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit


 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County, New Jersey

Survey Area Data: Version 19, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 24, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AptAv	Appoquinimink-Transquaking-Mispillion complex, 0 to 1 percent slopes, very frequently flooded	931.0	1.8%
AtsAr	Atsion sand, 0 to 2 percent slopes, rarely flooded	720.7	1.4%
AucB	Aura loamy sand, 0 to 5 percent slopes	47.4	0.1%
AugdA	Aura sandy loam, 0 to 2 percent slopes, Northern Coastal Plain	2,986.8	5.9%
AugdB	Aura sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	1,548.3	3.1%
BEAAV	Beaches, 0 to 2 percent slopes, very frequently flooded	53.1	0.1%
BEXAS	Berryland and Mullica soils, 0 to 2 percent slopes, occasionally flooded	6,574.9	13.0%
BrvAv	Broadkill silt loam, 0 to 1 percent slopes, very frequently flooded	1,621.1	3.2%
DocB	Downer loamy sand, 0 to 5 percent slopes, Northern Coastal Plain	1,481.6	2.9%
DocC	Downer loamy sand, 5 to 10 percent slopes, Northern Coastal Plain	73.1	0.1%
DoeA	Downer sandy loam, 0 to 2 percent slopes, Northern Coastal Plain	414.0	0.8%
DoeB	Downer sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	521.0	1.0%
EveB	Evesboro sand, 0 to 5 percent slopes	135.7	0.3%
EveC	Evesboro sand, 5 to 10 percent slopes	23.4	0.0%
FamA	Fallsington sandy loams, 0 to 2 percent slopes, northern coastal plain	2,152.1	4.2%
FodB	Fort Mott loamy sand, 0 to 5 percent slopes	163.5	0.3%
GamB	Galloway loamy sand, 0 to 5 percent slopes	1,963.2	3.9%
HbmB	Hammonton loamy sand, 0 to 5 percent slopes	2,754.8	5.4%



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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HboA	Hammonton sandy loam, 0 to 2 percent slopes	4,542.6	9.0%
HboB	Hammonton sandy loam, 2 to 5 percent slopes	311.4	0.6%
LakB	Lakehurst sand, 0 to 5 percent slopes	138.9	0.3%
LasB	Lakewood sand, 0 to 5 percent slopes	101.1	0.2%
MakAt	Manahawkin muck, 0 to 2 percent slopes, frequently flooded	3,082.2	6.1%
MbuA	Mattapex silt loam, 0 to 2 percent slopes, northern coastal plain	11.6	0.0%
PHG	Pits, sand and gravel	2,094.6	4.1%
PstAt	Psammaquents, sulfidic substratum, 0 to 2 percent slopes, frequently flooded	83.2	0.2%
PsvAr	Psammments, wet substratum, 0 to 3 percent slopes, rarely flooded	12.4	0.0%
SacA	Sassafras sandy loam, 0 to 2 percent slopes, Northern Coastal Plain	69.0	0.1%
SacB	Sassafras sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	51.5	0.1%
SadC	Sassafras gravelly sandy loam, 5 to 10 percent slopes	0.8	0.0%
TrkAv	Transquaking peat, 0 to 1 percent slopes, very frequently flooded, tidal	7,627.0	15.0%
WATER	Water	7,723.0	15.2%
WoeA	Woodstown sandy loam, 0 to 2 percent slopes, Northern Coastal Plain	689.3	1.4%
WoeB	Woodstown sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	23.2	0.0%
<b>Totals for Area of Interest</b>		<b>50,727.5</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named

according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

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An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Cumberland County, New Jersey

### AptAv—Appoquinimink-Transquaking-Mispillion complex, 0 to 1 percent slopes, very frequently flooded

#### Map Unit Setting

*National map unit symbol:* 2xh47

*Elevation:* 0 to 30 feet

*Mean annual precipitation:* 41 to 50 inches

*Mean annual air temperature:* 46 to 58 degrees F

*Frost-free period:* 190 to 260 days

*Farmland classification:* Farmland of unique importance

#### Map Unit Composition

*Appoquinimink, very frequently flooded, and similar soils:* 40 percent

*Transquaking, very frequently flooded, and similar soils:* 30 percent

*Mispillion, very frequently flooded, and similar soils:* 25 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Appoquinimink, Very Frequently Flooded

##### Setting

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Fine-silty marine deposits over herbaceous organic material

##### Typical profile

*Aseg - 0 to 6 inches:* mucky silt loam

*Cseg - 6 to 32 inches:* silt loam

*Oese - 32 to 80 inches:* mucky peat

##### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 2.00 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* Very frequent

*Frequency of ponding:* None

*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

*Available water capacity:* Very high (about 17.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydrologic Soil Group:* B/D

*Hydric soil rating:* Yes

## Description of Transquaking, Very Frequently Flooded

### Setting

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Herbaceous organic material over loamy fluviomarine deposits

### Typical profile

*Oise - 0 to 9 inches:* peat

*Oese - 9 to 46 inches:* mucky peat

*Oase - 46 to 65 inches:* muck

*Cseg - 65 to 80 inches:* silty clay

### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* Very frequent

*Frequency of ponding:* None

*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

*Available water capacity:* Very high (about 22.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydrologic Soil Group:* A/D

*Hydric soil rating:* Yes

## Description of Mispillion, Very Frequently Flooded

### Setting

*Landform:* Tidal marshes, salt marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Herbaceous organic material over loamy marine deposits and/or loamy fluviomarine deposits

### Typical profile

*Oese - 0 to 24 inches:* mucky peat

*Oase - 24 to 39 inches:* muck

*Cseg - 39 to 80 inches:* silt loam

### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* About 0 inches

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*Frequency of flooding:* Very frequent

*Frequency of ponding:* None

*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

*Available water capacity:* Moderate (about 8.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydrologic Soil Group:* C/D

*Hydric soil rating:* Yes

### Minor Components

#### Beaches, very frequently flooded

*Percent of map unit:* 5 percent

*Landform:* Beaches

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

## AtsAr—Atsion sand, 0 to 2 percent slopes, rarely flooded

### Map Unit Setting

*National map unit symbol:* 4kb8

*Elevation:* 0 to 140 feet

*Mean annual precipitation:* 28 to 59 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 161 to 231 days

*Farmland classification:* Farmland of unique importance

### Map Unit Composition

*Atsion, rarely flooded, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Atsion, Rarely Flooded

#### Setting

*Landform:* Flats

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Dip, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy fluviomarine deposits

#### Typical profile

*Oi - 0 to 2 inches:* peat

*A - 2 to 4 inches:* sand

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*E - 4 to 26 inches:* sand  
*Bh - 26 to 34 inches:* sand  
*Cg1 - 34 to 46 inches:* sand  
*Cg2 - 46 to 51 inches:* sand  
*Cg3 - 51 to 80 inches:* sand

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* About 0 to 12 inches  
*Frequency of flooding:* RareNone  
*Frequency of ponding:* Rare  
*Available water capacity:* Low (about 3.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* A/D  
*Hydric soil rating:* Yes

### Minor Components

#### Lakehurst

*Percent of map unit:* 5 percent  
*Landform:* Flats  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Berryland, occasionally flooded

*Percent of map unit:* 5 percent  
*Landform:* Depressions, flats, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* Yes

#### Manahawkin, frequently flooded

*Percent of map unit:* 5 percent  
*Landform:* Flood plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

## **AucB—Aura loamy sand, 0 to 5 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 4kf8  
*Elevation:* 60 to 150 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Aura and similar soils:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Aura**

#### **Setting**

*Landform:* Low hills  
*Landform position (three-dimensional):* Crest  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Old loamy alluvium and/or old gravelly alluvium

#### **Typical profile**

*Ap - 0 to 7 inches:* loamy sand  
*Bt - 7 to 22 inches:* coarse sandy loam  
*2Btx1 - 22 to 28 inches:* gravelly coarse sandy loam  
*2Btx2 - 28 to 59 inches:* gravelly sandy clay loam  
*2C - 59 to 80 inches:* gravelly loamy coarse sand

#### **Properties and qualities**

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* 15 to 40 inches to fragipan  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Very low (about 2.1 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* B  
*Hydric soil rating:* No



## Minor Components

### Woodstown

*Percent of map unit:* 5 percent  
*Landform:* Drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* No

### Sassafras

*Percent of map unit:* 5 percent  
*Landform:* Knolls  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

## AugdA—Aura sandy loam, 0 to 2 percent slopes, Northern Coastal Plain

### Map Unit Setting

*National map unit symbol:* 2thxx  
*Elevation:* 40 to 190 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 46 to 64 degrees F  
*Frost-free period:* 190 to 250 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Aura and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Aura

#### Setting

*Landform:* Fluvio-marine terraces, flats  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Tread, tal  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Coarse-loamy eolian deposits over loamy gravelly fluvio-marine deposits

#### Typical profile

*Ap - 0 to 8 inches:* sandy loam  
*Bt1 - 8 to 13 inches:* coarse sandy loam  
*Bt2 - 13 to 22 inches:* coarse sandy loam

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*2Btx1 - 22 to 28 inches:* gravelly coarse sandy loam

