

ROSENBERG CALICA & BIRNEY LLP

ATTORNEYS AND COUNSELORS AT LAW
100 GARDEN CITY PLAZA, SUITE 408
GARDEN CITY, NEW YORK 11530

RONALD J. ROSENBERG*
ROBERT M. CALICA
WILLIAM J. BIRNEY
EDWARD M. ROSS*
LESLEY A. REARDON
KENNETH E. ANESER*
JOHN S. GIULLA

TELEPHONE (516) 747-7400
FACSIMILE (516) 747-7480
WWW.RCBLAW.COM

TAMIR M. YOUNG
KENNETH J. WEINSTEIN
RICHARD A. ROSS
OF COUNSEL

*ALSO ADMITTED FL
*ALSO ADMITTED GT
*ALSO ADMITTED CT, NJ, DC
*ALSO ADMITTED MD
*ALSO ADMITTED NJ

JUDAH SERFATY
PETER J. WILLIAMS*
ROBERT J. HOWARD
DIANA G. ATTNER
JOSHUA M. LIEBMAN*
GEORGE B. KORDAS
RYAN J. McMAHON*

April 3, 2014

235783

ENTERED
Office of Proceedings
April 4, 2014
Part of
Public Record

VIA FEDERAL EXPRESS

Surface Transportation Board
395 E Street, SW
Washington DC 20423

Supplemental Submission on Behalf of Town of Brookhaven, New York

Re: Brookhaven Rail Terminal
205 Sills Rd, Yaphank, NY 11980 & STB F.D. No. 35141

Dear Members of the Surface Transportation Board:

We are special counsel for the Town of Brookhaven, New York ("Town"). We write respectfully to supplement the Town's pending application (the "Application") to reopen earlier proceedings before the Board upon the prior Application of Sills Road Realty LLC d/b/a Brookhaven Rail Terminal and its affiliates (collectively, "BRT") to construct a now completed and operating rail extension located within the Town, as determined by the Board's Order dated September 7, 2010 (the "Prior STB Order").

As documented in the Town's pending Application to reopen and for additional relief, BRT, which currently operates a 28 acre rail facility with 18,000 feet of trackage and a single Transload Building authorized by the Prior STB Order, seeks (and has undertaken massive excavation activities so as) to vastly expand its current rail facility onto an adjacent 93 acre parcel by constructing an estimated 12,000 linear feet of additional trackage, coupled with the planned construction of multiple industrial-type buildings and facilities with an aggregate size exceeding 1.2 million square feet.

The Town was recently provided by BRT with a copy of a document denominated as an "**Environmental Overview**" dated February 2014 prepared on behalf of BRT by the engineering firm of Gannett Fleming Inc. (attachment A). This amorphous document, while scarcely amounting to any type of bona fide environmental review, does clearly and unambiguously depict, on its cover page, the proposed rail and warehousing and manufacturing facilities which BRT is intending to construct on the adjacent 93 acre parcel and to serve with its 12,000 foot purported "*spur*". The proposed expansion includes, inter alia, a 400,000 square foot building

Surface Transportation Board

March 3, 2014

Page 2

denominated as “Manufacturing and Warehousing Building”, a 400,000 “Cold/Dry Storage Building”, a covered “Salt Storage Building” of nearly 40,000 square feet, and a proposed “Propane Transfer Station” of approximately 262,000 square feet, all spread across a newly purchased, adjacent 93 acre site which is nearly 3½ times the size of the previously approved facility, and which entails more than 5 times the already constructed Transload Building, all proposing to serve a vastly expanded customer base in terms of both enlarged geographic locale and volume.

Notably, although BRT has already undertaken extensive excavation and fill removal (i.e., sand-mining) activities on the 93 acre site in furtherance of the proposed development (see, Exhibit A to the Town’s Application), it is the Town’s understanding that there has been absolutely no environmental review whatsoever of the proposed expansion of any type, whether under NEPA, or pursuant to the procedures imposed and required by both the Prior STB Order as well as by the Federal Stipulation reached by BRT and the Town in certain Federal Court litigation between Sills Road Realty LLC and the Town (Docket No. CV-07-4584) [the “Federal Stipulation”], the terms of which are expressly incorporated into the Prior STB Order. BRT contends that it is totally exempted from any environmental review requirement, and claims that its planned extension is a “*spur*” under 49 U.S.C. §1050(b)(2) for which no such environmental oversight by the STB under NEPA is required.

It is respectfully requested that the Board consider the attached document as a supplement to the Town’s prior submissions upon its pending Application for reopening and for other relief before the Board.

Very truly yours,

ROSENBERG CALICA & BIRNEY LLP


Robert M. Calica

cc: Attached Service List
Enclosure

James H.M. Savage, Esq.
1750 K Street, N.W., Suite 350
Washington DC 20006

Lyngard Knutson, Esq.
Region 2 E.P.A.
290 Broadway, 25th Floor
New York NY 10007

NYS Dept. of Environmental Conservation
New York Natural Heritage Program
Albany NY 12233-4757
Attn: Tara Seoane

Field Office Supervisor U.S. Fish and Wildlife Service
Long Island Field Office
3 Old Barto Rd.
Brookhaven NY 11719
Attn: David A. Stilwell

MTA Long Island Rail Road
Jamaica Station
Jamaica NY 11435-4380
Attn: Helena E. Williams


DOREEN A. SALERA

Sworn to before me this
3rd day of April, 2014

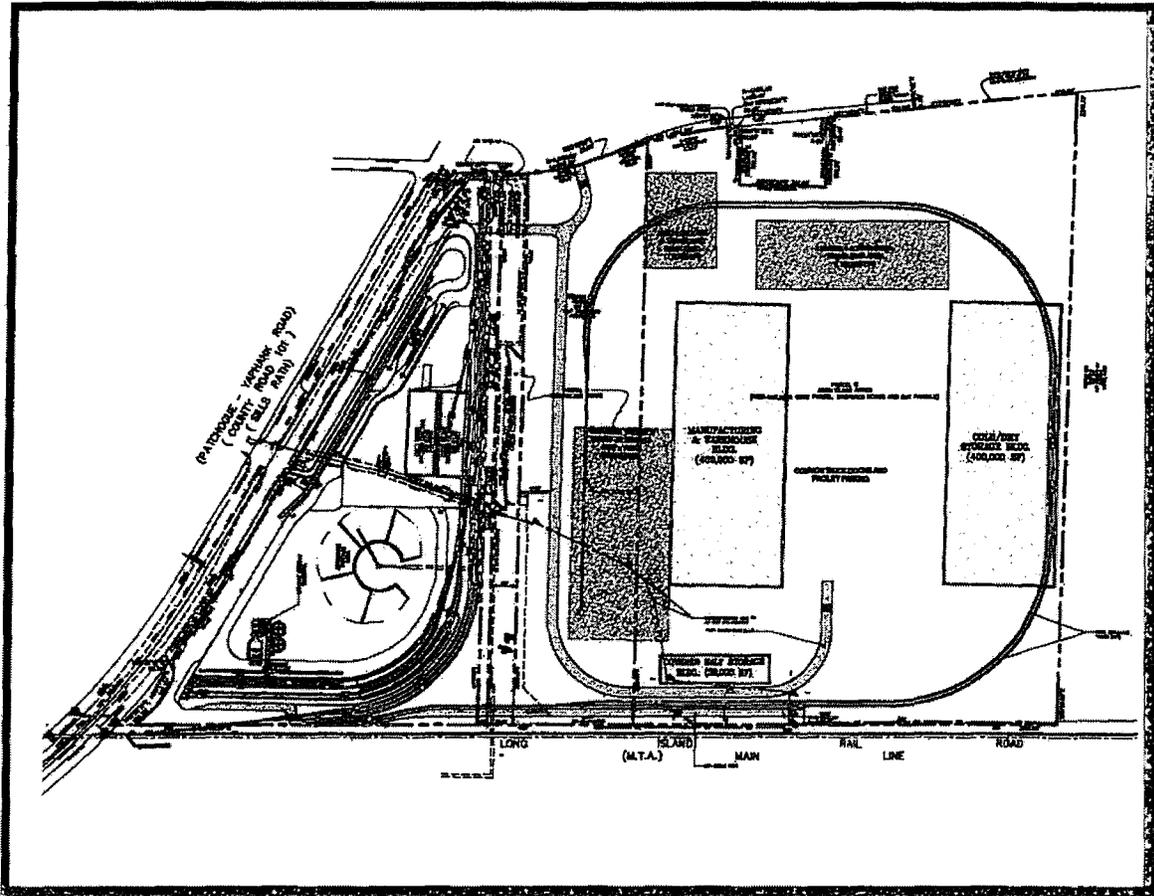

Notary Public

MARYELLEN BOYLE
Notary Public, State of New York
No.01BO5043092
Qualified in Queens County
Commission Expires May 1, 2015

BROOKHAVEN RAIL TERMINAL

Proposed Expansion (Parcels B and C)

ENVIRONMENTAL OVERVIEW



Prepared for:
Brookhaven Rail, LLC.

Prepared by:
Gannett Fleming, Inc.

