A. INTRODUCTION

This chapter provides a description of the baseline conditions found within the East Quogue study area. Each section details the environmental and/or social issues that are relevant to the study area as they relate to land use, population and housing, community services, economic characteristics, open space, natural, scenic, cultural and water resources, and traffic.

B. LAND USE, ZONING, AND NEIGHBORHOOD CHARACTER

This section describes the land use, zoning, and community character conditions of the study area. As part of this analysis, current and future residential zoning densities are examined to determine possible impacts on future land use under the proposed scenarios. This discussion will also evaluate the consistency of the proposed action with the Town's zoning ordinance, land use regulations, and master plan.

Historically, Southampton has been an agricultural, maritime, and resort community with large expanses of open land such as the Central Pine Barrens. As a result of improved access and regional growth trends, particularly in the latter half of the 20th century, the Town experienced significant increases in its year-round and seasonal residential populations. Over time, this trend has led to increased tourism and seasonal home economies, and as a result the Town has experienced substantial growth in residential development and population growth.

Almost 20 percent of the total land inventory in the Town (about 17,000 acres) remains undeveloped and is largely contained within the Central Pine Barrens in the western half of the Town including a portion of the East Quogue study area. However, there are intense pressures to develop these lands outside the pinelands Core Preservation Area.

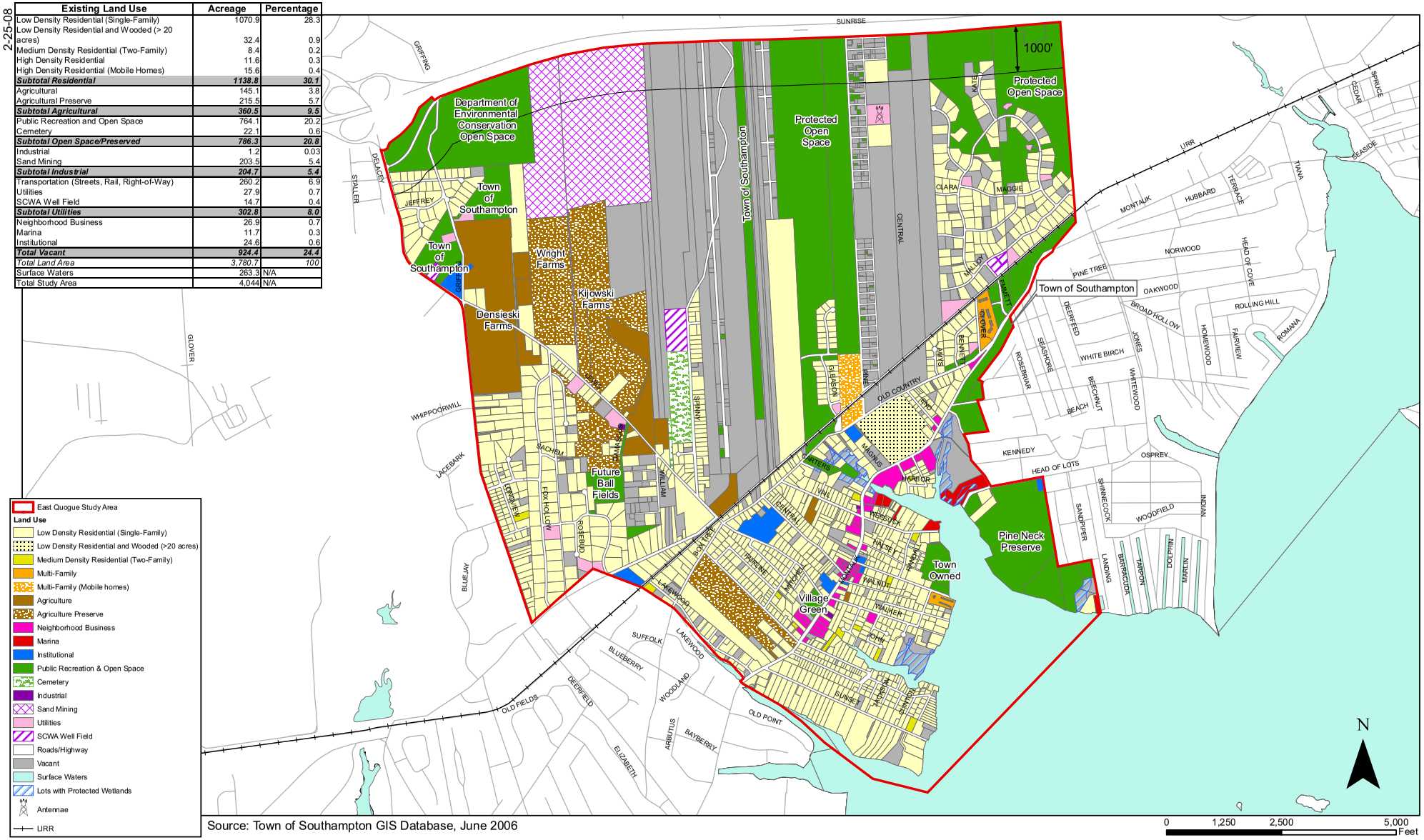
During the 1980s, Southampton sought to control the loss of open space and farmland through the use of large-lot zones, such as "Country Residence 200" (CR200) and "Country Residence 120" (CR120), which allows lots approximately 5 acres and 3 acres in size, respectively. Over 40 percent of the East Quogue study area is now zoned CR200. Although this practice of upzoning has been effective in limiting overall density, it does not preserve large parcels as undeveloped open space. The Town has, however, also found the use of cluster zoning to be effective. Cluster zoning is a technique that places residential lots on a smaller portion of the total development parcel by reducing the required minimum lot size, thus preserving the remaining land as open space.

STUDY AREA LAND USE

The hamlet of East Quogue is located within the western portion of the Town of Southampton (i.e., west of the Shinnecock Canal), and the East Quogue study area covers approximately 4,044 acres (3,781 acres of land area) of the hamlet. Figure 2-1 shows the existing study area land use based on the Town's tax records and field reconnaissance performed during the summer of 2006.

2-25-08

Existing Land Use	Acreage	Percentage
Low Density Residential (Single-Family)	1070.9	28.3
Low Density Residential and Wooded (> 20 acres)	32.4	0.9
Medium Density Residential (Two-Family)	8.4	0.2
High Density Residential	11.6	0.3
High Density Residential (Mobile Homes)	15.6	0.4
Subtotal Residential	***1138.8***	***30.1***
Agricultural	145.1	3.8
Agricultural Preserve	215.5	5.7
Subtotal Agricultural	***360.5***	***9.5***
Public Recreation and Open Space	764.1	20.2
Cemetery	22.1	0.6
Subtotal Open Space/Preserved	***786.3***	***20.8***
Industrial	1.2	0.03
Sand Mining	203.5	5.4
Subtotal Industrial	***204.7***	***5.4***
Transportation (Streets, Rail, Right-of-Way)	260.2	6.9
Utilities	27.9	0.7
SCWA Well Field	14.7	0.4
Subtotal Utilities	***302.8***	***8.0***
Neighborhood Business	26.9	0.7
Marina	11.7	0.3
Institutional	24.6	0.6
Total Vacant	***924.4***	***24.4***
Total Land Area	*3,780.7*	*100*
Surface Waters	263.3	N/A
Total Study Area	4,044	N/A



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Existing Land Use (2007)
Figure 2-1

Table 2-1 presents the study area land coverage by acreage. As the table shows, the overall study area is predominately residential lands including the Pines and Malloy Drive subdivisions, or approximately 30 percent (1,139 acres), made up primarily of low density (single-family) homes, but with some medium density (two-family) homes, and high density (multi-family homes or mobile homes) uses as well. Residential uses are largely concentrated in the southern portion of the study area (i.e., south of the Long Island Rail Road [LIRR] tracks). As described in more detail in Section E, "Economic and Fiscal Considerations," between 1990 and 2000, the seasonal population within the study area has decreased by almost 13 percent. This decline shows evidence of a turnover from seasonal to year-round residency within the study area.

Table 2-1
Existing Study Area Land Use

Land Use Class	Land Area (acres)	Percent of Total Land Area
Low Density Residential (Single-Family)	1070.9	28.3
Low Density Residential and Wooded (> 20 acres)	32.4	0.9
Medium Density Residential (Two-Family)	8.4	0.2
High Density Residential	11.6	0.3
High Density Residential (Mobile Homes)	15.6	0.4
Agricultural	145.1	3.8
Agricultural Preserve	215.5	5.7
Public Recreation and Open Space	764.1	20.2
Cemetery	22.1	0.6
Institutional	24.6	0.6
Neighborhood Business	26.9	0.7
Marina	11.7	0.3
Industrial	1.2	0.03
Sand Mining	203.5	5.4
Transportation (Streets, Rail, Right-of-Way)	260.2	6.9
Utilities	27.9	0.7
SCWA Well Field	14.7	0.4
Vacant	924.4	24.4
Total Land Area	3,780.7	100
Surface Waters	263.3	N/A
Total Study Area	**4,044**	**N/A**

Sources: Town of Southampton Town Code and Division of Information Systems, August 2006, December 2007.

Vacant lands are the second most prevalent land use at almost 25 percent (924 acres) of the study area. With the exception of isolated vacant parcels located south of the LIRR track where residential uses dominate, the majority of vacant land is featured north of the LIRR track to Sunrise Highway.

Public recreation and open space, the third most prevalent land use in the study area, accounts for 786 acres, or 21 percent of the study area total. This figure includes Town-owned open space—land that is set aside as part of a cluster subdivision or Planned Development District (PDD)—County and State lands, and cemeteries. From east to west, the significant open space areas start at the Pine Neck Preserve and continue up to Sunrise Highway in an almost contiguous band that runs along the eastern border of the study area. This open space connects to

two western open space concentrations via the Sunrise Highway vegetated right-of-way (see also Section F, "Open Space").

About 361 acres, or less than 10 percent of the total land in the study area, is used for agricultural purposes, with about 216 of those acres permanently preserved including the Miller and Kijowski Farms. These agricultural lands are found in the western portion of the study area within the Agricultural Overlay District. Of the three distinct areas that comprise the Agricultural Overlay District west of Shinnecock Canal, the study area includes two of those areas.

There are approximately 233 acres designated for industrial and utility use within the study area. These are predominantly privately held sand mining operations (East Coast Mines and Sand Farm Corporation) located in the northwestern portion of the study area (about 205 acres), with small areas of utility space accounted for in the recharge basins of residential subdivisions. These basins have been dedicated to the Town for utility purposes.

Much of the balance of the study area land is neighborhood business (27 acres), which is centered along Montauk Highway, East Quogue's Main Street. A detailed description of the businesses that comprise this district is provided below under Section E, "Economic and Fiscal Considerations." Other uses that complete the study area land pattern are institutional (25 acres), mainly the East Quogue Elementary School and various religious centers; and marina (12 acres). Finally, there are transportation/streets, rail, right-of-way (260 acres), Suffolk County Water Authority well fields (15 acres); and open water (263 acres).

ZONING AND LAND USE REGULATIONS

CHAPTER 330: ZONING

Zoning Districts: Land Use Districts and Densities

The study area consists of a number of zoning districts (see Table 2-2 below and Figure 1-4).

As Table 2-2 shows, over 85 percent of the study area is zoned for residential uses, the majority of which are in the CR200 and CR120 districts (44 percent of the total area). As shown on Figure 1-4, the larger lot zoning districts are entirely located north of the LIRR tracks. The CR200 zoning district allows single-family homes on 200,000 square feet of land (about 5 acres) while the CR120 district allows single-family homes on 120,000 square feet of land (about 3 acres). CR80 and R20 zoning, which allow single-family residences to be built on lots of 80,000 square feet (1.8 acres) and 20,000 square feet (0.5 acres), comprise 18 and 12 percent of the study area, respectively. These four residential zoning districts account for over 70 percent of the study area. Land uses permitted within these zoning districts are generally limited to single-family detached dwellings; parks, playgrounds, and recreation areas; plant nurseries; fire stations; municipal offices; schools; agricultural uses (excluding livestock); and accessory uses. The SC44 district allows only senior citizen housing; parks, playgrounds, and recreation areas; and plant nurseries.

Table 2-3 shows the dimension and coverage regulations for the residence and business zoning districts of the study area.

About 11 percent of the study area is dedicated TDR (Transfer of Development Rights). This district was established in 1988 when approximately 249 acres of the study area were deeded

and transferred to the Town of Southampton in association with the Malloy subdivisions (including the 30-lot subdivision on Gleason Drive and the Pines subdivision).

Table 2-2
Zoning Districts in the Study Area

Zoning District	Land Areas (acres)	Percent of Total Area
CR200: Country Residence	901.5	23.8
CR120: Country Residence	756.1	20.0
CR80: Country Residence	687.6	18.2
R80: Residence	148.0	3.9
R60: Residence	19.3	0.5
R40: Residence	302.3	8.0
R20: Residence	455.5	12.0
SC44: Senior Citizen Residence	9.0	0.2
HO: Hamlet Office/Residence	29.1	0.8
HC: Hamlet Commercial/Residence	8.5	0.2
VB: Village Business	11.7	0.3
RWB: Resort Waterfront Business	21.8	0.6
LI200: Light Industrial	17.3	0.5
TDR: Transfer of Development Rights	412.9	10.9
Total	**3780.7**	**100**

Sources: Town of Southampton Town Code and Division of Information Systems, August 2006

Less than 3 percent of the study area is zoned for residential/commercial and light industrial uses within the HO (Hamlet Office/Residence), HC (Hamlet Commercial/Residence), VB (Village Business), RWB (Resort Waterfront Business), and LI200 (Light Industry) districts. The HO, HC, and VB districts are to promote a hamlet center where a mixture of residential, business (such as shopping and personal services), and community facility uses is encouraged. The HO and HC districts were recently adopted (in 2005) for the hamlet of East Quogue to eliminate the HB (Highway Business) district, which was in conflict with the small lot sizes and residential uses that dominate the East Quogue hamlet center. These districts also replaced a large portion of the VB district in this area to promote a more compatible mix of uses with the surrounding historic community character.

The HO and HC districts allow similar uses, i.e., offices, housing, and low-traffic generating retail and service uses such as antique stores, galleries, and restaurants without liquor licenses. In addition, the HC district would permit by special exception some of the commercial and retail uses allowed in the VB district.

The following uses are allowed in the VB district: dwellings lawfully existing prior to adoption of the current regulations; park, playground, or recreation areas when authorized or operated by the municipality; church or similar place of worship or religious instruction, parish house, rectory, seminary, or convent; public library or museum; fire station, municipal office or government building; school (elementary or high), public denominational or private, operated or licensed by the New York State Education Department; bus passenger shelter; medical arts building; agricultural greenhouse; plant nursery; retail business, office business, personal services, amusement and recreational uses, and accessory uses.

Table 2-3
Zoning Lot Regulations for Districts in the Study Area

Use Districts	Minimum (square feet)	Maximum Lot Coverage	Minimum Lot Width (feet)	Maximum Height		Setbacks		
				Stories	Feet	Front	Side	Rear
CR200: Country Residence	200,000	5	200	2	32	100	50	100
CR120: Country Residence	120,000	10	200	2	32	80	30	100
CR80: Country Residence	80,000	10	175	2	32	80	30	100
R80: Country Residence	80,000	10	175	2	32	80	30	100
R60: Residence	60,000	15	150	2	32	80	25	100
R40: Residence	40,000	20	150	2	32	60	20	70
R20: Residence	20,000	20	120	2	32	40	20	60
SC44: Senior Citizen Residence	44,000	20	200	2	32	50	50	50
HO: Hamlet Office/Residence*	10,000	20	75	2	32	30	15	30
HC: Hamlet Commercial/ Residence*	10,000	20	75	2	32	30	15	30
VB: Village Business	N/A	70	20	2	35	10	N/A	35
RWB: Resort Waterfront Business	40,000	20	150	2	35	60	50	50
LI200: Light Industrial	200,000	20	300	3	40	60	60	60
TDR: Transfer of Development Rights	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: * These districts also maintain performance standards that require buildings to appear residential (i.e., no front, rear or side parking; residential style windows and entries; pitched roofs; and discrete signage).
Source: Town of Southampton Town Code, September 2006

Like the VB district, no residential uses are permitted in the RWB district. The intent of the RWB district is to promote commercial business including hotels and motels along the waterfront. Specifically, the following uses are permitted by special exception: bar, tavern or nightclub; bowling alleys or billiards; other outdoor activities; motels; marinas and yacht clubs; waterfront business complex; noncommercial educational, scientific, and research organization to study the marine environment; fresh or frozen packaged fish or commercial fishing facilities; ship and boat building and repairing; and boatyards. Permitted uses include church or similar place of worship or religious instruction; parish house, rectory, seminary or convent; park, playground or recreational area when authorized or operated by the municipality; fire station or any governmental building; school, elementary or high, public denominational or private, operated or licensed by the New York State Education Department; bus passenger shelter; agriculture excluding animal husbandry and restaurants. Accessory uses including docks or similar marine structures are permitted in this district.

The following uses are generally permitted in the Light Industry (LI200) district: dwellings lawfully existing prior to adoption of the current regulations; residential community facilities;

general community facilities (e.g., bus passenger shelter, sewage treatment plant or water supply facility); agricultural business uses (mainly by special exception); wholesale uses (by special exception only); limited retail business uses (largely by special exception); office business and service uses (with the exception of taxicab services, by special exception only); nonmanufacturing industrial uses by special exception; manufacturing industrial uses; and other accessory uses.

Other Zoning Districts

As discussed in detail in Chapter 1, "Project Background," there are several additional zoning districts that affect the study area including Planned Development District, Aquifer Protection Overlay District, Agricultural Overlay District, Old Filed Map Overlay District, Central Pine Barrens Overlay District, and Transfer of Development Rights. The intent of each of these districts is provided below:

Planned Development District. The purpose of this district is to protect natural resources while accommodating and providing for economic growth. It is intended that the district be used to achieve desirable development through the use of creative and imaginative site planning and design for residential, mixed-use, commercial, and industrial developments that might otherwise not be achievable under conventional zoning. PDD can also serve as receiving sites for Pine Barrens credits and other applicable development right transfers. Bonuses can also be awarded for providing substantial community benefits.

Aquifer Protection Overlay District.[1] As an overlay district, special provisions apply to all lots within this district regardless of their underlying zoning designations. This district aims to regulate land use to further protect and limit adverse impacts to water quality and quantity. In addition to regulating land use, specific measures that protect natural vegetation have also been established within the district. The purpose is to maximize groundwater recharge and to minimize nitrogen loading from fertilizers. Within the East Quogue study area, all lands north of the LIRR tracks are located in the Aquifer Protection Overlay District, see Figure 1-5.

Agricultural Overlay District. The purpose of this district is to encourage and make economically feasible the preservation of prime land for agricultural purposes through various programs including Planned Residential Developments, TDR, purchase of development rights, Agricultural PDDs, and private conservation donations. Approximately 456 acres of land in the western portion of the study area, both north and south of the LIRR tracks are featured in the Agricultural Overlay District, see Figure 1-5.

Old Filed Map Overlay District. This district applies to the more than 300 subdivision maps filed with the office of the Suffolk County Clerk prior to May 13, 1931, which have no record of approval by either the Planning Board or the Town Board. These maps, referred to as "old filed maps" are generally comprised of lots as small as 20 feet by 100 feet and are smaller than the minimum required in their applicable districts. Most of these lots are located in residentially zoned districts. (The entire study area is located within this overlay district.) The Town has created an Old Filed Map Overlay District to establish standards and procedures for the redevelopment of these nonconforming properties.

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[1] The Aquifer Protection Overlay District covers the study area north of the LIRR tracks, but is larger, and includes the Town's Agricultural Overlay District, which also covers a portion of the western segment of the study area.

Central Pine Barrens Overlay District. This overlay district covers the same land area as the Central Pine Barrens Plan. The Town also adopted this overlay district to equitably meet the economic and environmental needs of the Pine Barrens and to achieve sustainable development. The district allows transfer of development rights from the Central Pine Barrens district to approved receiving areas. Figure 1-7 depicts these overlay district boundaries.

Transfer of Permitted Residential Development Rights. The provisions of the Town Code relative to the transfer of permitted residential development rights were enacted to implement the *1999 Comprehensive Plan Update* and the *Central Pine Barrens Comprehensive Land Use Plan*. The purpose of these provisions is to provide a means for achieving community planning objectives in connection with the area's natural resources, population, utilities, and housing, while maintaining the overall ratio established between potential build-out population and the safe yield of the aquifer.

CHAPTER 292: SUBDIVISION OF LAND

The Town Planning Board reviews subdivision proposals pursuant to Chapter 292. As part of the subdivision review process, the Town has established general requirements and performance standards that determine whether an application is minor or major. An application is a minor review if 10 lots or less and does not involve the construction of new streets, impact wetlands, require drainage facilities, or expand by more than 5 percent the traffic carrying capacity of the improved local street system. As part of the minor subdivision review procedure, the Planning Board has the option to hold a public hearing.

A major subdivision requires the submission of detailed plans (e.g., drainage plans, street profiles, landscape plans), and requires the Planning Board to hold a public hearing.

A key element in Chapter 292 is the preservation and protection of the natural environment which includes natural terrain, wetlands, steep slopes, unique vegetation and wildlife habitat, flood plains, watercourses, and groundwater recharge areas. Soil erosion and sediment control practices may also be required. Street trees are required unless existing trees can be left in place.

CHAPTER 140: COMMUNITY PRESERVATION FUND

The Community Preservation Fund (CPF) was established in 1998 as a funding mechanism to provide for open space acquisition. This fund is supported through a 2 percent real estate transfer tax. In Southampton, this tax is levied on the sale of vacant land valued at more than $100,000 and on improved property valued at more than $250,000.

An Advisory Board consisting of seven Town residents is responsible for reviewing and making recommendations on proposed acquisitions of interests in real property using monies from the fund. In accordance with Chapter 140, lands acquired and managed under this program are to be used for: public enjoyment in a manner compatible with the natural, scenic, and open space character of such lands; preservation of the native biological diversity of such land; enhancing access for passive uses of such land; and preserving culturally significant property consistent with accepted standards for historic preservation. A more detailed discussion of the CPF is provided in Chapter 1, “Project Background,” and Section F, “Open Space.”

CHAPTER 243: OLD FILED MAPS

There are more than 300 subdivision maps for the Town that were filed with the office of the Suffolk County Clerk prior to May 13, 1931, where there is no record of approval by either by

the Planning Board or the Town Board. The Town has created an Old Filed Map Overlay District, discussed above, to establish standards and procedures for the redevelopment of these nonconforming properties.

The Town has also established an Old Filed Map Land Bank Program. One of the main objectives of this program is to promote and manage the orderly development of old filed maps by the acquisition, holding, and disposition of development rights or land. These development rights and/or land would be purchased from funds contained within the Town's Land Bank Trust Fund.

CHAPTER 325: WETLANDS

Wetlands (freshwater, brackish, and tidal) are protected pursuant to Chapter 325 of the Town Code. In establishing Chapter 325, the Town Board created a policy to achieve no net loss of existing wetlands and to restore and create wetlands where appropriate. The Town Code lists activities that require a permit in wetland areas or within 200 feet of a wetland boundary. Permits are sought from the Conservation Board or Planning Board (the approving authority depends on type of application). Permits may also be issued by the Town's Chief Environmental Analyst for certain kinds of activities, i.e., administrative wetlands permits. A more detailed description of the Town's wetlands regulations is provided in Chapter 1, "Project Background."

C. POPULATION AND HOUSING

The Town of Southampton and the study area feature both a year-round and seasonal population. The growth in both housing and population over the past few decades is consistent with the trends on the East End as a whole. However, seasonal population growth, in particular, remains a defining characteristic for Southampton. In addition to this seasonal population, East Quogue maintains a year-round population. In fact, about 24 percent of East Quogue's population is attributable to seasonal use whereas the Town as a whole maintains a 35 percent seasonal population (US Census 2000).

This section reviews population and housing trends that have shaped the Town and the study area, estimates future population and housing conditions, and assesses the impacts on population and housing.

POPULATION

HISTORICAL GROWTH

The Town of Southampton has the largest total population of the five East End towns and population is almost double that of the second most populated, Riverhead. As illustrated in Table 2-4, the Town's population has grown from 36,154 in 1970 to an estimated 58,564 in 2005. This represents a 62 percent increase in population over 35 years, or a 1.8 percent annual growth rate. Over the same period, the population of Suffolk County grew by 32 percent (a 0.9 percent annual growth rate), increasing from 1,127,030 in 1970 to 1,483,369 persons in 2005.

Population growth rates of the Town and County have shifted significantly since 1970. Both the Town and the County saw a substantial increase in population during the 1970s, each growing at a rate of 19.3 and 13.9 percent respectively. From 1980 through 1990, the population growth of both sectors continued, but at a much slower pace with a respective increase of 6.4 and 3.0

percent. However, Southampton's year-round population rebounded in the 1990s with a 20.3 percent growth surge while Suffolk County experienced a population gain of 7.3 percent.

Table 2-4
Historical Population Growth, 1970 to 2005

	1970	1980	1990	2000	2005 Estimate	% Change 1970-1980	% Change 1980-1990	% Change 1990-2000	% Change 2000-2005	% Change 1970-2005
Riverhead	18,909	20,243	23,011	27,680	32,028	7.1	13.7	20.3	15.7	69.4
Southold	16,804	19,172	19,836	20,599	22,344	14.1	3.5	3.8	8.5	33.0
Shelter Island	1,644	2,071	2,263	2,228	2,439	26.0	9.3	-1.5	9.5	48.4
East Hampton	10,980	14,029	16,132	19,647	21,268	27.8	15.0	21.8	8.3	93.7
Southampton	36,154	43,146	45,909	55,216	58,564	19.3	6.4	20.3	6.1	62.0
Study Area	N/A	N/A	2,166[1]	2,473[1] 2,153[2]	2,624[3] 2,284[4]	N/A	N/A	14.2	6.1	N/A
Suffolk County	1,127,030	1,284,231	1,322,535	1,419,369	1,483,396	13.9	3.0	7.3	4.5	31.6
Nassau/ Suffolk	2,555,869	2,605,813	2,609,883	2,753,145	2,831,753	2.0	0.2	5.5	2.9	10.8

Note: [1]Based on 2000 US Census Block Groups
[2]Based on 2000 US Census Block data
[3]Estimated based on 2000 US Census Block Group data and the Town of Southampton's growth rate between 2000 and 2005 (6.1 percent).
[4]Estimated based on 2000 US Census Block data and the Town of Southampton's growth rate between 2000 and 2005 (6.1 percent).

Sources: US Census 1970, 1980, 1990, and 2000; Long Island Population Survey; Long Island Power Authority 2005

HISTORICAL AND CURRENT DENSITIES

Table 2-5 illustrates population densities in the study area, Town, and County. As shown in the table, population density has seen an increase in all three areas. While population density is greater in Suffolk County as a whole than in Southampton (2.43 persons per acre versus 0.62 persons per acre in 2000) and the study area, population density has been increasing at a much faster rate locally. Population density within the study area increased from 0.57 persons per acre in 1990 to 0.65 persons in 2000, or a 14 percent increase. Likewise, population density in all of Southampton increased 20 percent in the same period, and has risen almost 53 percent from 1970 to 2000. In contrast, population density in Suffolk County increased only 7 percent from 1990 to 2000, and 26 percent between 1970 and 2000. The overall density of population in the Town and study area, however, remains well below that of the County as a whole.

POPULATION GROWTH IN THE STUDY AREA

Consistent with the Town as a whole, the population within the study area increased from 2,166 in 1990 to 2,473 in 2000, or a 14 percent gain. The population of the study area was derived by examining census block group data from the U.S. Census Bureau. Census block group data was used to serve as a comparison to the 1990 Census. Census blocks, the smallest geographic area measured by the census, which are only available for the 2000 Census, indicate that the study area population is actually 2,153, which more accurately represents the study area population.

Figure 2-2 depicts the four census block groups that compose the study area. The numbers in parenthesis indicate the population of each particular census block group.

Table 2-5
Population Density Per Acre

	Density				Percent Change 1970-1980	Percent Change 1980-1990	Percent Change 1990-2000	Percent Change 1970-2000
	1970	1980	1990	2000				
Study Area[1]	N/A	N/A	0.57	0.65	N/A	N/A	14.0	N/A
Southampton[2]	0.40	0.48	0.51	0.62	19.3	6.4	20.3	52.7
Suffolk County[3]	1.93	2.20	2.27	2.43	14.0	3.2	7.0	25.9

Notes: [1] Based on study area upland acreage: 3,781 acres
[2] Based on town-wide upland acreage: 89,728 acres
[3] Based on county-wide upland acreage: 583,680 acres
Sources: US Census 1970-2000; Suffolk County Department of Planning 2000

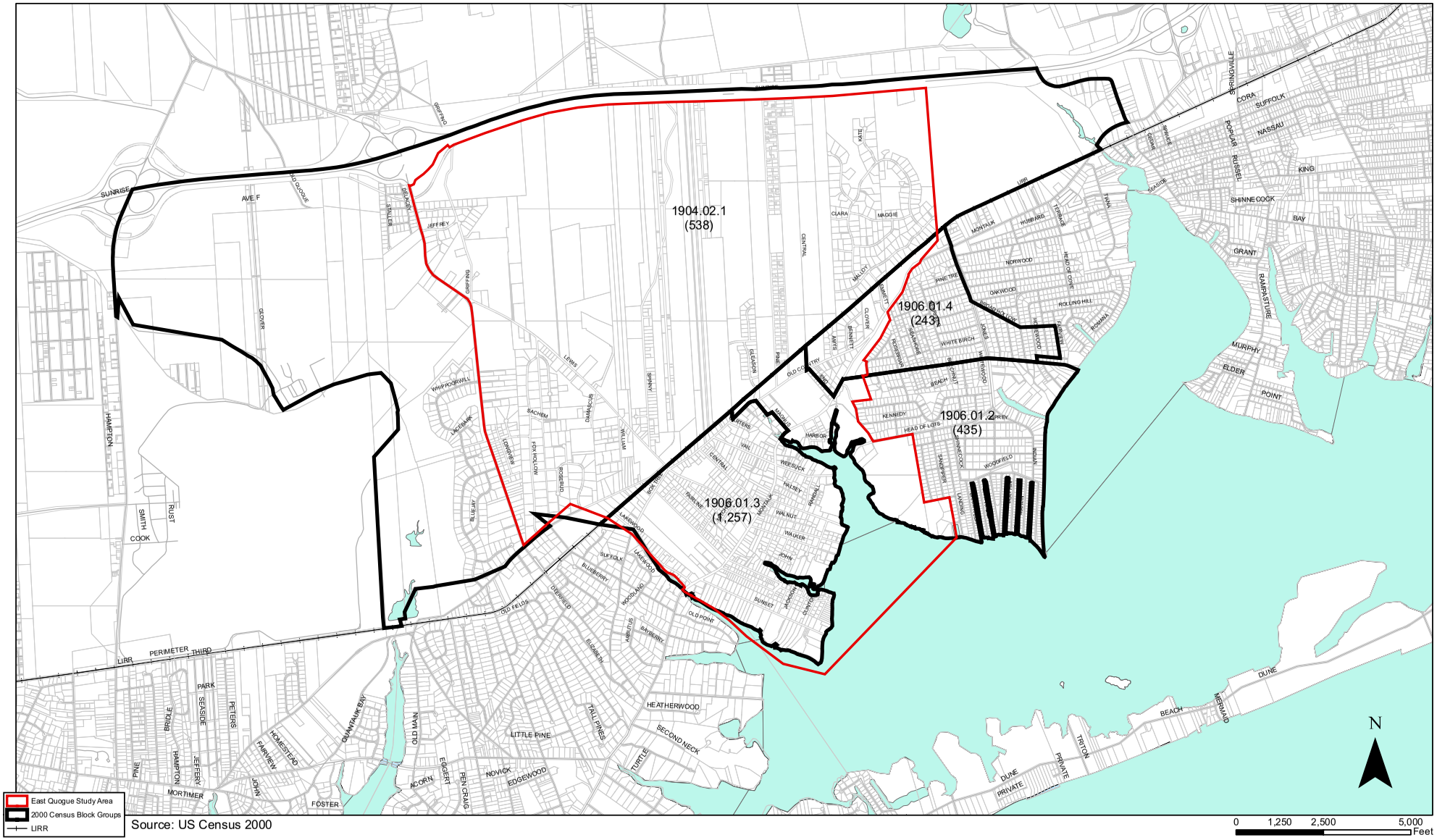
POPULATION PROJECTIONS

The Long Island Regional Planning Board, a regional planning agency, has estimated population growth across Long Island for five year increments between 2005 and 2030. Table 2-6 provides a summary of the projected population for the five East End communities as well as Suffolk County. Based on these projections, the Town of Southampton is expected to gain almost 7,900 new residents between 2005 and 2015, representing a 1.3 percent annual growth rate. This growth rate is double the rate for Suffolk County.