*2Btx2 - 28 to 59 inches:* gravelly sandy clay loam

*2C - 59 to 80 inches:* gravelly loamy coarse sand

### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 20 to 32 inches to fragipan

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Very low (about 2.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 1

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

### Minor Components

#### Sassafras

*Percent of map unit:* 10 percent

*Landform:* Flats, fluviomarine terraces

*Landform position (three-dimensional):* Tread, talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

#### Woodstown

*Percent of map unit:* 5 percent

*Landform:* Fluviomarine terraces, broad interstream divides, depressions, flats

*Landform position (two-dimensional):* Summit, footslope

*Landform position (three-dimensional):* Tread, talf, dip

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Hydric soil rating:* No

#### Downer

*Percent of map unit:* 5 percent

*Landform:* Knolls, low hills, terraces

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve, tread

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear, convex

*Hydric soil rating:* No

## **AugdB—Aura sandy loam, 2 to 5 percent slopes, Northern Coastal Plain**

### **Map Unit Setting**

*National map unit symbol:* 2x8s8

*Elevation:* 20 to 190 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 46 to 64 degrees F

*Frost-free period:* 190 to 250 days

*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Aura and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Aura**

#### **Setting**

*Landform:* Fluvio marine terraces, flats

*Landform position (two-dimensional):* Shoulder, backslope

*Landform position (three-dimensional):* Riser, rise

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Coarse-loamy eolian deposits over loamy gravelly fluvio marine deposits

#### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam

*Bt1 - 8 to 13 inches:* coarse sandy loam

*Bt2 - 13 to 22 inches:* coarse sandy loam

*2Btx1 - 22 to 28 inches:* gravelly coarse sandy loam

*2Btx2 - 28 to 59 inches:* gravelly sandy clay loam

*2C - 59 to 80 inches:* gravelly loamy coarse sand

#### **Properties and qualities**

*Slope:* 2 to 5 percent

*Depth to restrictive feature:* 20 to 32 inches to fragipan

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Very low (about 2.4 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* B

## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### Downer

*Percent of map unit:* 5 percent

*Landform:* Fluvio-marine terraces, low hills, knolls

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Nose slope, riser

*Down-slope shape:* Linear, convex

*Across-slope shape:* Convex, linear

*Hydric soil rating:* No

#### Sassafras

*Percent of map unit:* 5 percent

*Landform:* Flats, fluvio-marine terraces

*Landform position (three-dimensional):* Riser, rise

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

#### Woodstown

*Percent of map unit:* 5 percent

*Landform:* Broad interstream divides, depressions, flats, fluvio-marine terraces

*Landform position (two-dimensional):* Shoulder, footslope

*Landform position (three-dimensional):* Riser, dip

*Down-slope shape:* Convex, concave

*Across-slope shape:* Linear, concave

*Hydric soil rating:* No

## BEAAV—Beaches, 0 to 2 percent slopes, very frequently flooded

### Map Unit Setting

*National map unit symbol:* 2xh46

*Elevation:* 0 to 20 feet

*Mean annual precipitation:* 41 to 50 inches

*Mean annual air temperature:* 46 to 58 degrees F

*Frost-free period:* 180 to 260 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Beaches, very frequently flooded:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Beaches, Very Frequently Flooded

#### Setting

*Landform:* Beaches

*Down-slope shape:* Convex

*Across-slope shape:* Linear

## Custom Soil Resource Report

*Parent material:* Beach sand

### Typical profile

*A - 0 to 6 inches:* sand

*C - 6 to 80 inches:* coarse sand

### Properties and qualities

*Slope:* 0 to 2 percent

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (6.00 to 20.00 in/hr)

*Depth to water table:* About 0 to 7 inches

*Frequency of flooding:* Frequent

*Maximum salinity:* Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)

*Available water capacity:* Very low (about 2.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydric soil rating:* Yes

### Minor Components

#### Transquaking, very frequently flooded

*Percent of map unit:* 5 percent

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

#### Fox hill

*Percent of map unit:* 5 percent

*Landform:* Dunes, interdunes, washover fans

*Landform position (two-dimensional):* Shoulder, toeslope, backslope, footslope

*Landform position (three-dimensional):* Rise, dip, talf

*Microfeatures of landform position:* Swales

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Hydric soil rating:* Yes

#### Mispyllion, very frequently flooded

*Percent of map unit:* 3 percent

*Landform:* Tidal marshes, salt marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

#### Appoquinimink, very frequently flooded

*Percent of map unit:* 2 percent

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

**BEXAS—Berryland and Mullica soils, 0 to 2 percent slopes,  
occasionally flooded**

**Map Unit Setting**

*National map unit symbol:* 1j5zf

*Elevation:* 0 to 140 feet

*Mean annual precipitation:* 28 to 59 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 161 to 231 days

*Farmland classification:* Farmland of unique importance

**Map Unit Composition**

*Berryland, occasionally flooded, and similar soils:* 50 percent

*Mullica, occasionally flooded, and similar soils:* 40 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Berryland, Occasionally Flooded**

**Setting**

*Landform:* Depressions, flats, drainageways

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave

*Parent material:* Sandy fluviomarine deposits

**Typical profile**

*Ag - 0 to 11 inches:* sand

*Bh - 11 to 19 inches:* sand

*Bg - 19 to 32 inches:* sand

*B'h - 32 to 40 inches:* sand

*Cg1 - 40 to 44 inches:* sand

*Cg2 - 44 to 80 inches:* stratified sand to sandy loam

**Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Runoff class:* Negligible

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (2.00 to 20.00 in/hr)

*Depth to water table:* About 0 to 6 inches

*Frequency of flooding:* OccasionalNone

*Frequency of ponding:* Occasional

*Available water capacity:* Low (about 3.7 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

## Custom Soil Resource Report

*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* A/D  
*Hydric soil rating:* Yes

### Description of Mullica, Occasionally Flooded

#### Setting

*Landform:* Flood plains, depressions, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Parent material:* Sandy fluviomarine deposits and/or loamy fluviomarine deposits

#### Typical profile

*Oe - 0 to 2 inches:* mucky peat  
*Ag - 2 to 9 inches:* sandy loam  
*Bg1 - 9 to 14 inches:* sandy loam  
*Bg2 - 14 to 28 inches:* sandy loam  
*Cg1 - 28 to 31 inches:* loamy sand  
*Cg2 - 31 to 40 inches:* sand  
*Cg3 - 40 to 80 inches:* gravelly loamy sand

#### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 5.95 in/hr)  
*Depth to water table:* About 0 to 6 inches  
*Frequency of flooding:* Occasional  
*Frequency of ponding:* Occasional  
*Available water capacity:* Moderate (about 6.0 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* A/D  
*Hydric soil rating:* Yes

### Minor Components

#### Atsion

*Percent of map unit:* 5 percent  
*Landform:* Flats  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Dip, tal  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

#### Manahawkin, frequently flooded

*Percent of map unit:* 5 percent  
*Landform:* Flood plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

*Hydric soil rating:* Yes

**BrvAv—Broadkill silt loam, 0 to 1 percent slopes, very frequently flooded**

**Map Unit Setting**

*National map unit symbol:* 2xh48

*Elevation:* 0 to 30 feet

*Mean annual precipitation:* 41 to 50 inches

*Mean annual air temperature:* 46 to 58 degrees F

*Frost-free period:* 190 to 260 days

*Farmland classification:* Farmland of unique importance

**Map Unit Composition**

*Broadkill, very frequently flooded, and similar soils:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Broadkill, Very Frequently Flooded**

**Setting**

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Fine-silty marine deposits

**Typical profile**

*Oese - 0 to 6 inches:* mucky peat

*Aseg - 6 to 13 inches:* silt loam

*Cseg1 - 13 to 32 inches:* silty clay loam

*Cseg2 - 32 to 38 inches:* silt loam

*Cseg3 - 38 to 80 inches:* silt loam

**Properties and qualities**

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 2.00 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* Very frequent

*Frequency of ponding:* None

*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

*Available water capacity:* High (about 11.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w



## Custom Soil Resource Report

*Hydrologic Soil Group:* B/D

*Hydric soil rating:* Yes

### **DocB—Downer loamy sand, 0 to 5 percent slopes, Northern Coastal Plain**

#### **Map Unit Setting**

*National map unit symbol:* 2thw0

*Elevation:* 80 to 100 feet

*Mean annual precipitation:* 41 to 50 inches

*Mean annual air temperature:* 46 to 64 degrees F

*Frost-free period:* 190 to 250 days

*Farmland classification:* Farmland of statewide importance

#### **Map Unit Composition**

*Downer and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Downer**

##### **Setting**

*Landform:* Knolls, low hills

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve, rise

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear

*Parent material:* Loamy fluviomarine deposits

##### **Typical profile**

*Ap - 0 to 10 inches:* loamy sand

*BE - 10 to 16 inches:* loamy sand

*Bt - 16 to 28 inches:* sandy loam

*C1 - 28 to 48 inches:* loamy sand

*C2 - 48 to 80 inches:* sand

##### **Properties and qualities**

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline (0.0 to 0.2 mmhos/cm)

*Available water capacity:* Moderate (about 6.4 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* A

## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### Hammonton

*Percent of map unit:* 10 percent  
*Landform:* Broad interstream divides, flats  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Evesboro

*Percent of map unit:* 5 percent  
*Landform:* Dunes, knolls, flats, fluviomarine terraces  
*Landform position (three-dimensional):* Riser, rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear, convex  
*Hydric soil rating:* No

#### Atsion

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions, drainageways, deflation flats  
*Landform position (two-dimensional):* Toeslope, footslope  
*Landform position (three-dimensional):* Talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

## DocC—Downer loamy sand, 5 to 10 percent slopes, Northern Coastal Plain

### Map Unit Setting

*National map unit symbol:* 2thw7  
*Elevation:* 70 to 100 feet  
*Mean annual precipitation:* 42 to 49 inches  
*Mean annual air temperature:* 52 to 59 degrees F  
*Frost-free period:* 190 to 250 days  
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Downer and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Knolls, fluviomarine terraces, low hills  
*Landform position (two-dimensional):* Shoulder, backslope

## Custom Soil Resource Report

*Landform position (three-dimensional):* Side slope, riser

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear

*Parent material:* Loamy fluviomarine deposits

### Typical profile

*Ap - 0 to 9 inches:* loamy sand

*BE - 9 to 16 inches:* loamy sand

*Bt - 16 to 28 inches:* sandy loam

*C1 - 28 to 48 inches:* loamy sand

*C2 - 48 to 80 inches:* sand

### Properties and qualities

*Slope:* 5 to 10 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Moderate (about 6.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* 3e

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

## Minor Components

### Hammonton

*Percent of map unit:* 5 percent

*Landform:* Broad interstream divides, flats

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Hydric soil rating:* No

### Sassafras

*Percent of map unit:* 5 percent

*Landform:* Low hills, knolls

*Landform position (two-dimensional):* Backslope, shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Hydric soil rating:* No

### Evesboro

*Percent of map unit:* 5 percent

*Landform:* Dunes, low hills

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex, linear

*Across-slope shape:* Convex, linear

*Hydric soil rating:* No

## **DoeA—Downer sandy loam, 0 to 2 percent slopes, Northern Coastal Plain**

### **Map Unit Setting**

*National map unit symbol:* 2thwb

*Elevation:* 0 to 180 feet

*Mean annual precipitation:* 41 to 50 inches

*Mean annual air temperature:* 46 to 64 degrees F

*Frost-free period:* 180 to 250 days

*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Downer and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Downer**

#### **Setting**

*Landform:* Knolls, terraces, low hills

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve, riser, rise

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear, convex

*Parent material:* Loamy fluviomarine deposits

#### **Typical profile**

*Ap - 0 to 10 inches:* sandy loam

*BE - 10 to 16 inches:* loamy sand

*Bt - 16 to 28 inches:* sandy loam

*C1 - 28 to 48 inches:* loamy sand

*C2 - 48 to 80 inches:* sand

#### **Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Moderate (about 6.4 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 1

*Hydrologic Soil Group:* A

## Custom Soil Resource Report

*Hydric soil rating:* No

### Minor Components

#### Phalanx

*Percent of map unit:* 10 percent  
*Landform:* Terraces, hills  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Riser, rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Hammonton

*Percent of map unit:* 5 percent  
*Landform:* Flats, broad interstream divides  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Russett

*Percent of map unit:* 5 percent  
*Landform:* Flats, broad interstream divides, swales  
*Landform position (two-dimensional):* Footslope, shoulder, backslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

## DoeB—Downer sandy loam, 2 to 5 percent slopes, Northern Coastal Plain

### Map Unit Setting

*National map unit symbol:* 2thwf  
*Elevation:* 0 to 300 feet  
*Mean annual precipitation:* 42 to 49 inches  
*Mean annual air temperature:* 52 to 59 degrees F  
*Frost-free period:* 190 to 250 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Downer and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Downer

#### Setting

*Landform:* Fluvio-marine terraces, knolls, low hills

## Custom Soil Resource Report

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Nose slope, riser

*Down-slope shape:* Linear, convex

*Across-slope shape:* Convex, linear

*Parent material:* Loamy fluviomarine deposits

### Typical profile

*Ap - 0 to 10 inches:* sandy loam

*BE - 10 to 16 inches:* loamy sand

*Bt - 16 to 28 inches:* sandy loam

*C1 - 28 to 48 inches:* loamy sand

*C2 - 48 to 80 inches:* sand

### Properties and qualities

*Slope:* 2 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water capacity:* Moderate (about 6.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

### Minor Components

#### Phalanx

*Percent of map unit:* 10 percent

*Landform:* Hills, terraces

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Riser, rise

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Hydric soil rating:* No

#### Hammonton

*Percent of map unit:* 5 percent

*Landform:* Low hills, fluviomarine terraces

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Riser, dip

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Hydric soil rating:* No

#### Russett

*Percent of map unit:* 5 percent

*Landform:* Swales, broad interstream divides, flats

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear, concave

## Custom Soil Resource Report

*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

### **EveB—Evesboro sand, 0 to 5 percent slopes**

#### **Map Unit Setting**

*National map unit symbol:* 4kbl  
*Elevation:* 0 to 150 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Not prime farmland

#### **Map Unit Composition**

*Evesboro and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### **Description of Evesboro**

##### **Setting**

*Landform:* Low hills  
*Landform position (three-dimensional):* Interfluve, side slope  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy eolian deposits and/or sandy fluviomarine deposits

##### **Typical profile**

*A - 0 to 4 inches:* sand  
*AB - 4 to 17 inches:* sand  
*Bw - 17 to 31 inches:* sand  
*C - 31 to 80 inches:* stratified loamy sand to sand

##### **Properties and qualities**

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Excessively drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (2.00 to 20.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Low (about 4.2 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Hydric soil rating:* No

## Minor Components

### Lakehurst

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

### Atsion

*Percent of map unit:* 5 percent  
*Landform:* Flats  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Dip, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

### Downer

*Percent of map unit:* 5 percent  
*Landform:* Knolls, low hills  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

### Mullica, rarely flooded

*Percent of map unit:* 5 percent  
*Landform:* Flood plains, depressions, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

## EveC—Evesboro sand, 5 to 10 percent slopes

### Map Unit Setting

*National map unit symbol:* 4kbm  
*Elevation:* 10 to 130 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Evesboro and similar soils:* 95 percent  
*Minor components:* 5 percent



## Custom Soil Resource Report

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Evesboro

#### Setting

*Landform:* Low hills

*Landform position (three-dimensional):* Interfluve, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Sandy eolian deposits and/or sandy fluviomarine deposits

#### Typical profile

*A - 0 to 4 inches:* sand

*AB - 4 to 17 inches:* sand

*Bw - 17 to 31 inches:* sand

*C - 31 to 80 inches:* stratified loamy sand to sand

#### Properties and qualities

*Slope:* 5 to 10 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Excessively drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (2.00 to 20.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Low (about 4.2 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7s

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

### Minor Components

#### Downer

*Percent of map unit:* 5 percent

*Landform:* Knolls, low hills

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear, convex

*Hydric soil rating:* No

## FamA—Fallsington sandy loams, 0 to 2 percent slopes, northern coastal plain

#### Map Unit Setting

*National map unit symbol:* 2s96w

*Elevation:* 0 to 100 feet

## Custom Soil Resource Report

*Mean annual precipitation:* 42 to 48 inches

*Mean annual air temperature:* 52 to 58 degrees F

*Frost-free period:* 180 to 220 days

*Farmland classification:* Farmland of statewide importance, if drained

### Map Unit Composition

*Fallsington, undrained, and similar soils:* 48 percent

*Fallsington, drained, and similar soils:* 27 percent

*Minor components:* 25 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Fallsington, Undrained

#### Setting

*Landform:* Swales, flats, drainageways, depressions

*Landform position (three-dimensional):* Dip, talf

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear, concave

*Parent material:* Loamy fluviomarine deposits

#### Typical profile

*Oe - 0 to 2 inches:* mucky peat

*A - 2 to 10 inches:* sandy loam

*Btg - 10 to 32 inches:* sandy clay loam

*BCg - 32 to 39 inches:* loamy sand

*Cg1 - 39 to 46 inches:* sandy clay loam

*Cg2 - 46 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to high  
(0.01 to 1.98 in/hr)

*Depth to water table:* About 0 to 10 inches

*Frequency of flooding:* None

*Frequency of ponding:* Occasional

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.3 mmhos/cm)

*Available water capacity:* Moderate (about 8.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 5w

*Hydrologic Soil Group:* C/D

*Hydric soil rating:* Yes

### Description of Fallsington, Drained

#### Setting

*Landform:* Swales, depressions, flats

*Landform position (three-dimensional):* Dip, talf

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear, concave

*Parent material:* Loamy fluviomarine deposits

#### Typical profile

*Ap - 0 to 10 inches:* sandy loam

## Custom Soil Resource Report

*Btg* - 10 to 32 inches: sandy clay loam  
*BCg* - 32 to 39 inches: loamy sand  
*Cg1* - 39 to 46 inches: sandy clay loam  
*Cg2* - 46 to 80 inches: sand