February 2014

Table of Contents

I.	Introduction.....	1
II.	Study Area.....	1
III.	Physical Resources.....	1
	A. Geology, Soils and Climate.....	1
	B. Surface and Ground Water.....	3
	C. Air Quality.....	4
IV.	Biological Resources.....	4
	A. Vegetation.....	4
	B. Wetlands.....	5
	C. Wildlife.....	5
	D. Endangered, Threatened and Rare Species.....	5
V.	Noise.....	7
VI.	Cultural Resources.....	7
VII.	Hazardous Materials/Waste Sites.....	8
VIII.	Land Use.....	8
IX.	Socioeconomic Setting.....	8
	A. Population Demographics.....	8
	B. Economics and Employment.....	9
X.	Community Facilities and Services.....	10
XI.	Transportation.....	10
	A. Roadway.....	10
	B. Rail.....	11
XII.	Environmental Justice.....	11

Tables

Table 1: Soil types and distribution	2
Table 2: USFWS Consultation – Federal Threatened and Endangered Species of Concern	6
Table 3: Population and housing characteristics	9
Table 4: Population growth projections	9
Table 5: Unemployment and income characteristics	9
Table 6: Average Annual Daily Traffic (AADT) for select roadway segments	10
Table 7: Level of Service (LOS) for select roadway segments	11
Table 8: Racial demographics	12
Table 9: Poverty characteristics	12

Figures

Figure 1: Project Site	13
Figure 2: Study Area	14
Figure 3: Surface Waters and Floodplains	15
Figure 4: USFWS National Wetland Inventory	16
Figure 5: NYS DEC Environmental Mapper – Wetlands and Rare Plants and Rare Animals	17
Figure 6: NY State Historic Preservation Office – Cultural Resources	18
Figure 7: NYS DEC Environmental Navigator – Facilities	19

Appendices

Appendix A: Custom Soil Report	20
Appendix B: U.S. Fish and Wildlife Service IPAC Report	41

I. Introduction

This Environmental Overview evaluates the environmental setting and potential resource concerns associated with a proposed expansion of the existing Brookhaven Rail Terminal in the Village of Yaphank, Town of Brookhaven, Suffolk County, NY. The purpose of this study is to:

- Characterize natural, social, and cultural resources on and adjacent to the site;
- Identify potential resource and/or regulatory concerns which may require further analysis if future development is proposed; and
- Where applicable, suggest additional studies and/or minimization measures which may be necessary to fully characterize and address natural, social and cultural resource effects associated with future development and operation of the site.

Expansion concepts involve development of rail infrastructure on a combined 93 acres immediately east of the Brookhaven Rail Terminal at 205 Sills Road, Yaphank, NY (Figure 1). The site encompasses Parcel B, which is a 19.3 acre parcel and Parcel C, a 73.7 acre parcel. The site would be rail served with rail access from the existing terminal and will have access to the Interstate 495 Service Road.

The scope of this Environmental Overview generally parallels the environmental factors and resource analyses typically performed to comply with the National Environmental Policy Act (NEPA) and the New York State Environmental Quality Review Act (SEQRA). The overview has been developed based on existing and readily available information from federal, state and local regulatory and resource agencies, scientific literature and data, and applicable environmental analysis of other proposed actions in the vicinity of the site.

II. Study Area

The study area for this Environmental Overview encompasses an approximately 93 acre site located in the Town of Brookhaven, Suffolk County, NY. The site is bordered on the north by Interstate 495 (Long Island Expressway), on the west by the existing Brookhaven Rail Terminal, on the south by the Long Island Railroad (LIRR), and on the east by agricultural lands associated with the Suffolk County Farm and Education Center (Figure 2).

For resource considerations other than socioeconomics and transportation, the analysis in the Environmental Overview is limited to the proposed expansion site. For socioeconomic and transportation resources, the study area encompasses a larger area covering two Census tracts (1587.07 and 1591.06).

III. Physical Resources

A. Geology, Soils and Climate

The site is classified as part of the Atlantic Coastal Plain Physiographic province. The Atlantic Coastal Plain Province stretches along the east coast of the United States from Cape Cod, Massachusetts southward into Mexico. The site is part of a glacial outwash plain, which is composed of sand and gravel deposited by melt-water streams in front of a glacial terminal moraine located north of the project area. The terminal moraine is a ridge-like accumulation of till, and unstratified mix of clay, silt, sand, gravel, and boulders that mark a standstill of the retreating glacial ice sheet. The local

unconsolidated formations date back approximately 100 million years and are comprised of the Raritan Formation, which immediately overlies the bedrock complex and the Magothy Formation, which overlies the Raritan Formation. The depth to bedrock is approximately 1,500 feet below the ground surface¹.

According to the Soil Survey of Suffolk County, NY², soils on the site are classified as part of the general Riverhead-Plymouth-Carver soil association. Soils in this association are typically deep, nearly level to gentle sloping, well drained and excessively drained soils which are moderately to coarsely textured.

Specific soil types found on the site include Carver and Plymouth sands, Haven loam, Plymouth loamy sand, and Riverhead sandy loam (Table 1 and Appendix A).

Table 1: Soil types and distribution

Map Symbol	Map Unit	Approximate Site Coverage
CpE	Carver and Plymouth sands, 15 to 35 percent slopes	12.3%
HaA	Haven loam, 0 to 2 percent slopes	22.1%
PIA	Plymouth loamy sand, 0 to 3 percent slopes	38.4%
RdA	Riverhead sandy loam, 0 to 3 percent slopes	13.6%
RdB	Riverhead sandy loam, 3 to 8 percent slopes	13.6%

Source: Custom Soil Resource Report, Suffolk County, NY, Parcels B/C, obtained via USDA-NRCS Web Soil Survey, <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

Carver and Plymouth sands, 15 to 35% slopes (CpE): This soil is very deep and excessively drained, and its parent material consists of coarse sandy glaciofluvial deposits. The depth to the top of a seasonal high water table is greater than 80 inches. These soils are not considered prime farmland soils due to low natural fertility and high drought potential. This soil has a land capability rating of Class 7s, exhibiting very severe limitations that make them unsuited to cultivation and that restrict their use mainly to rangeland, forestland, or wildlife habitat. The suitability of this soil series for development generally exhibits severe use limitations due to high erosion potential, rapid permeability, and low compressibility which affect foundation strength.

Haven loam, 0 to 2% slopes (HaH): This soil is very deep and well-drained with parent material consisting of glaciofluvial deposits over sandy and gravelly glaciofluvial deposits. The depth to the top of a seasonal high water table is greater than 80 inches. Despite low natural fertility, this soil is designated as a Class 1 capability soil and considered a prime farmland soil due to high available soil moisture capacity and low erosion potential. The soil exhibits only slight limitations for development related to low compressibility and high permeability.

Plymouth loamy sand, 0 to 3% slopes (PIA): This soil is very deep and excessively drained, and the parent material consists of acid sandy glaciofluvial or deltaic deposits. The depth to the top of a seasonal high

¹ U.S. Geological Survey, 1995. Ground water atlas of the United States, HA 730-M. http://capp.water.usgs.gov/gwa/ch_m/index.html

² USDA Soil Conservation Service, 1975. Soil Survey of Suffolk County, New York. Publication O-473-964. http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/new_york/suffolkNY1975/suffolk.pdf

water table is greater than 80 inches. Despite low natural fertility, this soil is designated as a Class 3s capability soil and considered farmland soil of statewide importance, generally requiring irrigation. The soil exhibits moderate limitations for development mostly related to low compressibility.

Riverhead sandy loam, 0 to 3% slopes (RdA) and Riverhead sandy loam, 3 to 8% slopes (RdB): These soils are very deep and well drained with parent materials consisting of loamy glaciofluvial deposits overlying stratified sand and gravel. The depth to the top of a seasonal high water table is greater than 80 inches. These soils have a Class 2s land capability rating and are considered prime farmland soils, having low natural fertility but only moderate limitations that reduce the choice of plants or require moderate conservation practices. The soils exhibit moderate limitations for development mostly related to low compressibility and moderate to rapid permeability.

The climate of Suffolk County consists of winters that are modified by the Atlantic Ocean (the ocean raises the average winter temperature and decreases the average day-to-night range). Suffolk County summers are characterized by warm afternoons and cool evenings. Average annual precipitation is roughly 49 inches, and is distributed fairly evenly throughout the year. The average annual temperature is approximately 55 degrees Fahrenheit (F). The annual average temperature is approximately 35 degrees F in winter and 71 degrees F in summer. Total average annual snowfall is approximately 31 inches³.

B. Surface and Ground Water

No surface waters are found on the site; an approximate 0.5 acre New York State Department of Transportation (NYS DOT)-owned stormwater retention pond is located along the northern boundary of the site along the Interstate 495 service road. The nearest significant surface water is the Carmans River, located approximately 1.0 mile from the site (Figure 3).

The site is not located within a Federal Emergency Management Agency (FEMA) designated floodplain area (Figure 3) or within the state's Coastal Area Boundary as determined by the New York Department of State, Office of Communities and Waterfronts which manages the state's coastal zone management program.

The site is located over a portion of the Upper Glacial aquifer which underlies all of Nassau and Suffolk Counties. The Upper Glacial aquifer consists of fine to coarse brown sand, gravel and stones and has a probable maximum thickness of about 700 feet below ground surface. Data from the U.S. Geological Survey (USGS) indicate that the elevation of groundwater in the Upper Glacial Aquifer beneath the project area is approximately 37.5 feet above mean sea level. However, the water table at the site is subject to seasonal and/or year-to-year fluctuations ranging from four to six feet. Based on surface elevations, depth to groundwater is estimated to be 70.5 feet on average, with a water table minimum depth at 67.5 feet and maximum at 73.5 feet⁴.

³ Surface Transportation Board and U.S. Rail Corporation, July 2010. Draft Environmental Assessment for Brookhaven Rail Terminal, Finance Docket 35141. <http://www.stb.dot.gov/Decisions/readingroom.nsf/WFBUNID/4410AD2BE2F4A1828525776C0048AFE9?OpenDocument>

⁴ Smolensky, D.A., H.T. Buxton and P.K. Shernoff, 1989. Hydrological Framework of Long Island, New York. U.S. Department of the Interior, U.S. Geological Survey.

The site is within the Nassau-Suffolk "sole source" aquifer (i.e. the Upper Glacial aquifer) as determined by the U.S. Environmental Protection Agency (EPA)⁵. A sole source aquifer is a sole or principal drinking water source whose contamination would pose a hazard to public health. This designation protects an area's groundwater resource by requiring the EPA to review proposed projects within the designated area that would receive federal financial assistance. The EPA review is designed to ensure that potential projects do not endanger the groundwater source. The site would be served by public water and wastewater services. Based on development of the Brookhaven Rail Terminal, EPA is likely to raise concerns regarding stormwater detention/retention and the need for Spill Prevention Control and Countermeasure plans for on-site fuel storage, if the site is developed, to minimize potential effects to the sole source aquifer.