Table 2-6
Population Projections, 1990 to 2030

	1990	2000	2005	2010	2015	2020	2025	2030	% Change 1990-2030	% Change 2000-2030	% Change 2005-2015	% Change 2005-2030
Riverhead	23,011	27,680	34,463	40,196	44,780	48,156	50,659	52,860	130	91	30	53
Southold	19,836	20,599	21,946	23,250	24,585	25,950	27,260	28,467	44	38	12	30
Shelter Island	2,263	2,228	2,461	2,586	2,701	2,807	2,903	2,989	32	34	10	21
East Hampton	16,132	19,719	21,508	22,794	23,919	24,940	25,797	26,510	64	34	11	23
Southampton	45,351 (44,976)*	55,216 (54,712)*	59,982	64,065	67,852	71,325	74,347	76,933	71	41	13	28
Suffolk County	1,321,977 (1,321,864) *	1,419,381 (1,419,369) *	1,493,028	1,557,325	1,615,364	1,667,036	1,710,196	1,742,719	32	23	8	17
Nassau/Suffolk	2,609,325	2,753,925	2,834,912	2,919,534	2,994,360	3,061,437	3,118,595	3,163,761	21	15	6	12

Notes: * Based on U.S. 2000 Census
Source: Long Island Regional Planning Board (July 2004)



East Quogue Census Block Groups
Figure 2-2

AGE DISTRIBUTION AND BIRTH RATES

As shown in Table 2-7, the study area and the Town have a relatively large middle-aged population, and a growing school-age population. Table 2-7 depicts the age distribution for the study area, Southampton, and Suffolk County for 1990 and 2000, as well as the percent of total population for each cohort. The median age for the study area is slightly higher than the County, at 38.9 and 36.5, respectively, and lower than the median age for the Town at 40.4, based on the 2000 Census. In the study area and the County, persons 65 years and older comprise approximately 12 percent of the population, versus 17 percent for the Town. Persons under 20 years comprise 26 percent of the population in the study area, compared to 24 percent for the Town and 28 percent for the County. Persons between 35 and 44 years of age comprise the largest individual cohort in the study area, Town, and County, with 18, 17, and 18 percent of the population, respectively.

Table 2-7
Age Cohorts

Age Group	1990						2000					
	Study Area[1]		Southampton		Suffolk County		Study Area[1]		Southampton		Suffolk County	
	Total	Total %	Total	Total %	Total	Total %	Total	Total %	Total	Total %	Total	Total %
Under 5	134	6.2	2,594	5.8	92,949	7.0	181	7.3	3,104	5.7	100,304	7.1
5 to 9	138	6.4	2,514	5.6	86,417	6.5	177	7.2	3,412	6.2	109,690	7.7
10 to14	118	5.5	2,378	5.3	89,824	6.8	158	6.4	3,235	5.9	103,930	7.3
15 to 19	115	5.3	2,689	6.0	97,382	7.4	122	4.9	3,173	5.8	88,558	6.2
20 to 24	111	5.1	2,867	6.4	101,752	7.7	117	4.7	2,874	5.3	75,665	5.3
25 to 34	338	15.6	6,659	14.8	227,777	17.2	303	12.3	6,386	11.7	191,695	13.5
35 to 44	363	16.7	6,985	15.5	206,899	15.7	447	18.1	9,227	16.9	251,600	17.7
45 to 54	240	11.1	4,985	11.1	157,104	11.9	411	16.6	8,346	15.3	197,593	13.9
55 to 59	99	4.6	2,184	4.9	62,997	4.8	138	5.6	3,195	5.8	75,535	5.3
60 to 64	93	4.3	2,520	5.6	57,046	4.3	109	4.4	2,677	4.9	57,241	4.0
65 to 74	236	10.9	4,715	10.5	82,635	6.3	154	6.2	4,683	8.6	91,906	6.5
75 to 84	139	6.4	3,057	6.8	44,870	3.4	114	4.6	3,187	5.8	55,650	3.9
85+	43	2.0	829	1.8	14,212	1.1	42	1.7	1,213	2.2	20,002	1.4
Total	**2,166**	**100**	**44,976**	**100**	**1,321,864**	**100**	**2,473**	**100**	**54,712**	**100**	**1,419,369**	**100**

Note: [1]Based on US Census Block Groups
Sources: US Census 1990 and 2000

The fastest growing segments of the study area population over the last decade were persons from 45 to 54 and 55 to 59 years of age, along with persons from 5 to 9 years of age. In particular, the study area's 45 to 54 year cohort increased by 71 percent from 1990 to 2000. Other fast growing segments of the population were persons from 45 to 54 and 55 to 59 years of age, along with 85 years and older, which is also the fastest growing age group in the County.

The study area experienced a relative decline in four age cohorts, 25 to 34 (11 percent), 65 to 74 (35 percent), 75 to 84 (18 percent), 85 years and older (2 percent). This trend provides evidence that East Quogue is transitioning to a family community where children and middle-aged cohorts are dominant. During the same period, the Town experienced a 4 percent decline in persons between 25 and 34 whereas Suffolk County experienced a greater decline in the 25 to 34 group (15.8 percent).

The study area and Town also experienced a shift towards persons under 15 years of age, as this segment grew 32 and 30 percent between 1990 and 2000, respectively. This trend suggests a birth rate increase and/or more families with school-age children relocating to Southampton. These increases are also indicated in the growth in household size over the same decade (see Table 2-9 below).

With respect to birth rates, as Table 2-8 shows, Southampton's birth rate in 2002 was the highest of the East End towns and above the rate for Suffolk County and Long Island as a whole.

Table 2-8
Birth and Birth Rates

	Live Births	Birth Rates
Riverhead	231	7.9
Southold	201	9.5
Shelter Island	14	6.0
East Hampton	243	11.9
Southampton	931	16.4
Suffolk County	19,852	13.7
Nassau/Suffolk	36,188	12.9

Source: Suffolk County Department of Health Services, 2003 Annual Report-Vital Statistics for 2002

HOUSEHOLDS

The study area and Town experienced an increase in total households from 1990 to 2000 (see Table 2-9). The total number of households rose 12 percent in the study area from 863 in 1990 to 967 in 2000, with a Town-wide increase of 19 percent from 18,029 in 1990 to 21,504 in 2000. Similar to the study area growth, the total number of households in Suffolk County grew by nearly 11 percent.

In 2000, the study area had 967 households, with an average household size of 2.6, an increase from 2.5 in 1990. Both the study area and Town saw an increase in household size while the County saw a decline. The fastest growing household segment in the study area and Southampton was households with individuals under 18 years of age, which rose 36 and 30 percent from 1990 to 2000, respectively. The 4 percent growth in the study area household size over the 1990-2000 period, as compared to a 1.7 percent increase in the Town and a decline of 2.6 percent in the County, indicates a local trend towards larger households. This trend correlates

with similar increases in the change in age cohort and birth rates (discussed above), as well as public school student enrollment (see Section D, "Community Facilities and Services").

Table 2-9
Household Characteristics

	Study Area				Southampton			Suffolk County		
	1990[1]	2000[1]	% Change 1990-2000	2000 (Block Data)	1990	2000	% Change 1990-2000	1990	2000	% Change 1990-2000
Total Households	863	967	12.1	875	18,029	21,504	19.3	424,719	469,299	10.5
Average Household Size	2.50	2.60	4.0	2.43	2.41	2.45	1.7	3.04	2.96	-2.6
Households with under 18	245	333	35.9	288	4,874	6,337	30.0	174,594	190,215	8.9
Households with 65 & Older	301	240	-20.3	214	5,701	6,585	15.5	98,254	116,924	19.0

Note: [1]Based on US Census Block Groups
Sources: U.S. Census 1990 and 2000

HOUSING CHARACTERISTICS

HOUSING UNITS

Total housing units in the study area did not change significantly between 1990 and 2000, while housing units increased by approximately 7 percent in Southampton. Growth in Suffolk County increased at a slightly greater rate, 8.5 percent, during the same period. However, in 2000, the seasonal units in the study area and Southampton, respectively, made up 28 and 35 percent of its total housing stock, compared to 7 percent for Suffolk County.

Although the percentage of seasonal and second homes in Southampton far exceeds the proportion for the County, the number of seasonal units is decreasing as more seasonal homes are converted to primary residences. As Table 2-10 demonstrates, the seasonal percentage of total housing units declined by almost 13 percent from 1990 to 2000 in the study area. At the same time, the number of occupied housing units (primary residences) in Southampton increased by 12 percent to 967 units. In addition, total occupied housing units increased in the study area by 12.1 percent, and owner-occupancy increased by 12.6 percent. This data, coupled with increases in renter-occupied units and the above described declines in seasonal use, indicate a trend toward year-round occupancy in East Quogue.

Similar to most Long Island communities, the study area is predominately comprised of single-family detached dwellings with a small mix of attached and multi-family housing. As shown in Table 2-11, about 91 percent of the study area housing stock is single-family homes compared with 86 and 82 percent for the Town and County, respectively. The study area also has a higher concentration of mobile homes at 4 percent of the housing stock compared to 3 and 1 percent respectively for the Town and County (see also Section B, "Land Use, Zoning, and Neighborhood Character").

Table 2-10
Tenure and Vacancy Status of Housing Units

Housing Units	Study Area				Southampton			Suffolk County		
	1990[1]	2000[1]	% Change 1990-2000	2000 (Block Data)	1990	2000	% Change 1990-2000	1990	2000	% Change 1990-2000
Total Housing Units	1,429	1,422	-0.5	1,225	33,622	35,836	6.6	481,317	522,323	8.5
Occupied Housing Units	863	967	12.1	875	18,029	21,504	19.3	424,719	469,299	10.5
Owner-Occupied	690	777	12.6	698	13,672	16,348	19.6	340,253	374,360	10.0
Renter-Occupied	173	190	9.8	177	4,357	5,156	18.3	84,466	94,939	12.4
Seasonal Use	453	398	-12.1	288	12,960	12,604	-2.7	35,953	38,350	6.7
Seasonal Percent of Total	32	28	-12.5	23.5	38.5	35.2	-8.6	7.5	7.3	-0.2

Note: [1]Based on U.S. Census Block Groups
Sources: U.S. Census 1990 and 2000

Table 2-11
Housing Types

Housing Type	Study Area			Southampton			Suffolk County		
	1990[1]	2000[1]	% Change 1990-2000	1990	2000	% Change 1990-2000	1990	2000	% Change 1990-2000
Total	1,402	1,429	4.7	33,652	35,838	6.5	481,317	522,323	8.5
1-Unit Detached	1,255	1,297	3.3	28,322	30,914	9.2	389,125	426,250	9.5
1-Unit Attached	19	26	36.8	982	1,220	24.2	16,238	21,835	34.5
2 Units	33	20	-39.4	720	829	15.1	23,875	20,669	-13.4
3 or 4 Units	0	11	>100	470	418	-11.1	9,657	10,116	4.8
5 to 9 Units	0	14	>100	451	420	-6.9	7,982	11,119	39.3
10 to 19 Units	0	0	0.0	461	360	-21.9	12,783	11,934	-6.6
20 or More Units	0	4	>100	918	731	-20.4	10,890	14,927	37.1
Mobile Home	58	57	-1.7	891	944	5.9	4,974	5,374	8.0
(Boat, RV, Van, etc.)	37	0	-100	437	2	-99.5	5,793	99	-98.3

Note: [1]Based on U.S. Census Block Groups
Sources: U.S. Census 1990 and 2000

HOME VALUE

The Long Island housing market, like most of the region, has experienced a significant increase in property value over the last three years. Table 2-12 depicts the median home values for 2005, 2006, and the last quarter of 2007 for the hamlet of East Quogue, the five East End Towns, and Suffolk County. Based on the fourth quarter numbers for 2007, the East Quogue median home value is about 39 percent of the median Suffolk County home value, but 58 percent less than the Town as a whole.

Table 2-12
Quarterly Home Sale Statistics

Town	Median Home Values		
	2005	2006	July to September 2007
Riverhead	$379,950	$440,000	$482,000
Southold	$500,000	$500,000	$502,500
Shelter Island	$660,000	$792,500	$880,000
East Hampton	$800,000	$875,000	$1,172,500
Southampton	$745,000	$795,000	$925,000
East Quogue Hamlet	$539,000	$575,000	$585,000
Suffolk County	$402,000	$420,000	$421,635
Nassau/Suffolk	$435,000	$450,000	$458,500

Source: LIProfiles.com, 2008

D. COMMUNITY FACILITIES AND SERVICES

This section provides data on public facilities that serve the East Quogue study area. These include police and fire services, schools, libraries, health and human services, municipal services, and other community services (e.g., the Village Green). Services and operations provided to the study area are discussed with respect to whether the service district is specific to the study area or is part of a larger service district.

Figure 2-3 depicts the locations of all community facilities within the East Quogue study area. These facilities and services are described below.

POLICE

The Town of Southampton Police Department police headquarters is located at 110 Old Riverhead Road in Hampton Bays, and the substation nearest the study area is at Bridgehampton Commons. Based on correspondence with the Town Police Department (July 25, 2006), the Department employs 102 police officers throughout the Town. Part-time officers are hired to handle increases in summer workload. The number of calls for service in the study area is approximately 3,700 calls per year. Police response time to emergency calls is approximately five to ten minutes.

FIRE PROTECTION

Fire protection and emergency medical service in the study area is provided by the East Quogue Fire Department. The majority of the study area, with the exception of a few acres in the

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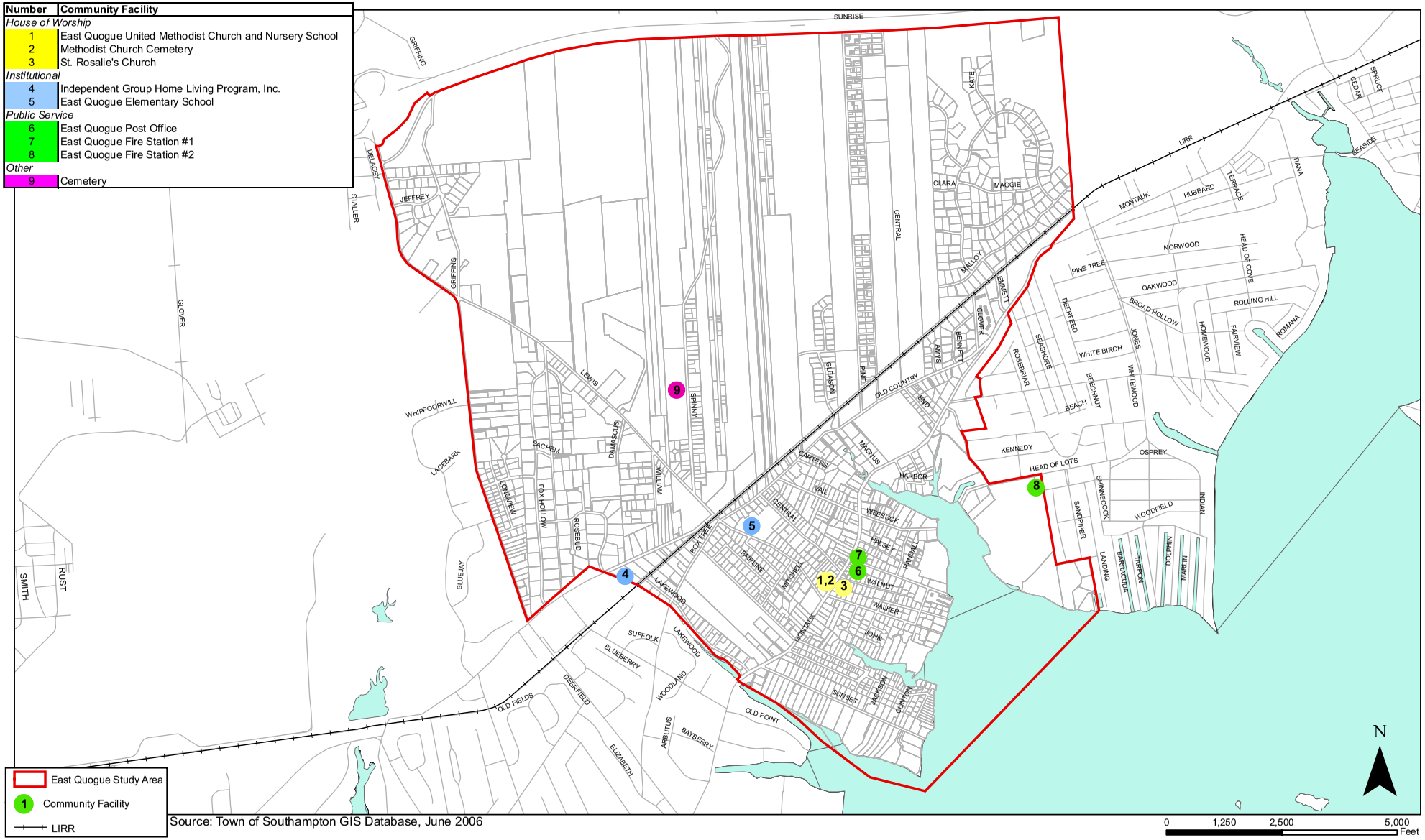
Number	Community Facility
House of Worship	
1	East Quogue United Methodist Church and Nursery School
2	Methodist Church Cemetery
3	St. Rosalie's Church
Institutional	
4	Independent Group Home Living Program, Inc.
5	East Quogue Elementary School
Public Service	
6	East Quogue Post Office
7	East Quogue Fire Station #1
8	East Quogue Fire Station #2
Other	
9	Cemetery



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Community Facilities
Figure 2-3

northeast corner, is located within the East Quogue Fire District (see Figure 2-4). The fire department also protects the adjacent areas to the west and south of the study area. Currently, there is emergency medical coverage provided from 6 AM to 6 PM, 7 days a week, by a paid paramedic. In addition to the paid coverage, emergency medical service and fire and rescue services are provided 24 hours a day by the members of the fire department. The department consists of 70 members, 11 of which are certified emergency medical technicians. The department responded to 444 alarms in 2007 with an average response time of approximately 4 minutes.

There are two fire stations located within the Fire District. Station 1, located at the corner of Montauk Hwy. and Bay Ave., houses two fire engines, two ambulances, one brush truck, one first responder vehicle, two fire police vehicles, one heavy rescue vehicle, one rescue boat and one storm rescue vehicle. Station 2, located at 29 Head of Lots Road, houses one fire engine and one aerial ladder truck.

The East Quogue Fire Department is certified by New York State as an Advanced Life Support organization. Approximately 70 percent of the total calls responded to by the fire department are emergency medical calls.

SCHOOLS

PUBLIC SCHOOLS

The East Quogue study area is served by two school districts—the East Quogue Union Free School District (UFSD) and the Westhampton Beach Union Free School District (see Figure 2-5). The entire study area is within the boundaries of the East Quogue UFSD, which includes only one school—the East Quogue Elementary School, located on Central Avenue. The East Quogue Elementary School serves grades K through 6. Students of middle school and high school age attend Westhampton Middle School and Westhampton Beach Senior High School, respectively. Figure 2-5 depicts the school districts that serve the East Quogue study area, as well as those that serve adjacent areas.

Table 2-13 provides data on school enrollment for East Quogue UFSD and Westhampton Beach UFSD for the school years 2000-01 through 2007-08. Total enrollment for East Quogue UFSD has grown about 6.4 percent between 2000-01 and 2007-08, while Westhampton Beach UFSD enrollment has grown about 1 percent from 2000-01 to 2007-08. While this school district has experienced fluctuations in enrollment during this time period, enrollment has been steadily rising since the 2004-05 school year. According the New York State Education Department, both districts are meeting the needs of the students.[1]

Since there is only one school within East Quogue UFSD, the enrollment figures presented above for East Quogue UFSD are identical to those for East Quogue Elementary School. According to Eastern Suffolk BOCES' *Public School Building Survey 2006-2007*, *A Study of District Demographics and Enrollment: 1990 – 2010*, the East Quogue Elementary School has capacity for 550 students. Based on this figure, the school is operating at 82 percent capacity in the 2007-08 school year.

[1] New York State School Report Card Guide to the District Comprehensive Information Report, 2003

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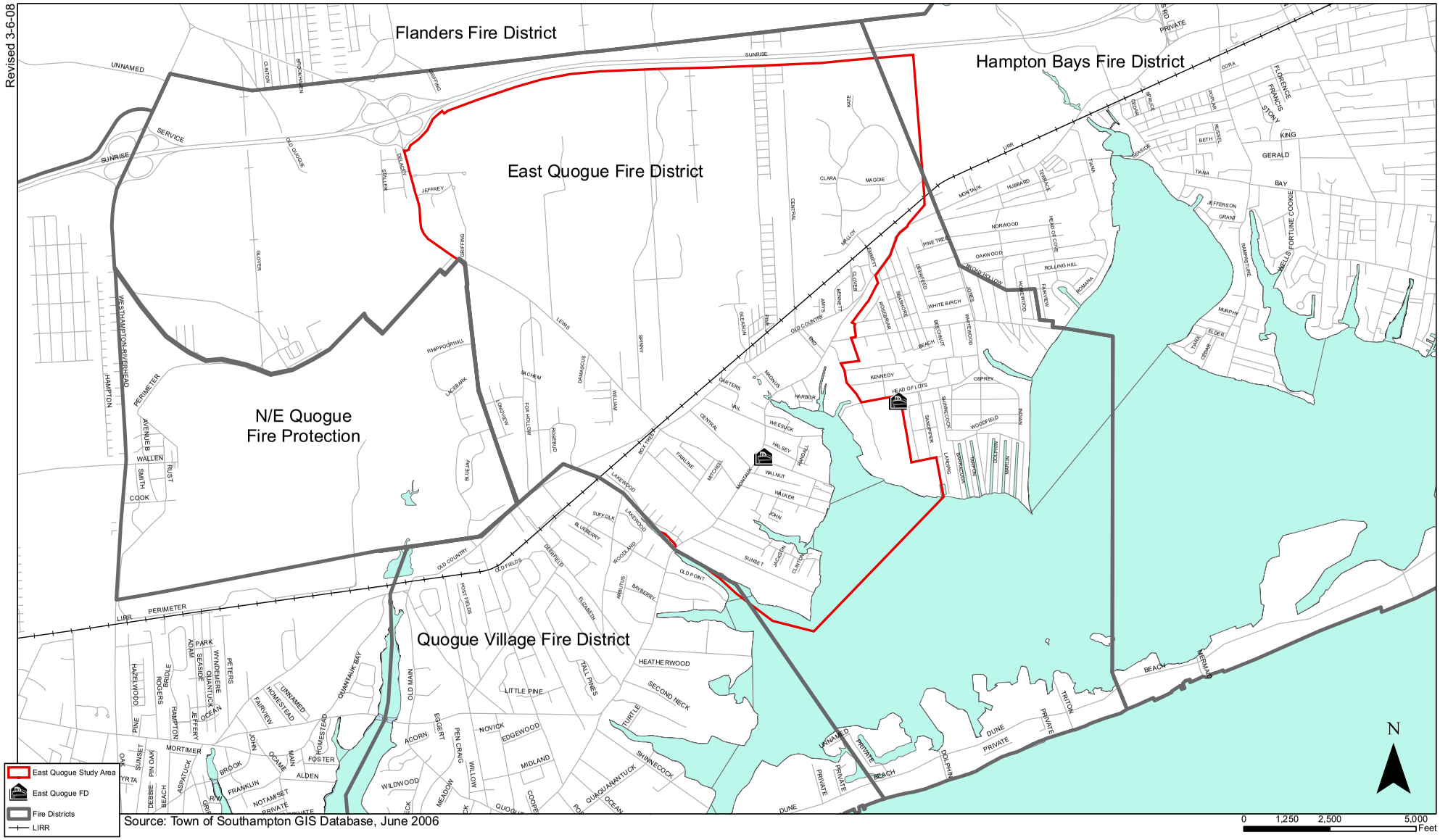
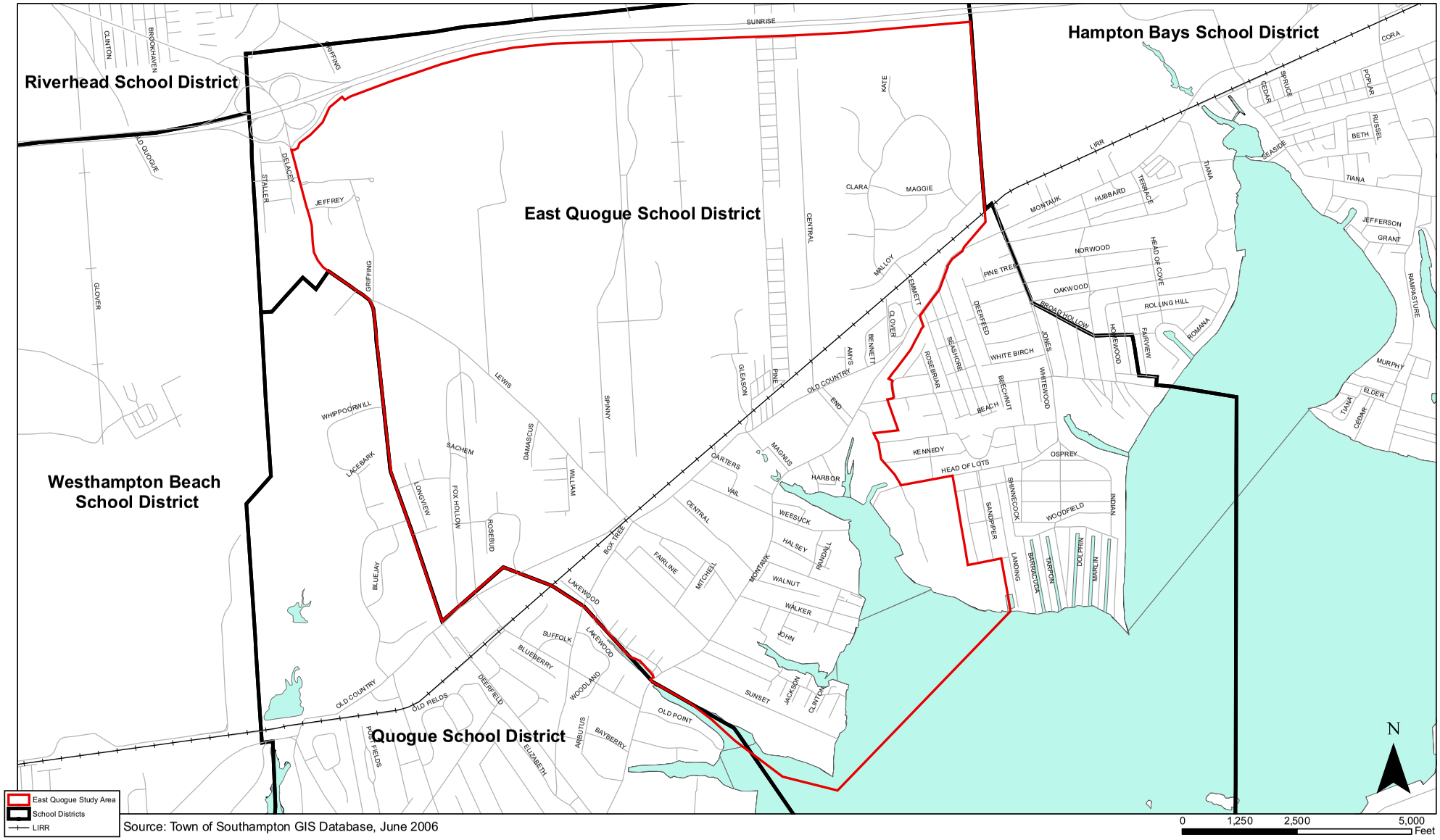


Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Fire and Ambulance Districts
Figure 2-4



East Quogue Generic Environmental Impact Statement

School Districts
Figure 2-5

Table 2-13
School District Enrollment

District	Grades	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	% Change (2000-01 – 2007-08)
East Quogue[1]	K-6	422	446	434	432	458	467	448	449[1]	6.4
Westhampton Beach	K-12	1,771[2]	1,768[2]	1,815[2]	1,727[2]	1,711[2]	1,764[3]	1,771[4]	1,788[4]	1.0

Sources: [1]East Quogue UFSD, October 2006, January 2008
[2]New York State Education Department, New York State District Report Cards, Comprehensive Information Reports, 2002-2003 and 2004-2005
[3]New York State Education Department, Property Tax Report Card 2005-2006
[4]Westhampton Beach UFSD, October 2006 , January 2008

Table 2-14 shows enrollment figures for the schools within Westhampton UFSD. As shown in the table, the number of high school students within Westhampton Beach UFSD is about double the number of elementary and middle school students. This is because the high school serves other districts including East Moriches, East Quogue, Quogue, Remsenberg, and Westhampton. Of all three schools, Westhampton Beach Middle School demonstrated the greatest percent change in enrollment over the last eight school years, with an approximately 12.5 percent increase from 2000-01 to 2006-07. The elementary and high schools actually lost enrollment over the same period.

As of July 2006, student capacity for the Westhampton Beach UFSD schools is as follows:

- Elementary School: 480-500 students;
- Middle School: 480-500 students;
- High School: 1,100 students.

Table 2-14
Enrollment for Westhampton Beach UFSD Schools

School	Grades	2000-01[1]	2001-02[1]	2002-03[1]	2003-04[1]	2004-05[1]	2005-06[2]	2006-07[3]	2007-08[3]	% Change (2000-01-2007-08)
Elementary School	K-5	406	423	439	445	431	444	413	404	-0.5
Middle School	6-8	377	413	423	428	424	437	437	424	12.5
High School	9-12	988	932	953	854	856	883	921	960	-2.8

Source: [1]New York State Education Department, New York State School Report Cards, Comprehensive Information Reports, 2002-2003 and 2004-2005.
[2] New York State Education Department, Property Tax Report Card 2005-2006
[3] Westhampton Beach UFSD, October 2006, January 2008

Based on these capacity numbers, for the 2007-08 school year, the Westhampton Beach Elementary School is operating at between 81 to 84 percent; the Westhampton Middle School is operating at approximately 85 to 88 percent; and the Westhampton Beach Senior High School is operating at approximately 87 percent capacity.

A report published in August 2001, *Investigating the possibility and options for housing East Quogue's secondary school students: A report to the Board of Education,* explored the possibility of the East Quogue UFSD to establish a middle-high school to accommodate students who presently attend the Westhampton Beach USFD. This report was initiated due to the East Quogue UFSD's concern that students would, at some point in the future, no longer be accommodated by Westhampton Beach UFSD due to capacity constraints. As noted above, Westhampton Beach UFSD can currently, and in the near future, accommodate out-of-district students. Further East Quogue UFSD does not have immediate intentions of building any new facilities.

HIGHER EDUCATION

The Town of Southampton, including East Quogue, is served by three institutions of higher learning. The first, Long Island University's Southampton Graduate Campus, located in Southampton Village, is home to the School of Continuing Education, which provides credit and non-credit courses for career advancement and personal enrichment to almost 1,000 students. The school offers master's degree programs in Childhood Education, Literacy Education, and Teaching Students with Disabilities. The second institution, Suffolk Community College, Eastern Campus in Riverhead, is a two-year school that enrolls over 2,000 students, who generally commute to school. The college offers a broad range of liberal arts and business courses, and specialized programs in Graphic Design, Dietetic Technology, Culinary Arts, Horticulture and Interior Design. Lastly, Stony Brook Southampton (formerly Southampton College), located in Southampton on Montauk Highway, was recently purchased by Stony Brook University to develop academic programs that focus on the environment and its sustainability. In addition, marine sciences and creative writing programs are also offered.

LIBRARIES

There are no public libraries located in East Quogue. The following excerpt from the *1999 Comprehensive Plan Update* describes the Town's libraries:

"The boundaries of the library districts in the Town of Southampton are the same as the school districts; however, since only six of the eleven library districts actually possess libraries, the remaining districts must contract out for library services, typically with adjoining districts. Four of the six libraries are in the incorporated villages: Quogue, Sag Harbor, Southampton, and Westhampton Beach. The other two libraries are in Bridgehampton and Hampton Bays."

East Quogue residents are eligible to apply for library cards at the Quogue Library under the East Quogue School District's library contract. The Quogue Library is located at 90 Quogue Street in the Incorporated Village of Quogue.

HEALTH SERVICES

Southampton has four major medial facilities located within or in the immediate vicinity of the Town. Each is described below.

SOUTHAMPTON HOSPITAL

Southampton Hospital, located on Meeting House Lane in Southampton Village, is the only hospital in Southampton Town. The hospital provides services in several areas including: 24 hour emergency services, intensive care, cardiac care, drug and alcohol abuse, rehabilitation, obstetrics, pediatrics, radiology, outpatient facilities, dialysis, and skilled nursing. Of the 168 beds in the hospital, 84 percent were occupied in 2000. The hospital is staffed by 782 employees (*Long Island Business News Book of Lists 2002*).

PECONIC BAY MEDICAL CENTER (CENTRAL SUFFOLK HOSPITAL)

Located in Riverhead, New York, the Peconic Bay Medical Center (PBMC) serves nearly 120,000 residents on the East End of Long Island from Wading River to Orient on the North Fork and from Moriches to Hampton Bays on the South Fork. With 800 employees and 160 medical staff, PBMC provides comprehensive healthcare services to the East End.[1] Since 1951, this facility has been known as Central Suffolk Hospital, which changed its name to PBMC in 2006. PBMC is a facility with 214 beds, including a 60-bed skilled nursing facility and a certified home care agency. The medical center is the regional provider of dialysis, orthopedics through the Hamptons Orthopedic & Rehabilitation Institute, and home to the Center for Bariatric Surgery. Through a unique partnership with Stony Brook University Hospital—Long Island's only academic medical center—PBMC has trauma-trained specialists staffing its Emergency Center.

EAST END AIDS WELLNESS PROJECT CENTER.

This facility is based in office space donated by the Village of Sag Harbor and provides outpatient medical care, psychiatric services, and medical services for HIV-positive people (*1999 Comprehensive Plan Update*).

THE KRAUS FAMILY HEALTH CENTER AT SOUTHAMPTON

This facility is located on Meeting House Lane in Southampton Village and "provides health care for all regardless of their ability to pay. Demand is expected to increase when the County Health Department becomes a Managed Care provider. The County Health Department is now seeking a site for a larger facility" (*1999 Comprehensive Plan Update*).

In addition, within the East Quogue study area, Independent Group Home Living (IGHL), a local not-for-profit, maintains a group home for mentally ill and developmentally disabled persons at 135 Old Country Road. The IGHL homes are intermediate care facilities (ICFs), in which residents receive comprehensive services ranging from speech therapy to nursing.

OTHER COMMUNITY FACILITIES

CHURCHES AND CEMETERIES

The East Quogue United Methodist Church and Nursery School is located on the north side of Montauk Highway, between Lewis Road and Central Avenue. The Methodist Church Cemetery is located behind the church. In addition, St. Rosalie's Mission Church is located at the southwest corner of Montauk Highway and Walnut Street.