### Properties and qualities

*Slope*: 0 to 2 percent  
*Depth to restrictive feature*: More than 80 inches  
*Drainage class*: Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat)*: Moderately low to high  
(0.01 to 1.98 in/hr)  
*Depth to water table*: About 10 to 20 inches  
*Frequency of flooding*: None  
*Frequency of ponding*: Rare  
*Maximum salinity*: Nonsaline to very slightly saline (0.0 to 2.3 mmhos/cm)  
*Available water capacity*: Moderate (about 8.2 inches)

### Interpretive groups

*Land capability classification (irrigated)*: None specified  
*Land capability classification (nonirrigated)*: 3w  
*Hydrologic Soil Group*: C/D  
*Hydric soil rating*: Yes

### Minor Components

#### Woodstown

*Percent of map unit*: 9 percent  
*Landform*: Fluvio-marine terraces, depressions, broad interstream divides, flats  
*Landform position (two-dimensional)*: Summit, footslope  
*Landform position (three-dimensional)*: Tread, dip, talf  
*Down-slope shape*: Linear, concave  
*Across-slope shape*: Linear, concave  
*Hydric soil rating*: No

#### Hambrook

*Percent of map unit*: 8 percent  
*Landform*: Fluvio-marine terraces, flats, depressions  
*Landform position (two-dimensional)*: Summit, footslope  
*Landform position (three-dimensional)*: Tread, talf, dip  
*Down-slope shape*: Linear, concave  
*Across-slope shape*: Linear, concave  
*Hydric soil rating*: No

#### Hammonton

*Percent of map unit*: 8 percent  
*Landform*: Drainageways, flats  
*Landform position (three-dimensional)*: Dip, talf  
*Down-slope shape*: Concave, linear  
*Across-slope shape*: Linear  
*Hydric soil rating*: No

## **FodB—Fort Mott loamy sand, 0 to 5 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 4kbr

*Elevation:* 10 to 130 feet

*Mean annual precipitation:* 28 to 59 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 161 to 231 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Fort mott and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Fort Mott**

#### **Setting**

*Landform:* Terraces, ridges

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Linear, convex

*Across-slope shape:* Linear

*Parent material:* Sandy eolian deposits and/or fluviomarine deposits

#### **Typical profile**

*Ap - 0 to 8 inches:* loamy sand

*E - 8 to 30 inches:* loamy sand

*BE - 30 to 33 inches:* sandy loam

*Bt - 33 to 49 inches:* sandy loam

*C - 49 to 72 inches:* loamy sand

#### **Properties and qualities**

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Low (about 5.9 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

## Minor Components

### Galestown

*Percent of map unit:* 10 percent  
*Landform:* Ridges, terraces  
*Landform position (three-dimensional):* Interfluve, riser  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Downer

*Percent of map unit:* 5 percent  
*Landform:* Knolls, low hills  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Hydric soil rating:* No

## GamB—Galloway loamy sand, 0 to 5 percent slopes

### Map Unit Setting

*National map unit symbol:* 4kbs  
*Elevation:* 0 to 180 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Galloway and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Galloway

#### Setting

*Landform:* Dunes, flats  
*Landform position (three-dimensional):* Riser, dip  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Parent material:* Unconsolidated sandy marine deposits

#### Typical profile

*A - 0 to 2 inches:* loamy sand  
*E - 2 to 10 inches:* loamy sand  
*Bw1 - 10 to 24 inches:* loamy sand  
*Bw2 - 24 to 36 inches:* loamy sand  
*Cg1 - 36 to 52 inches:* sand  
*Cg2 - 52 to 60 inches:* sand

**Properties and qualities**

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (6.00 to 20.00 in/hr)

*Depth to water table:* About 12 to 18 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Low (about 4.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3w

*Hydrologic Soil Group:* A/D

*Hydric soil rating:* No

**Minor Components**

**Downer**

*Percent of map unit:* 5 percent

*Landform:* Knolls, low hills

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

**Mullica, rarely flooded**

*Percent of map unit:* 5 percent

*Landform:* Flood plains, depressions, drainageways

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Hydric soil rating:* Yes

**Atsion**

*Percent of map unit:* 5 percent

*Landform:* Flats, drainageways

*Landform position (two-dimensional):* Toeslope, footslope

*Landform position (three-dimensional):* Base slope, dip, tal

*Down-slope shape:* Linear

*Across-slope shape:* Linear, concave

*Hydric soil rating:* Yes

**HbmB—Hammonton loamy sand, 0 to 5 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 4kbt

## Custom Soil Resource Report

*Elevation:* 0 to 120 feet

*Mean annual precipitation:* 28 to 59 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 161 to 231 days

*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Hammonton and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Hammonton

#### Setting

*Landform:* Depressions, flats

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Concave, linear

*Parent material:* Coarse-loamy fluviomarine deposits

#### Typical profile

*Ap - 0 to 8 inches:* loamy sand

*E - 8 to 18 inches:* loamy sand

*Bt - 18 to 36 inches:* sandy loam

*C - 36 to 80 inches:* sand

#### Properties and qualities

*Slope:* 0 to 5 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Runoff class:* Very high

*Capacity of the most limiting layer to transmit water (Ksat):* High (2.00 to 6.00 in/hr)

*Depth to water table:* About 18 to 42 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Moderate (about 6.9 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2w

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

### Minor Components

#### Atsion

*Percent of map unit:* 5 percent

*Landform:* Depressions

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Base slope

*Down-slope shape:* Concave

*Across-slope shape:* Concave

*Hydric soil rating:* Yes

**Glassboro**

*Percent of map unit:* 5 percent  
*Landform:* Flats, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

**Fallsington**

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

**Mullica, rarely flooded**

*Percent of map unit:* 5 percent  
*Landform:* Flood plains, depressions, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

**HboA—Hammonton sandy loam, 0 to 2 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 4kbv  
*Elevation:* 0 to 120 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* All areas are prime farmland

**Map Unit Composition**

*Hammonton and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Hammonton**

**Setting**

*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave



## Custom Soil Resource Report

*Parent material:* Coarse-loamy fluviomarine deposits

### Typical profile

*Ap - 0 to 8 inches:* sandy loam  
*E - 8 to 18 inches:* sandy loam  
*Bt - 18 to 36 inches:* sandy loam  
*C - 36 to 60 inches:* sand

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)  
*Depth to water table:* About 18 to 42 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Moderate (about 6.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* B  
*Hydric soil rating:* No

### Minor Components

#### Mullica, rarely flooded

*Percent of map unit:* 5 percent  
*Landform:* Flood plains, depressions, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

#### Fallsington

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

#### Atsion, rarely flooded

*Percent of map unit:* 5 percent  
*Landform:* Flats, drainageways  
*Landform position (two-dimensional):* Toeslope, footslope  
*Landform position (three-dimensional):* Base slope, dip, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

## **HboB—Hammonton sandy loam, 2 to 5 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 4kbw  
*Elevation:* 0 to 130 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Hammonton and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Hammonton**

#### **Setting**

*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Parent material:* Coarse-loamy fluviomarine deposits

#### **Typical profile**

*A - 0 to 10 inches:* sandy loam  
*Bt - 10 to 48 inches:* sandy loam  
*C - 48 to 72 inches:* sand

#### **Properties and qualities**

*Slope:* 2 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)  
*Depth to water table:* About 18 to 42 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Moderate (about 6.4 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* B  
*Hydric soil rating:* No

**Minor Components**

**Glassboro**

*Percent of map unit:* 5 percent  
*Landform:* Flats, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

**Fallsington**

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

**Downer**

*Percent of map unit:* 5 percent  
*Landform:* Knolls, low hills  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Convex, linear  
*Hydric soil rating:* No

**LakB—Lakehurst sand, 0 to 5 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 4kby  
*Elevation:* 20 to 150 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Lakehurst and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Lakehurst**

**Setting**

*Landform:* Flats, dunes  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear, convex  
*Parent material:* Sandy fluviomarine deposits

**Typical profile**

*Oi* - 0 to 2 inches: slightly decomposed plant material  
*A* - 2 to 4 inches: sand  
*E* - 4 to 18 inches: sand  
*Bh* - 18 to 32 inches: sand  
*BC* - 32 to 45 inches: sand  
*C* - 45 to 54 inches: sand  
*Cg* - 54 to 80 inches: sand

**Properties and qualities**

*Slope*: 0 to 5 percent  
*Depth to restrictive feature*: More than 80 inches  
*Drainage class*: Moderately well drained  
*Runoff class*: Very high  
*Capacity of the most limiting layer to transmit water (Ksat)*: High to very high (2.00 to 19.98 in/hr)  
*Depth to water table*: About 18 to 42 inches  
*Frequency of flooding*: None  
*Frequency of ponding*: None  
*Available water capacity*: Low (about 4.7 inches)

**Interpretive groups**

*Land capability classification (irrigated)*: None specified  
*Land capability classification (nonirrigated)*: 4w  
*Hydrologic Soil Group*: A  
*Hydric soil rating*: No

**Minor Components**

**Quakerbridge**

*Percent of map unit*: 5 percent  
*Landform*: Knolls, flats  
*Landform position (three-dimensional)*: Interfluve  
*Down-slope shape*: Convex, linear  
*Across-slope shape*: Linear  
*Hydric soil rating*: No