C. Air Quality

The Clean Air Act (CAA) and amendments of 1990 define a "nonattainment area" as a locality where air pollution levels persistently exceed National Ambient Air Quality Standards (NAAQS) or that contribute to ambient air quality in a nearby area that fails to meet standards. The EPA designations of nonattainment areas are based on violations of NAAQS for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). The CAA established two types of national air quality standards: 1) primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly and 2) secondary standards that set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

Suffolk County is classified⁶ as:

- Moderate nonattainment for 8-hr Ozone (1997 standard)
- Marginal nonattainment for 8-hr Ozone (2008 standard)
- Nonattainment for PM_{2.5} (1997 standard)
- Nonattainment for PM_{2.5} (2006 standard)

This region is designated as either attainment or unclassified for SO₂, PM₁₀, NO₂, CO, and Pb. Based on the development of the Brookhaven Rail terminal, general conformity analysis of ozone and PM_{2.5} emissions may be required if the site is developed.

IV. Biological Resources

A. Vegetation

The site is a relatively flat, undeveloped parcel comprised of oak and pine trees and brush. The dominant trees are pitch pine, mixed with scarlet oak, white oak, red oak, and black oak. A review of historical aerial photography indicates the site has been undeveloped forest land since at least 1957. The predominant vegetation surrounding the site is a terrestrial upland forest categorized as pitch

⁵ U.S. Environmental Protection Agency, 2009. Region 2 Sole Source Aquifers. <http://www.epa.gov/Region2/water/aquifer/>

⁶ U.S. Environmental Protection Agency, 2013. The Green Book of Nonattainment Areas for Criteria Pollutants. <http://www.epa.gov/airquality/greenbook/>

pine-oak forest. Pitch pine-oak forest habitat and similar pine barren habitats occur in dry areas where a high degree of disturbance and nutrient poor soils exist. The surrounding forest land is comprised of similar pitch pine-oak forest vegetation, with trees generally about 30 feet in height and five to ten-inches in diameter

B. Wetlands

Based on a review of National Wetland Inventory mapping (Figure 4) and New York State Department of Environmental Conservation (NYS DEC) mapping (Figure 5), there are no regulatory wetlands within the boundaries of the site. The approximate 0.5 acre NYS DOT-owned stormwater retention pond north of the site along the Interstate 495 service road is classified as a palustrine, unconsolidated bottom freshwater pond (PUBHx) which is permanently flooded.

C. Wildlife

Wildlife species adapted for disturbance and/or early-to-mid successional pine barren plant habitats are expected to occur within the site. Most of the species that may be found on the site would be classified as common suburban, forest and edge species, with limited potential for forest interior dependent and/or 'sensitive' species, as the site is bordered by active business/industrial activity and transportation facilities. Common species found on the site would be those able to utilize a broad range of habitats and food sources.

Bird species likely to use the site and surrounding area include Mourning dove, brown thrasher, and Northern mockingbird⁷. Other typical species would include Gray catbird, Black-capped chickadee, Northern cardinal, American crow, Northern flicker, Common grackle, Blue jay, and European starling⁸.

Small rodents and insectivores such as mice, shrews, and moles are expected to be the most abundant mammals, but the surrounding area may support larger mammals as well. Some mammal species likely to occur on or near the project site are the short-tailed shrew, eastern mole, woodchuck, eastern chipmunk, white-tailed deer, raccoon, and eastern gray squirrel.

Because there are no wetlands and other aquatic habitats on the site, aquatic reptiles and amphibians (except for occasional transient species) would not generally be found, although some species may be located in proximity to the NYS DOT detention pond.

D. Endangered, Threatened and Rare Species

Consultation with the U.S. Fish and Wildlife Service (USFWS) was conducted using their Information, Planning and Conservation System (IPAC) on-line screening tool. Results indicated the potential for six threatened, endangered, or candidate species and/or designated critical habitat (Table 2) to be present on or adjacent to the site (Appendix B). These six species are those known or believed to occur within Suffolk County, not necessarily within the site.

⁷ Caithness Long Island II, LLC, December 2013. Caithness Long Island Energy Center II Draft Environmental Impact Statement. <http://www.brookhaven.org/Departments/PlanningEnvironment/PlanningandEnvironment.aspx>

⁸ Surface Transportation Board and U.S. Rail Corporation, July 2010. Draft Environmental Assessment for Brookhaven Rail Terminal, Finance Docket 35141. <http://www.stb.dot.gov/Decisions/readingroom.nsf/WFBUNID/4410AD2BE2F4A1828525776C0048AFF9?OpenDocument>

Table 2: USFWS Consultation – Federal Threatened and Endangered Species of Concern

Species	Scientific Name	Federal Status
<i>Birds</i>		
Piping plover	<i>Charadrius melodus</i>	Threatened
Red knot	<i>Calidris canutus rufa</i>	Proposed Threatened
Roseate tern	<i>Sterna dougallii dougallii</i>	Endangered
<i>Flowering Plants</i>		
Sandplain gerardia	<i>Agalinis acuta</i>	Endangered
Seabeach amaranth	<i>Amaranthus pumilus</i>	Threatened
<i>Mammals</i>		
Northern long-eared bat	<i>Myotis septentrionalis</i>	Proposed Endangered

Piping plover is a small migratory shorebird which breeds along dry sandy beaches or in areas that have been filled with dredged sand, often near dunes in areas with little or no beach grass. Foraging areas are typically beaches, dunes and tidal areas. Piping plover may breed along the southern Long Island beaches and in the harbors of northern Suffolk County⁹.

The *red knot* is a large, bulky sandpiper which generally migrates between South American wintering areas and breeding grounds in the central Canadian Arctic. Areas along the Atlantic coast, potentially including the Long Island beaches, are utilized as stopover areas for rest and refueling. Spring migration is timed to coincide with the spawning season of the horseshoe crab¹⁰.

The *roseate tern* is another coastal migratory waterbird which breeds along southern Long Island, utilizing salt marsh islands and beaches with sparse vegetation. A primary food source is the American sand lance, a small marine fish¹¹.

Sandplain gerardia is a small annual maritime plant that grows in native grasslands along the coast. On Long Island, significant remnant populations remain only at Sayville, the Hempstead Plains, and Montauk. Current multi-agency management efforts concentrated at Sayville have been successful at increasing plant numbers in recent years¹².

Seabeach amaranth occurs on barrier island beaches just above the high tide line, growing on nearly pure sand substrate. This small annual maritime plant traps sand, initiating dune formation and creating suitable habitat for other plants, such as sea oats and beach grass. Today, most amaranth sites are within areas symbolically fenced to protect endangered piping plovers¹³.

The *Northern long-eared bat* is widely distributed throughout the eastern and northcentral U.S., generally associated with old-growth forests composed of trees 100 years old or older. It relies on

⁹ NYS Department of Environmental Conservation, no date. Piping Plover Fact Sheet. <http://www.dec.ny.gov/animals/7086.html>

¹⁰ U.S. Fish and Wildlife Service, September 2013. Rufa red knot fact sheet. <http://www.fws.gov/northeast/redknot/facts.pdf>

¹¹ NYS Department of Environmental Conservation, no date. Roseate Fact Sheet. <http://www.dec.ny.gov/animals/7084.html>

¹² U.S. Fish and Wildlife Service, no date. Long Island Recovery Efforts, Sandplain gerardia. <http://www.fws.gov/northeast/nyfo/es/lirecovery.htm>

¹³ Center for Biological Diversity, no date. Seabeach amaranth profile. http://biologicaldiversity.org/campaigns/esa_works/profile_pages/SeabeachAmaranth.html

intact interior forest habitat with low edge-to-interior ratios. Winter hibernation and roosting typically occurs in caves, mines and tunnels, while in summer they may also utilize cavities in both live and dead trees¹⁴.

Based on the review of these species' life history and habitat, it is unlikely that any of these species occur within or adjacent to the site. No suitable marine or coastal habitats exist within or near the site and no old-growth/substantial un-fragmented forest habitat or caves/other hibernacula are present or nearby.

Review of the NYS DEC Environmental Resource Mapper (Figure 5) did not identify any rare plant/animal or significant natural communities on or immediately adjacent to the site. The map layer entitled rare plants and animals includes generalized locations of all species that are listed by the State as rare, endangered or threatened.

V. Noise

Previous noise investigations for the development of the Brookhaven Rail Terminal determined that ambient noise levels near the project site range from 63 A-weighted decibels (dBA) along the LIRR to 70 dBA near Sills Road and Interstate 495. These levels are considered moderate and are typical of developed areas in proximity to roadway infrastructure¹⁵.

Recent noise analysis for a proposed development directly south of the site found noise levels to be generally around 59 dBA during the morning rush hour, approximated to 46 to 50 dBA during the daytime¹⁶. Overnight noise levels were measured as low as 43.6 dBA. The same analysis also included a parcel close to Interstate 495 (similar to the northern portion of the site) where noise levels were measured at 63.4 dBA during the morning rush hour, approximated to 56 to 59 dBA during the daytime, with nighttime levels around 52.6 dBA.

No noise sensitive receptors (residences, schools, parks, etc.) are found within 0.25 mile of the site and surrounding land uses to the west and south of the site are devoted to industrial uses. The Town of Brookhaven Noise Ordinance sets noise level limits of 75dBA for industrial areas.

VI. Cultural Resources

According to the NY State Historic Preservation Office, no federal or state listed or eligible historic resources are associated with the site. Furthermore, the site is not considered an archaeological sensitive area (Figure 6).