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[1] http://www.peconicbaymedicalcenter.org/aboutus-overview, accessed on September 5, 2007

POST OFFICE

The East Quogue Post Office is located at 6 Bay Avenue.

E. ECONOMIC AND FISCAL CONSIDERATIONS

This section examines the economic and fiscal conditions of the study area. It provides existing property valuation and tax structure as well as revenue derived from school district taxes in the study area as compared to the Town of Southampton as a whole.

PROPERTY TAX STRUCTURE

Table 2-15 shows the property tax structure for the study area and the Town of Southampton.

Table 2-15
Existing Property Tax Structure of Study Area and Town

	Total Assessed Value	Assessed Land Value	Assessed Improvement Value	True Taxes[1]	Total Taxes[2]
Study Area	$1,305,853,209	$859,886,696	$445,966,513	$13,611,678	$11,130,557
Southampton	$55,888,124,591	$40,174,542,127	$15,713,582,464	$263,554,591	$262,951,374

Notes: [1]True taxes are taxes before exemptions.
[2]Total taxes are taxes after exemptions.
Sources: Town of Southampton Division of Information Systems, February 2008; Town of Southampton 2007-2008 Tax Rate Sheet.

The table illustrates the property tax contributions of the study area compared to the Town as a whole. The study area generates $11,130,557 in property tax revenue, or approximately 4.2 percent of the Town's total net tax base of $262,951,374.

TAX DISTRICTS

There are a number of overlapping tax districts in Southampton, thus property tax bills vary across the Town. In addition to Town and County taxes, residents and businesses pay separate school, library, police, fire, lighting, water, and ambulance district taxes that vary by district. The boundaries of these districts do not necessarily coincide with municipal or the other tax district boundaries.

Table 2-16 lists the taxing districts that apply to the parcels within the East Quogue study area along with the corresponding tax rates (per $1,000 assessed value). By far, the largest proportion of taxes is paid to the East Quogue Union Free School District (UFSD), which accounts for about 76 percent of the local tax.

The entire study area is within the East Quogue UFSD. According to the Town of Southampton 2007-2008 Tax Rate Sheet, provided by the Town Tax Receiver's office, the tax rate for parcels within the East Quogue UFSD is $8.0672 per $1000 of assessed value. After exemptions, approximately $8,480,469.35 in taxes were billed for the East Quogue UFSD for the 2007-2008 tax year, as shown in Table 2-16.

Table 2-16
Tax Districts Applicable to East Quogue Study Area

District	Total Tax Amount After Exemptions (2007)	Tax Rate Per $1,000	Percent of Total
Suffolk County – General	$268,208.72	0.2452	2.4
New York State Real Property Tax Law[1]	$56,660.63	0.0518	0.5
General Town	$418,173.69	0.3823	3.8
Highway #1-#3 -#4	$255,848.24	0.2339	2.3
Highway Road Repair 2007	$30,736.93	0.0281	0.3
Police	$587,938.12	0.5375	5.3
Emergency Dispatching – E911	$70,224.15	0.0642	0.6
Zoning	$9,844.67	0.0090	0.1
East Quogue School District	$8,465,080.35	8.0672	76.1
East Quogue Library	$245,787.13	0.2212	2.2
East Quogue Fire District	$641,227.65	0.5693	5.8
East Quogue Lighting District	$50,962.19	0.0454	0.5
Hampton Bays Park District	$14.71	0.0173	0.0
Hampton Bays Parking District	$5.36	0.0063	0.0
Unpaid Alarms	$2,125.00	N/A	0.0
Apportioned Exemption	$24,721.66	N/A	0.2
Mitchell Place Street Improvement Project	$2,998.00	N/A	0.0
Total	**$11,130,557.24**	**10.4787**	**100.00**

Note: [1]These taxes are ultimately paid to Suffolk County.
Source: Town of Southampton Division of Information Systems, Levy Data, February, 2008.

Table 2-17 presents the cost per student attending the East Quogue Elementary School.

Table 2-17
Cost Per Student Attending East Quogue Elementary School

School Year	Cost per Student
2004-2005	$13,249.00*
2005-2006	$14,444.00*
2006-2007	$17,919.00*
2007-2008	$20,264.00**

Notes: * Actual cost per student
** Estimate
Source: East Quogue UFSD Business Office, October 2006, January 2008.

As discussed in detail in Section D, "Community Facilities and Services," the East Quogue UFSD consists of one elementary school that houses kindergarten through grade 6. Children that live in the East Quogue UFSD in grades 7 through 12 attend the Westhampton Beach UFSD, which receives tuition from the East Quogue UFSD. This tuition is estimated every year by Westhampton Beach UFSD. East Quogue UFSD pays this estimate, which is evaluated by New York State the following school year once Westhampton Beach UFSD sends the State a ST3

report detailing the actual costs per student for the year in question. Depending on whether the estimate is over or under the actual cost per student, East Quogue is reimbursed or needs to reimburse Westhampton Beach USFD. Table 2-18 provides a breakdown of both actual and estimated tuition paid by East Quogue UFSD to Westhampton Beach UFSD over the past three school years.

Table 2-18
Tuition Paid to Westhampton Beach

School Year	Tuition Bill per Student
2004-2005	$14,461.00*
2005-2006	$14,829.00*
2006-2007	$17,210.00**
2007-2008	$18,073.00**

Notes: * Actual cost per student
** Estimate
Source: East Quogue UFSD Business Office, October 2006, January 2008.

LOCAL BUSINESSES

The East Quogue study area is largely comprised of residential homes with agricultural uses primarily in the western portion of the study area. The local business district is centered along Montauk Highway between West Side Avenue to the west and East End Avenue to the east. In addition, there are some small businesses located south of Montauk Highway on side roads. Provided in Table 2-19 is a list of local businesses along the East Quogue Main Street (i.e., Montauk Highway). The businesses of the hamlet center are traditional small eateries, service, and gift shops that serve the local community. In addition, there are a few religious and institutional uses (see Section B, "Land Use, Zoning, and Neighborhood Character").

Table 2-19
East Quogue Neighborhood Businesses

Business	Address	Business Orientation on Road
Between West Side Avenue and Lewis Road (west to east)		
Automagic East (automotive repair)	643 Montauk Hwy	South
Hampton Brake Service	664 Montauk Hwy	North
James N. Agals Insurance (Farm Family Life Ins)	543 Montauk Hwy	North
Lopers Equipment Rental and Sales	589 Montauk Hwy	South
Mendehall Fuel (Seashore Fuels)	575 Montauk Hwy	South
Michael's Deli	615 Montauk Hwy	South
Dinome Painting	680 Montauk Hwy	North
Vacant store for rent (was Porch/Patio store)	585 Montauk Hwy	South
Westside Deli	690 Montauk Hwy	North
Between Lewis Road and Central Avenue (west to east)		
Citgo Gas Station (Quogue Automotive)	535 Montauk Hwy	South
Countach Automotive	509 Montauk Hwy	South
East Quogue United Methodist Nursery School	570 Montauk Hwy	North

Table 2-19 continued
East Quogue Neighborhood Businesses

Business	Address	Business Orientation on Road
Graceful Swan (collectibles, candles etc.)	544 Montauk Hwy	North
Olde Towne Builders (Olde Towne Property Mgt)	521 Montauk Hwy	South
Orlando's Barber Shop	501 Montauk Hwy	South
Quogue East Realty Company	521 Montauk Hwy	North
Between Central Avenue and Vail Avenue (west to east)		
Aligenky's Interior Creations	714A Montauk Hwy	South
China Delight	471 Montauk Hwy	South
Clover Nail and Skincare	526 Montauk Hwy	North
Distinctive Upholstery and Design	536 Montauk Hwy	North
East End Outdoor Supply Co.	476 Montauk Hwy	North
East Quogue Fire Department	Montauk Hwy E	South
East Quogue Wine and Liquor	530 Montauk Hwy	North
Fourth Neck Realty	477 Montauk Hwy	South
Halsey Common Professional Office Building	Montauk Hwy	South
John's Pizzeria (coming soon)	Montauk Hwy	South
Karrigan Country Realty	481 Montauk Hwy	South
Katharine Lovell Interiors	425 Montauk Hwy	South
New Moon Bar & Grill	524 Montauk Hwy	North
North Fork Bank	528 Montauk Hwy	North
Office Building: Recco Home Care, Smiley's Painting, JBG Realty, Lanzetta & Associates	472 Montauk Hwy	North
Once Upon a Time Thrift Boutique	485 Montauk Hwy	South
Paragon Mortgage Bank	487 Montauk Hwy	South
Quogue East Pub	530 Montauk Hwy	North
Roses & Rice Florist	540 Montauk Hwy	North
Ryder Hardware and Equipment Rental	494 Montauk Hwy	North
Sakura House (Japanese Restaurant)	540 Montauk Hwy	North
Shawn Michael Realty	499 Montauk Hwy	South
Sound Therapeutics (Pediatric Services)	474 Montauk Hwy	North
The Sweet Spot	481 Montauk Hwy	South
Village Card and Gift	497 Montauk Hwy	South
Village Prime Meat Shoppe	495 Montauk Hwy	South
Between Vail Avenue and East End Avenue		
7-Eleven	397 Montauk Hwy	South
Best Eastern	401 Montauk Hwy	South
East Quogue Pizza & Deli	424 Montauk Hwy	North
Empire Gas	470 Montauk Hwy	North
Gerard Villares Certified Public Accountant	Montauk Hwy	North
Hampton Family Dental	421 Montauk Hwy	South
John Romano Dentist	426 Montauk Hwy	North
Point Restaurant	412 Montauk Hwy	North
Reptile Rob's Pond and Pets	2 Carter Lane	South

Table 2-19 continued
East Quogue Neighborhood Businesses

Business	Address	Business Orientation on Road
Sandra Rosante Photography	424 Montauk Hwy	North
Stone Creek Inn	405 Montauk Hwy	South
Turtle Bay (Night Club)	395 Montauk Hwy	South
Additional businesses not on Montauk Highway		
Aldrich East End Yacht	Weesuck Ave E	East
East Quogue Post Office	6 Bay Avenue	West
Hampton Shipyard	5 Carter Lane E	East
Quogue Pony Farm	48 Lewis Road	South
Carole's Bed and Breakfast	7 Walnut Avenue	East

Source: AKRF Field Survey, August 2006

EMPLOYMENT CHARACTERISTICS

Table 2-20 shows recent employment statistics for the Town of Southampton and Suffolk County as a whole. As of December 2007, approximately 30,800 of the Town's residents are part of the labor force, which is defined as that portion of the population that is of employable age (18 to 64). Of the labor force population, approximately 29,400 were reported to be employed. Suffolk County's December 2007 labor force of 783,600 had 752,800 employed residents and 30,800 unemployed persons, equivalent to a 3.9 percent unemployment rate. In December 2007, the number of employed persons decreased for Southampton by 1.2 percent and the unemployment rate increased by about 18 percent.

Table 2-20
Employment Characteristics

	Town of Southampton, December 2006	Suffolk County, December 2006	Town of Southampton, December 2007	Suffolk County, December 2007	Percent Change Town Southampton	Percent Change Suffolk County
Civilian Labor Force	31,000	787,600	30,800	783,600	-0.6	-0.5
Employed	29,800	761,700	29,400	752,800	-1.3	-1.2
Unemployed Total	1,200	25,900	1,300	30,800	8.3	18.9
Unemployment Rate	3.9	3.3	4.3	3.9	10.3	18.2

Source: New York State Department of Labor, Long Island Region, August 2006

F. OPEN SPACE

Preserving open space is of paramount importance to the Town of Southampton. Beginning with the 1970 Town of Southampton Comprehensive Plan, the Town has instituted a policy of preserving open space and protecting the local natural features, groundwater, agricultural

resources, and wetlands. The Town also has the objective of meeting the recreational needs of its residents.

Designated open space occupies approximately 786 acres or 21 percent of the study area (see Figure 2-6). This acreage includes land from which residential development rights have been transferred, land set aside for open space conservation, cemeteries, and lands open to the public including the Pine Neck Nature Sanctuary, two Town parks, and the East Quogue Village Green. Several large tracts of open space from which residential development rights have been transferred are located between Sunrise Highway and the LIRR tracks in the northeastern portion of the study area. Behind these lands are clusters of residential development.

The New York State Department of Environmental Conservation (DEC) owns parcels of land in the study area's northwest corner. To the south is a Town-owned conservation area on both the east and west sides of Griffing Road. The Town also holds conservation areas fronting Sunrise Highway and Montauk Highway (see Figure 2-6). Additionally, the Town recently acquired parcels in the vicinity of Weesuck Creek for conservation purposes.

The study area also includes two cemeteries—one behind East Quogue United Methodist Church on the north side of Montauk Highway between Lewis Road and Central Avenue, and another on the west side of Spinney Road.

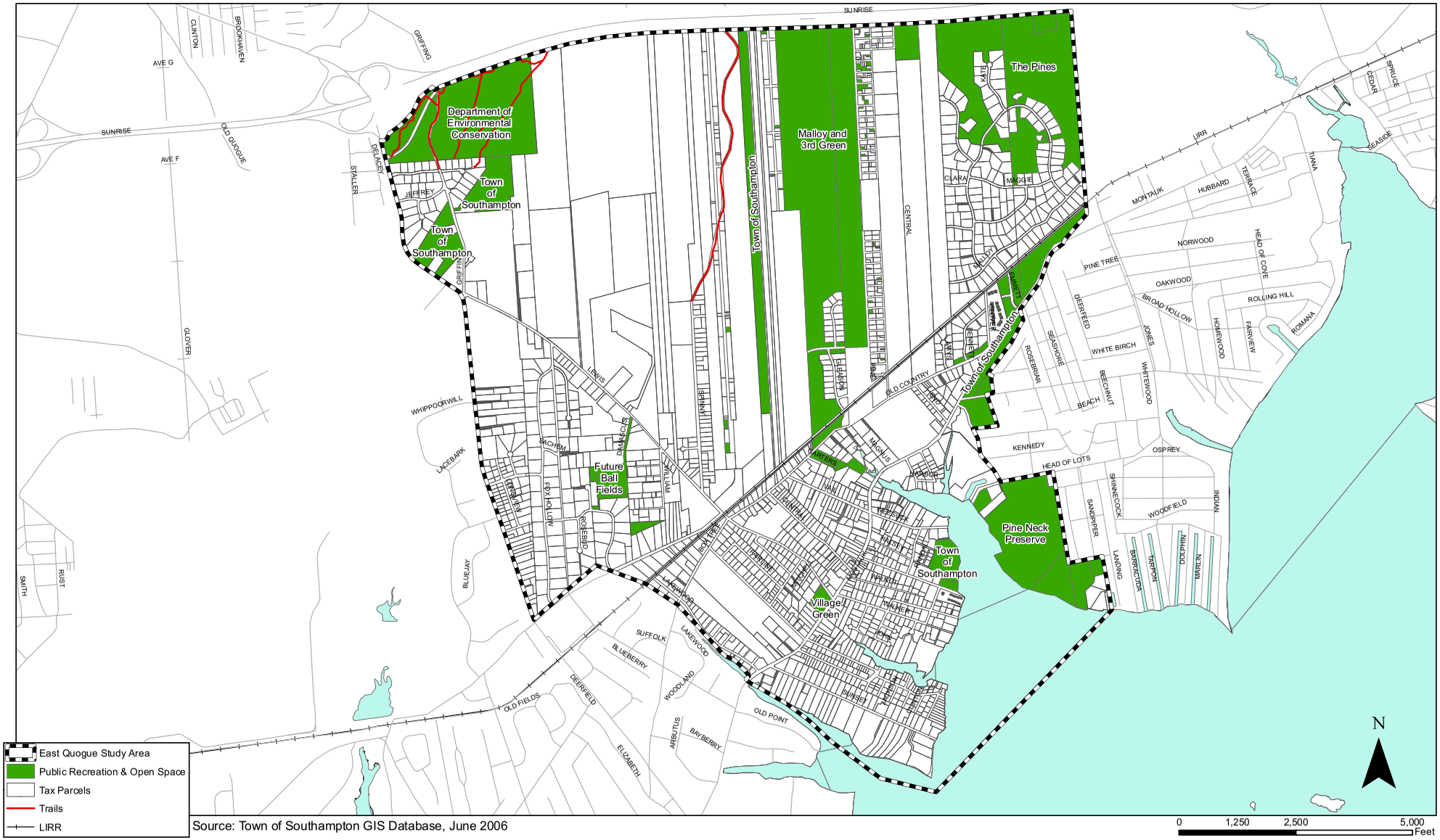
There are two designated parks in the study area that serve as community parks. The 2.3-acre East Quogue Village Green, owned by the Town of Southampton, is located at the northwest corner of Montauk Highway and Lewis Road. The property is used for both passive and active recreation and features planted walkways, gazebos, a picnic area, a bandshell/civic ceremony area, a playground, public restrooms, and a bike rack. The other local park is the Pine Neck Nature Sanctuary. This open space, co-owned by the Town and the Nature Conservancy, is located along Weesuck Creek, south of Head of Lots Road. The property features 15 acres of natural habitat, trails, wetlands, and shoreline, and is used for passive recreation including bird watching and hiking. Another 49 acres adjacent to the Pine Neck Preserve are owned by the Town and preserved as open space.

The Town also owns approximately 13.7 acres of open space at 146 Damascus Road. The Town recently acquired this former animal shelter site and surrounding lots using CPFs. The Town intends to develop the site as an active recreation park with Little League ball fields, multipurpose areas and possibly court games.

In addition, various lots have been preserved as open space within the Old Filed Map areas north of the LIRR tracks. Additional recreational opportunities in the study area include a Town-owned boat launch at the end of Bay Avenue on Shinnecock Bay, property recently purchased by the Town on the east side of Bay Avenue, and a privately owned marina—Hampton Marina Center. Local residents also utilize Weesuck Creek for recreation and commercial activities.

LEVEL OF SERVICE (LOS)

In terms of park use and adequacy, level of service (LOS) is defined as acreage per 1,000 people. The National Recreation and Park Association (NRPA) suggests that open space, at a minimum, be composed of a "core" system of parklands, with a total of 6.25 to 10.5 acres of open space per 1,000 population with half of the land dedicated to active uses such as ball fields, playgrounds, tennis and basketball courts, and skate board facilities. The NRPA suggests shifting away from reliance on an absolute national standard (i.e., the long standing notion of 10 acres per 1,000 persons) to increasing community self-direction where the number of acres for park and



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Open Space and Trails
Figure 2-6

recreation land is based on what citizens determine is best for themselves. According to the Town's draft 2003 *Town of Southampton Recreation Plan,* "…because the Town of Southampton contains large quantities of open space, new parks with active recreation facilities may be developed more intensely—that is, with facilities covering a greater percentage of the park than the fifty percent that is typical. It is therefore reasonable to reduce its LOS target acreage from the national minimum to a range of between 5 and 10 acres per 1,000." Using the minimum from this range and the maximum from the national range, Table 2-21 shows the developed parkland LOS for the East Quogue study area based on the current open space and population.

Table 2-21
Parkland Level of Service

Area	Population (Year-round, 2000 Census)	Existing Total Acres of Recreation Parkland	Existing LOS (acres per 1,000)	Optimum Total Acreage[1]
East Quogue study area	2,153	17.3	8.04	10.8-22.6

Note: [1]Optimum total acreage based on the Town's standard references in their Recreation Plan and NRPA standards for parkland LOS.

Sources: US Census 2000; NRPA, *Open Space Guidelines and Standards*; *Town of Southampton Recreation Plan*, 2003; AKRF, Inc., August 2006.

As shown in Table 2-21, the existing developed parkland in the study area is below the optimum LOS target (10.8 to 22.6 acres for the study area) based on Town and NRPA standards. To meet this LOS target, an additional 2.76 acres of parkland are needed.

The Town currently owns approximately 13.7 acres of open space on Damascus Road (Section 288, Block 1, Lot 25 and Section 314, Block 2, Lots 1.17, 4.15, and 4.16). The Town purchased this site with the intention of developing it into active parkland. The Town currently has plans to develop this space as recreational fields. Therefore, when this site is developed into an active park, the parkland LOS for the East Quogue study area will increase to 14.4 acres per 1,000 persons and would therefore exceed the optimum target for developed open space.

It is noted that this open space analysis is conservative in that it does not consider the study area's open space resources that are not considered active parklands but that are preserved as open space areas for passive activities. As shown in Figure 2-6, this includes State park and Town owned land throughout the study area. Further, the Town's recreation plan (2003) includes Thomas Sullivan Memorial Park—an 11.6 acre park that is part of the East Quogue Elementary School property—as part of East Quogue's active parkland inventory. The plan rated this park, which has two ball fields, one soccer field, and a playground, as a 3, signifying that it's in poor condition and needs renovations, landscaping, and parking. The school district has since renovated this park.

OPEN SPACE PRESERVATION PLANS, PROGRAMS, AND POLICIES

OVERVIEW

Over the past thirty years the Town of Southampton has demonstrated a commitment to the preservation of open space through a series of plans and policy initiatives. Beginning with the Town's first Master Plan in 1970 and culminating with the 2005 Community Preservation

Project Plan, Southampton has sought to preserve its wealth of open space through the voluntary acquisition of land and transfer of development rights in targeted areas. This section examines the Town's open space plans, programs and policies.

TOWN OF SOUTHAMPTON 1970 MASTER PLAN

The first *Town of Southampton Master Plan* was published in 1970 and focused on the balance between development and natural features protection, groundwater management, protection of agricultural resources, and wetlands preservation. It was recommended in that plan that areas where growth should occur are the historically populated hamlets and villages within the Town (such as East Quogue), while recognizing that open spaces and neighborhood parks are essential components of future development. The plan also identified East Quogue as a high priority project for the development of neighborhood parks.

TOWN OF SOUTHAMPTON 1999 COMPREHENSIVE MASTER PLAN UPDATE

A comprehensive update of the 1970 and 1984 master plans was released by the Town in 1999. The *1999 Comprehensive Plan Update* for the Town of Southampton focused on land management, growth, and environmental protection, and is now guiding land use and zoning decisions throughout Southampton. As stated in the adopted plan, "all Town land use regulations must be in accordance with the Comprehensive Plan" and the underlying purpose of the plan is "the control of land uses for the benefit of the whole community."

The Town's vision in preparing this Comprehensive Plan was to protect existing natural and cultural resources, promote community spaces, encourage economic growth, and provide alternative transportation options for residents. Relative to the protection of open spaces, the Town set the following goals:

- Maintain and preserve existing open space;
- Provide an interconnected system of greenways, walkways, and bike paths linking destinations and resources throughout the Town;
- Encourage the preservation and expansion of existing trails and open space through the subdivision process; and
- Provide increased access to trails and greenways to all residents and visitors of the Town.

The 1999 Plan recognizes that each of its hamlets is unique and must contend with different challenges and opportunities. The overall goal for the East Quogue hamlet was to create a "civic hamlet center theme, featuring a walkable center and a new park and community center and possibly a library." Beyond the development of a community center/library and a park within walking distance of the main street area, the other recommendation related to open space was the protection of open space views.

COMMUNITY PRESERVATION FUND

As described above, the CPF represents the funding mechanism by which most of Southampton's open space preservation and management procedures flow. Enacted by New York State on June 22, 1998 and adopted by the Town of Southampton, along with all five East End towns on April 1, 1999, the CPF is supported through a 2 percent real estate transfer tax and generates revenue on the sale of vacant land valued at more than $100,000 and on improved

property valued at more than $250,000. In November 2006, the voters of the Town of Southampton approved a ten-year extension of the tax to the year 2030.

Southampton has realized the greatest benefit of all the East End towns in terms of land acquisition and preservation of open space. In its effort to protect its rural heritage and natural resources, Southampton has spent $161 million on conservation with $152 million generated from the CPF. As of December 2004, the Town has purchased over 1,944 acres of open space with an additional 300 acres in contract.

COMMUNITY PRESERVATION PROJECT PLAN

The *1998-2001 Town of Southampton Community Preservation Project Plan*, was adopted by the Town Board in 1998 to serve several functions in carrying out the goals of the CPF, including targeting specific projects and parcels for which funds would be earmarked.

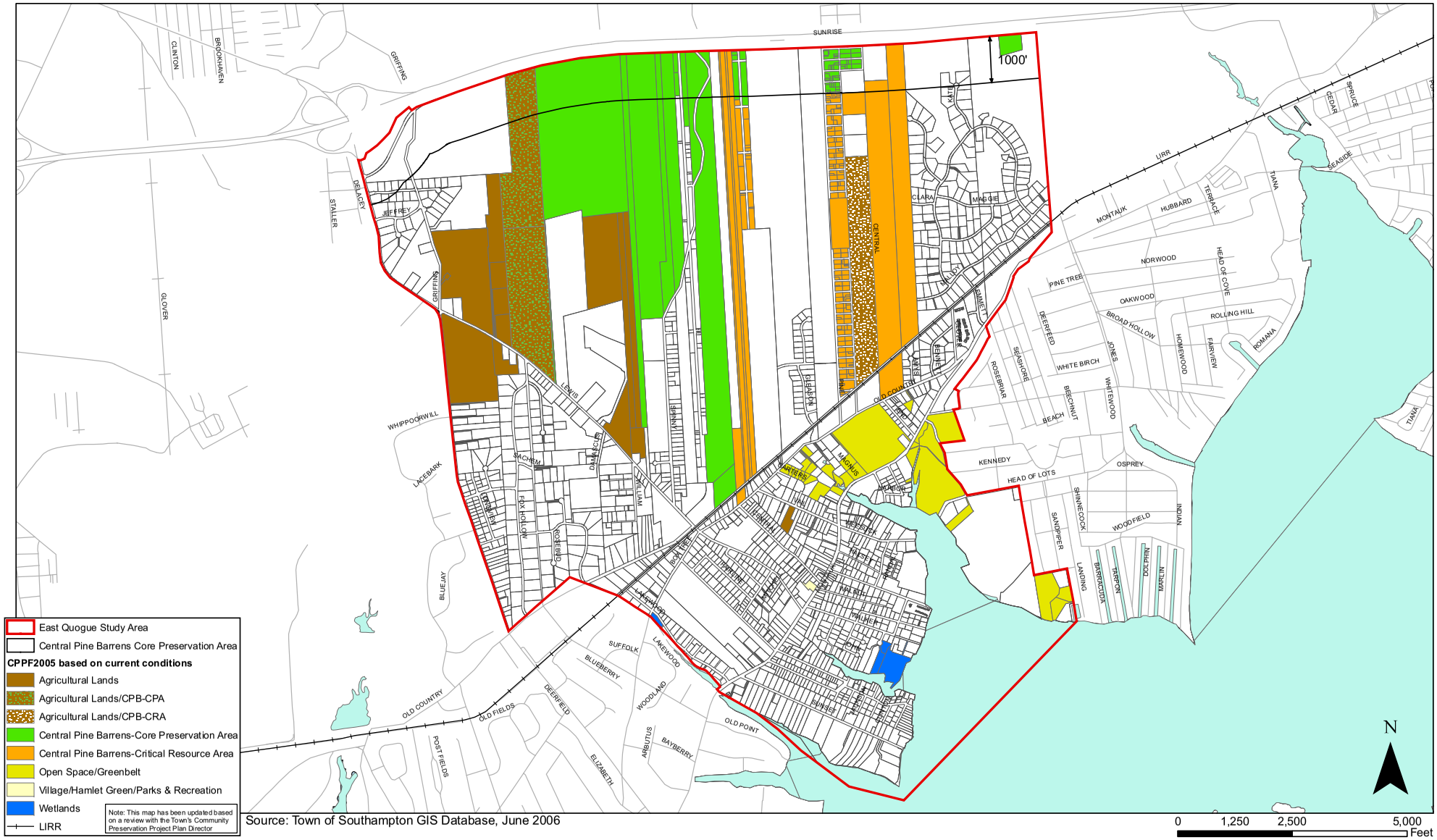
Both the *1998-2001 Town of Southampton Community Preservation Project Plan* and its update, the *2001-2003 and 2003-2005 Town of Southampton Community Preservation Project Plan* presents Southampton's planning policy efforts to preserve and manage existing open space. As part of the Town's vision for preserving open space as one of the area's natural resources, Southampton seeks to expand its open space areas "outside of the Pine Barrens through cooperative efforts with non-profit agencies and private landowners; and target open space acquisition funds for the protection of significant habitat areas, endangered species habitats, and the Town's aquifer recharge areas."

The latest 2005 project plan increased the total acreage to be preserved to over 30,061 acres. The 2005 plan further builds upon the previous two plans and has identified nearly 270 parcels (approximately 1,203 acres) of land within the study area that boast natural features worth preserving. The plan recognized that "Weesuck Creek sustains exemplary occurrences of high and intertidal marshes, biologically significant areas whose protection is critical to maintaining the overall ecology of Shinnecock Bay." The preservation of these lands would help to counter the devastation of this watershed that has occurred from the heavy residential development along the western shoreline. Figure 2-7 shows the priority parcels listed in the 2005 update that are within the project study area that have not already been developed or subdivided. The 2005 plan recommends the preservation of approximately 109 acres in the Weesuck Creek vicinity.

TOWN OF SOUTHAMPTON RECREATION PLAN

The *Town of Southampton Recreation Plan* (2003) provides a comprehensive approach to recreation planning in the Town and includes a compilation of recommendations from the Comprehensive Plan that concern recreation. These recommendations are as follows:

- Develop a comprehensive picture of Southampton recreational needs and wants;
- Identify potential locations for new and/or expanded recreational facilities within the Town;
- Facilitate access to recreation resources in the Town for all residents and visitors;
- Incorporate greenway and trail development into the overall recreation planning process;
- Make the Town's recreation management function self-sustaining;
- Enhance the use of Southampton's recreational resources as a tool for economic development;



East Quogue Generic Environmental Impact Statement

Community Preservation Project Fund (2003-2005) Priority Parcels
Figure 2-7

- Review and refine Town regulations and policies concerning recreational areas in order to reduce conflicts between natural resource protection and recreational uses;
- Review and refine Town land use and zoning regulations to facilitate the preservation and expansion of greenway and open space areas;
- Support local marinas through review and refinement of Town land use, zoning and other regulations, and technical assistance;
- Pursue partnerships between the Town, school districts, local colleges, and private resources to maximize opportunities for recreation use; and
- Explore and advance the planning concerning recognized needs for specialized recreation.

The recreation plan recommends that additional open space and recreational needs could be met with CPF properties. For example, the 13.7-acre former animal shelter site on Damascus Road was purchased using the Town's CPF with the intention of developing it as an active recreation park. In addition, a 64-acre site known as the "DeRopp" property in East Quogue was purchased by the Town's CPF in the year 2000. The recreation plan identified this property as having the potential to provide needed parkland. Today, 15 of the 64 acres have been designated as the Pine Neck Nature Sanctuary. The remainder of the land is preserved as open space.

ZONING TO PRESERVE OPEN SPACE

The *1999 Comprehensive Plan Update* recommends the establishment of PDDs for the purpose of protecting natural resources and providing open space. It is intended that PDDs, as floating zoning districts, can serve as receiving sites for Pine Barrens credits and other applicable development rights transfers. Bonuses can also be achieved for providing substantial community benefits.

In terms of preserving open space, a PDD should:

- Conserve and protect open space, natural resources, and diverse ecological communities and protect diversity and groundwater quality and quantity;
- Encourage a more efficient use of the remaining vacant land in the Town; and
- Protect open space connections.

SOUTHAMPTON TOWN CODE

Chapter 247: Open Space

Chapter 247 of the Southampton Town Code focuses on existing provisions designed to protect open space within the Town including the establishment of PDD regulations. According to the Code:

"The legislative intent of the planned residential development provision is to encourage flexibility of design and development of land in such a manner as to promote the most appropriate use of land, to facilitate the adequate and economical provision of streets and utilities, to preserve the natural and scenic qualities of open lands in order to provide larger areas of open space for both recreational and conservation purposes, and to implement objectives of the master plan."

Some aspects of Chapter 247 apply directly to residentially zoned land in districts ranging from CR200 to R20. In addition, the Code requires that 25 percent (or approximately 6 percent of the

study area) of the land in the CR200 district be reserved "in its natural state for passive recreational, open space, paleontological, archaeological, and historical resources." If the land in question is also located in the Aquifer Protection Overlay district (74 percent of the study area), the preservation requirement is 65 percent.

Allowable density is determined by creating a yield map. This yield map is used to determine the number of units that could be achieved in the absence of Chapter 247. "Manor houses" can also be used to achieve the allowable number of site units (Manor Houses may contain 2 to 4 individual units). The Planning Board may also require an open space easement dedicated to the Town as a condition of approval, and/or development located on a portion of the parcel or tract that minimizes the impact on groundwater recharge.

The Code also discusses provisions pertaining to conservation easements, specifically with regard to the procedures upon which such easements are obtained by the Town, and the protection of easements and buffers, particularly prior to and during construction. The Town also has a trail preservation agreement provision (Chapter 295) in its Code which allows a written agreement between the Town and owner of property traversed by a trail, whereby the property owner can voluntarily limit the use of their property in exchange for certain property tax adjustments. In return, the owner agrees to preserve that portion of the property along the trail and not "eliminate, build on, or block access to the trail for a period of a year" (Town of Southampton Code, Local Law No. 59 of 1994).

Chapter 292: Subdivision of Land

Section 35(B) of Chapter 292 requires the development of parkland when a new residential subdivision is proposed in the Town. Specifically, a new subdivision must provide at least 5 acres of parkland per 100 dwelling units. Parkland constitutes a playground or other recreation and open space purposes, including passive recreational uses. If suitable parkland cannot adequately be accommodated, the subdivider would be required to pay a park fee to the Town equal in amount to the fair market value at the time of the subdivision procedure.

Further, to foster the goal of trail preservation, §292-6.2 of the Town Code, requires that all new subdivisions preserve existing trails in their natural state within reserved areas of the subdivision (consistent with overall land use principles); if preservation of trails is not consistent with land use policies, the Planning Board may require the relocation of trails within the proposed reserved areas. In addition to encouraging the dedication of public use of these trails, preserved trails, in accordance with §292-6.2 must be:

- Improved in accordance with the Board's rules and regulations relating to clearing and marking of trails;
- Well buffered from proposed development; and
- For recreational uses; public utilization shall be encouraged.