**Atsion, rarely flooded**

*Percent of map unit*: 5 percent  
*Landform*: Flats, depressions  
*Landform position (two-dimensional)*: Toeslope, footslope  
*Landform position (three-dimensional)*: Base slope, dip, talus  
*Down-slope shape*: Linear, concave  
*Across-slope shape*: Linear, concave  
*Hydric soil rating*: Yes

**Berryland, rarely flooded**

*Percent of map unit*: 5 percent  
*Landform*: Drainageways, flats, depressions  
*Landform position (two-dimensional)*: Toeslope  
*Landform position (three-dimensional)*: Base slope  
*Down-slope shape*: Linear, concave  
*Across-slope shape*: Concave, linear  
*Hydric soil rating*: Yes

## **LasB—Lakewood sand, 0 to 5 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 4kbz  
*Elevation:* 20 to 150 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Lakewood and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Lakewood**

#### **Setting**

*Landform:* Flats, knolls  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear  
*Parent material:* Sandy fluviomarine deposits

#### **Typical profile**

*A - 0 to 3 inches:* sand  
*E - 3 to 11 inches:* sand  
*Bh - 11 to 13 inches:* loamy sand  
*BC - 13 to 30 inches:* sand  
*C1 - 30 to 46 inches:* sand  
*C2 - 46 to 80 inches:* sand

#### **Properties and qualities**

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Excessively drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (6.00 to 20.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Very low (about 1.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Hydric soil rating:* No

**Minor Components**

**Quakerbridge**

*Percent of map unit:* 5 percent  
*Landform:* Flats, knolls  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

**Lakehurst**

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

**Atsion, rarely flooded**

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions  
*Landform position (two-dimensional):* Toeslope, footslope  
*Landform position (three-dimensional):* Base slope, dip, talf  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

**MakAt—Manahawkin muck, 0 to 2 percent slopes, frequently flooded**

**Map Unit Setting**

*National map unit symbol:* 1j5zk  
*Elevation:* 0 to 140 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Farmland of unique importance

**Map Unit Composition**

*Manahawkin, frequently flooded, and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Manahawkin, Frequently Flooded**

**Setting**

*Landform:* Swamps, flood plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Organic, woody material over sandy alluvium

## Custom Soil Resource Report

### Typical profile

*Oa1 - 0 to 13 inches:* muck  
*Oa2 - 13 to 26 inches:* muck  
*Oa3 - 26 to 47 inches:* muck  
*Cg - 47 to 80 inches:* sand

### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (2.00 to 20.00 in/hr)  
*Depth to water table:* About 0 to 6 inches  
*Frequency of flooding:* FrequentNone  
*Frequency of ponding:* Frequent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water capacity:* Very high (about 17.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7w  
*Hydrologic Soil Group:* A/D  
*Hydric soil rating:* Yes

### Minor Components

#### Atsion

*Percent of map unit:* 5 percent  
*Landform:* Flats  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Dip, tal  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

#### Berryland, occasionally flooded

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

#### Mullica, rarely flooded

*Percent of map unit:* 5 percent  
*Landform:* Depressions, drainageways, flood plains  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

## **MbuA—Mattapex silt loam, 0 to 2 percent slopes, northern coastal plain**

### **Map Unit Setting**

*National map unit symbol:* 2thws  
*Elevation:* 0 to 460 feet  
*Mean annual precipitation:* 42 to 49 inches  
*Mean annual air temperature:* 52 to 59 degrees F  
*Frost-free period:* 190 to 250 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Mattapex and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Mattapex**

#### **Setting**

*Landform:* Flats, swales, depressions  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Parent material:* Silty eolian deposits over fluviomarine sediments

#### **Typical profile**

*Ap - 0 to 11 inches:* silt loam  
*BE - 11 to 15 inches:* silt loam  
*Bt - 15 to 36 inches:* silt loam  
*2C1 - 36 to 60 inches:* fine sandy loam  
*2C2 - 60 to 80 inches:* loamy sand

#### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.57 in/hr)  
*Depth to water table:* About 20 to 40 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water capacity:* High (about 9.6 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 2w  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No



## Minor Components

### Woodstown

*Percent of map unit:* 10 percent

*Landform:* Flats, depressions, broad interstream divides, fluviomarine terraces

*Landform position (two-dimensional):* Summit, footslope

*Landform position (three-dimensional):* Tread, talf, dip

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear, concave

*Hydric soil rating:* No

### Dodon

*Percent of map unit:* 5 percent

*Landform:* Fluviomarine terraces, stream terraces

*Landform position (two-dimensional):* Summit

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* No

### Othello, drained

*Percent of map unit:* 5 percent

*Landform:* Swales, flats, depressions

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear, concave

*Hydric soil rating:* Yes

## PHG—Pits, sand and gravel

### Map Unit Setting

*National map unit symbol:* 4kcb

*Mean annual precipitation:* 30 to 64 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 131 to 178 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Pits, sand and gravel:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Pits, Sand And Gravel

#### Setting

*Parent material:* Sandy material disturbed by human activity

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8s

*Hydric soil rating:* No

**PstAt—Psammaquents, sulfidic substratum, 0 to 2 percent slopes, frequently flooded**

**Map Unit Setting**

*National map unit symbol:* 2xh4c

*Elevation:* 0 to 30 feet

*Mean annual precipitation:* 41 to 50 inches

*Mean annual air temperature:* 46 to 58 degrees F

*Frost-free period:* 190 to 260 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Psammaquents, sulfidic substratum, frequently flooded, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Psammaquents, Sulfidic Substratum, Frequently Flooded**

**Setting**

*Landform:* Flats

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy lateral spread deposits over organic material

**Typical profile**

*^A - 0 to 12 inches:* sand

*^C - 12 to 36 inches:* gravelly sand

*2Oese1 - 36 to 43 inches:* mucky peat

*2Oese2 - 43 to 80 inches:* mucky peat

**Properties and qualities**

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to very high (0.60 to 20.00 in/hr)

*Depth to water table:* About 0 inches

*Frequency of flooding:* Frequent

*Frequency of ponding:* None

*Maximum salinity:* Very slightly saline to strongly saline (2.0 to 16.0 mmhos/cm)

*Available water capacity:* Very low (about 2.5 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydrologic Soil Group:* A/D

*Hydric soil rating:* Yes

**Minor Components**

**Transquaking, very frequently flooded**

*Percent of map unit:* 5 percent  
*Landform:* Tidal marshes  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**Beaches, frequently flooded**

*Percent of map unit:* 5 percent  
*Landform:* Beaches  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**Mispyllion, very frequently flooded**

*Percent of map unit:* 3 percent  
*Landform:* Tidal marshes, salt marshes  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**Appoquinimink, very frequently flooded**

*Percent of map unit:* 2 percent  
*Landform:* Tidal marshes  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

**PsvAr—Psamments, wet substratum, 0 to 3 percent slopes, rarely flooded**

**Map Unit Setting**

*National map unit symbol:* 1j5zr  
*Elevation:* 0 to 140 feet  
*Mean annual precipitation:* 28 to 59 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 161 to 231 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Psamments, wet substratum, rarely flooded, and similar soils:* 85 percent  
*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Psamments, Wet Substratum, Rarely Flooded**

**Setting**

*Landform:* Flats  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Sandy lateral spread deposits

**Typical profile**

*A - 0 to 12 inches:* coarse sand  
*C1 - 12 to 36 inches:* gravelly coarse sand  
*C2 - 36 to 80 inches:* sand

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (6.00 to 20.00 in/hr)  
*Depth to water table:* About 18 to 42 inches  
*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Available water capacity:* Low (about 3.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* A  
*Hydric soil rating:* No

**Minor Components**

**Manahawkin, frequently flooded**

*Percent of map unit:* 5 percent  
*Landform:* Swamps, flood plains  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

**Berryland, occasionally flooded**

*Percent of map unit:* 5 percent  
*Landform:* Flats, depressions, drainageways  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

**Mullica, rarely flooded**

*Percent of map unit:* 5 percent  
*Landform:* Drainageways, flood plains, depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Concave, linear

*Hydric soil rating: Yes*

## **SacA—Sassafras sandy loam, 0 to 2 percent slopes, Northern Coastal Plain**

### **Map Unit Setting**

*National map unit symbol: 2thx8*

*Elevation: 0 to 470 feet*

*Mean annual precipitation: 41 to 49 inches*

*Mean annual air temperature: 53 to 58 degrees F*

*Frost-free period: 190 to 250 days*

*Farmland classification: All areas are prime farmland*

### **Map Unit Composition**

*Sassafras and similar soils: 80 percent*

*Minor components: 20 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Sassafras**

#### **Setting**

*Landform: Flats, fluviomarine terraces*

*Landform position (three-dimensional): Riser, rise*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Loamy fluviomarine deposits*