The Suffolk County Almshouse Barn (90NR01779) was listed in the National Register of Historic Places (NRHP) in 1986. Built in 1871, this is a large multi-story barn with gable roof and wood shingle sheathing. The entire Suffolk County Poor Farm, containing approximately 200 acres bounded by

¹⁴ U.S. Fish and Wildlife Service, January 6, 2014. Northern long-eared bat. <http://www.fws.gov/midwest/endangered/mammals/nlba/>

¹⁵ Surface Transportation Board and U.S. Rail Corporation, July 2010. Draft Environmental Assessment for Brookhaven Rail Terminal, Finance Docket 35141. <http://www.stb.dot.gov/Decisions/readingroom.nsf/WEBUNID/4410AD2BE2F4A1828525776C0048AFE9?OpenDocument>

¹⁶ Suffolk County, NY, March 2011. Draft Generic Environmental Impact Statement, Declaration as Surplus and Subsequent Sale of 250 Acres of County Owned Land in Yaphank for Mixed Use Development Purposes. <http://www.suffolkcountyny.gov/Departments/Planning/Boards/CouncilonEnvironmentalQuality/DGEIS.aspx>

Yaphank Avenue, LIRR, and Patchogue Road (Long Island Avenue) has been determined to be eligible for listing in the NRHP by the NY State Historic Preservation Office¹⁷.

While the Suffolk County Poor Farm resource is immediately adjacent to the eastern boundary of the site, the Suffolk County Almshouse Barn is approximately 2,500 feet to the east separated from the site by agricultural fields. To minimize potential effects to cultural resources, future use of the site should consider retaining a vegetative buffer along the eastern boundary of the site to avoid effects to the historic agricultural context and setting of these historic resources.

VII. Hazardous Materials/Waste Sites

According to the NYS DEC, the site does not contain active hazardous remediation or associated regulated activities (Figure 7). A previous Phase 1 Environmental Site Assessment completed in accordance with American Standard for Testing & Materials (ASTM) *Standard Practice Guidelines for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (E 1527-05)* by the property owner identified no environmental conditions¹⁸.

VIII. Land Use

The site is currently an undeveloped, partially forested parcel. Land uses surrounding the site include other industrial activities at the Brookhaven Rail Terminal, the Sills Road Industrial Park along Old Dock Road, and the proposed expansion of the Caithness Power facility to the west and southwest. South of the site is the LIRR, which abuts other vacant lands to the south. To the east of the site are agricultural fields of the Suffolk County Farm and Education Center. The site is bordered on the north by Interstate 495 (Long Island Expressway).

The site and the adjoining Brookhaven Rail Terminal are currently zoned as Industrial 1. No land use or zoning issues related to future development of the site appear to be a concern.

IX. Socioeconomic Setting

A. Population Demographics

The Town of Brookhaven encompasses approximately 530 square miles in central Suffolk County, accounting for almost a quarter of the County's land area and more than a third of its population. From 1990 to 2010, the population of the Town of Brookhaven and Suffolk County all increased; however, the Town of Brookhaven experienced the strongest population growth in comparison with Suffolk County (Table 3).

¹⁷ Suffolk County, NY, March 2011. Draft Generic Environmental Impact Statement, Declaration as Surplus and Subsequent Sale of 250 Acres of County Owned Land in Yaphank for Mixed Use Development Purposes.

<http://www.suffolkcountyny.gov/Departments/Planning/Boards/CouncilonEnvironmentalQuality/DGEIS.aspx>

¹⁸ Oakland Law Group LLC, July 2011. Phase I Environmental Site Assessment, Sills Road Parcels.

Table 3: Population and housing characteristics

Geography	1990	2000	2010	Annual Growth		% Increase
				1990-2000	2000-2010	1990-2010
Town of Brookhaven						
Population	407,832	448,248	486,040	0.9%	0.8%	19%
Households	129,109	146,904	162,884	1.3%	1.0%	26%
Suffolk County						
Population	1,321,330	1,419,369	1,493,350	0.7%	1.8%	13%
Households	424,561	469,299	499,992	1.0%	0.6%	18%

Source: U.S. Census Bureau, Census 2010 SF1

Long-term projections indicate that the population of the Town of Brookhaven could increase by more than 120,000 people between 2010 and 2035 (Table 4). The town is expected to experience a greater population increase, by percentage, than Suffolk County over the same period.

Table 4: Population growth projections

Geography	Population						2010-2035 Percentage Growth
	2010	2015	2020	2025	2030	2035	
Town of Brookhaven	486,040	522,400	554,900	579,300	595,500	607,000	25%
Suffolk County	1,493,350	1,580,000	1,648,800	1,700,200	1,734,300	1,758,200	18%

Source: Suffolk County Comprehensive Plan 2035, August 2011. http://suffolkcountyny.gov/Portals/0/planning/CompPlan/vol1/Vol1_FrontEnd_Re082211.pdf

B. Economics and Employment

Areas included in the socioeconomic study area are characterized by lower unemployment in comparison to the Town and County (Table 5). From an economic standpoint, per capita income in the site area is generally below that estimated for the Town and County, while median family income is higher in areas north of the site and lower in communities to the south.

Table 5: Unemployment and Income characteristics

Geography	Percent Unemployment	Per Capita Income (2012 \$)	Median Family Income (2012 \$)
Suffolk County	7.0%	\$36,819	\$100,179
Town of Brookhaven	6.3%	\$34,231	\$98,732
Census Tract 1587.07	4.9%	\$33,663	\$108,173
Census Tract 1591.06	4.1%	\$30,172	\$96,750

Source: U.S. Census Bureau, American Community Survey, 2008-2012 5-year average

X. Community Facilities and Services

There are few community facilities and services in proximity to the site. The Suffolk County Offices at 360 Yaphank Avenue and 335 Yaphank Avenue house several governmental offices, including County Board of Elections, Public Works Department, Transit Bus, and Wastewater Management. Adjacent to the county office building on the western side of Yaphank Avenue is Suffolk County Farm and Education Center. Other community facilities along Yaphank Avenue include the County Fire Academy, County Police Headquarters, and the Yaphank Correctional Facility. The Southaven County Park, encompassing 1,356 acres, is located along Gerard Road approximately 1.8 miles from the site.

Integrity Christian Fellowship Church is located at 1 Old Dock Road in the Sills Industrial Park. Baseball Heaven is a large, private sports facility at 350 Sills Road.

XI. Transportation

A. Roadway

The site has available highway access from County Road 101 (Sills Road) via the Brookhaven Rail Terminal site and the Interstate 495 Service Road.

Existing average annual daily traffic volumes (AADT) in the vicinity of the site are shown in Table 6.

Table 6: Average Annual Daily Traffic (AADT) for select roadway segments

Location	Segment	AADT
County Road 101 (Sills Road)	Station Road and County Road 16 (Horseblock Road)	17,000
	County Road 16 (Horseblock Road) and I-495 South Service Road	16,100
County Road 16 (Horseblock Road)	Station Road to County Road 101 (Sills Road)	22,800
	County Road 101 (Sills Road) and County Road 99 (Woodside Avenue)	10,900
I-495 (Long Island Expressway)	Exit 66 (Sills Road) and Exit 67 (Yaphank Avenue)	66,802

Source: Caithness Long Island II, Draft Environmental Impact Statement, December 2013.

Recent traffic analysis¹⁹ in the area also examined the applicable Level of Service (LOS) for roadway intersections. LOS is a representative measure of traffic flow based on the perception of delay from a typical motorist. LOS ranges from LOS A, which corresponds to generally congestion-free traffic conditions, to LOS F which corresponds to congested or "traffic jam" conditions.

¹⁹ Caithness Long Island II, LLC, December 2013. Caithness Long Island Energy Center II Draft Environmental Impact Statement. <http://www.brookhaven.org/Departments/PlanningEnvironment/PlanningandEnvironment.aspx>

Unsignalized intersections (i.e. stop-sign controlled intersections) were found to generally operate at an LOS B level. Signalized intersections were generally found to operate at LOS C or better (Table 7).

Table 7: Level of Service (LOS) for select roadway segments

Roadway	Intersection at:	LOS
County Road 16 (Horseblock Road)	County Road 101 (Sills Road)	C
	Old Dock Road	C
	Alexan Road	C
County Road 101 (Sills Road)	Long Island Avenue (South)	A
	Long Island Avenue (North)	A
	I-495 Service Road (South)	A
	I-495 Service Road (North)	B

Source: Calithness Long Island II, Draft Environmental Impact Statement, December 2013.

Additional analysis of transportation effects, including site trip generation, would likely be required to ensure the local transportation network could accommodate traffic generated by future development and operation of the site.

B. Rail

There are currently 74 passenger trains, including revenue and non-revenue movements, operating over the LIRR on an average weekday. Freight movements along the railroad generally occur during off-peak periods. The calculated freight movement capacity of the LIRR within the current passenger schedule is approximately 96,000 east-bound loads with westbound returns. In 2012, the New York and Atlantic Railway delivered approximately 20,610 carloads (including both eastbound and westbound return movements). Therefore, current freight movements on the LIRR represent less than 25 percent of the available operating capacity²⁰.

XII. Environmental Justice

The racial profile of the area population surrounding the site shows that lands to the north of the site show less racial diversity in comparison to the Town and County, while lands to the south show greater racial diversity (Table 8). It appears that the percentage of minority residents in Census Tract 1591.06 is concentrated in the Atlantic Point apartment complex south of Horseblock Road along Alexan Boulevard in the most southern portion of the socioeconomic study area.