Chapter 295: Trails

In accordance with the Comprehensive Plan, Chapter 295 of the Town Code recognizes the significance of a trail system to the Town's residents and visitors alike. With this chapter, the Town set up the Trail Advisory Board to, among other things, identify existing and potential trails. The establishment of this chapter made it the Town's policy to identify and protect existing trails, as well as to develop and maintain new linking trails to secure various social, economic, aesthetic, and environmental benefits necessary to the health, safety, and general

welfare of present and future residents of Southampton (designated trails in the study area are shown on Figure 2-6).

NEW YORK STATE OPEN SPACE CONSERVATION PLAN

In November 2006, DEC, New York State Department of State (DOS) and the Office of State Parks, Recreation, and Historic Preservation (OPRHP) released *New York State Open Space Conservation Plan and GEIS*. This is the current adopted State-wide plan for open space acquisition and protection. Preparation of a State-wide open space conservation plan was initiated by an act of the State legislature in 1990 and the first plan was approved in November 1992. It is required by the act that the plan be updated every three years. Subsequent plans were completed in 1995, 1998, and 2002. The 2006 plan, which builds upon the previous studies, was expanded to include the State's Coastal and Estuarine Land Conservation Plan, which is a requirement for coastal states to qualify for federal funds through the Coastal and Estuarine Land Conservation Program (CELCP). This fund gives priority to lands that can be effectively managed and that have significant ecological value. Another change from the 2002 plan was the expansion of priority projects that should be included as part of the plan such as major resource areas, areas of State-wide significance, and linear corridors.

Within the DEC, the Bureau of Real Property is the agency responsible for land acquisition. The plan is not limited to public recreation but recognizes the benefit of private land stewardship and identifies sites that are priorities for preservation for a number of reasons, among them the protection and preservation of farmland, historic and archaeological resources, water quality, natural and scenic environments, and open space/recreational opportunities. There is an evaluation process that leads to the identification of priority sites. That process considers regional plans and needs, resource values, and alternative mechanisms for protection. To assist in developing the plan, there are nine Regional Advisory Committees that provide input; the Town lies within Region 1, which covers Long Island. Within the project study area, previous versions of the plan identified lands for acquisition in the Central Pine Barrens Core Preservation Area and Critical Resource Area including the Henry Hollow's region and Chardonnay Woods (The Pine Subdivision). The 2006 plan removed Henry's Hollow and Chardonnay Woods from the priority parcel list since the largest parcels were acquired. However, the lands within the Central Pine Barrens in the Town are still listed on the priority acquisition list.

SOUTH SHORE ESTUARY RESERVE

As discussed in Chapter 1, "Project Background," the New York State Legislature, in 1993, enacted Article 46 entitled "Long Island South Shore Estuary Reserve." Article 46 recognized the importance of the South Shore Estuary and its contributions to the natural environment and required the development of a Comprehensive Plan. Thus, in 2001 the *Long Island South Shore Estuary Reserve Comprehensive Management Plan* was published.

Recommendations of the plan specific to the East Quogue study area and open space and recreation issues include expanding public access to Weesuck Creek; preserve open space in the Pine Barrens region; restore wetlands in the Pine Neck area and further south; and restore the stream corridor that extends from Weesuck Creek northwest past Spinney Road.

In May 2005, DOS published the *South Shore Estuary Reserve Open Space Analysis*, which identified areas of open space in the confines of the SSER study area. Open space areas were defined as lands that do not exhibit manmade structures or improvements and are not already protected by public or private entities. Within the study area alone there are more than 60

individual parcels totaling approximately 2,083 acres—more than half of the study area—that have been identified as SSER open space priority parcels (see Figure 2-8).

G. NATURAL RESOURCES

The Town of Southampton is recognized across Long Island, the region, and the State of New York for its diverse and high-quality open spaces and ecosystems. In addition to habitats that are important and unique in New York State, including Pine Barren forest, swamp forest wetlands and habitats for numerous breeding birds, the Town has many New York State designated rare plant and animal species. This combination of features creates a vitally important biological diversity.

In addition to providing ecological habitat, many of these natural features provide opportunities for pristine groundwater recharge. The study area is located over one of the largest sole source aquifers in New York State making the protection of these areas not only crucial to sustaining the local ecology, but also providing high quality drinking water.

The key habitats described below support some of the largest tracts of undisturbed land west of the Shinnecock Canal, which provide a mix of unique flora and fauna. The discussion provided below does not account for every species that could be present in the study area. However, given the biological diversity of the area and the presence of pristine and unique habitats in the Pine Barrens area and along the bay coast, the population and presence of unique and potentially rare individual species is expected to be substantial.

The State's Natural Heritage Program (NHP) maintains a list of endangered, threatened, and rare plants and animals that are likely to be found in the study area. This list is developed as a cooperative effort of the DEC, New York State Soil Conservation Service, New York State Natural Heritage Program, The Nature Conservancy, and State-wide garden clubs, universities, and colleges. NHP was contacted to determine whether endangered, threatened, and rare plants and animals could potentially exist within the East Quogue study area.

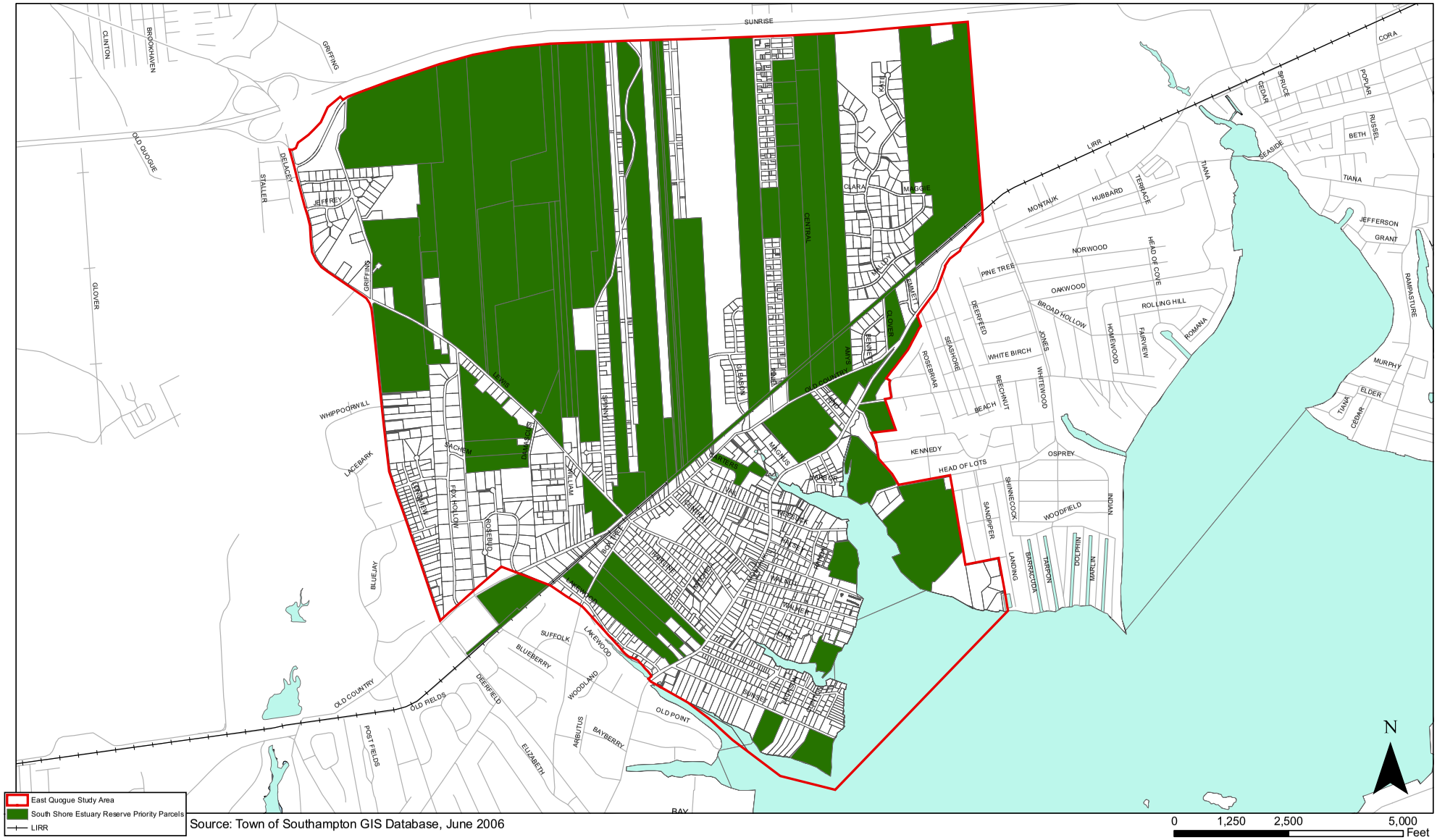
This section presents the natural features that distinguish this study area from other places in the Town and the region.

NATURAL COMMUNITIES

Over the years the Town has assembled significant data on the natural communities of the Town and the study area. These key communities are listed below in Table 2-22, along with their respective land acreage.

Overall, natural coverages in the study area are comprised of two groups, uplands (hill elevations) and lowlands. The upland communities are found on the higher elevations and adjacent slopes. These areas mainly feature pitch pine-oak forest communities. The lower elevations host the wetland and wet soil habitats (although small wet depressions can also be found in the hills). Together, these natural communities cover about 1,863 acres, (almost one-half of the study area), of which about 93 percent are upland types and 7 percent are the low lying wetland and wet soil habitats.

As shown in Table 2-22, the vast majority of the hill elevation natural community is pitch pine-oak forest. This community covers most of the land area north of the LIRR tracks and east of Lewis Road. Higher elevations also include pockets of successional southern hardwoods, successional old field, successional maritime forest, and successional red cedar woodland, all



South Shore Estuary Reserve Open Space Priority Parcels
Figure 2-8

south of the LIRR tracks and Old Country Road (see Figure 2-9a and Figure 2-9b). Lower elevations feature wetlands that are identified and mapped by the DEC and include open water ponds and streams, wet meadows, and other wetland communities such as red maple-black gum swamp.

Table 2-22
Natural Communities Coverage within the Study Area

Community Type	Acreage	Percent of Total
Hill Elevations		
Pitch Pine-Oak Forest	1,668	89.5
Successional Southern Hardwoods	24.7	1.3
Successional Maritime Forest	4.7	0.3
Successional Old Field	35.0	1.9
Successional Red Cedar Woodland	0.7	0.04
Maritime Beach (Marine Intertidal Beach)	2.3	0.1
Subtotal	*1,736*	*93.2*
Lowlands		
Red Maple-Black Gum Swamp	54.7	2.9
Reedgrass Marsh	3.8	0.2
Tidal Marsh[1]	68.8	3.7
Subtotal	*127*	*6.8*
Total	**1,863**	**100**

Note: [1]Includes Lakes, Ponds, and Creeks
Source: Town of Southampton Division of Information Systems, July 2006

NATURAL HERITAGE COMMUNITIES

This discussion is based on Carol Reschke's *Ecological Communities of New York State* which was used to identify the natural vegetative community cover types in the study area. Figures 2-9a and 2-9b show the locations of these communities. Appendix B provides a description of the ranking system applied to these communities. Generally, the lower the number, the rarer the community, either globally or at the State level. That document was initially released in 1990 and was then updated (Draft Second Edition) in January 2002.

Terrestrial System

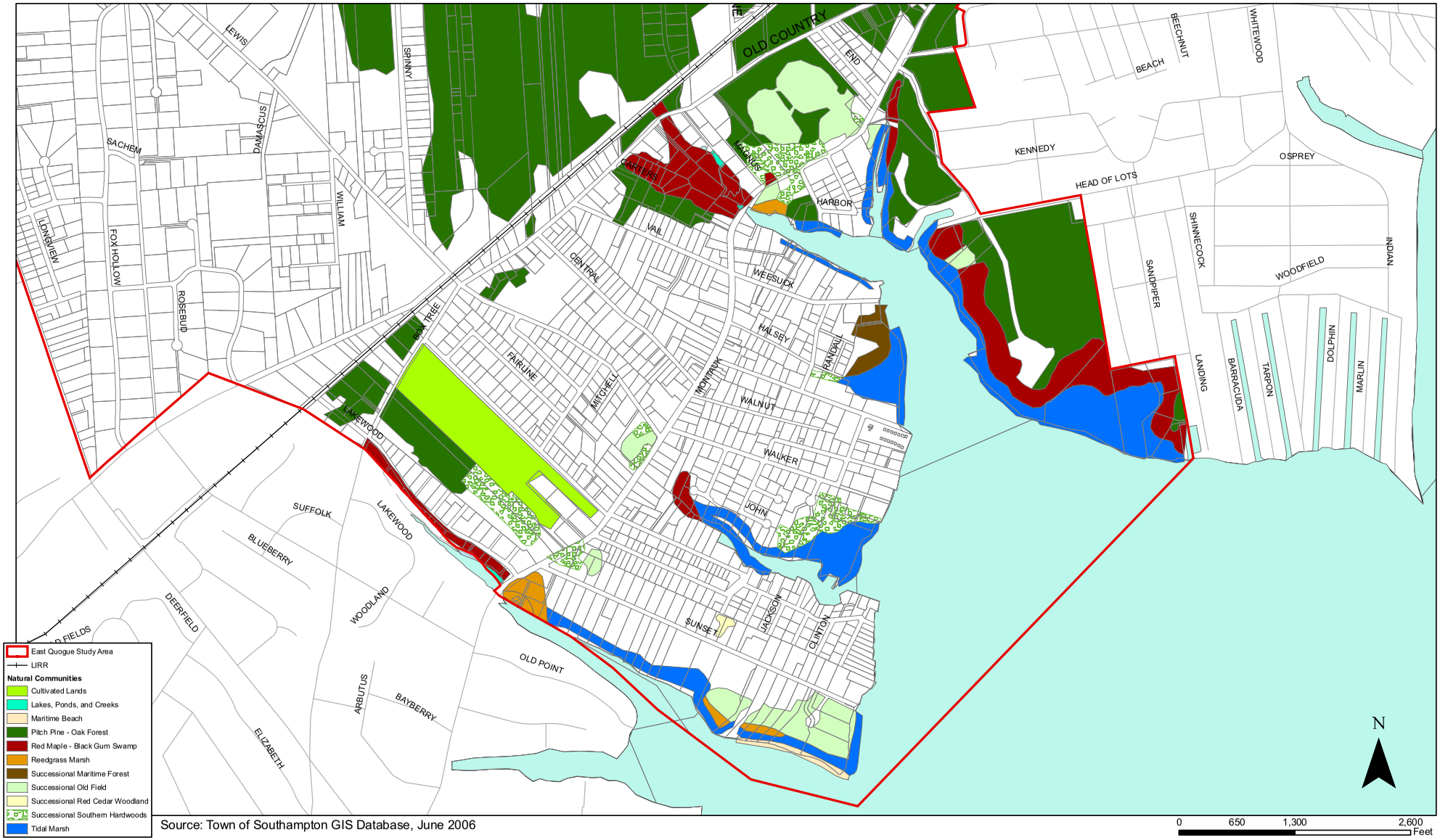
Forested Uplands

Pitch Pine-Oak Forest. The Pitch Pine-Oak Forest covers much of the undeveloped portion of the study area. It is represented by dominant indicator species, including pitch pine (*Pinus rigida*), white oak *(Quercus alba)*, black oak *(Quercus velutina)*, and scarlet oak *(Q. coccinea)*. The shrub layer is characterized by well-developed scrub oak *(Q. ilicifolia)* and a continuous layer of blueberries *(Vaccinium pallidum, Vaccinium angustifolium)* and black huckleberry *(Gaylussacia baccata)*. Also found in this community is bracken fern *(Pteridium aquilinum)*, wintergreen *(Gaultheria procumbens)*, and Pennsylvania sedge *(Carex pensylvanica)*. This mixed forest community typically occurs on well-drained sandy soils of glacial moraines with the ratio of pines to oaks varying. Based on New York State Natural Heritage Program ranking, this habitat has a global rank of G4G5 and a State rank of S4, which means that it is apparently secure both globally and within New York State.

Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Natural Communities
Figure 2-9a



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Natural Communities
Figure 2-9b

Fire typically maintains a variety of successional stages within pitch pine-oak woodlands and allows the pines to perpetuate. According to Kricher and Morrison (1988), in the absence of fire, pine-oak dominated communities succeed naturally into forests dominated by oaks, hickories, and red maples.

Successional Southern Hardwoods. This ecological community occurs where a hardwood or mixed forest has been cleared or disturbed and is characterized by light-demanding species. The dominant tree species are sassafras *(Sassafras albidum)*, red maple *(Acer rubrum)*, black locust *(Robinia pseudoacacia)*, black cherry *(Prunus serotina)*, tree-of-heaven (Ailanthus), and eastern red cedar (Juniperus virginiana). Successional southern hardwood communities are also characterized by introduced species which may or may not dominate. This community has a global and State rank of G5 and S5, respectively, and is located scattered throughout the study area, south of Old Country Road.

Successional Maritime Forest. The Successional Maritime Forest habitat is a hardwood forest that occurs in low areas near the coast. The forest often experiences salt spray and therefore the canopy comprises stunted and flat-topped trees. The dominant canopy species include black oak, post oak (*Q. stellata*), shadbush (*Amelanchier canadensis*), white oak, black cherry, black gum (*Nyssa sylvatica*), sassafras, and red maple. Common vines include riverbank grape (*Vitis riparia*), poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), and greenbrier (*Smilax spp.*). Dominant shrubs and ground cover vary with Bayberry (*Myrica pensylvanica*) commonly found in these type of forest. In addition, introduced species are also typically found in this community. Successional Maritime Forest has a global rank of G4 and a State rank of S3/S4. Within the study area it covers about 4.7 acres, and is located between Weesuck and Bay Avenues.

Open Uplands

Successional Old Field. This natural meadow community is dominated by forbs and grasses that occur on sites previously cleared, plowed, and then abandoned. Dominating herbs include: goldenrod (*Solidago canadensis*), bluegrass (*Poa pratensis, P. compressa*), timothy (*Phleum pratense*), sweet vernal grass (*Anthoxanthum odoratum*), orchard grass (*Dactylis glomerata*), common evening primrose (*Oenothera biennis*), old field cinquefoil (*Potentilla simplex*), New England aster (*Aster novae-angliae*), wild strawberry (*Fragaria virginiana*), Queen Anne's lace (*Daucus carota*), Ragweed (*Ambrosia artemisiifolia*), and hawkweeds (*Hieracium spp.*).

Less than 50 percent of the vegetative cover in these areas consists of shrubs. Various scattered shrubs throughout these sites include arrowwood (*Viburnum recognitum*), sumac (*Rhus typhina*, *R. glabra*), and eastern red cedar. This natural community is temporary and eventually succeeds to shrubland, woodland, or forested areas that are also found in the study area. This community has a global and State rank of G4 and S4, respectively. Within the study area this habitat covers about 35 acres, and is located south of Old Country Road.

Maritime Beach (Marine intertidal beach). A Maritime Beach community occurs on unstable sand, gravel or cobble or bay shores above mean high tide where the shore is modified by storm water and wind erosion. This community has very sparse vegetation, which may consist of beachgrass (*Ammophila breviligulata*), sea-rocket (*Cakile edentula ssp. Edentula*), seaside atriplex (*Atriplex patula*), seabeach knotweed (*Polygonum glaucum*), and seaside spurge (*Chamaesyce polygonifolia*). This community is important for migrating shorebirds, such as sanderlings, willets, etc. This community has a global and State rank of G5 and S5, respectively.

Within the study area this habitat covers about 2.3 acres, and is located at the southwestern border of the study area.

Barrens and Woodlands

Successional Red Cedar Woodland. This woodland community typically develops on abandoned agricultural fields at elevations less than 1,000 feet. Eastern red cedar is the dominant tree type accompanied by gray birch (*Betula populifolia*) and other early successional hardwoods. Shrubs and groundcover are similar to those in a successional old field. This community has a global and State rank of G5 and S5, respectively. Within the study area this habitat covers about 0.7 acres, and is located along Sunset Avenue.

Palustrine System

Forested Mineral Soil Wetlands

Red Maple-Black Gum Swamp. This maritime coastal ecological community occurs in poorly drained depressions that lie over inorganic soils and often times in a band between coastal streams and uplands. Red maple and tupelo (*Nyssa sylvatica*) are often co-dominant. Various shrubs on these sites often make this layer dense and well-developed. A few of the shrub species present in this community are: spice bush (*Lindera benzoin*), winterberry (*IIex verticillata*), sweet pepperbush (*Clethra alnifolia*), swamp azalea (*Rhododendron viscosum*), highbush blueberry (*Vaccinium corymbosum*), and arrowwood (*Viburnum recognitum*). In addition, poison ivy, catbriar (*Smilax rotundifolia)*, ferns and herbs are typically abundant. This community has a global rank of G3G4 and a State rank of S2. Within the study area this habitat covers about 54.7 acres, and is located at the head waters of Weesuck Creek and along the eastern border of this waterway.

Estuarine Cultural and Palustrine Cultural

Reedgrass Marsh. This habitat is found along the shorelines of East Quogue, especially in historically disturbed areas. The community is dominated by reedgrass (*Phragmites australis*).

Estuarine System

Tidal Marsh. This community acts as a buffer between coastal waters and the land. The mix of freshwater with salt water provides a unique condition of varying salinities, which is a crucial habitat for tidal organisms. Tidal marshes can be broken down into two categories—high salt marsh and low salt marsh. High salt marshes occur in sheltered tidal waters extending from mean high tide up to the limit of spring tide. Dominant plant species include salt meadow grass (*Spartina patens*), cordgrass (*Spartina alterniflora*), and reedgrass. Low salt marshes also occur in sheltered areas of the coast extending from mean high tide seaward to mean sea level (about 6 feet below mean high tide). The dominant species is cordgrass. Both of the communities have a global rank of G4 and a State rank of S3/4. Within the study area this habitat covers about 68.8 acres, and is located along the East Quogue shoreline.

KEY HABITATS

Central Pine Barrens

The Central Pine Barrens comprises more than 100,000 acres of pitch pine-oak forest within the Towns of Riverhead, Brookhaven, and Southampton with about 30 percent (29,367 acres) within Southampton and almost 3 percent within the East Quogue study area. The Pine Barrens

contains a unique assemblage of pitch pine forest with pine-oak forest, freshwater ponds, swamps, marshes, bogs, and streams. These communities provide the essential habitat for a myriad of endangered, threatened and rare flora and fauna. The portion of the Central Pine Barrens within the Town of Southampton represents the most intact and undeveloped portions of this ecosystem. The undeveloped portions of the study area are those that are located within the Central Pine Barrens region (see Figure 2-10). Notably, a globally rare community, the dwarf pitch pine plains, is found within the Town just west of the project study area. This community is one of only three worldwide.

In addition to its unique and diverse ecological community, the Central Pine Barrens also provides significant high quality recharge to the underlying federally designated sole source aquifer.

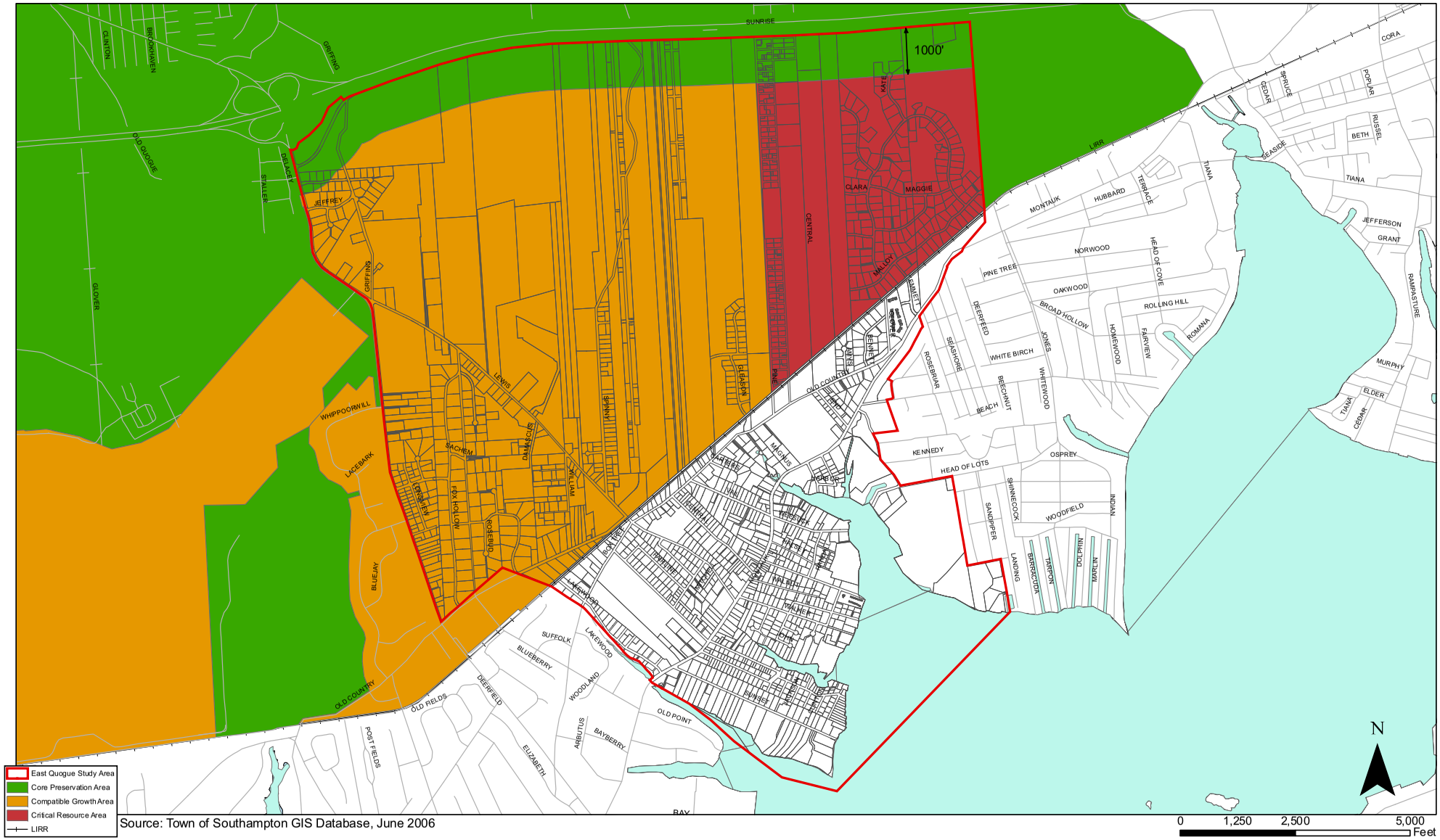
To properly manage lands within the Central Pine Barrens and to ensure preservation of key areas, the *Central Pine Barrens Comprehensive Land Use Plan* designated a Core Preservation Area and a Compatible Growth Area. No development is permitted in the Core Preservation Area while development that adheres to set standards and guidelines included in the Comprehensive Plan is permitted within the Compatible Growth Area. Of the 2,778 acres of Central Pine Barrens in the study area, 356 acres are located within the Core Preservation Area and 2,422 are located within the Compatible Growth Area. The Comprehensive Plan also designated Critical Resource Areas—areas that are located outside of the Core Preservation Area but due to the presence of certain natural features need additional protection than that provided within the Compatible Growth Area. Within the study area, one Critical Resource Area is featured in the northeast portion from Sunrise Highway south to the LIRR tracks. This area was designated as a Critical Resource Area due to the habitat type that is conducive to the coastal barrens buckmoth (*Hemileuca maia maia*), which is a New York State special concern species (i.e., a species at risk of endangerment).

Weesuck Creek

Weesuck Creek acts as a tributary to Shinnecock Bay and exhibits biologically rich wetlands and shorelines of coastal forest. Specifically, the western shoreline is completely built with residential and some commercial uses while the eastern shoreline provides a large expense of pristine coastal forests of oak, pine, maple, and tupelo. Salt hay meadows characterize the area, backed by red maple-black gum hardwood swamps and coastal Pine Barrens communities. The Weesuck Creek watershed is also an important component of the health and water quality of the Shinnecock Bay and therefore contributes to the significant commercial and recreational economy that is provided by the bay.

The marshes of Weesuck Creek provide the nursery and feeding ground for bluefish, flounder, weakfish, tomcod, and blue claw crab, all of which have commercial and recreational significance. Forage fish such as sicklebacks, killfish, popefish, Atlantic silverside, and menhaden also seek out these areas, thus increasing the area's importance to finfish throughout Shinnecock Bay. In addition, Weesuck Creek provides habitat to numerous song and wading birds.

A considerable portion of the eastern Weesuck Creek coastline is now protected in perpetuity through the Town's acquisition of the Pine Neck Preserve. The wetlands within the Pine Neck Preserve and a large portion of Weesuck Creek have been designated by DOS as a Significant Coastal Fish and Wildlife Habitat (SCFWH) related to the larger system of Shinnecock Bay, see below.



Source: Town of Southampton GIS Database, June 2006

Central Pine Barrens Regulatory Zones
Figure 2-10

East Quogue Generic Environmental Impact Statement

Shinnecock Bay

Located between the Villages of Quogue and Southampton, Shinnecock Bay comprises 9,000 acres of open water, salt marshes, dredged material islands, and intertidal flats and is connected to Moriches Bay via the Quogue Canal and to the Great Peconic Bay via Shinnecock Canal. Shinnecock Bay is recognized as one of the largest and most valuable estuaries along the Atlantic coast with its expansive salt hay meadows, pristine maritime dunes, bayside mudflats, eelgrass beds, and spartina marshes. Other habitats that are connected to and part of the bay include Tiana Bay, Heady Creek, Halsey Neck Pond, and Shinnecock Inlet. Shinnecock Bay is bordered by high density residential development and small craft harbor facilities on the north and west sides. The Shinnecock Indian Reservation on the east and the barrier beaches to the south are generally undeveloped. Further, there has been relatively little disturbance of the bottom substrate in Shinnecock Bay.[1]

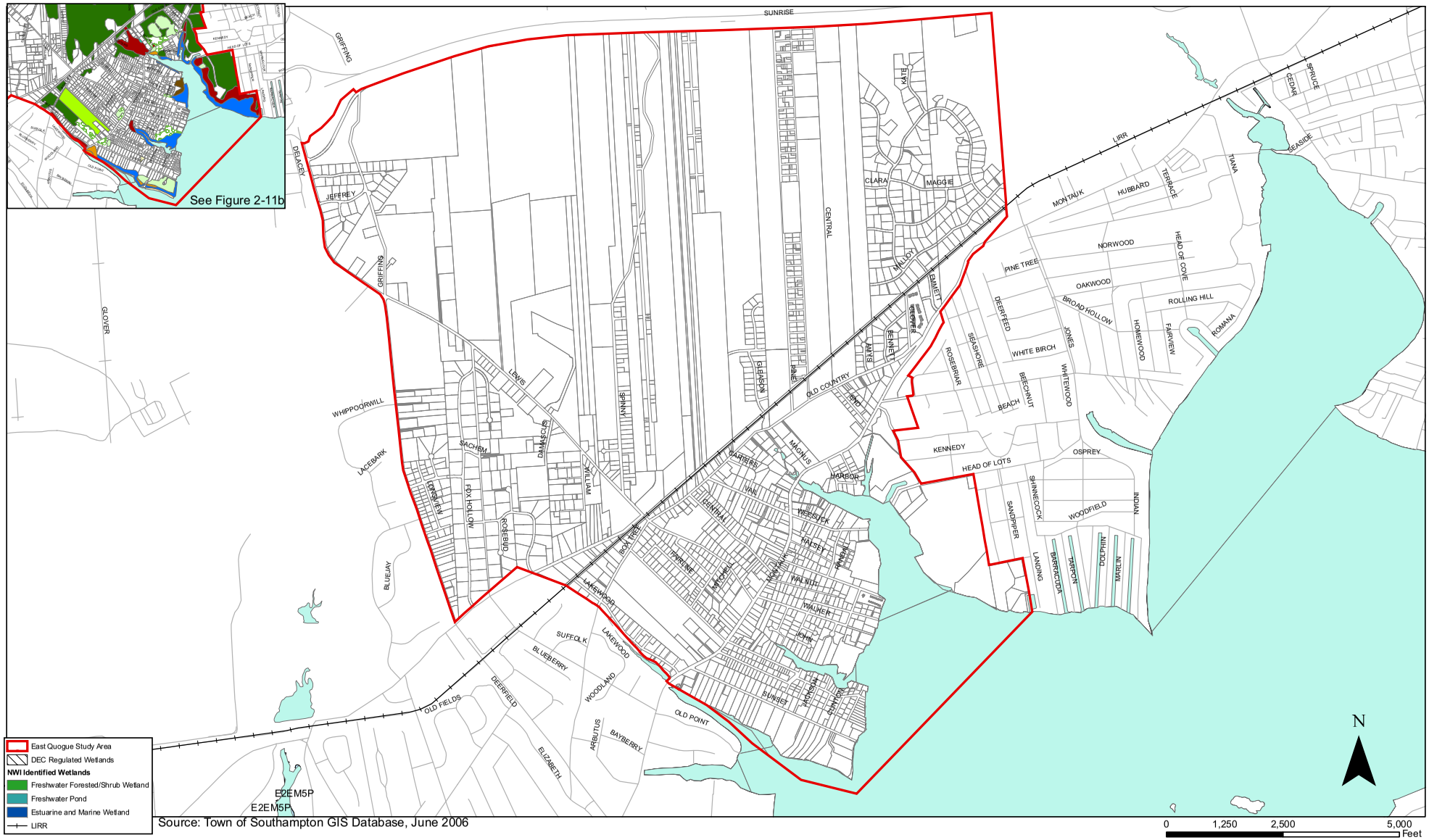
Shinnecock Bay is one of three major protected, shallow (generally less than 10 feet and closer to 2 feet near the project study area), coastal bay areas on the south shore of Long Island. As mentioned above, Shinnecock Bay was designated by DOS as a SCFWH. This designation entitles this system to be protected, preserved, and where practical, restored to maintain its viability as a habitat.