#### **Typical profile**

*Ap - 0 to 12 inches: sandy loam*

*Bt1 - 12 to 18 inches: sandy loam*

*Bt2 - 18 to 28 inches: sandy clay loam*

*BC - 28 to 40 inches: loamy sand*

*C1 - 40 to 58 inches: sand*

*C2 - 58 to 80 inches: sand*

#### **Properties and qualities**

*Slope: 0 to 2 percent*

*Depth to restrictive feature: More than 80 inches*

*Drainage class: Well drained*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high  
(0.20 to 2.00 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Available water capacity: Moderate (about 7.1 inches)*

#### **Interpretive groups**

*Land capability classification (irrigated): 1*

*Land capability classification (nonirrigated): 1*

*Hydrologic Soil Group: B*

*Hydric soil rating: No*

## Minor Components

### Downer

*Percent of map unit:* 4 percent  
*Landform:* Fluvio-marine terraces, flats, knolls  
*Landform position (two-dimensional):* Shoulder, summit  
*Landform position (three-dimensional):* Interfluvium, riser, rise  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Ingleside

*Percent of map unit:* 4 percent  
*Landform:* Fluvio-marine terraces, flats  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Woodstown

*Percent of map unit:* 4 percent  
*Landform:* Fluvio-marine terraces, flats  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Tread, talus  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Fallsington, drained

*Percent of map unit:* 4 percent  
*Landform:* Depressions, swales, flats, broad interstream divides  
*Landform position (two-dimensional):* Footslope, summit  
*Landform position (three-dimensional):* Dip, talus  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

### Aura

*Percent of map unit:* 4 percent  
*Landform:* Low hills, fluvio-marine terraces  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope, nose slope, riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

## **SacB—Sassafras sandy loam, 2 to 5 percent slopes, Northern Coastal Plain**

### **Map Unit Setting**

*National map unit symbol:* 2thxd  
*Elevation:* 0 to 470 feet  
*Mean annual precipitation:* 41 to 49 inches  
*Mean annual air temperature:* 53 to 58 degrees F  
*Frost-free period:* 190 to 250 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Sassafras and similar soils:* 80 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Sassafras**

#### **Setting**

*Landform:* Flats, fluviomarine terraces  
*Landform position (three-dimensional):* Riser, rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loamy fluviomarine deposits

#### **Typical profile**

*Ap - 0 to 12 inches:* sandy loam  
*Bt1 - 12 to 18 inches:* sandy loam  
*Bt2 - 18 to 28 inches:* sandy clay loam  
*BC - 28 to 40 inches:* loamy sand  
*C1 - 40 to 58 inches:* sand  
*C2 - 58 to 80 inches:* sand

#### **Properties and qualities**

*Slope:* 2 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Moderate (about 7.1 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* B  
*Hydric soil rating:* No

## Minor Components

### Downer

*Percent of map unit:* 4 percent  
*Landform:* Flats, knolls, fluviomarine terraces  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Interfluve, riser, rise  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Aura

*Percent of map unit:* 4 percent  
*Landform:* Low hills, fluviomarine terraces  
*Landform position (two-dimensional):* Backslope  
*Landform position (three-dimensional):* Side slope, nose slope, riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Fallsington, drained

*Percent of map unit:* 4 percent  
*Landform:* Flats, depressions, swales  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

### Woodstown

*Percent of map unit:* 4 percent  
*Landform:* Broad interstream divides, depressions, flats, fluviomarine terraces  
*Landform position (two-dimensional):* Summit, footslope  
*Landform position (three-dimensional):* Tread, talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

### Ingleside

*Percent of map unit:* 4 percent  
*Landform:* Flats  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No



## **SadC—Sassafras gravelly sandy loam, 5 to 10 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 4kcl

*Elevation:* 30 to 600 feet

*Mean annual precipitation:* 28 to 59 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 161 to 231 days

*Farmland classification:* Farmland of statewide importance

### **Map Unit Composition**

*Sassafras, eroded, and similar soils:* 95 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Sassafras, Eroded**

#### **Setting**

*Landform:* Knolls, low hills

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Interfluve

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Loamy and/or gravelly fluviomarine deposits

#### **Typical profile**

*A - 0 to 17 inches:* gravelly sandy loam

*Bt - 17 to 37 inches:* sandy clay loam

*C - 37 to 60 inches:* gravelly sandy loam

#### **Properties and qualities**

*Slope:* 5 to 10 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water capacity:* Moderate (about 7.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

## Minor Components

### Aura

*Percent of map unit:* 5 percent  
*Landform:* Low hills on knolls  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

## TrkAv—Transquaking peat, 0 to 1 percent slopes, very frequently flooded, tidal

### Map Unit Setting

*National map unit symbol:* 2xh4d  
*Elevation:* 0 to 30 feet  
*Mean annual precipitation:* 41 to 50 inches  
*Mean annual air temperature:* 46 to 58 degrees F  
*Frost-free period:* 190 to 260 days  
*Farmland classification:* Farmland of unique importance

### Map Unit Composition

*Transquaking, very frequently flooded, and similar soils:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

## Description of Transquaking, Very Frequently Flooded

### Setting

*Landform:* Tidal marshes  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Herbaceous organic material over loamy fluviomarine deposits

### Typical profile

*Oise - 0 to 9 inches:* peat  
*Oese - 9 to 46 inches:* mucky peat  
*Oase - 46 to 65 inches:* muck  
*Cseg - 65 to 80 inches:* silty clay

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Very poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 0 inches  
*Frequency of flooding:* Very frequent

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*Frequency of ponding:* None

*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)

*Available water capacity:* Very high (about 22.5 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8w

*Hydrologic Soil Group:* A/D

*Hydric soil rating:* Yes

### Minor Components

#### **Appoquinimink, very frequently flooded**

*Percent of map unit:* 5 percent

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

#### **Broadkill, very frequently flooded**

*Percent of map unit:* 5 percent

*Landform:* Tidal marshes

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Hydric soil rating:* Yes

## WATER—Water

### Map Unit Setting

*National map unit symbol:* 4kcr

*Mean annual precipitation:* 30 to 64 inches

*Mean annual air temperature:* 46 to 79 degrees F

*Frost-free period:* 131 to 178 days

*Farmland classification:* Not prime farmland

### Map Unit Composition

*Water:* 100 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

## **WoeA—Woodstown sandy loam, 0 to 2 percent slopes, Northern Coastal Plain**

### **Map Unit Setting**

*National map unit symbol:* 2thvw  
*Elevation:* 0 to 280 feet  
*Mean annual precipitation:* 42 to 48 inches  
*Mean annual air temperature:* 52 to 58 degrees F  
*Frost-free period:* 180 to 220 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Woodstown and similar soils:* 81 percent  
*Minor components:* 19 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Woodstown**

#### **Setting**

*Landform:* Depressions, broad interstream divides, flats, fluvio-marine terraces  
*Landform position (two-dimensional):* Footslope, summit  
*Landform position (three-dimensional):* Tread, dip, talf  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Parent material:* Loamy fluvio-marine deposits

#### **Typical profile**

*Ap - 0 to 7 inches:* sandy loam  
*E - 7 to 11 inches:* sandy loam  
*Bt - 11 to 29 inches:* sandy loam  
*BCg - 29 to 45 inches:* fine sandy loam  
*Cg - 45 to 80 inches:* loamy sand

#### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 20 to 40 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water capacity:* Moderate (about 8.3 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2w  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

## Minor Components

### Fallsington

*Percent of map unit:* 7 percent  
*Landform:* Depressions, swales, flats, drainageways  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Dip, talf  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

### Hammonton

*Percent of map unit:* 7 percent  
*Landform:* Flats, broad interstream divides  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

### Hambrook

*Percent of map unit:* 5 percent  
*Landform:* Fluvio-marine terraces, flats  
*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Tread, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

## WoeB—Woodstown sandy loam, 2 to 5 percent slopes, Northern Coastal Plain

### Map Unit Setting

*National map unit symbol:* 2thvx  
*Elevation:* 0 to 490 feet  
*Mean annual precipitation:* 42 to 48 inches  
*Mean annual air temperature:* 52 to 58 degrees F  
*Frost-free period:* 180 to 220 days  
*Farmland classification:* All areas are prime farmland

### Map Unit Composition

*Woodstown and similar soils:* 81 percent  
*Minor components:* 19 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Woodstown

#### Setting

*Landform:* Fluvio-marine terraces, depressions, broad interstream divides, flats  
*Landform position (two-dimensional):* Shoulder, footslope

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*Landform position (three-dimensional):* Riser, dip  
*Down-slope shape:* Convex, concave  
*Across-slope shape:* Linear, concave  
*Parent material:* Loamy fluviomarine deposits

### Typical profile

*Ap - 0 to 7 inches:* sandy loam  
*E - 7 to 11 inches:* sandy loam  
*Bt - 11 to 29 inches:* sandy loam  
*BCg - 29 to 45 inches:* fine sandy loam  
*Cg - 45 to 80 inches:* loamy sand

### Properties and qualities

*Slope:* 2 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)  
*Depth to water table:* About 20 to 40 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water capacity:* Moderate (about 8.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 2e  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

### Minor Components

#### Fallsington, occasionally ponded

*Percent of map unit:* 7 percent  
*Landform:* Flats, drainageways, depressions, swales  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

#### Hammonton

*Percent of map unit:* 7 percent  
*Landform:* Flats, broad interstream divides  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Hambrook