²⁰ Long Island Railroad, September 2013. Long Island Rail Road Double Track Project, Ronkonkoma to Farmingdale, Environmental Assessment. <http://web.mta.info/lirr/doubletrack/environmentalassessment.htm>

Table 8: Racial demographics

Geography	Population/Race								Minority/Ethnic Characteristics		
	Total	White	Black or African American	American Indian & Alaska Native	Asian	Native Hawaiian & Other Pacific Islander	Some other race	Two or more races	Total Racial Minority Percentage	Hispanic Population	Hispanic Percentage
Suffolk County	1,493,350	1,206,297	111,224	5,366	50,972	495	82,965	36,031	19.2%	246,239	16.5%
Town of Brookhaven	486,040	410,649	26,639	1,368	19,082	152	16,855	11,295	15.5%	60,270	12.4%
Census Tract 1587.07	1,671	1,494	70	3	16	0	38	50	10.6%	164	9.8%
Census Tract 1591.06	6,887	5,226	899	17	253	2	244	246	24.1%	1,432	20.8%

Source: U.S. Census Bureau, 2010 Census SF1

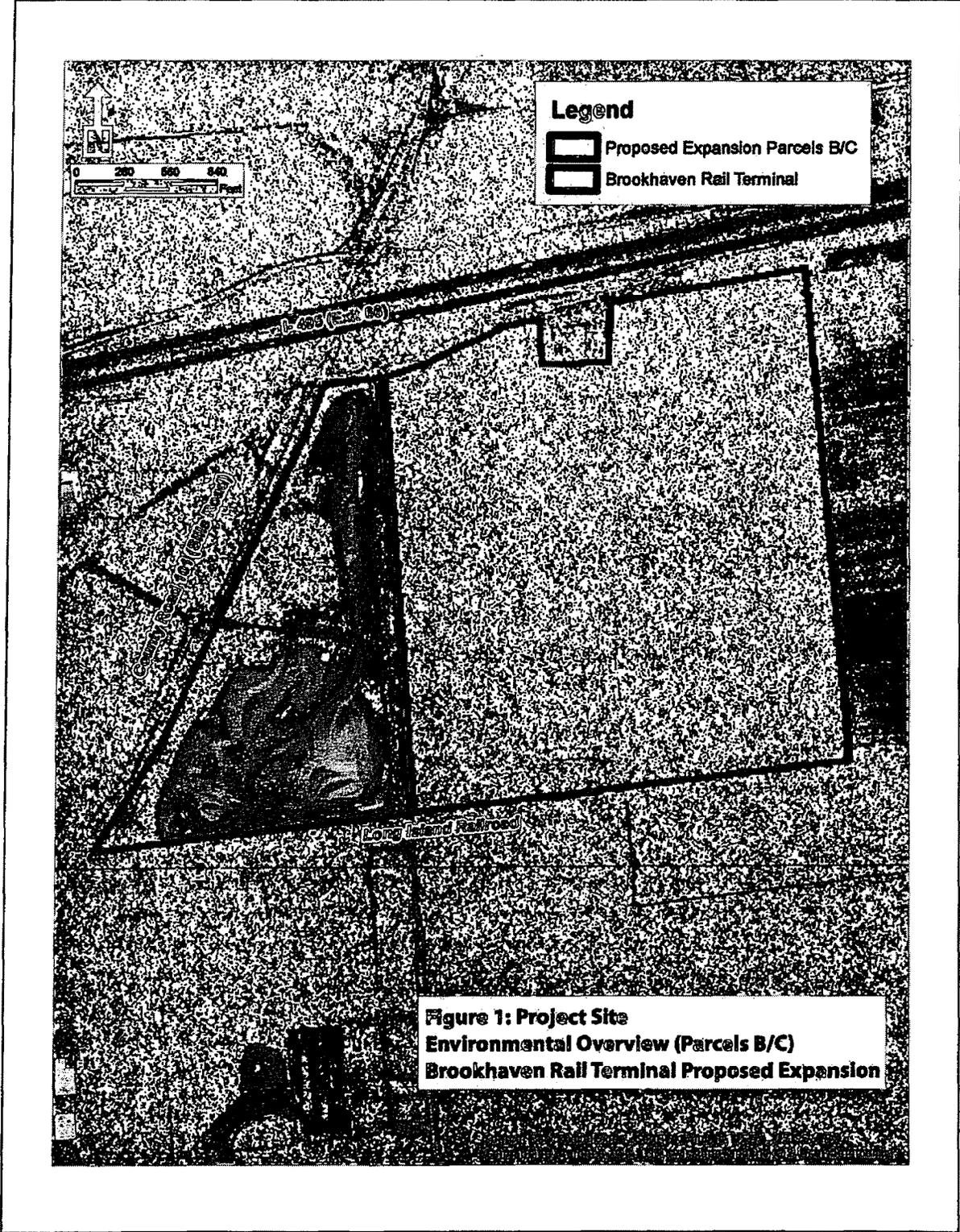
Estimates of poverty indicate that the area north of the site (Census Tract 1587.07) experiences a slightly greater percentage of poverty in comparison to the Town and County, while areas south of the site (Census Tract 1591.06) have a substantially lower percentage of residents living below poverty levels (Table 9).