In addition to having significant bird concentrations, Shinnecock Bay is a productive area for marine finfish, shellfish, and other wildlife. Much of this productivity is directly attributable to the salt marshes and tidal flats that border the bay. Shinnecock Bay serves as a nursery and feeding area (April through November, generally) for bluefish, winter flounder, summer flounder, scup, weakfish, tomcod, blue claw crab, and forage fish species, such as Atlantic silverside, menhaden, striped killifish, pipefish, and sticklebacks. As a result of the abundant fisheries resources in the bay, Shinnecock Bay receives heavy recreation and commercial fishing pressure of regional significance. Shinnecock Inlet is an especially significant component of Shinnecock Bay, as a corridor for fish migrations, as a source for the exchange and circulation of bay waters, and as an area where foraging by many fish and wildlife species is concentrated. Wildlife species that feed extensively on fisheries resources near the inlet include least tern, common tern, and harbor seal. From December through early May, concentrations of harbor seals occur in Shinnecock Bay. Exposed sand shoals near the inlet provide an important "haulout" area, which seals use for resting and sunning. This location is one of about five major haulouts around Long Island, serving as a focal point for seals feeding in the bay. The bay is also inhabited by hard clams, soft clams, bay scallops, and bank mussels, and most of the bay waters are certified for commercial shellfishing. Shellfish harvests from the area are of regional significance. Halsey Lane Pond, a freshwater pond draining into Heady Creek, contains a significant population (at least 1,000 individuals) of alewife.

Wetlands

According to DEC wetland maps, the only areas in the study area with regulated wetlands are north and east of Weesuck Creek. Further, the National Wetlands Inventory (NWI) has indicated these areas as wetland sites but also includes an area west of Weesuck Creek between Weesuck and Bay Avenues. NWI wetlands were also identified west of Lewis Road and west of Spinney Road (see Figures 2-11a and 2-11b). The water features that are located north of the LIRR tracks (i.e., west of Lewis Road and west of Spinney Road) are classified as freshwater ponds by the

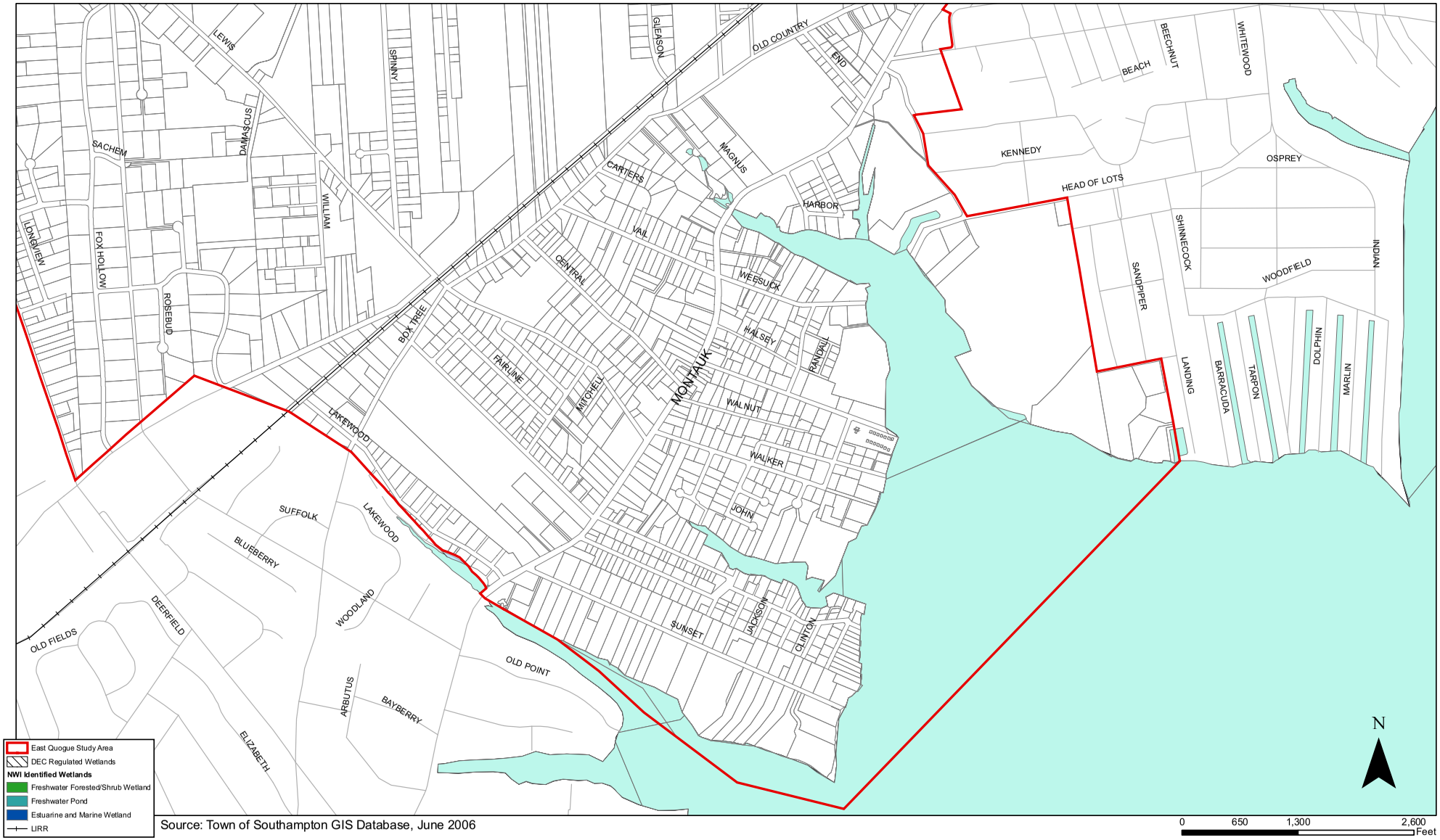
[1] http://www.nyswaterfronts.com/downloads/pdfs/sig_hab/LongIsland/Shinnecock_Bay.pdf



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Freshwater and Tidal Wetlands
Figure 2-11a



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Freshwater and Tidal Wetlands
Figure 2-11b

NWI. Since these ponds are not mapped by DEC they are not regulated by the State. The Lewis Road ponds are drainage basins for flood control. The ponds west of Spinney Road were identified on property that is actively sand mined. The wetlands featured south of the LIRR tracks that are regulated by DEC include Q-10, located just south of the LIRR tracks to Weesuck Creek between Vail Avenue and Magnus Lane; Q-20, located southwest of Josiah Foster's Path to Weesuck Creek; and Q-2, located along the eastern coast of Weesuck Creek expanding further east to Canvasback Lane where Weesuck Creek flows into Shinnecock Bay. It should be noted that the DEC wetland map indicates that Weesuck Creek continues northwest past Spinney Road towards the sand mining operations. In addition, there is a regulated wetland featured along the western study area boundary, both north and south of Montauk Highway, identified as Q-6. The NWI wetlands south of the LIRR tracks are generally located within the same areas as the DEC mapped wetlands.

Agricultural Lands

In addition to the natural communities that distinguish the East Quogue study area, agricultural lands, entirely within the western portion of the study area, are also an important feature of the study area. These lands are primarily found north of Old Country Road with the exception of one farmland found south of this roadway and west of West Side Avenue.

WILDLIFE HABITAT

OVERVIEW

Wildlife, as defined for the purposes of this study, includes mammals, reptiles, and amphibians. For the purposes of this study, information was compiled from a variety of sources including both peer-reviewed and published literature as well as secondary literature. Reports based upon peer reviewed literature are generally more robust. Secondary literature and conversations with local naturalists have been included where they provide supplemental data.

COASTAL BARRENS BUCKMOTH

The vast wooded Pine Barrens, specifically areas north of the 100-foot contour of the Pine Barrens pitch-pine oak forest that comprise the northern portion of the East Quogue study area, provide the habitat that supports the coastal barrens buckmoth (*Hemileuca maia maia*), a special concern species in the State. This area has been designated as a Critical Resource Area within the Central Pine Barrens known as "Henry's Hollow." The buckmoth has a global rank of 5 (globally secure but possibly rare within its range) and a State rank of 2 (vulnerable to extirpation). The buckmoth is a fire adapted species that seeks refuge underground to escape potential fires during the dry season and with adequate rainfall in October, hatch as adult moths.

MAMMALS

Animals expected to utilize the study area are those associated with forested and agricultural lands of relatively low development densities, and those that are more tolerant of habitat disturbance, due to the developed areas within the eastern, southern, and western portions of the study area. In addition to the large undeveloped lands within the center of the study area, linkages to the larger Pine Barren forest to the north afford an even larger range for animals. Moreover, connections to the estuarine waters in the southern portion of the study area provide

habitat for species that thrive in a mix of habitats from interior forest to marsh lands. Table 2-23 provides a list of mammals that are likely to utilize the study area.

Table 2-23
Animals Likely Present in the Study Area

Common Name	Scientific Name
White-tailed deer	*Odocoileus viginianus*
Mink	*Mustela vison*
Raccoons	*Procyon lotor*
Opossum	*Didelphis marsupialis*
Short-tailed shrew	*Blarina brevicauda*
Masked shrew	*Sorex cinereus*
Meadow vole	*Microtus pennsylvanicus*
Pine vole	*Microtus pinetorum*
Eastern mole	*Scalopus aquaticus*
Eastern cottontail	*Sylvilagus floridanus*
Eastern gray squirrel	*Sciurus carolinensis*
Eastern chipmunk	*Tamias striatus*
Red fox	*Vulpes vulpes*
Woodchuck	*Marmota monax*
White-footed mouse	*Peromyscus leucopus*

Sources: *The Western Town Generic Environmental Impact Statement, 1993; Final Environmental Impact Statement for The Pines, 1988.*

REPTILES AND AMPHIBIANS

A list of reptiles and amphibians known to use the study area is provided in Table 2-24. This list was compiled based on the DEC Amphibian and Reptile Atlas Project, a 10-year survey (1990-1999) that documents the geographic distribution of New York State's amphibians and reptiles. Like the Breeding Bird Atlas (described below), this survey divided the State into large blocks, and with the assistance of volunteers, inventoried those blocks for amphibians and reptiles. The compiled data were organized by USGS quadrangle. The study area almost entirely falls within the Quogue quadrangle. Table 2-24 lists all frogs, toads, salamanders, and snakes recorded in the DEC database for the quadrangle. Of the 70 species of amphibians and reptiles identified by the survey, 21 (30 percent) are expected to utilize the study area. Of those, four species are listed as either threatened, endangered or special concern species.

Those species of reptiles and amphibians requiring wetlands and aquatic resources for a large percentage of their life cycle are unlikely to occur in those portions of the study area that lack wetlands and contain few aquatic breeding sites. According to the DEC and NWI maps, wetlands are predominately south of Old Country Road, along the coast of Weesuck and Daves Creek and Shinnecock Bay.

Because a large portion of the study area is well drained and lacks wetlands, it is expected that amphibians and reptiles that frequent the study area would be limited to those that do not require water or wet soil for a majority of their life cycles. These would include Fowlers toad (*Bufo fowleri*), which requires only temporary water-filled ruts to lay their eggs, and northern redback salamander (*Plethodon cinereus*), which is an entirely terrestrial species found in hardwood or

mixed forests. Reptiles occupying any or all of the sites could include such species as eastern box turtle (*Terrapene c. carolina*), and snakes typically found in habitat close to human habitation or disturbance such as common garter snake (*Thamnophis sirtalis*), and northern black racer (*Coluber c. constrictor*). Such species also would find prey, including rodents and invertebrates within the study area.

Table 2-24
Amphibians and Reptiles Known to Occur in the Study Area

Common Name	Scientific Name	Status
Salamanders		
Northern Redback Salamander	*Plethodon cinereus*	N/A
Frogs and Toads		
Fowler's Toad	*Bufo fowleri*	N/A
Gray Treefrog	*Hyla versicolor*	N/A
Northern Spring Peeper	*Pseudacris c. crucifer*	N/A
Bullfrog	*Rana catesbeiana*	N/A
Green Frog	*Rana clamitans melanota*	N/A
Turtles		
Common Snapping Turtle	*Chelydra s. serpentine*	N/A
Spotted Turtle	*Clemmys guttata*	NYS special concern species
Eastern Box Turtle	*Terrapene c. carolina*	N/A
Red-Eared Slider	*Trachemys scripta elegans*	Species introduced to the area
Painted Turtle	*Chrysemys picta*	Species introduced to the area
Northern Diamondback terrapin	*Malaclemys t. terrapin*	NYS special concern species
Atlantic Ridley Sea Turtle	*Lepidochelys kempii*	Federally and State listed endangered species
Snakes		
Northern Water Snake	*Nerodia s. sipedon*	N/A
Common Garter Snake	*Thamnophis sirtalis*	N/A
Eastern Hognose Snake	*Heterodon platirhinos*	NYS special concern species
Northern Ringneck Snake	*Diadophis punctatus edwardsii*	N/A
Northern Black Racer	*Coluber c. constrictor*	N/A
Eastern Milk Snake	*Lampropeltis t. triangulum*	N/A

Sources: New York State Amphibian and Reptile Atlas (1990 – 1999), Quogue Quadrangle
Amphibians and Reptiles of Long Island, Staten Island and Manhattan, Hofstra University, Department of Biology
http://people.hofstra.edu/faculty/Russell_L_Burke/HerpKey/list_regional-species.htm

AVIAN HABITAT AND SPECIES

OVERVIEW

Long Island is centrally located along the mid-Atlantic flyway. Moreover, the unique habitats of the Town and the study area afford an extensive habitat for populations of avian species including forest interior species and coastal waterbirds. A more detailed discussion follows.

According to the 1988 *Atlas of Breeding Birds in New York State* between 1980 and 1985, there were 280 possible, probable, or confirmed breeders in the East Quogue blocks. The Atlas was

developed by covering the entire State with a grid made up of 5 kilometer by 5 kilometer blocks. Of the 280 species considered, 178 or 64 percent were confirmed in these blocks (identified as blocks 6952B/D and 7052A/C). The Atlas has since been updated and the interim data has been posted on the DEC website. It is expected that the final Atlas will be available in 2008. Based on the data collected between 2000 and 2005, there were a total of 323 possible, probable, or confirmed breeders in the specified blocks with 198 confirmed, 94 probable and 31 possible breeders.[1] The total of 323 accounts for all birds identified in each of the four blocks. When considered on a species basis, 128 species were considered possible, probable, or confirmed. A list of these species is provided in Appendix B.

A number of bird species identified in the study area are protected. Protected species, identified within the study area or its immediate vicinity, as defined in the Environmental Conservation Law 11-0103, include two endangered species, piping plover (*Charadrisu melodus*) and roseate tern (*Sterna dougallii*), and four threatened species, common tern (*Sterna hirundo*), least tern (*Sterna antillarum*), northern harrier (*Circus cyaneus*), and upland sandpiper (*Bartramia longicauda*). Endangered species are those in immediate danger of becoming extinct or extirpated while threatened species are those that are likely to become endangered in the future. A total of eight bird species identified by the Breeding Bird Atlas project in the vicinity of the study area are "special concern" species. These are species that are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued existence in New York State (e.g., grasshopper sparrow [*Ammodramus savannarum*], whip-poor-will [*Caprimulgus vociferous*], and American bittern [*Botaurus lentiginosus*]).

MIGRATORY BIRDS

Neotropical migratory birds breed on the East End of Long Island. A neotropical migratory species is one that winters in Latin America and breeds in the United States. Migratory breeding birds are of concern on the Eastern End of Long Island due to a noticeable decline in local populations. Of particular concern are neotropical migratory forest interior species that breed and thrive within forest interiors. Forest interior species require large uninterrupted woodland territories to maintain viable populations. For example, the ovenbird (*Seiurus aurocapillus*), a forest interior species, shows a preference for mature deciduous and mixed forests with little understory, and an abundance of fallen leaves, logs, and rocks. According to the Breeding Bird Atlas, ovenbird populations are typically sustained in woodlots exceeding 35 acres. Ovenbirds are generally less abundant in smaller forest tracts and edge habitats. While these areas may be utilized for feeding and attracting potential nest mates during courtship, successful breeding habitat for the ovenbird generally correlates to large forest tracts.

Populations of neotropical migratory species have declined in the eastern United States and Canada (Robbins et al. 1989; Sauer & Droege 1992; Witham & Hunter 1992), and it has been suggested that this decline is due to the fragmentation of extensive forest tracts in the northeast (Robbins 1980; Whitcomb et al. 1981; Wilcove 1985). The common occurrence associated with forest fragmentation is the segregation of forest areas into smaller disconnected parts. With smaller patches of forest, avian species lose nesting opportunities and become more susceptible to ground predators such as raccoons.

[1] www.apps.dec.state.ny.us/apps/bba/results

Forest fragmentation is the division of large forest blocks into smaller separated blocks due to development and disturbance related to development. The disconnection of the forest blocks limits the habitat areas for species that thrive on the interior of the forest. Fragmented forests also increase the edge —the area that is adjacent to open areas such as roads—and thus increases predation of interior species as the area to hide has been reduced. As mentioned earlier, the Brown-headed cowbird is an example of an edge species that thrives in fragmented forests. Habitat fragmentation has been termed the greatest worldwide threat to forest wildlife (Rosenburg and Raphael 1986) and the primary cause of species extinction (Wilcox and Murphy, 1985). Common practices within the Town and throughout Long Island that aim to reduce forest fragmentation are cluster developments, which encourages development on smaller lots to maintain large contiguous forest blocks and habitat corridors that provide connectivity of forested areas and allow species movement through the corridors to larger forested tracts.In forested areas, there are both forest interior and forest edge species that primarily breed or forage the forest perimeter. The edge is created at the interface of two significantly different community types, such as a woodland clearing, a maintained power line corridor through a forested area, or a wooded hedgerow traversing an agricultural field (Forman & Godron, 1986). Edge species, such as the song sparrow (*Melospiza melodia*), show a preference for nesting in thickets, hedgerows, and woodland clearings, and are commonly found in suburban gardens and parks. A more recent derivation of a forest interior species is a forest dependent species which can breed and thrive on the interior of a forest or on the edge of a forest. However, these specific species do not tolerate small forested areas.

The following are common forest interior species that may nest within the study area: hairy woodpecker (*Picoides villosus*), white-breasted nuthatch (*Sitta carolinensis*), black-and-white warbler (*Mniotilta varia*), ovenbird (*Seiurus aurocapillus*), scarlet tanager (*Piranga olivacea*), American redstart (*Setophaga ruticilla*), and veery (*Catharus fuscescens*). The following avian species are common forest dependent nesters are confirmed breeders within the study area: great crested flycatcher (*Myiarchus crinitus*), Eastern wood-pewee (*Contopus virens*), wood thrush (*Hylocichla mustelina*), red-eyed vireo (*Vireo olivaceus*), and red-bellied woodpecker (*Melanerpes carolinus*).

Area-sensitive species include neotropical migrants such as the ovenbird, worm-eating warbler, and black-and-white warbler. The reproductive success of area-sensitive species on the East End may be lower in fragmented forests because of parasitism by Brown-Headed Cowbirds *(Molothrus ater)*. Nest predation is more prevalent near forest edges than forest interiors (Askins et al. 1990; Paton 1994; Rich et al. 1994). These species typically build nests on the ground and therefore are particularly vulnerable to predation by raccoons and domestic cats, which hunt along the forest floor (Askins et al. 1990). The population of this species increases as the forest interior decreases. Brown-headed cowbirds parasitize neotropical migratory species by placing their eggs in the nest of other birds while possibly pushing the host eggs out of the nest. The cowbird eggs hatch early in comparison to host species, and therefore may crowd out the host nestlings. Neotropical species will either raise or abandon the outside nestlings. It is common for cowbird nestlings to tire smaller host birds to the point where no energy can be exerted for their own nestlings.

SHINNECOCK BAY WATERBIRDS

This highly productive bay is important to a variety of waterbirds throughout the year. Shinnecock Bay is one of the most important waterfowl wintering areas (November - March) on Long Island. Over a 10 year period, it was estimated that the bay was host to over 3,500 birds

per year including scaup (*Aythya marila*), brant (*Branta bernicla*), black duck (*Anas rubripes*), red-breasted merganser (*Mergus serrator*), bufflehead (*Bucephala albeola*), common goldeneye (*Bucephala clangula*), mallard (*Anas platyrhynchos*), Canada goose (*Branta Canadensis*), oldsquaw (*Clangula hyemalis*), and canvasback (*Aythya valisineria*)[1]. Thus, Shinnecock Bay supports wintering waterfowl concentrations of State-wide significance. Waterfowl use of the bay during winter is influenced in part by the extent of ice cover each year. Concentrations of waterfowl also occur in Shinnecock Bay during the spring and fall migrations (March - April and October - November, respectively).

LOCAL BIRDS WITH DECLINING POPULATIONS

It is noted that a number of local birds, once quite prevalent, have been declining in population. This includes the red-shouldered hawk, ruffed grouse, northern bobwhite, whip-poor-will, and the bank swallow. Given the concerns about the depletion of these declining species, a brief description of their habitats and characteristics is provided below.

Red-Shouldered Hawk (Buteo lineatus)

The habitat of the red-shouldered hawk comprises woods and swamps. Its range from March through October is the entire region of New York, Pennsylvania, New Jersey, Maryland, Delaware, West Virginia, and Virginia. Its range from November through February is from southeast New York, central Pennsylvania, and West Virginia south (Alden & Cassie 1999).

According to Andrle & Carroll (1988), the red-shouldered hawk uses a variety of woodland habitats, including lower wetlands and mesic (dry) upland forests, and in at least one county it nested on level terrain, close to some form of surface water. This hawk hunts in areas such as pastures, fallow fields, and wood edges. It is reported that "reductions of forest cover through development and timber harvest expose breeding red-shouldered hawks to competition from the more aggressive red-tailed hawk. Other factors that may adversely affect breeding include increased firewood cutting, development of second homes, and recreational activity in New York forests, as well as the substantial reduction in wetland habitats and increased acid precipitation."

The red-shouldered hawk is a confirmed breeder on the South Fork of Long Island and in one other location in central Long Island (Andrle & Carroll 1988). However, this species may still occur in the larger intact forest blocks in East Quogue.

Ruffed Grouse (Bonasa umbellus)

The habitat of the Ruffed Grouse consists of broadleaf and mixed woods. It is a resident of the entire region of New York, Pennsylvania, New Jersey, Delaware, West Virginia, and Virginia, except in coastal plains (Alden & Cassie 1999).

According to Andrle & Carroll (1988), this species came near to extinction in the late 1800s from cumulative effects of land clearing, logging, and fire, when only 25 percent of the State remained forested. However, it rebounded almost a century later in 1980. Reforestation provided ideal habitat conditions for the Ruffed Grouse, which is especially well adapted to early successional forests, i.e., forested areas from 10 to 40 years following land abandonment.

[1] http://www.nyswaterfronts.com/downloads/pdfs/sig_hab/LongIsland/Shinnecock_Bay.pdf

Changes in habitat may still be affecting grouse populations today, and it is reported that the alteration of successional stages can quite easily and quickly affect population numbers.

This species has been found in every county in New York State (expect New York City), but breeding has not been confirmed in Nassau or Niagra Counties where loss of forest habitat from urban sprawl has occurred.

The ruffed grouse is a confirmed breeder on the South Fork of Long Island, as well as in other parts of Suffolk County (Andrle & Carroll 1988).

Northern Bobwhite (Colinus virginianus)

The habitat of the northern bobwhite consists of brushy fields and edges. It is a resident from southern Pennsylvania, northern New Jersey, and southern Long Island, but it is more common southward (Alden & Cassie 1999).

According to Andrle & Carroll (1988), this bird is uncommon on Long Island. In 1975, the maximum count was 828 birds in Kings, Queens, Nassau, and Suffolk Counties, where the only really viable wild population now exists. In the 1985 count, only 361 bobwhites were documented. This species is now primarily confined to the undeveloped portion of Long Island where it breeds in a number of habitats, including open fields of tall grass, in weedy and cultivated fields, along the edges of golf courses, and even in the open scrub pine forest. It requires nearly bare ground and associated herbaceous cover, with cultivated crops or a similar source of food and brushy cover nearby. The northern bobwhite needs open country for breeding. Loss of farmland to forest succession and to development has hastened the decline of this species.

The northern bobwhite is a confirmed breeder throughout Suffolk and Nassau Counties, including the South Fork of Long Island (Andrle & Carroll 1988).

Whip-Poor-Will (Caprimulgus vociferous)

The habitat of the whip-poor-will consists of open mixed woods. Its range from May through September is the entire region of New York, Pennsylvania, New Jersey, Maryland, Delaware, West Virginia, and Virginia (Alden & Cassie 1999).

According to Andrle & Carroll (1988), this species is rather uncommon in the State and only rarely seen. There is some evidence that the whip-poor-will has declined in the State since the early 1900s. Hypotheses for the apparent decline of this species are the decrease of large Saturnid moths, a major part of its diet. The moths are believed to have declined initially because of the cutting of the State's forests in the 1800s, and then more severely in the early 1900s with the spread of industrial pollution and use of pesticides. The range of this species is currently expanding to the southern United States, possibly because of the reforestation of cleared lands. However, from 1965 to 1979 there was no reported increase or decrease in the whip-poor-will population in New York State (Robbins et al. 1986). In 1974, at least 100 calling birds were counted in Connetquot River State Park. This species is probably most abundant on Long Island.

The whip-poor-will prefers large, contiguous blocks of undisturbed dry woodlands such as the pitch pine-scrub oak barrens on Long Island and deciduous woods inland, and drier oak-hickory forests found upstate. This species most often occurs in woods with scattered or adjacent fields or open areas rather than in unbroken tracts of forest. Reportedly, three nests were found on Long Island in extensive second-growth oak woodland with some pitch pine.

The whip-poor-will is a probable and possible breeder in the larger remaining forested blocks in East Quogue.

Bank Swallow (Riparia riparia)

The habitat of the bank swallow consists of waterways and fields. Its range from mid-April through May and August through September is the entire region of New York, Pennsylvania, New Jersey, Maryland, Delaware, West Virginia, and Virginia. It breeds from New York south to northern West Virginia, eastern Virginia (Alden & Cassie 1999).

According to Andrle & Carroll (1988), the bank swallow usually nests near water, in the steep banks of streams and creeks where the soil may be sand, clay, or gravel. It also nests in the banks of lakes, bays, or oceans, and occasionally is found some distance from water in the steep sides of sand and gravel pits, highway and railroad embankments, and even in piles of sawdust or coal dust or dry well walls. Where such habitat occurs, the bird is common, even abundant, but because the specialized habitat is irregularly distributed, the bank swallow is a wide-spread but local breeder throughout most of New York. It was reported in 1923 that the bird was found only along the outer beaches of Long Island's south shore, and was local or absent elsewhere. In 1942, it was reported that only a few pairs nested on the north shore in Suffolk County and most of the nesting was concentrated on Long Island's extreme eastern tip. This may be evidence that the bank swallow has changed its nesting sites. More recently, there were few Atlas records that identified the species on the south shore, but several on the north shore and quite a few throughout the eastern third of the Island. Reportedly, the bank swallow prefers to nest in the vicinity of human habitation or in active sand and gravel pits (i.e., ones that are fresh), rather than in abandoned ones.

The bank swallow is a confirmed breeder on the South Fork of Long Island, as well as in other locations in Suffolk and Nassau Counties (Andrle & Carroll 1988).

H. SOILS, GEOLOGY, AND WATER RESOURCES

This section provides an overview of soils, geology, and water resources (both surface and groundwater) of the East Quogue study area. The surface waters of the study area include Weesuck Creek and Daves Creek, both ecologically important water resources to East Quogue and the Town of Southampton as well as a portion of the Shinnecock Bay. These surface waters and groundwater from the study area feed Shinnecock Bay and thus, the study area plays a large role in the health and vitality of the bay. What follows is a general description of these systems, groundwater characteristics, and local well data within the study area.

GROUNDWATER POLICY AND MANAGEMENT

As described in detail in Chapter 1, "Project Background," there are several policy and management documents that pertain to protecting the quantity and quality of Long Island's groundwater. In 1978, the Environmental Protection Agency (EPA) designated Long Island's groundwater as a sole source aquifer (Federal Register, 43, June 21, 1978), concluding that the system is the principal source of drinking water to the people of Long Island" and "if contaminated, would create a significant hazard to public health." Provided below is a brief summary of the policies that are pertinent to the East Quogue study area:

THE SAFE DRINKING WATER ACT OF 1974

The Safe Drinking Water Act (SDWA) authorized the EPA to regulate public water systems to protect the public's health. The EPA set standards for chemicals that might be found in water that could potentially have adverse effects. As of 1986, EPA had set 25 drinking water standards, 10 of which were for synthetic organics.

In 1986, Congress reauthorized the SDWA to provide funds to continue the program. Funds were targeted for watershed protection, and the EPA was required to establish 83 new standards for drinking water by 1989. The first eight of these standards were published in June of 1987. In June of 1988, these standards became law. Suppliers are not permitted to distribute water that exceeds these standards unless they get a waiver from the New York State Department of Health Drinking Water Standards (DOH) and notify the public.

PINE BARRENS PROTECTION ACT OF 1993

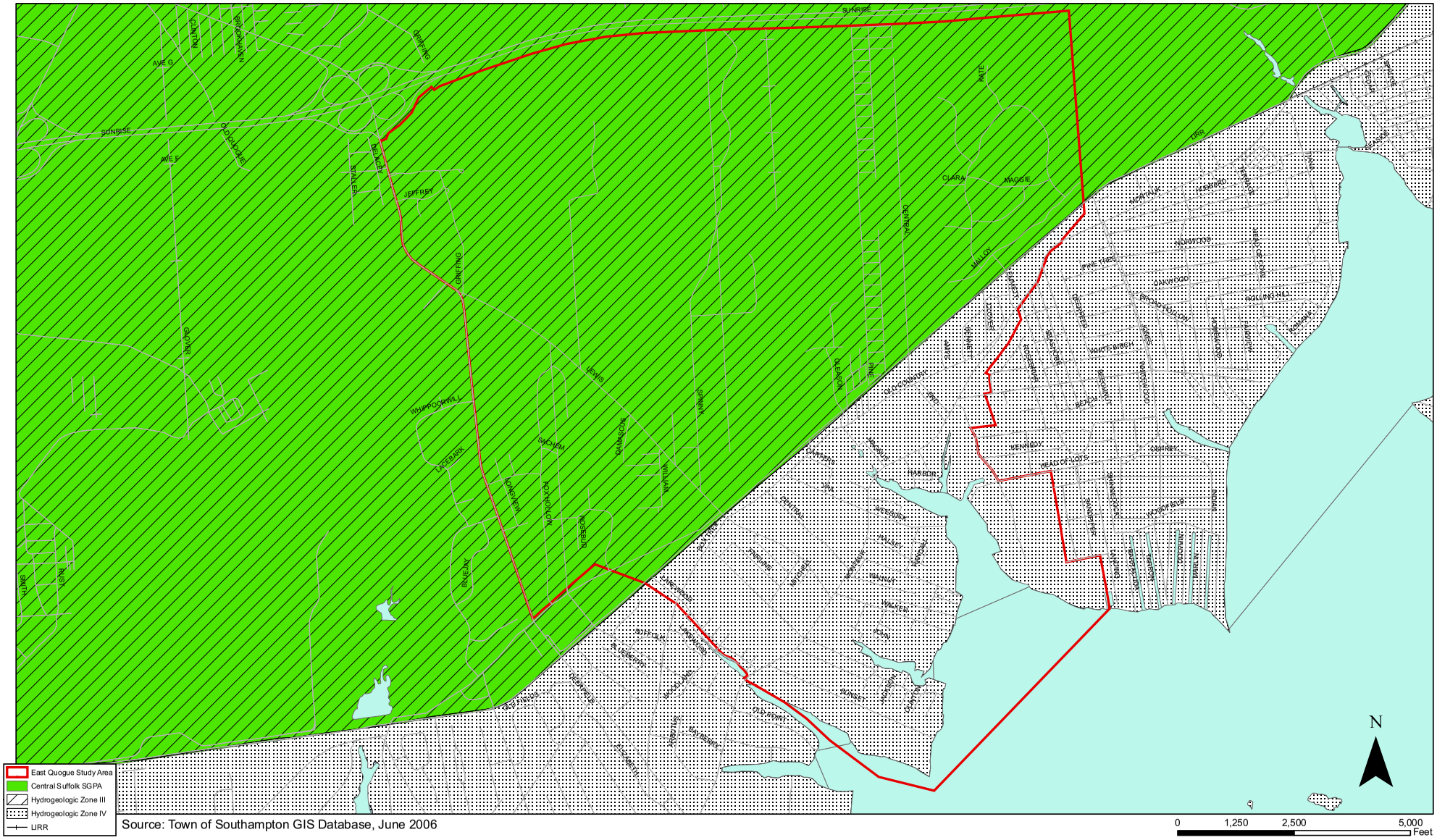
This act was an amendment to the Long Island Pine Barrens Maritime Reserve Act (Environmental Conservation Law Article 57) enacted in 1990. Article 57 was implemented for the purposes of protecting the ecology of the Pine Barrens of eastern Suffolk County, the groundwater and the sole source aquifer, and the surface waters of the Peconic Bay. In addition to recognizing the importance of the Pine Barrens contribution to the natural environment, the legislation defined a 100,000 acre Central Pine Barrens area for the purposes of managing regional growth, development, and land preservation in portions of the Towns of Riverhead, Brookhaven, and Southampton. Within Southampton, this management area is west of the Shinnecock Canal.