*Percent of map unit:* 5 percent  
*Landform:* Fluviomarine terraces, flats  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Riser, dip  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear

## Custom Soil Resource Report

*Hydric soil rating:* No

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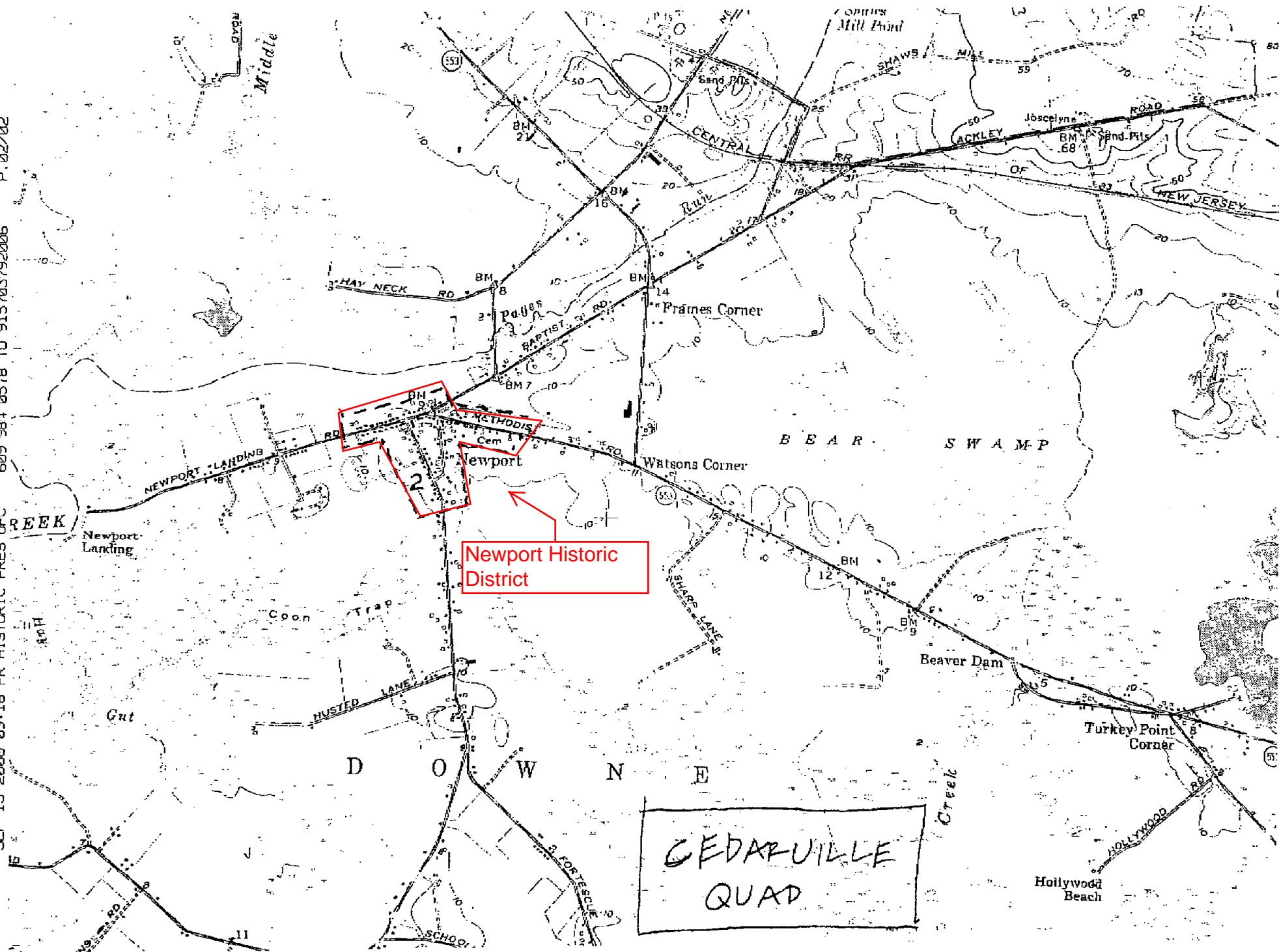


## Custom Soil Resource Report

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**Subject:** HPO Project #21-0973: Downe Township Mini-Programmatic Agreement for HUD Projects  
**From:** "Marcopul, Kate (DEP)" <Kate.Marcopul@dep.nj.gov>  
**Date:** 5/4/2021, 2:59 PM  
**To:** Mark Blauer <mblauer@evenlink.com>  
**CC:** michael.r.furda <michael.r.furda@hud.gov>, "Benton, Bruce (DCA)" <Robert.Benton@dca.nj.gov>, "rgc4downe@comcast.net" <rgc4downe@comcast.net>

**\*\*This e-mail serves as the official correspondence of the New Jersey Historic Preservation Office as we switch to a temporary remote work environment in response to the ongoing novel coronavirus (COVID19) outbreak\*\***

HPO Project #21-0973-1  
HPO-E2021-010

Mark Blauer President  
Blauer Associates  
P.O. Box 363  
Nescopeck, PA 18635

Dear Mr. Blauer:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published with amendments in the Federal Register on 6 July 2004 (69 FR 40544-40555), I am providing Consultation Comments for the following proposed undertaking:

**Cumberland County, Downe Township  
Multiple Property Rehabilitation Program  
Community Development Block Grant (CDBG) - Small Cities Program  
Mini-Programmatic Agreement  
U.S. Department of Housing and Urban Development (HUD)**

**800.4 Identification of Historic Properties**

According to the submitted documentation Downe Township has been awarded funds through HUD's Community Development Block Grant (CDBG) - Small Cities Program. It is our understanding that the funds will be utilized to rehabilitate properties throughout Downe Township. There may be numerous historic properties throughout the project areas, which are listed on, or eligible for listing on, the National Register of Historic Places.

**800.5 Assessment of Adverse Effects**

Based on the description of the proposed rehabilitation program, I find that the CDBG funds will have no adverse effect on historic properties pursuant to 36 CFR Part 800.5(b). This determination is based on the following understanding:

1. The HPO has determined that the following activities are unlikely to have any effect on historic properties that are listed on, or eligible for listing on, the National Register of Historic Places:

- a. Plumbing, heating and electrical upgrades;
- b. Paint (including for the purposes of encapsulation or stabilization) and paint stripping or removal using organic or custom solvents, heat guns, mechanical removal (ie. HEPA sanding, wet scraping, HEPA vacuum blasting, HEPA vacuum needle gun), or chemicals. Paint or paint removal may occur on- or off-site;
- c. Cleaning, sealing and deglossing of surfaces (i.e. HEPA vacuum, wet cleaning with trisodium phosphate or equivalent detergents, rinsing to remove efflorescence);
- d. Encapsulation with paint only (see item 1.b above). Projects involving encapsulation with drywall, plywood or vinyl, or a similar treatment, must be submitted to the HPO for review and comment;
- e. Soil treatments, including: the covering of bare, lead-contaminated soil with grass, gravel, mulch or similar materials; establishing land use controls such as the obstruction of areas with fences or thorny bushes;
- f. The application of liquid-applied coatings, adhesively bonded covering material, drywall, paneling, wainscoting, aluminum, vinyl, rubber tread and riser coverings, underlayment, vinyl, or other sheet finish goods to interior surfaces;
- g. Testing and clearance measures, including occupant protection, worker protection, waste management and the ongoing monitoring of hazard control measures.

2. Section 106 consultation shall be submitted to the HPO for review prior to project implementation if the scope of work entails work beyond what is outlined in item #1 of this letter and the property is 50 years old or older, or previously determined eligible for or listed on the National Register of Historic Places. Please note that the HPO review shall focus on exterior building elements on all elevations visible from the street. The consultation shall include a cover letter requesting consultation, photographs of the project site and surrounding streetscape, a map clearly indicating the site location, a project description for each project, and plans and specifications for all proposed rehabilitation work.

Below is guidance to help you plan a project that will have no effect or no adverse effect on historic properties:

- When repair, removal or alteration of building elements/materials on a building determined eligible, either as part of the consultation or previously listed on, or determined eligible for listing on, the National Register of Historic Places is necessary, the element/material must be replaced in kind to match the material, design, dimension, texture, detailing and exterior appearance in accordance with the Secretary of the Interior's Standards for Rehabilitation (Standards).
- When it is determined that existing historic windows are beyond repair, the replacement windows must match the material, dimensions, size, sash and muntin profiles of the existing historic windows. This work will require submission of a Section 106 consultation to the HPO for review and comment.

3. Section 106 consultations shall be submitted to the Historic Preservation Office for soil treatments involving the removal and replacement of 2-6 inches of soil or more proposed for properties located within an eligible or listed archaeological site grid as identified in the NJ CRGIS Online Viewer, LUCY.

4. If Downe Township determines that it cannot revise the scope of work in order to bring a project into conformance with the Standards and it is determined that the proposed undertaking will adversely affect historic properties, the Township shall notify consulting parties and continue consultation to resolve the adverse effects pursuant to 36 CFR Part 800.6.