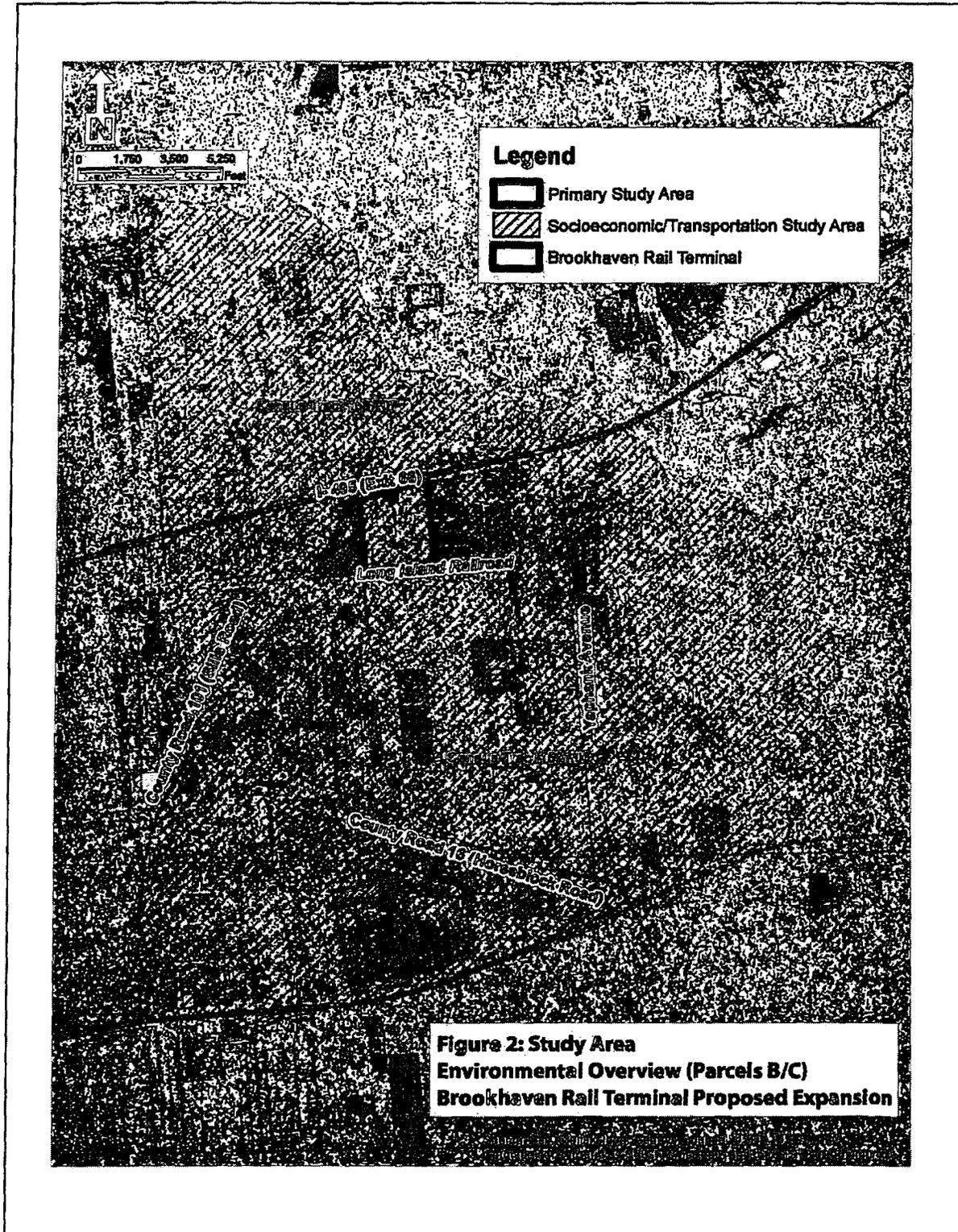
Table 9: Poverty characteristics

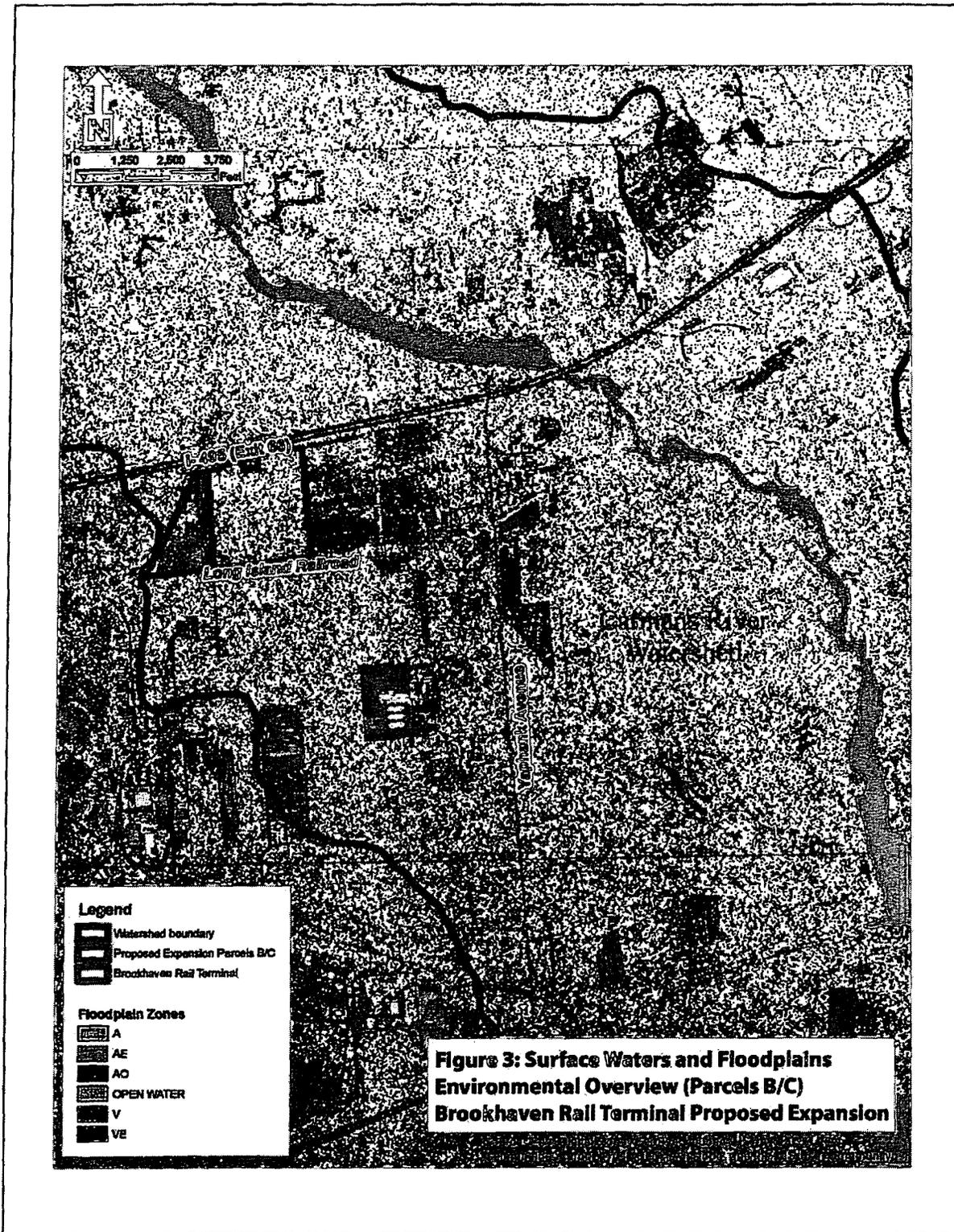
Geography	Total Population	Population living below poverty level	Percent of population living below poverty level
Suffolk County	1,465,199	89,650	6.1%
Town of Brookhaven	471,988	33,684	7.1%
Census Tract 1587.07	1,621	123	7.6%
Census Tract 1591.06	5,391	113	2.1%

Source: U.S. Census Bureau, 2008-2012 American Community Survey

As the site is generally distant from residential areas, environmental justice populations would not be expected to experience disproportionate effects from activities at the site.







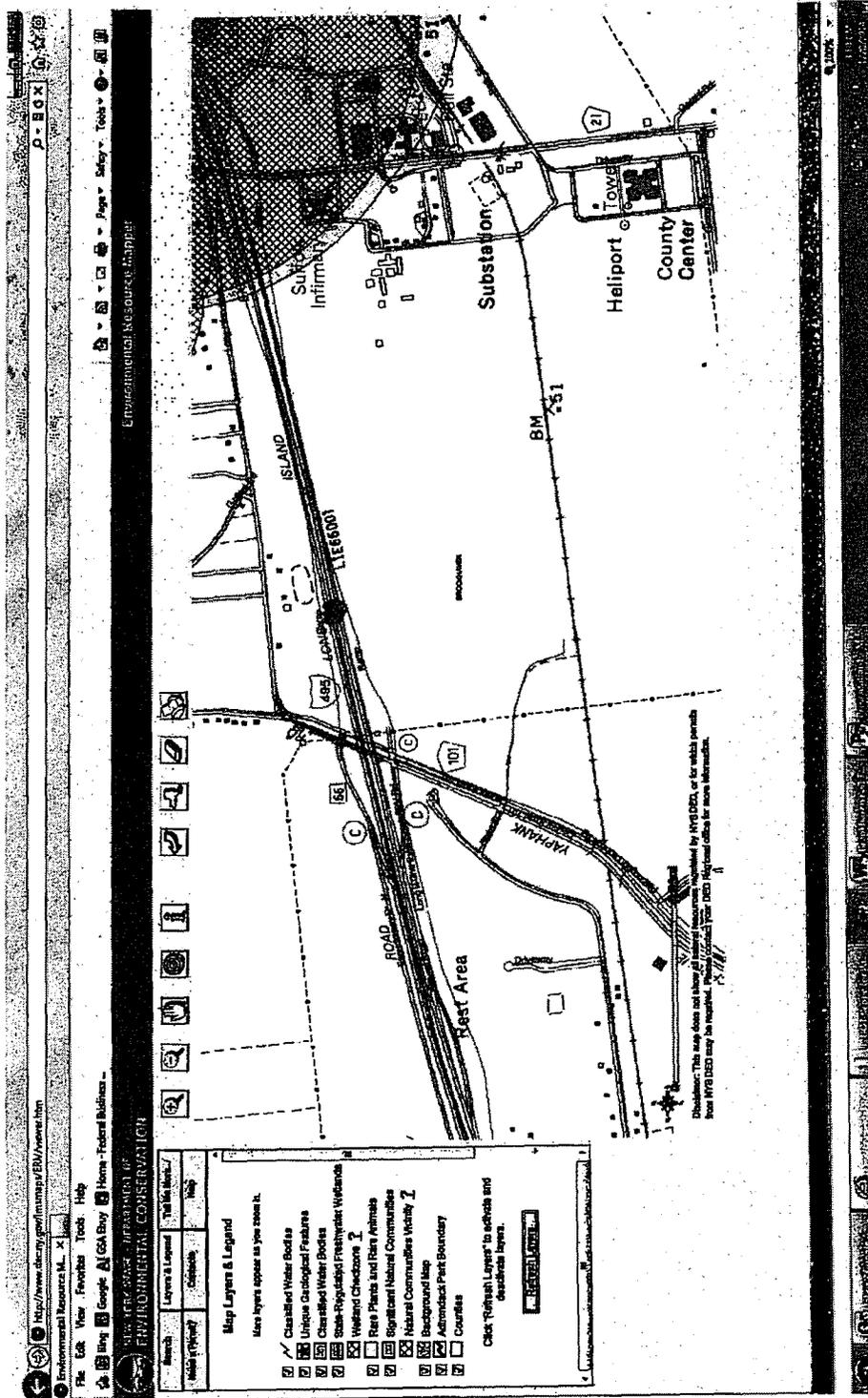


Figure 5: NYS DEC Environmental Mapper – Wetlands and Rare Plants and Rare Animals