The 1993 amendments required the development of a comprehensive management plan for the Central Pine Barrens area and identified two geographic regions within the Central Pine Barrens—the 52,500 acre Core Preservation Area and the 47,500 acre Compatible Growth Area. Development in the Core Preservation Area is to be prohibited and redirected outside of the Core Preservation Area while the Compatible Growth Area provides a balance for growth and development consistent with groundwater and surface water protection as well as habitat preservation. Figure 2-10 shows how the Central Pine Barrens plan affects land management in the study area. As shown in that figure, the East Quogue study area contains the Core Preservation Area on its northern portion, but is largely within the Compatible Growth Area (or is outside the Central Pine Barrens management area) where development is allowed in accordance with the design standards established in the plan (see Chapter 1, "Project Background").

Consistent with the goals established in Article 57 to ensure preservation of the Core Preservation Area and promote appropriate, compact and efficient development, the Pine Barrens Credit was established to administer the preservation of lands within the Core Preservation Area and Compatible Growth Area that are held in private ownership but are necessary for the protection and preservation of the hydrologic and ecologic integrity of the Central Pine Barrens region. These credits allow the TDR from sending areas (areas to be preserved) to receiving areas (areas where development is encouraged).

LONG ISLAND COMPREHENSIVE WASTE TREATMENT MANAGEMENT PLAN (208), 1978

The 208 Study identified various Hydrogeologic Zones as part of the land and groundwater management planning recommendations. The study area is located in Hydrogeologic Zones III (minimum lot size requirement is 40,000 square feet or the density equivalent) and IV (minimum lot size requirement is 20,000 square feet or the density equivalent), see Figure 2-12. Recommendations of the 208 Study relevant for Zone III are:



Source: Town of Southampton GIS Database, June 2006

Central Suffolk Special Groundwater Protection Area and Hydrogeologic Zones
Figure 2-12

- Minimize population density by encouraging large lot development (two acre zoning or better) where possible, to protect the groundwater and surface waters from future pollutant loadings;
- Promote the preservation of existing large lot holdings and natural vegetation;
- Establish a groundwater monitoring program for early detection of potential water quality problems;
- Encourage low maintenance lawns and reduce the use of fertilizers on turf;
- Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals, and bacteria to surface and groundwater; and
- Prohibit the use of fertilizers on turf and promote the use of low maintenance lawns.

Zone IV recommendations include:

- Minimize population density by encouraging large lot development (one dwelling unit per acre or more);
- Reduce excessive use of irrigation water to minimize saltwater intrusion;
- Optimize pumping patterns to minimize saltwater upconing;
- Optimize the timing of fertilizer application to reduce nitrate contamination from agriculture; and
- Control stormwater runoff to minimize contamination to surface and groundwater.

LONG ISLAND COMPREHENSIVE SPECIAL GROUNDWATER PROTECTION AREA PLAN, 1992

Article 55 of the State's Environmental Conservation Law established the Special Groundwater Protection Planning Project on Long Island. The 1992 plan identifies nine special groundwater protection areas (SGPA) in the Nassau and Suffolk County regions. The SGPAs are watershed recharge areas important for the maintenance of large volumes of high quality groundwater. SGPAs are usually located in largely undeveloped or sparsely developed areas of Long Island that provide recharge to portions of the deep flow aquifer system. The existing water supply policy is to ensure the future quantity and quality of groundwater recharge by controlling development and pumpage in these SGPAs. All SGPAs are designated Critical Environmental Areas, which are areas of exceptional or unique natural settings which have an inherent ecological, geological, or hydrological sensitivity. The Central Suffolk SGPA covers the study area north of the LIRR tracks (see Figure 2-12).

The plan makes the following recommendations relative to the study area within the Central Suffolk SGPA:

- Suffolk County or the Town should acquire the development rights to the small pockets of farmland at Lewis Road and along Riverhead-East Moriches Road.
- The Town of Southampton should facilitate the conversion of obsolete or inappropriately located extractive and industrial properties, such as sand mines.
- The Town or County should replat the remaining old file map subdivisions for clustered housing and open space.

SUFFOLK COUNTY COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN (1987)

This plan recognized the link between land use and groundwater contamination and thus recommended limiting residential densities, in key areas, through local zoning.

SUFFOLK COUNTY SANITARY CODE, ARTICLE 4: WATER SUPPLY

Article 4 requires that private water systems conform to standards issued by the Suffolk County Department of Health Services (SCDHS), as well as to minimum New York State requirements.

SUFFOLK COUNTY SANITARY CODE, ARTICLE 6: REALTY SUBDIVISIONS

Article 6 applies to subdivisions and their review by SCDHS with respect to sanitary and waste disposal techniques. This includes the review of individual sewerage systems as well as community water supply systems.

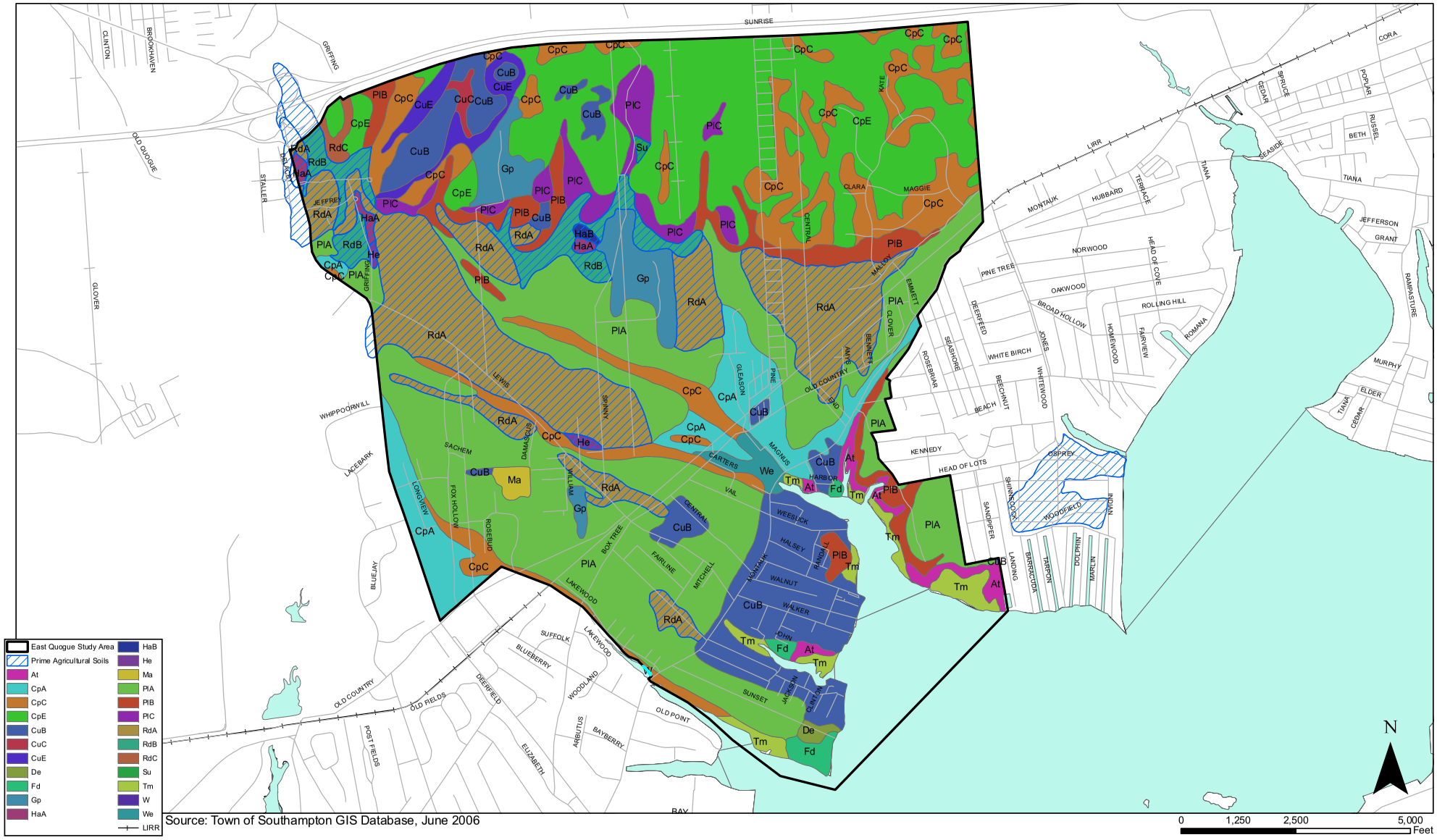
SUFFOLK COUNTY SANITARY CODE, ARTICLE 7: WATER POLLUTION CONTROL

Charged with safeguarding all water resources of the County, this article regulates the discharge of sewage, industrial wastes, offensive materials, toxic or hazardous materials or other wastes to surface or groundwater. Within the portion of the study area that is designated as Hydrogeologic Zone III (the area north of the LIRR tracks), this article limits the sanitary flow to 300 gallons per day (equivalent of one acre zoning). Densities in excess of these standards require the use of a sewage treatment plant (STP). In addition, DEC regulations require the use of a STP if the flow from a single facility is in excess of 30,000 gallons per day.

SOILS

The soil types of the East Quogue study area were mapped based on the Town's Geographic Information System database and the *Soil Survey of Suffolk County, New York* (United States Department of Agriculture [USDA] Soil Conservation Service, April 1975). The soils of the study area are listed in Table 2-25 and shown on Figure 2-13. Soil types are characterized by their composition (i.e., sands, clays, etc.), slope, erodability, permeability, and typical depth to groundwater. Based on this characterization, the soil survey provides a three-part measure of constraints on development divided into slight, moderate, or severe for different potential site uses (paved surfaces, home construction, septic disposal). Moderate and severe limitations do not in themselves create significant adverse environmental impacts but reflect the likelihood of additional site preparation and site engineering, ongoing maintenance requirements, and costs necessary to utilize the land for an intended purpose.

The most prevalent study area soil type is Plymouth loamy sand (PlA) with slopes ranging from 0 to 3 percent. This soil class comprises 26 percent of the entire study area and is primarily found just north of the center of the study area and continues east, south, and west to the study area boundaries. Other central soil classes include Carver and Plymouth sands (CpA and CpE) with slopes ranging from 0 to 3 percent and 15 to 35 percent, respectively, and Riverhead sandy loam (RdA) with slopes from 0 to 3 percent. These three soil classes comprise 10, 17, and 15 percent of the study area, respectively. The CpE soils are featured in the northern portion of the study area in the Central Pine Barrens Core Preservation Area while the CpA soils are mainly located along the western edge of the study area and in a small concentration in the central-eastern portion of the study area. The RdA soils are identified as prime agricultural soils and



East Quogue Soils
Figure 2-13

therefore are largely located in those portions of the study area that are farmed. These soils are also found in the central-eastern portion of the study area.

Table 2-25
Study Area Soils

Soil Class	Soil Description	Acres	Percent of Total
At	Atsion Sand	35.77	0.9
CpA	Carver and Plymouth sands, 0-3 percent slope	193.12	5.1
CpC	Carver and Plymouth sands, 3-15 percent slope	384.43	10.2
CpE	Carver and Plymouth sands, 15-35 percent slope	635.99	16.8
CuB	Cut and fill land, gently sloping	334.10	8.8
CuC	Cut and fill land, sloping	7.86	0.2
CuE	Cut and fill land, steep	43.71	1.2
De	Deerfield sand	6.51	0.2
Fd	Fill land, dredge material	20.96	0.6
Gp	Gravel pits	109.13	2.9
HaA	Haven loam, 0-2 percent slope	11.16	0.3
HaB	Haven loam, 2-6 percent slope	3.16	0.1
He	Haven loam, thick surface layer	5.82	0.2
Ma	Made land	11.21	0.3
PlA	Plymouth loamy sand, 0-3 percent slope	983.07	26.0
PlB	Plymouth loamy sand, 3-8 percent slope	149.97	4.0
PlC	Plymouth loamy sand, 8-15 percent slope	93.49	2.5
RdA	Riverhead sandy loam, 0-3 percent slope	565.35	14.9
RdB	Riverhead sandy loam, 3-8 percent slope	99.43	2.6
RdC	Riverhead sandy loam, 8-15 percent slope	10.65	0.3
Su	Sudbury sandy loam	2.56	0.1
Tm	Tidal Marsh	51.88	1.4
We	Wareham loamy sand	22.23	0.6
Total		**3,781**	**100**

Sources: Town of Southampton Division of Information Systems, June 2006; *Soil Survey of Suffolk County*, New York, USDA Soil Conservation Service, April 1975

Since much of the study area south of the railroad track is already built, the remainder of this data presentation will focus on soils within the portion of the study area where there are projected and potential development sites. Table 2-26 indicates soil classes that are featured within these areas. Similar to the study area as a whole, the dominant soil classes within the projected and potential development areas include RdA at 24 percent, PlA at 19 percent, and CpE at 17 percent. A fourth soil type, Carver and Plymouth sands (CpC) with slopes ranging from 3 to 15 percent comprises almost 10 percent of this area.

The general soil properties associated with each dominant soil mapping unit described above, as presented in the Soil Survey of Suffolk County, are as follows:

- Carver Series—deep excessively drained, coarse textured soils generally present on rolling moraines and broad outwash plains. Slopes range from 0 to 35 percent. Permeability is rapid throughout the zones of this series.

- Plymouth Series—deep excessively drained, coarse-textured soils that formed in a mantle of loamy sand or sand over thick layers of stratified coarse sand and gravel. Slopes range from 0 to 15 percent. These soils are primarily found on broad, gently sloping to level outwash plains and on undulation to steep moraines. Permeability is rapid in these soils except in those of the silty substratum phase where permeability is moderate.
- Riverhead Series—deep, well-drained, moderately coarse textured soils that formed in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. Generally nearly level to gently sloping, these soils range from nearly level to steep slopes. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum.

Table 2-26
Soils on Projected and Potential Development Sites

Soil Class	Soil Description	Acres	Percent of Total
At	Atsion Sand	7.16	0.5
CpA	Carver and Plymouth sands, 0-3 percent slope	31.52	2.3
CpC	Carver and Plymouth sands, 3-15 percent slope	127.79	9.5
CpE	Carver and Plymouth sands, 15-35 percent slope	225.88	16.7
CuB	Cut and fill land, gently sloping	53.04	3.9
CuC	Cut and fill land, sloping	7.86	0.6
CuE	Cut and fill land, steep	27.36	2.0
Gp	Gravel pits	90.53	6.7
HaA	Haven loam, 0-2 percent slope	5.00	0.4
HaB	Haven loam, 2-6 percent slope	3.16	0.2
He	Haven loam, thick surface layer	2.39	0.2
PlA	Plymouth loamy sand, 0-3 percent slope	257.02	19.1
PlB	Plymouth loamy sand, 3-8 percent slope	65.67	4.9
PlC	Plymouth loamy sand, 8-15 percent slope	63.66	4.7
RdA	Riverhead sandy loam, 0-3 percent slope	318.56	23.6
RdB	Riverhead sandy loam, 3-8 percent slope	58.00	4.3
Su	Sudbury sandy loam	2.20	0.2
Tm	Tidal Marsh	2.08	0.2
We	Wareham loamy sand	0.17	0.0
Total		**1,349**	**100**

Sources: Town of Southampton Division of Information Systems, June 2006; *Soil Survey of Suffolk County, New York,* USDA Soil Conservation Service, April 1975

HYDROGEOLOGIC SETTING

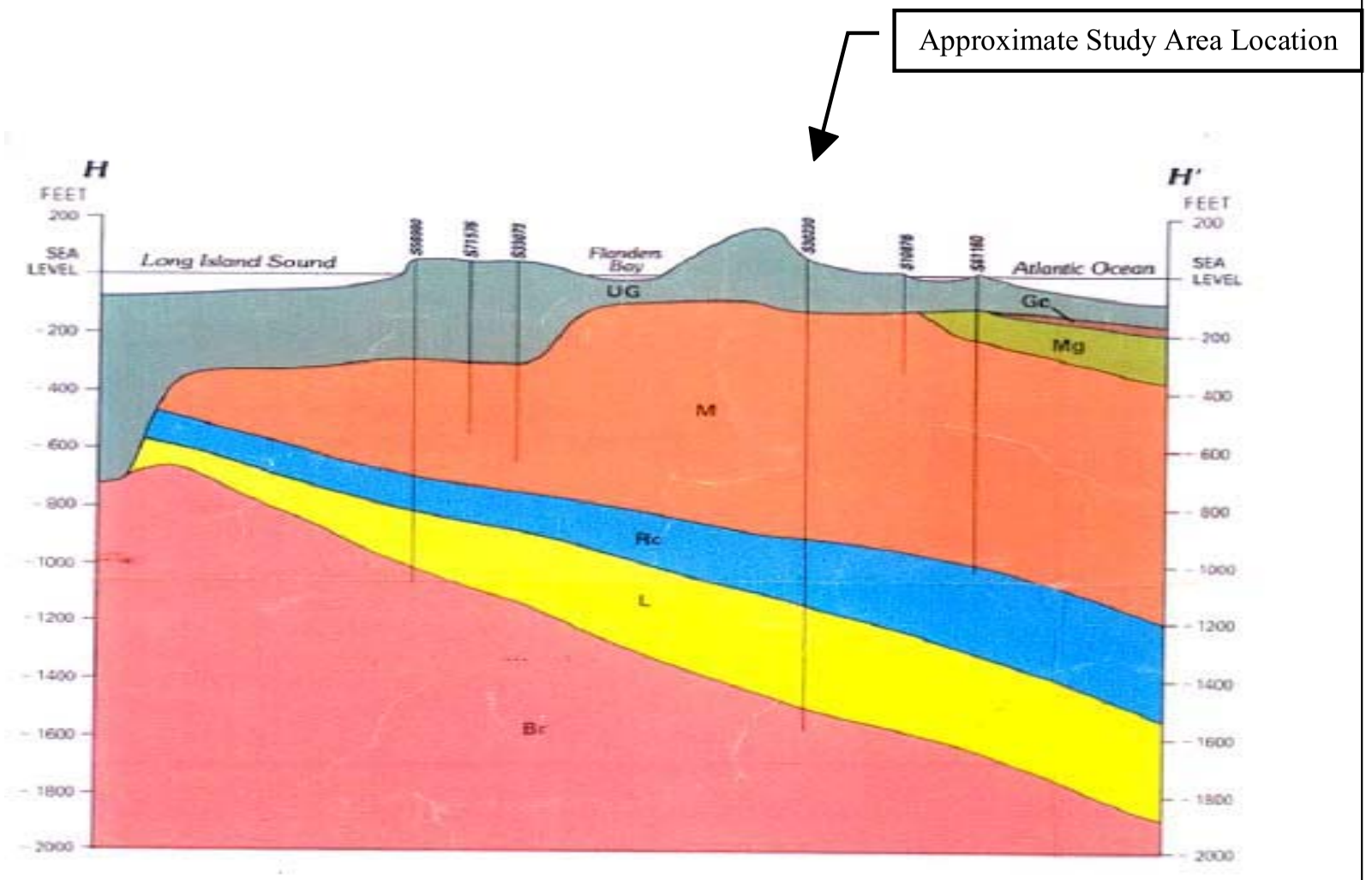
Most of Long Island's geology is defined by two terminal moraines—low, hill-like formations that are remnants of the advances of glaciers during the last ice age (the Pleistocene epoch). The two morainal ridges—the Harbor Hill Moraine and Ronkonkoma Moraine—run the length of Long Island and diverge to the east to form the North and South Forks. The moraines are made of poorly sorted glacial till deposited at the glacial terminus. South of the moraines are outwash plain deposits of sands and gravel. The northern portion of the study area lies on the Ronkonkoma Moraine while the southern portion lies on the outwash plains south of the Ronkonkoma Moraine.

Long Island is composed of many layers of sand, clay, and gravel, with southeasterly sloping bedrock below. These layers of subsurface geologic deposits are important in defining the groundwater aquifers that underlie Long Island. The interrelationships of the various geologic deposits dictate how the aquifer is recharged by rainfall, and also determine how activities on the land surface might affect the quantity and quality of the groundwater. As shown schematically in Figure 2-14, the geologic composition of most of Long Island consists of three distinct formations over bedrock. The thickness of these unconsolidated glacial and deltaic deposits ranges from a few hundred feet in the northwestern sections of Nassau County to more than 2,000 feet along Suffolk's south shore barrier beaches. Beginning at the surface and extending down to bedrock, these formations include:

- Glacial Aquifer (Upper Pleistocene)—The Glacial Aquifer, comprising medium to coarse sand and gravel with occasional thin lenses of fine sand and brown clay, is the youngest of the formations and the closest to the surface. This aquifer generally has greater water transmitting properties than the underlying deposits. It was created 15,000 years ago from glacial deposits of sand and gravel from the retreating glaciers. Within the study area, these deposits extend from ground level about 100 feet down below the surface to the top of the Magothy Formation and is about 100 to 200 feet thick in the vicinity of the study area.
- Magothy Aquifer—Just below the Upper Pleistocene, the Magothy Formation was formed in the Cretaceous Age (70 to 140 million years ago). This formation consists of fluvial and deltaic deposits and is composed mainly of mixed layers of sand, silt, and clay. The Magothy contains some discontinuous clay layers ("lenses") with low permeability while the fine to coarse sand deposits are of high permeability. Gravel is also present, but limited primarily to the lower strata of the formation. Minerals (e.g., muscovite and pyrite) distinguish this formation from the upper glacial deposits, as does lignite, which is a signature feature of the Magothy. This formation is between 750 and 850 feet thick below the study area. The Magothy Aquifer is the primary drinking water source for most of Long Island.
- Raritan Formation and the Lloyd Aquifer—Beneath the Magothy is a layer of clay, which comprises the upper strata of the Raritan Formation. This formation is between 225 and 300 feet thick in the vicinity of the study area. Below the clay is the Lloyd Aquifer. The Lloyd is generally between 300 and 350 feet thick beneath the study area. It consists primarily of fine- to coarse-grained sand and gravel, intermixed with clay. The Raritan Formation's confining unit of clay is quite thick and restricts the water flow between the Lloyd Aquifer and the Magothy Aquifer.
- Bedrock—Bedrock dates from the Precambrian and Paleozoic eras (more than 500 million years old). It begins about 1,450 to 1,625 feet below the study area, and is composed of impermeable schist and gneiss.

TOPOGRAPHY

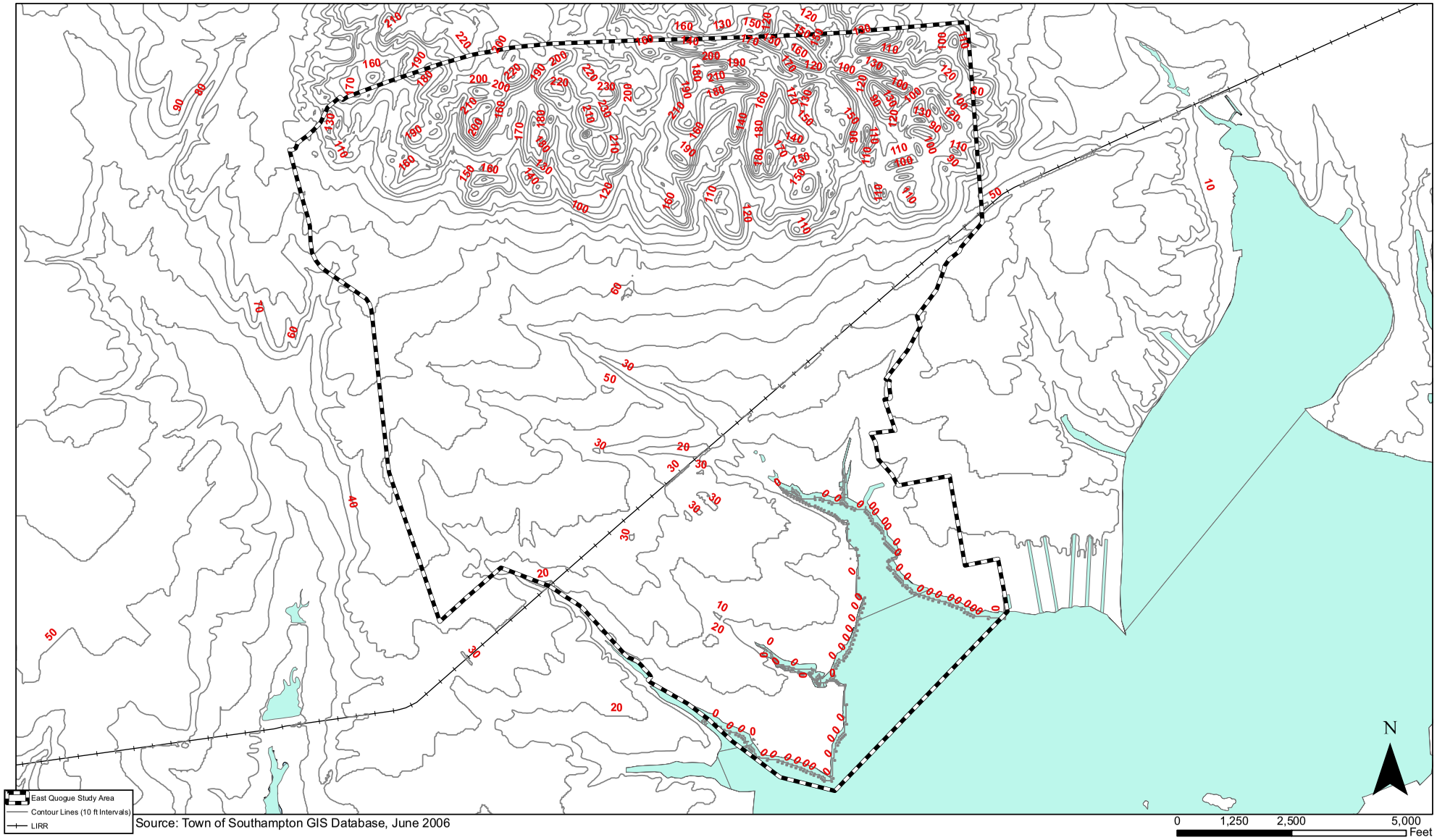
The ground elevation in the northern portion of the study area, within the Core Preservation Area and just south, ranges from 80 feet above mean sea level (MSL) along the northeastern border to 230 feet above MSL at a high point in the north central portion of the study area. Figure 2-15 depicts the elevations throughout the study area. The northern portion of the study area has a rolling topography that displays exemplary knob and kettle topography characteristic of the Ronkonkoma Moraine. Many of the hillsides in this area have slopes in excess of 20 percent. Moving south through the study area, the topography is more characteristic of the outwash plains



Source: U.S. Geological Survey Hydrogeologic Framework of Long Island, NY

Gc	Gardiners Clay
Mg	Monmouth greensand
UG	Upper Glacial
M	Magothy aquifer
Rc	Raritan confining unit
L	Lloyd aquifer
Br	Bedrock

Figure 2-14
Geologic Cross-Section



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Topography
Figure 2-15

where slopes are gradual. The elevation within the center of the study area at a high point is at 60 feet above MSL and decreases as you move south to 0 feet above MSL along the Weesuck Creek coastline.

GROUNDWATER RESOURCES

OVERVIEW

As stated, in 1978, the aquifers of Long Island were designated by EPA as a sole source aquifer.

The three main aquifers, Upper Glacial, Magothy, and Lloyd, supply both Nassau and Suffolk Counties with potable water. The Upper Glacial Aquifer is used widely for water supply in areas of central and eastern Suffolk County. Because the Upper Glacial Aquifer in Nassau County is generally of degraded quality due to past sanitary and industrial waste disposal practices, the majority of Nassau County obtains its water supply from the deeper Magothy Aquifer. While the Magothy Aquifer also supplies the majority of Suffolk County with potable water, the Lloyd Aquifer supplies water to the south shore barrier beach communities.

GROUNDWATER SUPPLY

The sole source of water supply for the study area and most of Long Island is groundwater. Groundwater supply is determined by the hydrologic cycle, which consists of precipitation, evapotranspiration, runoff, and recharge. Average rainfall on Long Island is approximately 44 inches per year, roughly half of which goes to evaporation or evapotranspiration. The remaining 22 inches recharge the aquifers, primarily during the months of October through April. Recharge is the volume of precipitation entering groundwater by percolating down through the soil. Water will percolate vertically and will create, at the first level of accumulation, the local water table.

Depth to groundwater is generally equivalent to sea level along the north and south shorelines of Long Island and, following the topography, rises in elevation towards the center of the Island. These elevation changes form a parabola in the groundwater levels. The depth to groundwater on Long Island ranges from a few feet along the shorelines and stream/lake margins to more than 200 feet in the center of the Island, depending on the surface topography. The high point of the parabola is referred to as the groundwater divide that creates a hydraulic gradient causing groundwater to generally flow to the north (into Long Island Sound), or to the south (into the Atlantic Ocean). Groundwater flow in the vicinity of the study area is generally southeast to Weesuck Creek and Shinnecock Bay.

According to SCDHS, the water table is at an elevation that ranges from 15 feet above MSL in the northwestern portion of the study area to about 0 feet above MSL in the southeastern portion of the study area. Therefore, the approximate depth to groundwater at the proposed site ranges from 215 to 0 feet above MSL.

As detailed in Chapter 1, “Project Background,” the 208 Study issued in 1978 by the Long Island Regional Planning Board (LIRPB) identified eight Long Island Hydrogeologic Zones in Nassau and Suffolk Counties with the objective of protecting groundwater quality. These eight zones were differentiated based on differences in underlying groundwater flow patterns and groundwater quality. Zones I through III occupy geographic areas that are primarily characterized by a deep flow system (or large vertical component of groundwater flow recharging the aquifer); the remaining five zones are characterized by a larger horizontal component of groundwater flow, which contributes to shallow recharge or transmits flows to

surface waters. The study area is located within Hydrogeologic Zones III and IV as defined by the 208 Study. Zone III, ranging from the approximate center of the Town of Brookhaven to just west of the Shinnecock Canal, is characterized as a deep flow system with a large vertical component of groundwater flow recharging the aquifer while Zone IV is classified as a shallow flow system that discharges to streams and marine waters. Zone IV extends west of the study area east to the center of East Hampton Town. The minimum lot size requirement for Zones III and IV are 40,000 and 20,000 square feet, respectively.

Change in storage of the aquifer and water table determines groundwater supply. This change can be estimated by comparing inflow from recharge, outflow through pumping, and groundwater flow to surface waters. The permissive sustained yield is the amount of water that can be pumped annually from a specific groundwater source while maintaining satisfactory water levels and not resulting in an unwanted result.

Most of the study area is supplied potable water from the Suffolk County Water Authority (SCWA). (Immediately to the east of the study area is the Hampton Bays Water District.) According to SCWA's 2005 Annual Drinking Water Quality Report, SCWA maintains 542 wells throughout Suffolk County with 501 active in 2004. These wells serve more than 1.1 million people in Suffolk County. Presently, 217 wells draw from the Upper Glacial Aquifer, 321 from the Magothy Aquifer, and only 4 wells draw from the Lloyd Aquifer.

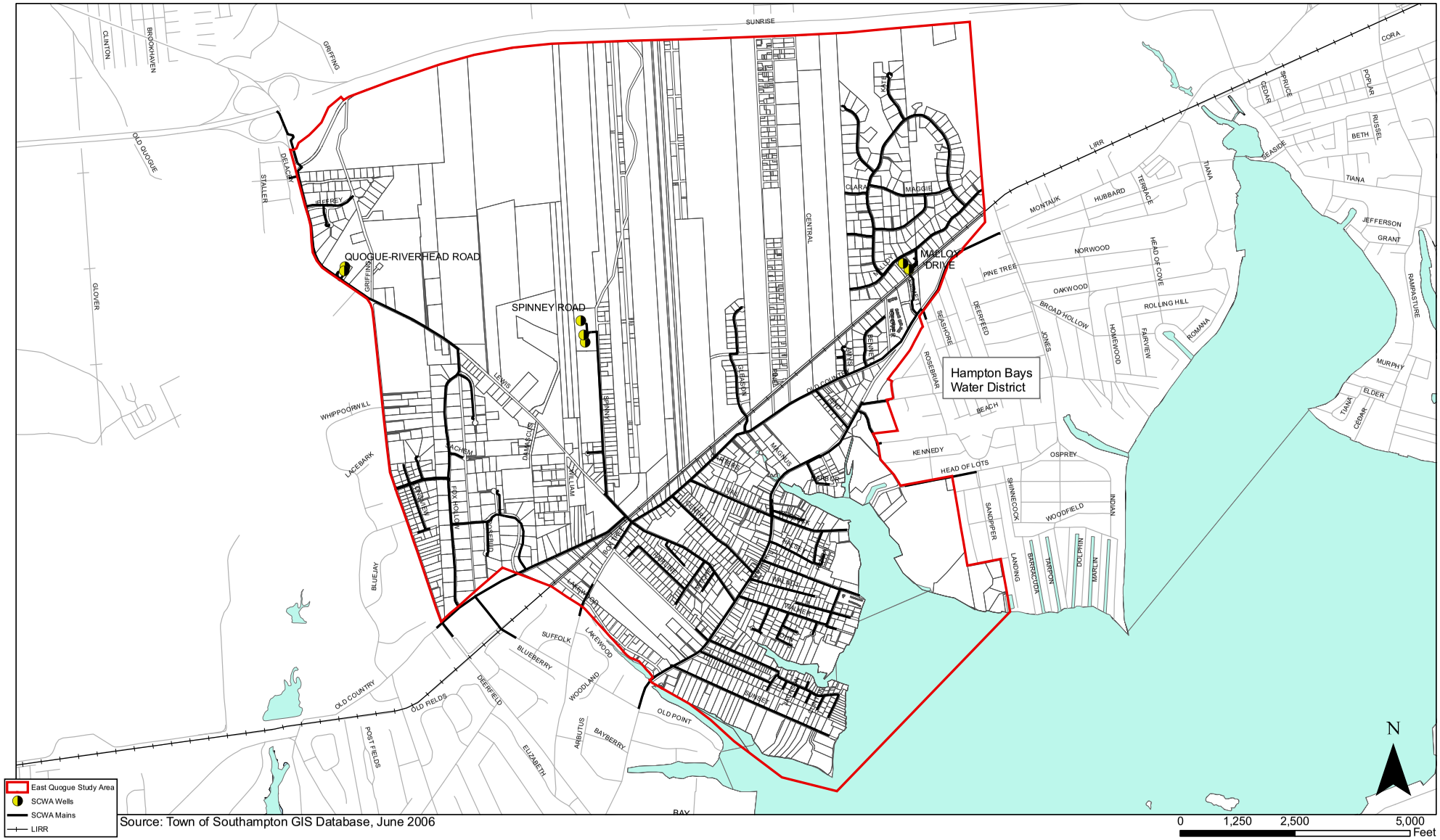
Within the study area, the SCWA has 3 existing well fields. Those fields are: Spinney Road with 3 wells, Malloy Drive with 2 wells, and Quogue Riverhead Road with 2 wells. Table 2-27 lists each field and its respective well numbers and Figure 2-16 shows the location of each of these wells and the SCWA water mains.