If Downe Township agrees to the conditions above, which pertain only to projects administered under the CDBG Program, an official representative shall sign the bottom of this letter and send the original back to the Historic Preservation Office. Pursuant to 36 CFR Part 800.5(d)(1), the Agency Official shall maintain a record of the findings and provide information on the finding to the public on request, consistent with confidentiality provision of 36 CFR Part 800.11(c). Implementation of the undertaking in accordance with the

findings as documented fulfills responsibilities under Section 106 and this part. If the Agency Official shall not conduct the undertaking as proposed in the finding, the Agency Official shall reopen consultation under 36 CFR Part 800.5(a).

We look forward to continuing consultation with you. Should there be any questions, please contact Lindsay Thivierge of my staff at (609) 292-4091 or via email at [Lindsay.Thivierge@dep.nj.gov](mailto:Lindsay.Thivierge@dep.nj.gov).

Sincerely,

**Katherine J. Marcopul, Ph.D., CPM**  
**Administrator and**  
**Deputy State Historic Preservation Officer**  
Historic Preservation Office  
NJ Department of Environmental Protection  
501 East State Street, Trenton, NJ 08625  
[kate.marcopul@dep.nj.gov](mailto:kate.marcopul@dep.nj.gov)  
T (609) 984-0176 | F (609) 984-0578

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**NEW JERSEY  
DEPARTMENT OF  
ENVIRONMENTAL  
PROTECTION**



KJM/MMB/LT/sb

c. Michael Furda, HUD  
Robert Benton, NJDCA

On behalf of Downe Township, I agree to the conditions as listed above:

5/5/2021

The Honorable Michael Rothman, Deputy Mayor of Downe Township

Date

**LIST OF ATTACHED CORRESPONDENCE - FORMS - ADS**

1. NOI-RROF legal notice text to be published August 29, 2023;
2. NOI-RROF distribution memorandum dated August 29, 2023; and
3. Request for Release of Funds form to be signed September 19, 2023.

NOTICE OF INTENT TO REQUEST RELEASE OF FUNDS  
DOWNE TOWNSHIP, CUMBERLAND COUNTY, NJ

August 29, 2023

Township of Downe  
288 Main Street  
Newport, NJ 08345  
856-447-3100

TO ALL INTERESTED AGENCIES, GROUPS, AND PERSONS:

On or about September 19, 2023 the Township of Downe, Cumberland County, will submit a request to the New Jersey Department of Community Affairs (NJDCa) to release funds under Title I of the Housing and Community Development Act of 1974, as amended (PL 93-383), for the following project.

Project Title: Downe Township Housing Rehabilitation Project 23-0351-00

Purpose of Project: Rehabilitation of Single Family, Owner Occupied Homes

Project Location: Township of Downe (entire Township)

Estimated Cost: \$230,000

Additional project information is contained in the Environmental Review Record (ERR). The ERR will be made available to the public for review either electronically or by U.S. mail. Please submit your request by U.S. mail to the Downe Township Municipal Clerk's Office, Municipal Building, 288 Main Street, Newport, NJ 08345 or by email to Nadine Lockley [downetwpcclerk@comcast.net](mailto:downetwpcclerk@comcast.net). The ERR can be accessed online at the following website <https://downetwpcnj.org/>.

PUBLIC COMMENTS

Any individual, group, or agency may submit written comments on the ERR to Municipal Clerk's Office, Township of Downe, Municipal Building, 288 Main Street, Newport, NJ 08345 or by email to [downetwpcclerk@comcast.net](mailto:downetwpcclerk@comcast.net). All comments received by September 18, 2023 will be considered by the Township of Downe prior to authorizing submission of a request for release of funds.

RELEASE OF FUNDS

The Township of Downe certifies to the NJDCa that Michael Rothman in his capacity as Mayor consents to accept the jurisdiction of the Federal Courts if an action is brought to enforce responsibilities in relation to the environmental review process and that these responsibilities

have been satisfied. NJDCA's approval of certification satisfies its responsibilities under NEPA and related laws and authorities, and allows the Township of Downe to use program funds.

#### OBJECTIONS TO RELEASE OF FUNDS

NJDCA will accept objections to its release of funds and the Township of Downe's certification for a period of fifteen days following the anticipated submission date or its actual receipt of the request (whichever is later) only if they are on one of the following bases: (a) the certification was not in fact executed by the certifying officer of the Township of Downe; (b) the Township of Downe has omitted a step or failed to make a decision or finding required by HUD regulations at 24 CFR 58; (c) the grant recipient has committed funds or incurred costs not authorized by 24 CFR 58 before approval of a release of funds by NJDCA; or (d) another Federal agency acting pursuant to 40 CFR Part 1504 has submitted a written finding that the project is unsatisfactory from the standpoint of environmental quality. Objections must be prepared and submitted in accordance with the required procedures (24 CFR Part 58) and shall be addressed to NJDCA at Small Cities Program, Division of Housing and Community Resources, P.O. Box 811, Trenton, New Jersey 08625 or by email to [Jacahri.Smith@dca.nj.gov](mailto:Jacahri.Smith@dca.nj.gov). Potential objectors should contact NJDCA to verify the actual last date of the objection period.

Michael Rothman, Mayor  
Township of Downe  
Municipal Building  
288 Main Street  
Newport, NJ 08345



# D BLAUER ASSOCIATES D

P.O. Box 363, Nescopeck, Pa. 18635

Tel: 570.520.4955

mblauer@evenlink.com

September 19, 2023

Downe Township, Cumberland County  
Housing Rehabilitation NJ DCA Project #23-0351-00

To Individuals, Groups Agencies, and Media Interested in Possible Environmental Consequences of the Community Development Block Grant Program of the Township of Downe, Cumberland County, New Jersey.

In accordance with regulations set up for Environmental Review Procedures for Community Development, I am forwarding for you a copy of Downe's "Notice to Intent to Request Release of Funds" for the project described in the attached notice.

Sincerely,

Mark Blauer  
President

Enclosures

Copies to the following:

1. ATTN: Chief of Environmental Impacts Branch,  
US EPA, Regional Office, 26 Federal Plaza,  
New York, NY 10278
2. ATTN: Public Information Officer, US EPA, Headquarter Office,  
Washington, DC 20000
3. Lawrence Schmidt, Assistant Director Planning Group,  
NJ Dept. of Environmental Protection  
CN 402, Trenton, NJ 08625
4. Department of Environmental Protection  
Office of Historic Preservation
5. Cumberland County Planning Office
6. Administrator, NJ DCA Small Cities, P.O. Box 811, Trenton, NJ 08625-0811
7. The News of Cumberland County newspaper

**NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS  
SMALL CITIES COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

**REQUEST FOR RELEASE OF FUNDS  
AND CERTIFICATION**

(Pursuant to Section 104(g) of Title I, Housing & Community Development Act of 1974)

**Part I. Program Description and Request for Release of Funds**

1. Name of Grantee Township of Downe	2. Grant Agreement Number #23-0351-00
3. Grantee's Address (Including Street, City, State and Zip Code) 288 Main Street, Newport, NJ 08345	4. Date of Request/Certification September 19, 2023

The Small Cities Community Development Block Grant Program Grantee listed above requests the release of funds and removal of environmental grant conditions governing the use of the assistance for the following:

5. Project Activity/Project Name: Township-Wide Home Rehabilitation Project	6. Location: (Street address, city, county & state) Downe Township, Cumberland County, New Jersey
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7. Program Activity/Project Description:  Rehabilitation of single family owner occupied homes at scattered sites in Downe Township.
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## Part II. Environmental Certification

With reference to the above Program Activity(ies)/Project(s), I, the undersigned officer of the Grantee, certify that:

1. The Grantee has assumed responsibility for and complied with, or will continue to comply with, the National Environmental Policy Act of 1969, as amended; the environmental procedures, permit requirements and statutory obligations of the laws cited in 24 CFR 58.5 and 24 CFR 58.6; and applicable State and Local laws.
2. After considering the type and degree of environmental effects identified by the environmental review completed for the proposed project described in Part 1 of this request, I have found the project did not require the preparation and dissemination of an environmental impact statement.
3. The Grantee has disseminated and/or published in the manner prescribed by 24 CFR 58.43 and 58.60 a notice to the public in accordance with 24 CFR 58.70 and as evidenced by the attached copy (copies) or provide evidence of posting and mailing procedure.
4. The dates for all statutory and regulatory time periods for review, comment or other action are in compliance with procedures and requirements of 24 CFR Part 58
5. As the duly designated certifying official of the Grantee, I also certify that:
6. I am authorized to and do consent to assume the status of federal official under the National Environmental Policy Act of 1969 and each provision of law designated in the 24 CFR 58.5 and 24 CFR 58.6 list of NEPA-related authorities insofar as the provisions of these laws apply to the HUD responsibilities for environmental review, decision-making and actions that have been assumed by the Grantee.
7. I am authorized to and do accept, on behalf of the Grantee personally, the jurisdiction of the federal courts for the enforcement of all these responsibilities, in my capacity as certifying officer of the Grantee.

Signature of Certifying Officer of the Grantee:	Title of Certifying Officer: Mayor
	Date Signed: September 19, 2023
Address of Certifying Officer:  288 Main Street, Newport, New Jersey 08345	