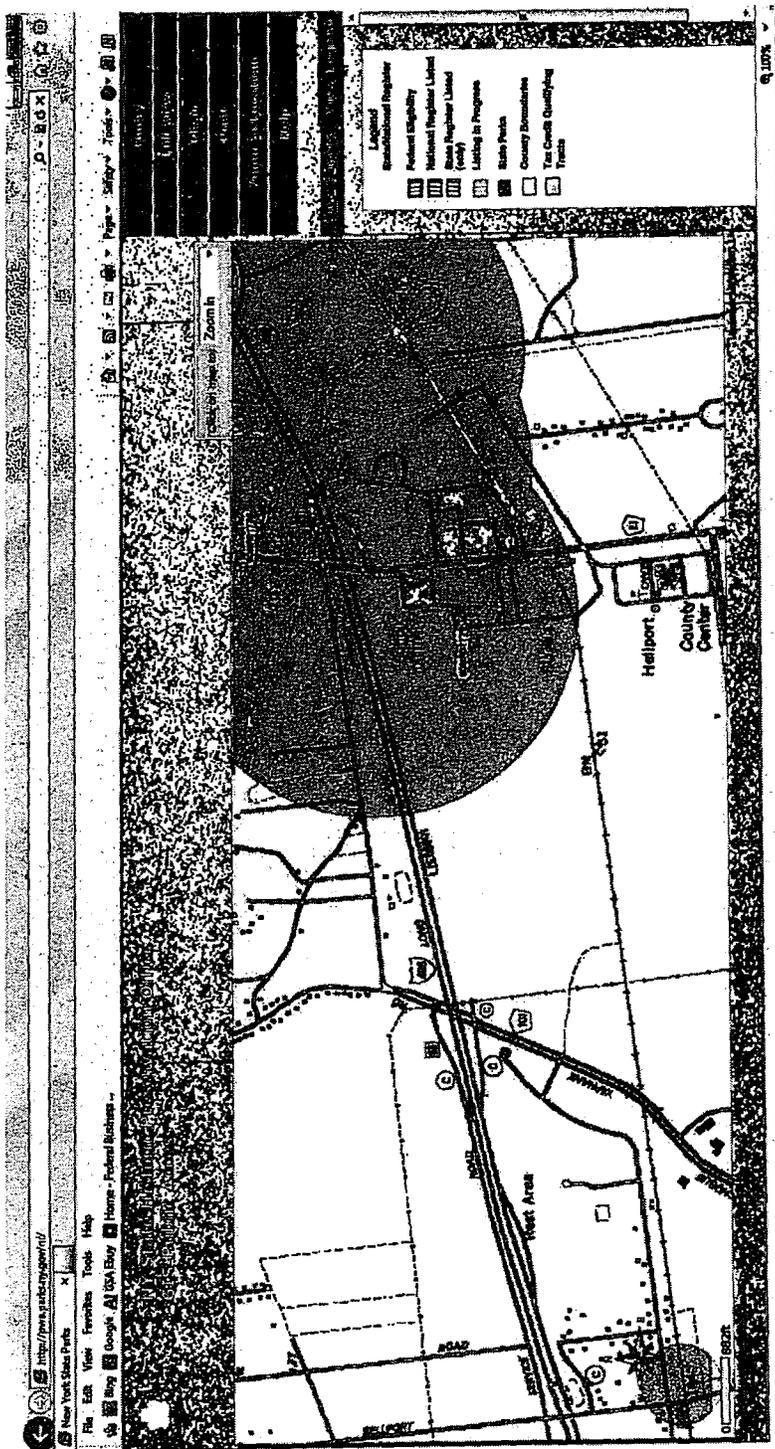


Figure 6: NY State Historic Preservation Office – Cultural Resources

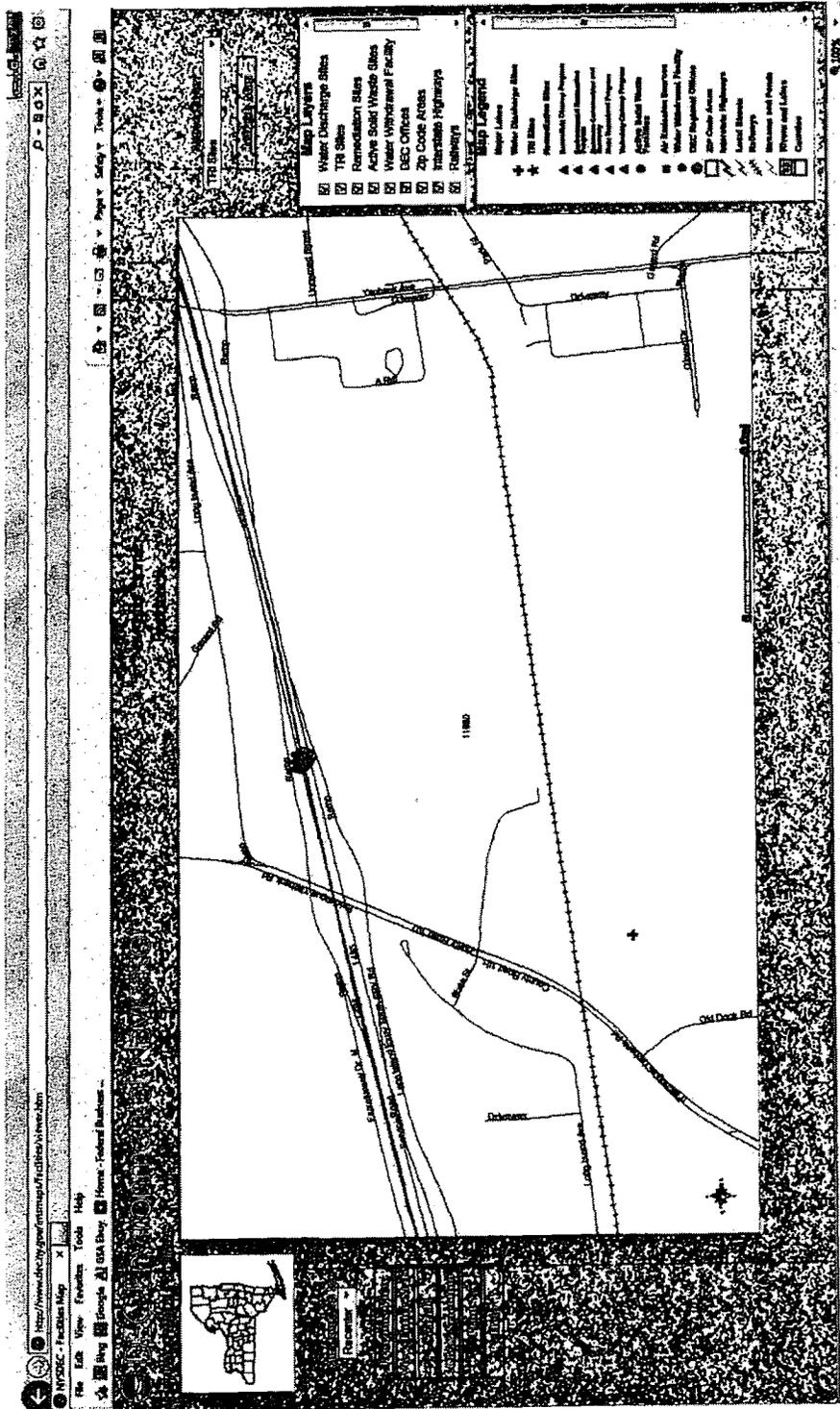


Figure 7: NYS DEC Environmental Navigator - Facilities

APPENDIX A

Custom Soil Report



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 Suffolk County, New York

Parcels B/C



January 20, 2014

Preface

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 (<http://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).

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface.....	2
How Soil Surveys Are Made.....	5
Soil Map.....	7
Soil Map.....	8
Legend.....	9
Map Unit Legend.....	10
Map Unit Descriptions.....	10
Suffolk County, New York.....	12
CpE—Carver and Plymouth sands, 15 to 35 percent slopes.....	12
HaA—Haven loam, 0 to 2 percent slopes.....	13
PIA—Plymouth loamy sand, 0 to 3 percent slopes.....	14
RdA—Riverhead sandy loam, 0 to 3 percent slopes.....	15
RdB—Riverhead sandy loam, 3 to 8 percent slopes.....	17
References.....	19

How Soil Surveys Are Made

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

Custom Soil Resource Report

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.

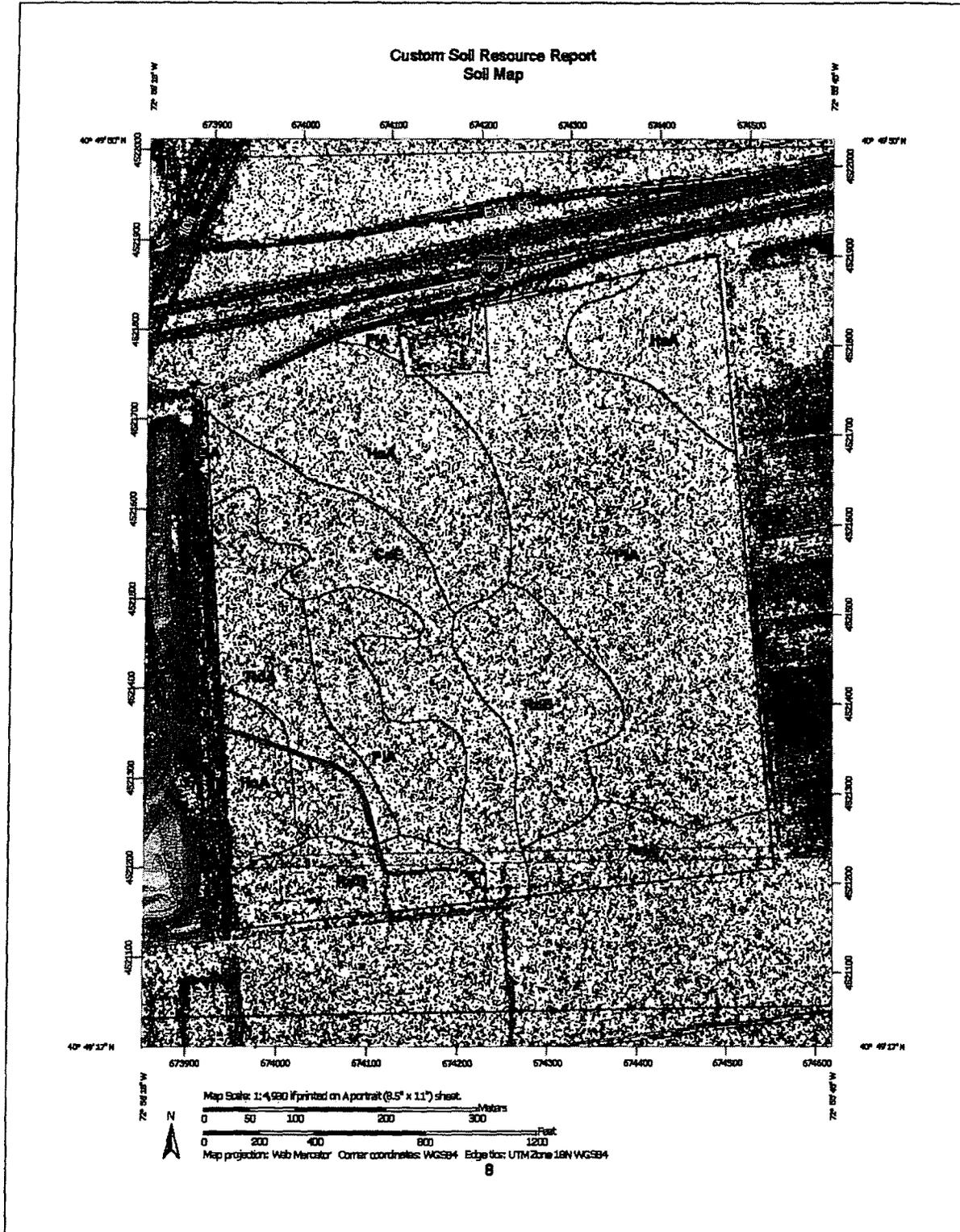
While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the 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 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

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

MAP LEGEND		MAP INFORMATION	
<p>Area of Interest (AOI)</p> <ul style="list-style-type: none"> Area of Interest (AOI) <p>Soils</p> <ul style="list-style-type: none"> Soil Map Unit Polygons Soil Map Unit Lines Soil Map Unit Points <p>Special Point Features</p> <ul style="list-style-type: none"> Blowout Borrow Pit Clay Spot Closed Depression Gravel Pit Gravelly Spot Landfill Levee Flow Marsh or swamp Mine or Quarry Miscellaneous Water Perennial Water Rock Outcrop Saline Spot Sandy Spot Severely Eroded Spot Shothole Slide or Slip Stale Spot 	<ul style="list-style-type: none"> Spill Area Stony Spot Very Stony Spot Wet Spot Other Special Line Features <p>Water Features</p> <ul style="list-style-type: none"> Streams and Canals <p>Transportation</p> <ul style="list-style-type: none"> Rails Interstate Highways US Routes Major Roads Local Roads <p>Background</p> <ul style="list-style-type: none"> Aerial Photography 	<p>The soil surveys that comprise your AOI were mapped at 1:20,000.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: Web Mercator (EPSG:3857)</p> <p>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.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Suffolk County, New York Survey Area Date: Version 11, Dec 15, 2013</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Mar 28, 2011--May 17, 2011</p> <p>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.</p>	

Custom Soil Resource Report

Map Unit Legend

Suffolk County, New York (NY103)			
Map Unit Symbol	Map Unit Name	Area in ACI	Percent of ACI
CpE	Carver and Plymouth sands, 15 to 35 percent slopes	11.6	12.3%
HaA	Haven loam, 0 to 2 percent slopes	20.9	22.1%
PIA	Plymouth loamy sand, 0 to 3 percent slopes	36.3	38.4%
RdA	Riverhead sandy loam, 0 to 3 percent slopes	12.9	13.6%
RdB	Riverhead sandy loam, 3 to 8 percent slopes	12.8	13.6%
Totals for Area of Interest		94.6	100.0%

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.