Table 2-27
Suffolk County Water Authority Well Field Data

Well Field Name	Well Number
Spinney Road	S-23184
	S-53593
	S-123249
Malloy Drive	S-115945
	S-115899
Quogue-Riverhead Road	S-94286
	S-108161

Source: SCWA, August 2006

To evaluate the use of the aquifer in the study area, an investigation of pumping rates (see Table 2-28) and storage information for SCWA well fields was performed. Three fields: Spinney Road, Malloy Drive, and Quogue-Riverhead Road were evaluated. Data for three years was compiled from 2003 to 2005. The total average pumpage from these wells was 244.6 million gallons per year over the three year analysis period. Table 2-28 also shows that there is more than enough capacity to meet the existing needs of the community.



Source: Town of Southampton GIS Database, June 2006

Suffolk County Water Authority Well Field and Water Line Locations
Figure 2-16

Table 2-28
Groundwater Pumping Statistics

	Average Daily Pumpage*	Peak Daily Pumpage*	Annual Water Pumpage*	Annual Peak Rate*
Spinney Road	0.32	1.1	116.5	1,576.8
Malloy Drive	0.74	1.4	273.1	683.3
Quogue-Riverhead Road	0.94	2.1	344.6	1,366.6

Notes: Statistics are an average over a three year period between 2003 and 2005.
*Pumpage is measured in million gallons.
Source: Suffolk County Water Authority, November 2006

GROUNDWATER QUALITY

Groundwater recharge percolates through soils, which can therefore affect groundwater quality. As groundwater is the only potable water source for the area, the protection of this resource is essential.

As discussed in Chapter 1, "Project Background," the 1996 amendment of the SDWA placed a strong emphasis on the protection of surface and groundwater sources used for public drinking water. As a result of these amendments, New York State developed a Source Water Assessment Program (SWAP) to assess and evaluate the sources of drinking water used by public water systems. Each source water assessment includes:

1) A delineation of the source water assessment area;

2) An inventory of potential significant contaminant sources within the source water assessment area; and

3) An evaluation of the source water's susceptibility to contamination.

The SWAP for Long Island was completed by the New York State Department of Health and the SCDHS in 2003. Results of the 2003 assessment showed that 60 percent of drinking water supply wells in Suffolk County have a low susceptibility to contamination by microbials including protozoa, enteric bacteria, and enteric viruses while 20 percent of the wells have a medium to high susceptibility. Specifically, shallow wells are more vulnerable to the presence of microbial source in unsewered areas that have relatively short travel times from the water table to the well, particularly in central and eastern parts of the County[1]. In addition, more than 70 percent of the public wells in Suffolk County rated medium to high for nitrate susceptibility. The high susceptibility rating is likely due to the slow degradation of nitrates in groundwater. About 10 percent of Suffolk County wells were rated as medium to high for susceptibility to pesticides and almost 70 percent of wells in the county were also rated medium to high for volatile organic compounds (VOCs).

Within the study area, two SCWA wells were included in the SWAP analysis. The well located within the western central portion of the study area (S-23184) where agricultural land is dominant (53 percent), based on a travel time between 2 and 5 years, has a medium susceptibility to microbial contamination and based on a 25 year travel time, a low susceptibility to microbials and a high susceptibility to pesticides. Based on a 75 year travel time, this well has

[1] New York State Department of Heath *Long Island Source Water Assessment Executive Summary*, 2005

a medium susceptibility to pesticides and based on a 100 year travel time, high susceptibility to pesticides and nitrates and a low susceptibility to VOCs. The second well tested in the study area (S-53593) is located just north of the first well. The predominant land use that surrounds this well is also agriculture at 67 percent. There is no risk of contamination within a 2 year travel span. However, based on a 5 to 25 year travel time, there is a low susceptibility to microbial contamination. Based on a 25 to 75 year travel time, there is a high susceptibility to pesticides. Based on a 100 year travel time, there is a high susceptibility to nitrates and a low susceptibility to VOCs.

SCWA Wells

The SCWA was contacted to obtain information regarding water quality within the study area. The information provided by SCWA is a summary of testing data at the well fields within the study area between January 2005 and June 2006. SCWA laboratory analytical data for the three well fields located in the project area were compared to the Maximum Contaminant Levels (MCLs) in NYCRR Title 10, Part 5, Subpart 5-1 and Ambient Water Quality Standards (AWQSs) in DEC Division of Water Technical and Operational Guide Series (TOGS) 1.1.1. The analytical results for each well field are described below. Table 2-29 provides a summary of any exceedances of regulatory standards detected in the wells.

Table 2-29
SCWA Wells – Summary of Regulatory Standard Exceedances

Chemical	MCL	AWQS	Spinney Rd #1		Spinney Rd #2		Spinney Rd #3		Quogue-Riverhead Rd #1		Quogue-Riverhead Rd #2	
			Date	Conc.	Date	Conc.	Date	Conc.	Date	Conc.	Date	Conc.
Aldicarb Sulfone	2 ug/L	2 ug/L	7/6/05-6/13/06	2.1-2.3	8/3/05-8/24/05	2.1-2.5	N/A	N/A	N/A	N/A	N/A	N/A
Aldicarb Sulfoxide	4 ug/L	4 ug/L	N/A	N/A	8/3/05-8/24/05	4.1-4.4	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate	10 mg/L	10 mg/L	9/5/05-5/10/06	10.04-13.62	6/14/05-6/28/06	10.18-14.17	N/A	N/A	N/A	N/A	N/A	N/A
Copper	NS	0.2 mg/L	2/16/06	0.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron	0.3 mg/L	0.3 mg/L	N/A	N/A	N/A	N/A	6/7/05 & 4/24/06	0.31& 0.32	1/24/05-3/13/06	0.41-0.57	8/26/05-6/22/06	0.41-0.57

Notes: Malloy Dr #1 and Malloy Dr #2 wells did not exceed regulatory standards
MCL – Maximum Containment Level
AWQS – Ambient Water Quality Standard for Class GA groundwater
Mg/L – milligrams per liter
Ug/L – micrograms per liter
N/A – not applicable
NS – no standard or guidance value
Source: SCWA, August 2006

Spinney Road Well Field: Spinney Road #1 (S-23184), Spinney Road #2 (S-53593), and Spinney Road #3 (S-123249)

Copper, iron, and nitrate concentrations detected in the Spinney Road wells exceeded their respective MCLs and/or AWQSs on one or more occasions. The copper concentration in Spinney Road #1 well exceeded the AWQS of 0.2 milligrams per liter (mg/L) on one occasion (February 16, 2006), and the iron concentration in Spinney Road #3 well exceeded the MCL/AWQS of 0.3 mg/L on two occasions (June 7, 2005 and April 24, 2006). Nitrate concentrations exceeded its MCL/AWQS of 10 mg/L in Spinney Road #1 and #2 wells throughout the later part of the sampling period (from June 2005 through June 2006). Organic

contaminants detected in the Spinney Road well field included: carbofuran; aldicarb sulfone; aldicarb sulfoxide; chloroform and the pesticide DCPA Diacid. Aldicarb sulfone concentrations regularly exceeded the MCL/AWQS of 2 micrograms per liter (ug/L) in Spinney Road #1 well from July 6, 2005 to June 29, 2006, and both aldicarb sulfone and aldicarb sulfoxide concentrations exceeded their respective MCLs/AWQSs of 2 ug/L and 4 ug/L in the Spinney Road #2 well between August 3 and August 24, 2005. All other concentrations of organic chemicals were below their associated MCLs/AWQSs throughout the reporting period.

Quogue Riverhead Road Well Field: Quogue Riverhead Rd #1 (S-94286) and Quogue Riverhead Rd #2 (S-108161)

Iron concentrations detected in Quogue Riverhead Road #1 well between January 24, 2005 and March 13, 2006 and the Quogue Riverhead Road #2 well between August 23, 2005 and June 22, 2006 were consistently above the MCL/AWQS of 0.3 mg/L. All other detected inorganic compound concentrations were below their associated MCLs/AWQSs. Trihalomethanes (dibromochloromethane, bromodichloromethane, and chloroform) were detected in the Quogue Riverhead Road #2 well on November 21, 2005; however, the concentrations were below their respective AWQSs for the individual compounds and the MCL for total trihalomethanes. No other organic compounds were detected in the Quogue Riverhead Road wells.

Suffolk County Department of Health Services Monitoring Wells

In addition to the 7 wells owned by SCWA, SCDHS maintains two monitoring wells within the study area—48434 and 48435. Based on testing that occurred between 1980 and 1994, neither well exceeded MCLs/AWOSs for pesticide or organic constituents. However, between 1974 and 1986, both wells, on occasion, exceeded the iron MCL of 0.3 mg/L. Well 48434 exceeded the Manganese MCL of 0.3 mg/L three times in 1982 while well 48435 exceeded the sodium guidance level of 20 mg/L several time between 1974 and 1981 and 1992 and 1994. This guidance value is for people with severely restricted sodium diets.

The need to maintain groundwater quality and quantity is a primary driving force behind developmental planning and land use. Contaminants such as nitrates from human waste, pesticides, organic, and inorganic chemicals from an array of practices all can contribute to the degradation of groundwater quality. Nitrogen sources include on-site sewage systems from existing and new residential development and agricultural sources. For the future, the greater threat to increased nitrogen loading is residential development.

SURFACE WATER RESOURCES

Provided below is a general description of the major surface water bodies within the study area.

WEESUCK CREEK

Weesuck Creek is the major surface water feature located in the study area. It is situated between Montauk Highway and Landing Lane and feeds Shinnecock Bay. The western shoreline of Weesuck Creek is almost entirely developed with residential and some commercial uses, while the eastern shoreline is largely undeveloped, with tidal marsh, red maple-black gum swamp and pitch pine-oak forest communities. Weesuck Creek has exemplary high and intertidal marshes. These marshes provide the nursery and feeding for several fish species that have commercial and recreational significance and provide habitat for forage fish, which increases the area's importance to finfish throughout Shinnecock Bay. In addition, Weesuck Creek provides habitat to numerous song and wading birds. Local residents also utilize this water resource for

recreation and commercial activities. There is also a Town owned boat ramp at the end of Bay Avenue leading into Weesuck Creek. See Section I, "Scenic Resources," for photographs of Weesuck Creek.

As stated earlier, the wetlands within the Pine Neck Preserve and a large portion of Weesuck Creek have been designated by DOS as a SCFWH related to the larger system of Shinnecock Bay (see Figure 1-9).

DAVES CREEK

Daves Creek is located towards the southwestern border of the study area between West End Avenue and Walker Avenue. Similar to Weesuck Creek, Daves Creek is also host to a myriad of species who thrive in estuarine waters. Further, this water feature provides local residents with recreation activities including fishing, birding, and boating.

SHINNECOCK BAY

Shinnecock Bay is 9,000 acres of open water, salt marshes, dredged material islands, and intertidal flats that extend from the Westhampton Beach barrier island and Moriches Inlet on the west, Shinnecock Inlet, and the western end of the Southampton Beach barrier spit on the east. Shinnecock Bay is connected to Moriches Bay via the Quogue Canal and to the Great Peconic Bay via Shinnecock Canal. The bay complex also includes the creeks and marshes that enter into the system. Shinnecock Bay is one of three major protected, shallow (less than 10 feet and closer to 2 feet near the project study area), coastal bay areas on the south shore of Long Islands, and represents one of the largest estuarine ecosystems in New York State. In addition to significant bird concentrations, Shinnecock Bay is highly productive for marine finfish, shellfish, and other wildlife (see also Section G, "Natural Resources"). As a result of the abundant fisheries resources in the bay, Shinnecock Bay receives heavy recreational and commercial fishing pressure of regional significance.

As mentioned above, Shinnecock Bay was designated by DOS as a SCFWH. This designation entitles this system to be protected, preserved, and where practical, restored to maintain its viability as a habitat.

SURFACE WATER PROTECTION PROGRAMS

South Shore Estuary Reserve Act of 1993

In 1993, the New York State Legislature enacted Article 46 entitled "Long Island South Shore Estuary Reserve." Article 46 recognized the importance of the South Shore Estuary and its contributions to the natural environment including unique marine habitats and locally significant and diverse populations of rare, threatened, and endangered species of plants and animals. The SSER provides immeasurable ecological, recreational, and economic benefits to the Town of Southampton, Nassau and Suffolk Counties, and New York State. This act required that the South Shore estuary system be managed and protected as a single integrated estuary and the development of a comprehensive management plan to better manage and protect this massive estuarine system.

The SSER is a 326 square mile watershed that stretches 75 miles from the western Nassau County border to the Village of Southampton including the waters between the barrier beach and the mainland. The eastern bays, where the East Quogue study area is located, was noted for its ability to support significant colonies of nesting terns, gulls, and wading birds with highly

productive shallow waters. The goals and implementation strategies of the *Long Island South Shore Estuary Reserve Comprehensive Management Plan* include:

Goals

- Improve and maintain water quality;
- Protect and restore living resources;
- Expand public use and enjoyment ;
- Sustain and expand the estuary-related economy; and
- Increase education outreach and stewardship.

Implementation Strategies

- Reduce point and nonpoint source pollution;
- Increase harvest levels of hard clams and other shellfish species;
- Protect and restore coastal habitats to support shellfish, finfish, and coastal bird populations;
- Preserve open space to sustain community character and protect water quality and habitat;
- Improve knowledge of ecosystem management;
- Increase public use of the estuary and expand tourism;
- Sustain water-dependent businesses;
- Promote maritime center vitality; and
- Heighten public awareness of the Estuary.

Recommendations of the plan specific to the East Quogue study area include expanding public access to Weesuck Creek; remediating storm water management from Sunrise Highway down to Weesuck Creek; preserving open space in the Pine Barrens region; restoring wetlands in the Pine Neck area and further south; and restoring the stream corridor that extends from Weesuck Creek northwest past Spinney Road. This plan also identified Weesuck Creek as a priority waterbody that at some point had some or all of its uses impaired by pollution or other human activities.

Surface Water Quality Data

In accordance with the CWA, New York State has published a 2004 Water Quality report pursuant to Section 305(b) and Section 303(d) of this act. This publication identifies Weesuck Creek as an impaired waterbody with well documented water quality problems that result in precluded or impaired uses. The cause of this impairment is pathogens deposited by urban/stormwater runoff sources. Thus, shellfishing is restricted in these waters. Once a waterbody is listed as impaired, New York State must consider the development of a Total Maximum Daily Load (TMDL) or other strategies to reduce the input of site specific pollutants that restrict waterbody uses to restore and protect such uses. Since urban/stormwater runoff is an issue affecting numerous surface water resources within this area, a plan to address the general problem instead of the site-specific problem facing Weesuck Creek is anticipated.

SCDHS collected water quality data from an area that is approximately 0.55 miles east of Phillips Point off Weesuck Creek between January 11, 2005 and November 1, 2005. Data was collected for nutrients to investigate the effects of storm water runoff and infiltration of shallow groundwater from the surrounding areas. On average, during this collection period, dissolved oxygen (DO) ranged from 6.7 mg/L at a depth of 7 feet to 14.9 at a depth of 5 feet. The surface water standard for DO is less than 5.0 mg/L, therefore total nitrogen and total dissolved nitrogen

detected during this period ranged from a low of 0.05 mg/L to a high of 0.90 mg/L and 0.05 mg/L to 0.92 mg/L, respectively. The surface water quality standard for nitrogen is 10 mg/L, thus these concentrations are well within the standard. Total phosphorous detected ranged between 0.025 mg/L and 0.174 mg/L. There is no surface water quality standard for phosphorous for this class of water. The median number of total coliform detected was < 20 and the standard is 70, thus this concentration is well within the standard.

SCDHS, in 2001, surveyed locations in Shinnecock Bay and Moriches Bay including Weesuck Creek, Quantuck Creek, Beaverdam Creek, Seatuck Cove, Hart Cove, and the Forge River for Paralytic Shellfish Poisoning (PSP)—an illness caused by eating shellfish contaminated with a dinoflagellate (phytoplankton) marine algae called *Alexandrium tamarense*, which contains a powerful toxin. This microaglae is often associated with "red tides," a condition where the water color turns reddish-brown. The 2001 survey detected positive results in all locations in the spring (but not in the fall) but at levels that were well below health standards. Further, according to SCDHS, no cases of PSP have been documented. These sites were retested in 2002 and positive results were again found in Weesuck Creek but well below the standards. The PSP water quality standard is 80 ug of toxin/100 g and the concentration detected in Weesuck Creek in 2002 was 3.6 ug of toxin/100 g.

I. SCENIC RESOURCES

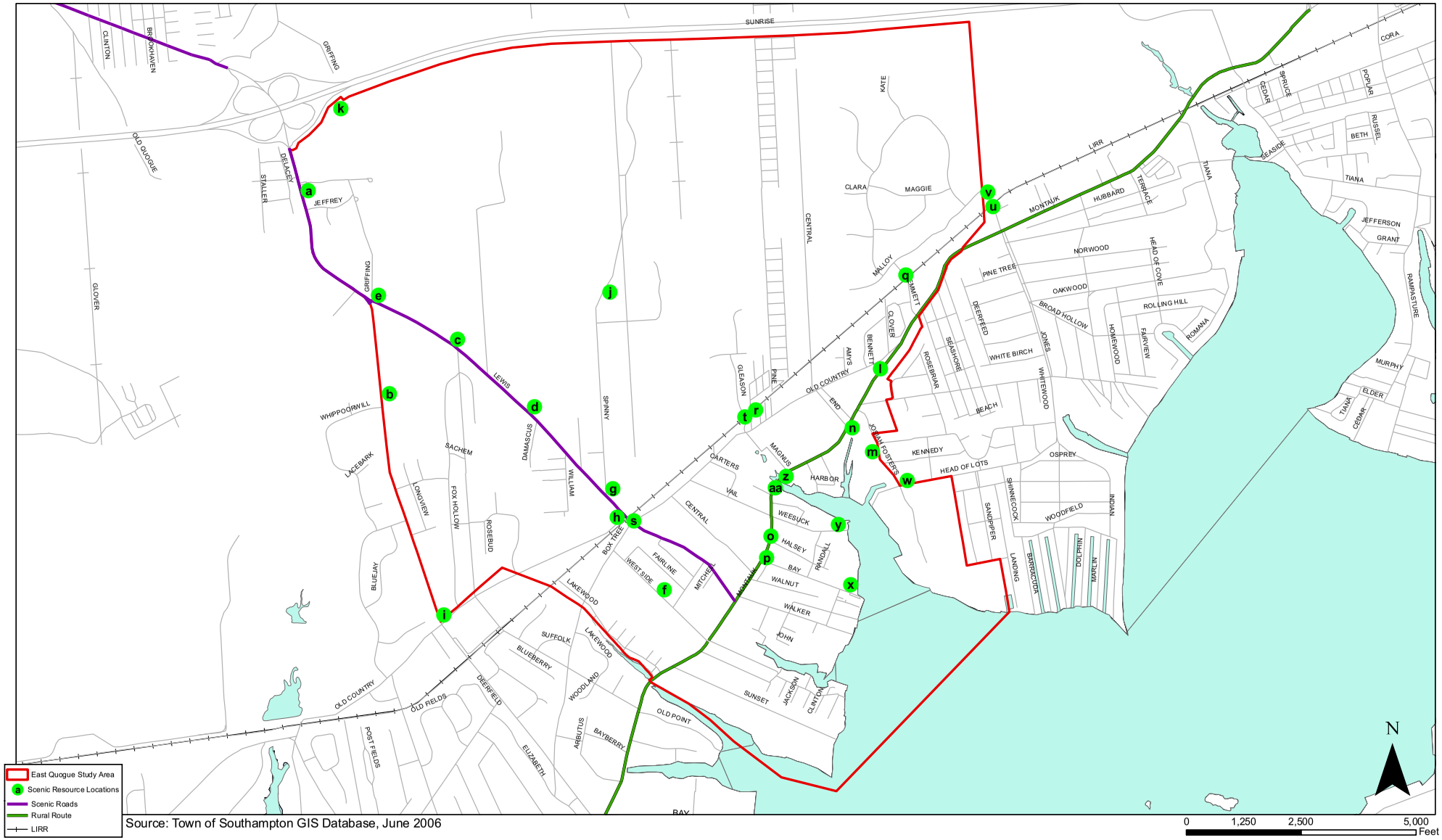
The study area maintains some of the Town's last expanses of undisturbed vacant land, with active agricultural lands, unbroken forest blocks and natural coastlines especially along Weesuck Creek. This section describes the scenic values of the East Quogue study area, with a focus on views along major road corridors.

SCENIC ROAD CORRIDORS AND FEATURES

The study area is defined by residential uses characteristic of a small, quiet hamlet with large expanses of vacant lands and open spaces and farmland. Important scenic corridors that characterize the study area include agricultural, rural, or neighborhood-commercial ("Main Street") uses associated with the hamlet center. Specific scenic components that contribute to the overall landscape include views of upland forests; wetlands; two-lane country roads; and the bays and shoreline. These resources are recognized as local and regional scenic attractions that contribute to the overall rural character of East Quogue.

The images on the pages following illustrate the rural character and ecological communities of the study area. These views present a picture with respect to the rural and open character of the study area. Figure 2-17 depicts the locations of significant scenic roads in the study area as well as the locations of the scenic resources displayed in the photos.

The views seen in Figures 2-18, 2-19, and 2-20 present the forested and agricultural landscapes along Quogue-Riverhead Road (CR 104), Lewis Road, and West Side Avenue corridors, respectively. Agricultural use on West Side Avenue is the only such use within the study area south of Old Country Road. Figure 2-21 shows different perspectives from the intersection of Lewis Road. In addition to Lewis Road maintaining significant agricultural viewsheds as shown in Figures 2-19 and 2-20, Lewis Road also represents a key example of the vast tree lined roadway corridors exhibited throughout the study area. Figure 2-21(g) depicts the rural character of Lewis Road, bordered by pine-oak forest in the Spinney Road vicinity, while photograph (h) depicts the residential uses on Lewis Road south of the railroad tracks. Figure 2-22 is another example of quaint country roads with adjacent forested lands in the study area. Figure 2-23(k)



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Key to Photographs and Scenic Roads
Figure 2-17

(a): Looking south at Quogue Riverhead Road (CR 104) near Jeffrey Lane.

(b): Looking east from Quogue Riverhead Road near Whippoorwill Lane toward Densieski Farm.

(c): Looking east from Lewis Road at intersection with Fox Hollow Road toward farmlands.

(d): Looking east from Lewis Road north of Damascus Road toward farmlands.

(e): Looking southeast from intersection of Lewis Road and CR 104 toward CR 104 and agricultural lands.

(f): Looking north along West Side Avenue at the only agricultural land south of Old Country Road.

(g): Looking northwest from Spinney Road at intersection with Lewis Road toward tree lined Lewis Road.

(h): Looking south from Old Country Road at intersection with Lewis Road toward single-family residential uses on Lewis Road.

(i): Looking east from intersection of CR 104 and Old Country Road toward forested lands lining Old Country Road.

(j): Looking west on Spinney Road toward undeveloped forested lands.

(k): Looking east on Sunrise Highway at intersection with CR 104 toward Central Pine Barrens region on south side of Sunrise Highway.

(l): Looking east from Montauk Highway toward intersection with Old Country Road at forested lands on the south side of the roadway. A restaurant is visible on the north side of Montauk Highway in this area.

depicts the Central Pine Barrens region on the south side of Sunrise Highway in the northern portion of the study area. Portions of Montauk Highway in the eastern section of the study area are also lined with a mixed deciduous/coniferous forest as shown in Figure 2-23(l). Josiah Foster's Path is yet another example of picturesque country road in the study area, as shown in Figure 2-24(m). A farmers market on the north side of Montauk Highway near the intersection with Josiah Foster's Path is shown in Figure 2-24(n). Between Lewis and Old Country Roads, Montauk Highway is generally lined with quaint neighborhood shops and sidewalk plantings (see Figure 2-25). Figure 2-26(q) depicts a view of the LIRR tracks and undeveloped forested lands on either side from the overpass on Emmet Road in the northeastern portion of the study area. Views of grade crossings in the study area are shown in Figures 2-26 and 2-27.

The remaining figures, Figures 2-28 through 2-31, exhibit the several unique habitats and ecological communities that comprise the study area. Figure 2-28 depicts the undeveloped forested region in the northeastern portion of the study area known as "Henry's Hollow." Henry's Hollow is a Critical Resource Area within the Central Pine Barrens. Figure 2-29 depicts the Pine Neck Nature Sanctuary on the east side of Weesuck Creek. The property features 15 acres of natural habitat, trails, wetlands, and shoreline, and is used for passive recreation including bird watching. A considerable portion of the eastern Weesuck Creek coastline is now protected in perpetuity through the Town's acquisition of the Pink Neck Nature Sanctuary. The remaining figures depict views of Weesuck Creek in the southern portion of the study area. Weesuck Creek acts as a tributary to Shinnecock Bay and exhibits biologically rich wetlands and shorelines of coastal forest. Specifically, the western shoreline is completely built with residential and some commercial uses while the eastern shoreline provides a large expense of pristine coastal forests of oak, pine, maple, and tupelo. Salt hay meadows characterize the area, backed by red maple-black gum hardwood swamps and coastal Pine Barren communities.

COMPREHENSIVE PLAN

The Town's *1999 Comprehensive Plan Update* identifies key scenic corridors in the Town. Within the study area, the following are considered to be high vulnerability scenic corridors: Quogue-Riverhead Road, Lewis Road, and Montauk Highway. These corridors were established based on the following:

- An inventory of visual, land use, ownership, natural, and cultural characteristics of both the primary and secondary roadways in the Town. This inventory included viewsheds, the area that is visible from the roadway consisting of foreground, middle-ground, and background views; viewpoints, exact locations that provide essential views from the road; and road corridor segments.
- A survey of public opinion to assign numeric values to specific scenic corridors. This visual preference survey asked more than 650 residents to designate the physical and visual characteristics of several road and highway corridors. Overall, the preference was for small country roads along shorelines, preserved open space, minimally developed farmland, Pine Barrens, wooded moraine, and deciduous forests, as well as preserved and maintained villages and hamlets. The scenic assessment also designated corridors that have a 5 or greater value within the study area. The rating of corridor values range from +10, the highest, to -10, the lowest, with 0 being neutral.
- A vulnerability analysis that identified which scenic corridors would require proper management to maintain their existing scenic quality.

(m): Looking north along Josiah Foster's Path between Montauk Highway and Head of Lots Road.

(n): Looking north toward farmers market on Montauk Highway near intersection with Josiah Foster's Path.

(o): Looking south on Montauk Highway between Central and Vail Avenues toward sidewalk plantings and shops lining south side of Montauk Highway.

(p): Looking west from sidewalk on north side of Montauk Highway at intersection with Bay Avenue toward sidewalk plantings and shops on north side of Montauk Highway.

(q): Looking east from train overpass on Emmet Road toward LIRR tracks. Henry's Hollow region is to the north of the tracks.

(r): Looking east from grade crossing on Gleason Drive toward grade crossing at Oak Street.

(s): Looking north toward grade crossing on Lewis Road.

(t): Looking north toward grade crossing on Gleason Drive.

(u): Looking north from Jones Road toward Henry's Hollow region, a Critical Resource Area in the northeastern portion of the East Quogue study area.

(v): Looking northwest from Jones Road toward Henry's Hollow region.

(w): Looking south toward Pine Neck Nature Sanctuary from Head of Lots Road.

(x): Looking east across Weesuck Creek from Bay Avenue.

(y): Looking east from Weesuck Avenue across Weesuck Creek.

(z): Looking north from Montauk Highway toward headwaters of Weesuck Creek.

(aa): Looking south from Montauk Highway toward Weesuck Creek.

The Comprehensive Plan recognizes the importance of scenic resources as most visitors and residents view the Town from their cars and therefore what is visible from the roads forms their image of Southampton. During the comprehensive planning process, the Citizen's Advisory Committee identified the protection of "sense of place" and maintaining the Town's rural character as the most important issues facing the preservation of scenic resources. The plan identified one scenic roadway—Lewis Road—within the study area (see Figure 2-17). Scenic roadway designations recognize the importance of roadways that contain exceptional examples of historic, agricultural, natural, and cultural features. Figure 2-17 also shows Montauk Highway as a rural route.

J. CULTURAL RESOURCES

This section provides a brief overview of the development history of the Town of Southampton and East Quogue and presents an inventory of cultural resources including archaeological resources and standing historic structures.

HISTORICAL DEVELOPMENT

TOWN OF SOUTHAMPTON

Southampton Town was originally occupied by the Shinnecock Indians, one of thirteen Algonquin tribes inhabiting Long Island prior to European settlement, and one of four who were in possession of the eastern portion of the Island. As the *1999 Comprehensive Plan Update* states: "The Shinnecock, which means 'level land,' inhabited the coastal plain around creeks and inlets which supplied a bounty of aquatic life for food and trade." The Shinnecocks were a peaceful yet credulous people, as they welcomed English settlers in 1640 and unknowingly signed over the title to their land to the settlers.

In 1640, settlers from Lynn, Massachusetts arrived in the vicinity of Southampton to establish a new plantation. The original land acquisition from the Indians covered the eastern portion of the Town; the area west of the Shinnecock Canal was acquired in 1666. The Town was first patented in 1676 and wasn't recognized as a town until after the Revolution on March 7, 1788, but had kept records since its founding days.

Agriculture and fishing, notably whaling, were the primary trades in the early years (1776-1850). The early settlers were principally farmers who grew a variety of grains, including wheat, oats, barley, and rye. In addition, the settlers raised cattle and hogs. Whaling became a major industry during the 18th century, leading to the prominence of Sag Harbor as an east coast port. In 1788, a US customs house was built, making Sag Harbor a port of entry. The demand for whale oil declined during the third quarter of the 19th century, following the discovery of petroleum in Pennsylvania, leading to the decline of Sag Harbor as a port.

By 1872, the LIRR was extended to Southampton. The 1873 railroad ran from Eastport, through Westhampton, Canoe Place, Southampton Village, Water Mill, Bridgehampton, and on to Sag Harbor. Sag Harbor, although past the peak of its whaling and ship building fame, was still the most prosperous village in the eastern end of Long Island, and Bridgehampton, Southampton, and East Hampton were also flourishing at that time as agricultural and stock-raising villages.

The summer resort industry began during the late 19th century, facilitated by the expansion of the LIRR into the area. Beach resorts were developed at Westhampton Beach, Quogue, Southampton Village, and, later during the 1920s, at North Sea. Development increased as the

network of parkways and highways increased across the Island, particularly the construction of the Southern State Parkway and Sunrise Highway. Moreover, population gradually increased as summer homes emerged as a permanent fixture of Southampton's housing stock.

EAST QUOGUE

In the early 17th century, settlers from Southampton traveled to the Quogue/East Quogue area to harvest hay from its broad meadows. They loaded the hay onto barges or rafts and poled them back to their farms in Southampton. What is now known as East Quogue was originally called Fourth Neck then Atlanticville due to its close proximity to the Atlantic Ocean.[1]

The first settlements in the area did not occur until the 18th century when people from the north, east, and west showed interest in developing Atlanticville due to its rich soil, natural resources, and central location between Shinnecock Bay and the Atlantic Ocean to the south and Peconic Bay to the north, which supplied fish for food and market.[2]

On March 25, 1891, Atlanticville was renamed to East Quogue and about the same time, a new railroad station was constructed to serve Quogue and East Quogue. The Quogue Station provided visitors from the western parts of the Island and New York City to now stop in this area and visit for long periods of time during the summer months.

Similar to most Long Island communities, religion was an integral part of the East Quogue community. Until the Methodist Church was built in 1882, locals traveled to private homes or churches for early meeting and Sunday school.

A notable feature of East Quogue during this time period was a huge oak tree with a hollow center located at Old Country Road and Pleasure Drive (now Lewis Road). This tree provided a virtual post office for Quogue and East Quogue's early settlers. They called it the "oak box tree" and placed their mail in the tree's hollow center to be picked up and exchanged by post riders. In 1894, the tree was damaged by fire and removed to the Quogue Post Office. Later, that portion of the tree was put on display at the Old Schoolhouse Museum on Quogue Street. An official post office was established in Atlanticville in 1858 in William H. Foster's (the first postmaster) home on Main Street. The public school was located in the parlor of this home and the post office in the kitchen. The desk used by Foster is now in the National Post Office Museum in Washington D.C.

In the late 19th and early 20th centuries, East Quogue attracted tourists with many small homelike summer hotels and boarding houses. The boarding houses typically hired carriages to retrieve visitors from the train station, and accepted guests for three or four months during the summer. This influx of visitors gave East Quogue a new economic viability after the arrival of the LIRR.

HISTORIC RESOURCES

There are three tiers of recognition and regulatory protection for historic resources. These are the National Register of Historic Places, the State Register of Historic Places held by the State Historic Preservation Office (SHPO), and local recognition. Resources that have been identified at each level are described below.