Custom Soil Resource Report

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.

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.

Custom Soil Resource Report

Suffolk County, New York

CpE—Carver and Plymouth sands, 15 to 35 percent slopes

Map Unit Setting

Mean annual precipitation: 45 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 225 days

Map Unit Composition

Carver and similar soils: 40 percent
Plymouth, sand, and similar soils: 40 percent
Minor components: 20 percent

Description of Plymouth, Sand

Setting

Landform: Outwash plains, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Acid sandy glaciofluvial or deltaic deposits

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Sand
4 to 27 inches: Sand
27 to 80 inches: Gravelly coarse sand

Description of Carver

Setting

Landform: Outwash plains, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse sandy glaciofluvial deposits

Custom Soil Resource Report

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.6 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: A

Typical profile

0 to 1 inches: Highly decomposed plant material
1 to 9 inches: Coarse sand
9 to 23 inches: Coarse sand
23 to 80 inches: Coarse sand

Minor Components

Carver, dark subsoil
Percent of map unit: 5 percent

Haven
Percent of map unit: 5 percent

Riverhead
Percent of map unit: 5 percent

Montauk, sandy variant
Percent of map unit: 5 percent

HaA—Haven loam, 0 to 2 percent slopes

Map Unit Setting

Mean annual precipitation: 45 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 225 days

Map Unit Composition

Haven and similar soils: 75 percent
Minor components: 25 percent

Description of Haven

Setting

Landform: Outwash plains

Custom Soil Resource Report

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits

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 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 1
Hydrologic Soil Group: B

Typical profile

0 to 2 inches: Highly decomposed plant material
2 to 5 inches: Loam
5 to 19 inches: Loam
19 to 28 inches: Gravelly loam
28 to 60 inches: Stratified gravelly sand

Minor Components

Riverhead

Percent of map unit: 5 percent

Scio

Percent of map unit: 5 percent

Unnamed soils, gravelly

Percent of map unit: 5 percent

Bridgehampton

Percent of map unit: 5 percent

Montauk

Percent of map unit: 5 percent

P1A—Plymouth loamy sand, 0 to 3 percent slopes

Map Unit Setting

Mean annual precipitation: 45 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 225 days

Custom Soil Resource Report

Map Unit Composition

Plymouth and similar soils: 85 percent
Minor components: 15 percent

Description of Plymouth

Setting

Landform: Moraines, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Acid sandy glaciofluvial or deltaic deposits

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.4 Inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3s
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Loamy sand
4 to 27 inches: Loamy sand
27 to 60 inches: Gravelly coarse sand

Minor Components

Riverhead

Percent of map unit: 5 percent

Montauk, sandy variant

Percent of map unit: 5 percent

Carver

Percent of map unit: 5 percent

RdA—Riverhead sandy loam, 0 to 3 percent slopes

Map Unit Setting

Mean annual precipitation: 45 to 50 Inches
Mean annual air temperature: 50 to 54 degrees F

Custom Soil Resource Report

Frost-free period: 150 to 225 days

Map Unit Composition

Riverhead and similar soils: 80 percent
Minor components: 20 percent

Description of Riverhead

Setting

Landform: Moraines, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits overlying stratified sand and gravel

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2s
Hydrologic Soil Group: A

Typical profile

0 to 12 inches: Sandy loam
12 to 27 inches: Sandy loam
27 to 35 inches: Gravelly loamy sand
35 to 65 inches: Stratified coarse sand to gravelly sand

Minor Components

Plymouth

Percent of map unit: 5 percent

Sudbury

Percent of map unit: 5 percent

Haven

Percent of map unit: 5 percent

Montauk, sandy variant

Percent of map unit: 3 percent

Riverhead, silt loam layers

Percent of map unit: 2 percent

Custom Soil Resource Report

RdB—Riverhead sandy loam, 3 to 8 percent slopes

Map Unit Setting

Mean annual precipitation: 45 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 225 days

Map Unit Composition

Riverhead and similar soils: 80 percent
Minor components: 20 percent

Description of Riverhead

Setting

Landform: Moraines, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits overlying stratified sand and gravel

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2s
Hydrologic Soil Group: A

Typical profile

0 to 12 inches: Sandy loam
12 to 27 inches: Sandy loam
27 to 35 inches: Gravelly loamy sand
35 to 65 inches: Stratified coarse sand to gravelly sand

Minor Components

Plymouth

Percent of map unit: 5 percent

Bridgehampton

Percent of map unit: 5 percent

Custom Soil Resource Report

- Haven**
Percent of map unit: 5 percent
- Montauk, sandy variant**
Percent of map unit: 3 percent
- Riverhead, silt loam layers**
Percent of map unit: 2 percent

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/forestry/pub/>
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelpdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B

U.S. Fish and Wildlife Service IPAC Report



U.S. Fish and Wildlife Service

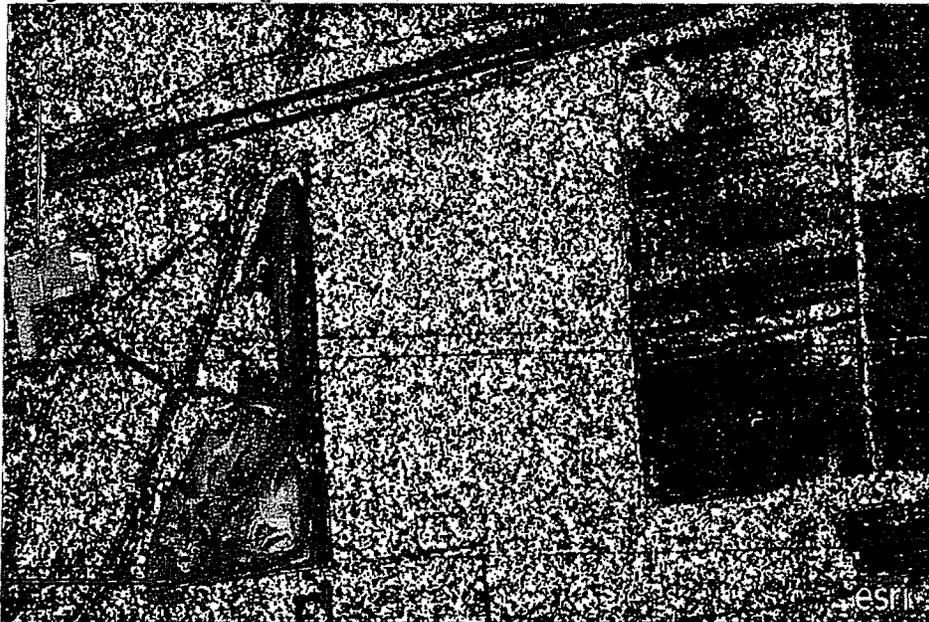
Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

LONG ISLAND ECOLOGICAL SERVICES FIELD OFFICE
340 SMITH ROAD
SHIRLEY, NY 11967
(631) 286-0485

Project Location Map:





U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Counties:

Suffolk, NY

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-72.9378144 40.828081, -72.9351966 40.8288929, -72.9350679 40.8283733, -72.933995 40.8285032, -72.9340808 40.8290893, -72.9309051 40.8296105, -72.9301755 40.8233772, -72.9370849 40.8226254, -72.9378144 40.828081)))

Project Type:

Development

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of 6 threatened, endangered, or candidate species, and/or designated critical habitat on your species list. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project:

Birds	Status	Species Profile	Contact
Piping Plover (<i>Charadrius melodus</i>) Population: except Great Lakes watershed	Threatened	species info	Long Island Ecological Services Field Office
Red Knot (<i>Calidris canutus rufa</i>)	Proposed Threatened	species info	Long Island Ecological Services Field Office
Roseate tern (<i>Sterna dougallii dougallii</i>) Population: northeast U.S. nesting pop.	Endangered	species info	Long Island Ecological Services Field Office
Flowering Plants			
Sandplain gerardia (<i>Agrostis acuta</i>)	Endangered	species info	Long Island Ecological Services Field Office
Seabeach amaranth (<i>Amaranthus pumilus</i>)	Threatened	species info	Long Island Ecological Services Field Office
Mammals			



U.S. Fish and Wildlife Service

Natural Resources of Concern

northern long-eared Bat <i>(Myotis septentrionalis)</i> Population:	Proposed Endangered	species info	Long Island Ecological Services Field Office
---	------------------------	--------------	---

FWS National Wildlife Refuges (USEWS National Wildlife Refuges Program).
There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USEWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.

NWI Wetlands (USEWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

The following wetlands intersect your project area:

Wetland Types	NWI Classification Code	Approximate Acres
Freshwater Pond	EUREK	0.55285