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[1] Southampton 325th Anniversary, 1965

[2] ibid

NATIONAL REGISTER OF HISTORIC PLACES

A search of properties in the National Register Information System at http://www.cr.nps.gov/nR/research/nris.htm on May 19, 2006 revealed no historic properties listed on the National Register of Historic Places within the East Quogue study area. This determination is supported by information contained in the Town of Southampton's *1999 Comprehensive Plan Update* and *Town of Southampton Draft GEIS for Comprehensive Plan Update (1997)*.

STATE REGISTER OF HISTORIC PLACES

A review of the SPHINX (State Preservation Historical Information Network Exchange) at http://nysparks.state.ny.us/shpo/resources/index.htm indicated that no State designated historic resources are located in the East Quogue study area. This statement is supported by information contained in the documents listed above.

LOCAL LANDMARKS

The Town of Southampton Town Board, in October 1998, adopted Article XXVII Landmarks and Historic Districts and Heritage Resource Areas and with this ordinance, established the Landmarks and Historic Districts Board. This Board is charged with conducting surveys of historic sites, recommending the designation of historic districts, increasing public awareness about historic preservation, and recommending utilization of State or private funds for preservation of landmarks and historic districts within the Town (Southampton Zoning Code: § 330-320). In addition, the Board recommends individual structures or sites for "construction, reconstruction, moving, alteration, or demolition which will affect the exterior appearance of any structure," and determines whether or not to grant a certificate of approval. With regard to locally designated structures, the Landmarks Board reviews proposed designation by the Town Board.

The Town Board designates landmarks according to the following criteria (Southampton Zoning Code: § 330-321):

- Possesses special character or historic or aesthetic interest of value as part of the cultural, political, economic or social history of the locality, region, State or nation;
- Is identified with historic personages;
- Embodies the distinguishing characteristics of an architectural style;
- Is the work of a designer whose work has significantly influenced an age;
- Represents an established and familiar visual feature of the neighborhood.

Further, the Town Board designates a group of properties as an historic district if it:

- Contains properties that meet one or more criteria for designation of a landmark; and
- It constitutes a distinct section of the Town.

Southampton has designated nine sites that satisfy the criteria of the Landmarks and Historic Districts ordinance, none of which are located in the study area:

- Beebe Windmill & Berwind Memorial Village Green;
- Big Duck in Flanders;
- Canoe Place Chapel in Hampton Bays;

- Conscience Point Park in North Sea;
- Fordham Mill in Speonk;
- Hampton House (Nathaniel Rogers House) in Bridgehampton;
- Noyac School House in Sag Harbor;
- Prosper King House; and
- Water Mill Museum in Water Mill.

Although no designated local landmarks are within the East Quogue study area, the 1*999 Comprehensive Plan Update* indicates concentrations of historic resources generally south of Old Country Road within the study area, which have not been fully inventoried. Inventories of potentially historic resources within the Town of Southampton were compiled through the efforts of the individual Community Advisory Committees (CACs) for each hamlet. The following historic resources, which are largely featured along Montauk Highway, have been identified by the East Quogue CAC:

- Farmhouse on Lewis Road
- Farmhouse
- Boxtree – site of the first letter box in the U.S.
- Old Culver Store
- Methodist Church
- Old Store, Main Street
- Main Street
- Down's House
- Overton House – early 1900s
- Mendenhall
- Old House
- Brown's House, Main Street – early 1900s
- corner of Weesuck and Main – early hunting lodge
- Old house on Weesuck
- Foster Crossing – old Country Club
- Old Boarding House – part of B.F. Squires land
- Caffrey House – Boarding House run by daughter of B.F. Squires Emma Caffrey and her daughter Minerva.

Under State Law, Southampton Town maintains abandoned cemeteries and colonial period burial grounds as Memorial Parks. Some of the Town's cemeteries maintain headstones dating back to the late 1600s. Within the study area, there are two cemeteries that have been surveyed by the Town—Oakwood Cemetery on Spinney Road and East Quogue Methodist Church Cemetery on Montauk Highway. The later cemetery maintains headstones dating back to the 1850s.

CULTURAL RESOURCES SURVEY

In 1999, the Preservation League of New York State and the Town of Southampton provided funds for a cultural resources survey of 300 historic resources within the Town. This survey was conducted by GAI Consultants, Inc. In July 2000, GAI published the *Cultural Resources Survey of the Town of Southampton, New York*. The survey consisted of four components including archival research; fieldwork methodology; data entry; and project coordination. The 1999 survey evaluated historic resources within 16 unincorporated hamlets of the Town including East Quogue. GAI surveyed 23 historic resources in the hamlet of East Quogue (see Figure 2-32). Resources that were specifically described in the survey, relative to the study area, are depicted in Table 2-30.

The cultural resources survey delineated 11 potential historic districts in the Town that are eligible for listing in the National Register of Historic Places under one or more of the National Register Criteria including:

- Criteria A: relates to the broad patterns of history, as well as to specific events;
- Criteria B: relates to significant individuals;
- Criteria C: relates to resources significant as the work of a master or which embody distinctive building types or styles; and
- Criteria D: relates to sites of archaeological importance and was not specifically addressed in this architectural survey.

Table 2-30
Examples of East Quogue Surveyed Resources

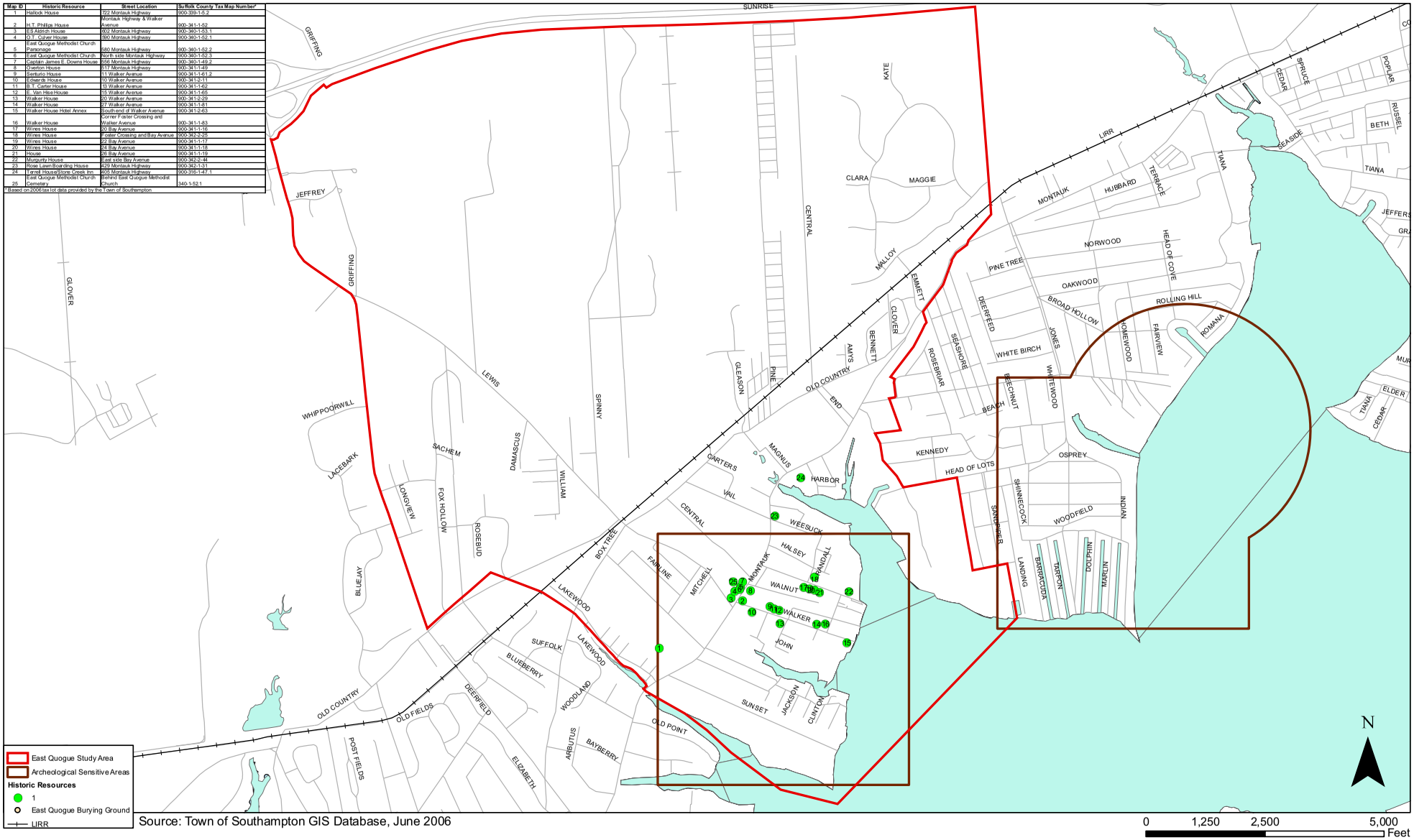
Historic Resource	Reason for Recognition
Captain James E. Downs House	Typical vernacular version of the Italianate style
East Quogue Methodist Church	Wooden shingles laid in patterns on the exterior presenting a common decorative feature of old churches
Oakland	Boarding houses (typically larger residences converted by the owner for summer lodging) that served summer visitors, often up to four months. Most of these houses were demolished at a later date.
Howell House	See Oakland
East Quogue House	See Oakland
Rose Lawn Boarding House	See Oakland. This house still exists today.
Stone Creek Inn	Once a boarding house but now operates as a restaurant.
Walker House	Once the largest boarding houses in East Quogue, it was originally constructed as a hunting lodge in 1871.

Source: *Cultural Resources Survey of the Town of Southampton, New York*, July 2000

The proposed East Quogue historic district, located from Montauk Highway south to Tiana Bay, would include approximately 38 resources. This district is significant under Criteria A for its association with the summer resort theme, and under Criteria C for its collection of Queen Anne-style buildings. Of the 38 historic resources within this district, 15 were not inventoried in the 1999 survey. The cultural resources survey recommends that this and the other 10 historic districts be nominated as Southampton Town Landmarks by the Southampton Landmarks and Historic Districts Board.

Map ID	Historic Resource	Street Location	Suffolk County Tax Map Number*
1	Hallock House	722 Montauk Highway	900-339-1-5.2
2	H.T. Phillips House	Montauk Highway & Walker Avenue	900-341-1-52
3	E.S.Aldrich House	602 Montauk Highway	900-340-1-53.1
4	O.T. Culver House	590 Montauk Highway	900-340-1-52.1
5	East Quogue Methodist Church Parsonage	580 Montauk Highway	900-340-1-52.2
6	East Quogue Methodist Church	North side Montauk Highway	900-340-1-52.3
7	Captain James E. Downs House	556 Montauk Highway	900-340-1-49.2
8	Overton House	517 Montauk Highway	900-341-1-49
9	Berbuto House	11 Walker Avenue	900-341-1-61.2
10	Edwards House	10 Walker Avenue	900-341-2-11
11	B.T. Carter House	13 Walker Avenue	900-341-1-62
12	E. Van Hise House	15 Walker Avenue	900-341-1-65
13	Walker House	20 Walker Avenue	900-341-2-29
14	Walker House	27 Walker Avenue	900-341-1-81
15	Walker House Hotel Annex	South end of Walker Avenue	900-341-2-63
16	Walker House	Corner Foster Crossing and Walker Avenue	900-341-1-83
17	Wines House	20 Bay Avenue	900-341-1-16
18	Wines House	Foster Crossing and Bay Avenue	900-342-2-25
19	Wines House	22 Bay Avenue	900-341-1-17
20	Wines House	24 Bay Avenue	900-341-1-18
21	House	26 Bay Avenue	900-341-1-19
22	Murguntry House	East side Bay Avenue	900-342-2-44
23	Rose Lawn Boarding House	429 Montauk Highway	900-342-1-31
24	Terrell House/Stone Creek Inn	405 Montauk Highway	900-316-1-47.1
25	East Quogue Methodist Church Cemetery	Behind East Quogue Methodist Church	340-1-52.1

* Based on 2006 tax lot data provided by the Town of Southampton



Source: Town of Southampton GIS Database, June 2006

East Quogue Generic Environmental Impact Statement

Cultural Resources
Figure 2-32

ARCHAEOLOGICAL RESOURCES

According to SHPO's online GIS system, there are potentially sensitive archaeological areas south of Montauk Highway (CR 80) within the East Quogue study area (see Figure 2-32). This information is supported by information contained in the draft *GEIS for Comprehensive Plan Update (1997)* and in the Town of Southampton's GIS database.

K. TRAFFIC, AIR, AND NOISE

TRAFFIC

This section analyzes the existing transportation network, traffic volumes, and trends within East Quogue, focusing on the study area.

STUDY AREA

As shown in Figure 2-33, 12 intersections (considered key intersections likely to be affected by project-generated trips) were identified for detailed analysis including:

1. Quogue-Riverhead Road (CR 104) & Old Country Road
2. Quogue-Riverhead Road & Lewis Road
3. Lewis Road & Spinney Road
4. Lewis Road & Old Country Road
5. Lewis Road & Box Tree Road/Old Country Road
6. Old Country Road & Central Avenue
7. Montauk Highway (CR 80) & Lewis Road
8. Montauk Highway & Central Avenue
9. Montauk Highway & Josiah Fosters Path
10. Montauk Highway & Squires Avenue
11. Montauk Highway & Old Country Road
12. Montauk Highway & Emmett Drive

The intersection of Montauk Highway & Central Avenue is signalized. The remaining study area intersections are unsignalized.

STREET NETWORK

The East Quogue study area includes several key roads, which are operated and maintained by the State, County, and Town. Just north of the study area, the New York State Department of Transportation (NYSDOT) is responsible for Sunrise Highway (NYS Route 27). Although Sunrise Highway is outside of the study area boundary, it is important to note that Sunrise Highway is a major east/west highway for the south shore of Long Island and the principal arterial for the South Fork. Sunrise Highway extends from New York City in the west to Montauk Point in the east. Just north of the study area, Sunrise Highway connects to Quogue-Riverhead Road (CR 104) via a cloverleaf interchange at Exit 64. Quogue-Riverhead Road, operated by the Suffolk County Department of Public Works (SCDPW), runs along the western

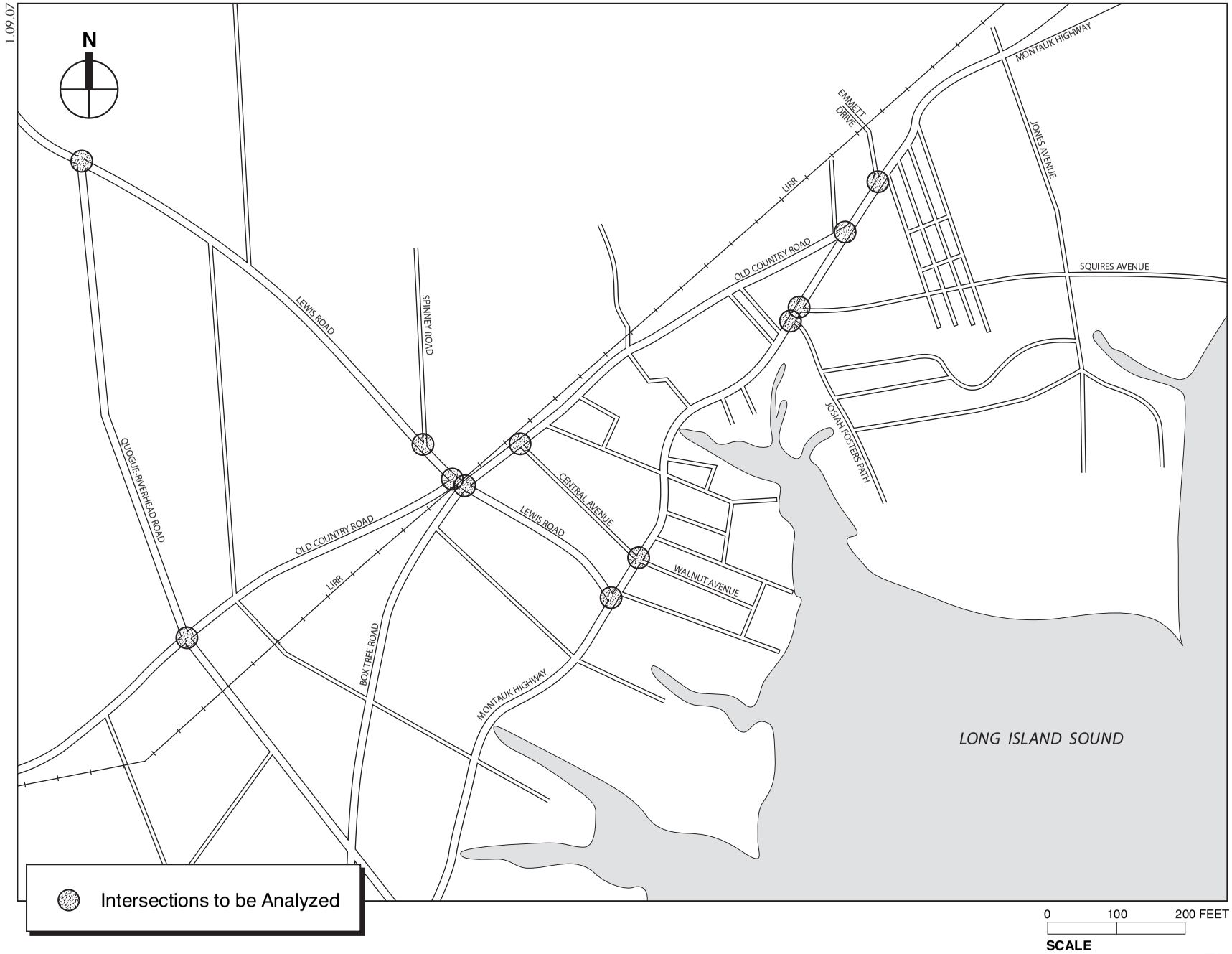


Figure 2-33

Traffic Study Area

boundary of the study area, connecting Sunrise Highway to the north with Montauk Highway (CR 80) to the south. Montauk Highway operates as a County road in this portion of the Town. Montauk Highway runs roughly parallel to Sunrise Highway, and extends from east to west in the southern portion of the study area. Two important Town roads within the study area are Lewis Road and Old Country Road. Lewis Road runs north and south in the western portion of the study area, connecting Quogue-Riverhead Road to Montauk Highway. Old Country Road runs east and west in the central portion of the study area, connecting Quogue-Riverhead Road to Montauk Highway. The other Town roads in the study area are Box Tree Road, Central Avenue, Emmett Drive, Josiah Fosters Path, Spinney Road, and Squires Avenue. With the exception of Sunrise Highway, which is a four lane limited access expressway, all of the roadways within the study area are generally two lane facilities (one moving lane in each direction).

SIGNALIZED INTERSECTION CAPACITY ANALYSIS METHODOLOGY

The operation of signalized intersections in the study area was analyzed applying the methodologies presented in the 2000 *Highway Capacity Manual (HCM)*. This procedure evaluates signalized intersections for average control delay per vehicle and level of service (LOS).

LOS for the signalized intersections is based on the average control delay per vehicle for the various lane group movements within the intersection. Control delay is equal to stopped delay times 1.3. This delay is the basis for a LOS determination for individual lane groups, each approach as a whole, and the overall intersection.

The control delay criteria for the range of service levels for signalized intersections are shown in Table 2-31.

Table 2-31

LOS Criteria for Signalized Intersections

Level-of-Service (LOS)	Control Delay Per Vehicle
A	≤ 10.0 seconds
B	> 10.0 and ≤ 20.0 seconds
C	> 20.0 and ≤ 35.0 seconds
D	> 35.0 and ≤ 55.0 seconds
E	> 55.0 and ≤ 80.0 seconds
F	> 80.0 seconds

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

Although the *HCM* methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the *HCM*. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay indicates an optimization of traffic flow—when an approach, or the whole intersection, processes traffic close to its theoretical maximum with a minimum amount of delay. However, very high v/c ratios—especially those greater than 1.0—are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition

where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle breakdowns are frequent. The *HCM* methodology provides for a summary of the total intersection operating conditions. The analysis chooses the two critical movements (the worst case from each roadway) and calculates a summary critical v/c ratio, delay, and LOS.

UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS METHODOLOGY

The LOS criteria for unsignalized intersections are summarized in Table 2-32. For the purposes of this analysis, control delay is defined as the total elapsed time that includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation.

Table 2-32
LOS Criteria for Unsignalized Intersections

Level-of-Service (LOS)	Control Delay Per Vehicle
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds

Source: Transportation Research Board, *Highway Capacity Manual*, 2000.

Note that the LOS criteria for unsignalized intersections are somewhat different from the criteria used in signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. In addition, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than at signalized intersections. For these reasons, it is considered that the average control delay threshold for any given LOS is less for an unsignalized than for a signalized intersection. The LOS for a Two-Way Stop Control intersection is determined by the control delay and is defined for each minor movement.

TRAFFIC CONDITIONS

Table 2-33 shows Annual Average Daily Traffic (AADT) counts for some of the study area roadways. The AADT is a measure of the average daily volume of traffic in both directions averaged over the entire year. As Table 2-33 shows, Sunrise Highway carries a significant volume of traffic. The average daily volume of traffic for SR 27 from Quogue-Riverhead Road to Riverhead-Hampton Bays Road (NYS Route 24) was 46,200 vehicles for 2004. As the *1999 Comprehensive Plan Update* states, Sunrise Highway is one of the main east/west arterials providing access not just to Southampton, but also through Southampton to East Hampton.

Existing traffic conditions in the study area were established based on manual traffic counts conducted in October 2006, traffic volumes presented in The Hills of Southampton Traffic Impact Study (July 2006) at the study area intersections, prepared by Nelson & Pope, LLP, and traffic data provided by Dunn Engineering Associates. The data collection program consisted of manual and Automatic Traffic Recorder (ATR) counts conducted at study area locations.

Turning movement volumes were collected at the study area intersections during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods. The volume data was tabulated to identify the peak hours at each of the intersections. The peak hour volumes at each intersection are used in this study to perform a conservative analysis. Additionally, a seasonal adjustment factor of 1.17 (as recommended by NYSDOT) was applied to the existing volumes to reflect peak summer conditions (August).

Table 2-33
Traffic Volumes for State and County Roadways in Study Area

Route	Section Length (miles)	Start Description	End Description	Year	AADT*
Sunrise Hwy	4.2	Quoque-Riverhead Rd.	Riverhead-Hampton Bays Rd	2004	46,200
Quogue-Riverhead Rd	0.56	Quogue Village	Woodleigh Pl	2001	9,132
Quogue-Riverhead Rd	1.29	Woodleigh Pl	Oakville Ave	2001	9,132
Quogue-Riverhead Rd	0.3	Oakville Ave	Sunrise Hwy	2001	9,132
Quogue-Riverhead Rd	0.66	Sunrise Highway	Pleasure Dr	2001	5,469
Montauk Hwy	0.48	Southampton Town Line	Lewis Rd	2001	9,446
Montauk Hwy	3.66	Lewis Rd	Riverhead-Hampton Bays Rd	2001	9,446

Note: *AADT (annual average daily traffic volumes).
Sources: New York State Department of Transportation (NYSDOT), 2003 Traffic Volume Report for Suffolk County; NYSDOT, Local Highway Traffic Volume Report; NYSDOT, 2004 Traffic Data Report for New York State.

Figures 2-34 and 2-35 show the roadway volumes in the study area for existing conditions for the peak hours analyzed. It is important to note that traffic volumes along the study area roadways may not necessarily balance because of the presence of various sinks and sources (e.g. driveways) that are located between intersections.

The peak hours of the roadway network are as follows:

- AM Peak Hour – 8:00 AM to 9:00 AM
- PM Peak Hour – 4:30 PM to 5:30 PM

It is important to note that the peak hours for individual study area intersections may occur slightly before or after these hours (under one hour). However the peak hours listed above are representative of the peak hours for the roadway network as a whole.

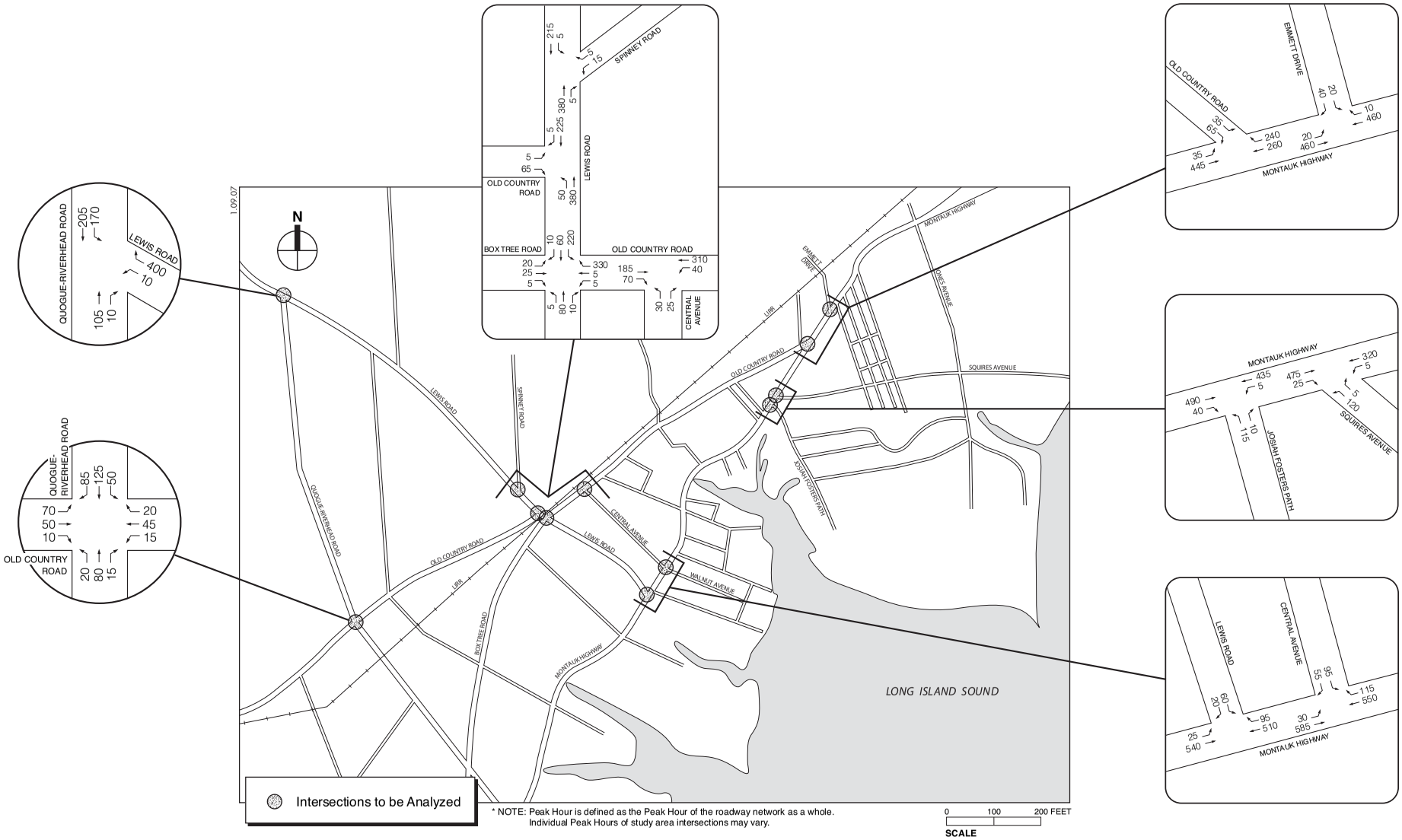


Figure 2-34

2006 Existing Traffic Volumes
AM Summer Peak Hour (8:00-9:00AM)*

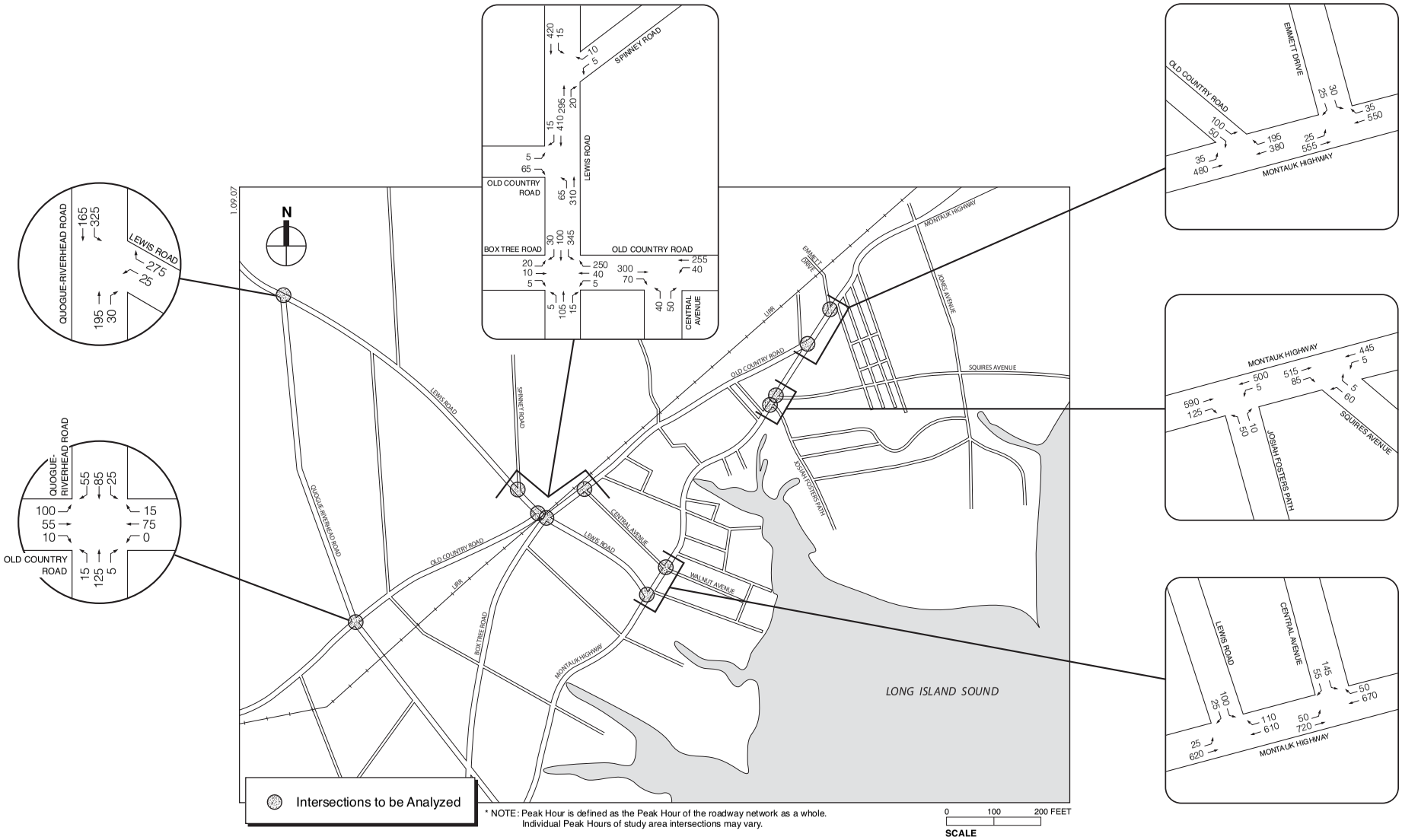


Figure 2-35

2006 Existing Traffic Volumes
PM Summer Peak Hour (4:30-5:30 PM)*

The data was then analyzed using the *HCM* methodology (see Appendix C for Highway Capacity Software (HCS) outputs for all study area intersections) to compute delays, v/c ratios, and LOS as described above.

As shown in Table 2-34 the lane groups/approaches of the intersections in the study area generally operate at LOS D or better (LOS D or better generally indicates acceptable operating conditions) under 2006 Existing Conditions during the peak hours analyzed with the following exceptions:

- The westbound Lewis Road left-turn lane group at Quogue-Riverhead Road operates at LOS E during the PM peak hour.
- The eastbound Old Country Road approach at Lewis Road operates at LOS F during the PM peak hour.
- The southbound Old Country Road approach at Montauk Highway operates at LOS E during the PM peak hour.
- The southbound Central Avenue approach at Montauk Highway operates at LOS E and LOS F during the AM and PM peak hours, respectively.
- The northbound Josiah Fosters Path approach at Montauk Highway operates at LOS E during the PM peak hour.

LOS E and F generally indicate congested conditions and notable delays. However it is important to note that it is not uncommon for the minor approaches at unsignalized intersections to operate at LOS E and F due to the high opposing volumes along the major roadway (such as Montauk Highway). The capacity analysis indicates that the 95th percentile queue lengths at the unsignalized approaches operating at LOS E or F ranges between 2 to 5 cars. Therefore, even with LOS E or F, queuing is not a notable problem at the unsignalized intersections.

During certain peak periods of the East Quogue Elementary School (located on the west side of Central Avenue, just south of Old Country Road) associated vehicle activity, additional traffic control measures are in place to facilitate traffic flow along both Central Avenue and Lewis Road. These traffic control measures include the presence of crossing guards and police officers to direct vehicular and pedestrian traffic in the vicinity of the school. These additional traffic control measures are difficult to assess in the HCS analysis, however these measures are implemented to improve traffic flow, circulation, and safety in the vicinity of the school.

ACCIDENT DATA

Table 2-35 presents accident data by type for most of the intersections in the study area (data was unavailable for the intersection of Montauk Highway and Emmett Drive) for the most recent 4-year period for which data is available from NYSDOT (2000-2003). The table indicates a total of 46 accidents in the study area during the analysis period. The majority of the accidents (approximately 70 percent) involved a collision with another motor vehicle. None of the accidents involved collisions with pedestrians. The intersection at Old Country Road and Quogue-Riverhead Road (CR 104) was reported to have the greatest number of accidents during the analysis period (12 accidents over the four year period). It is noted that three of the accidents reported for this intersection were identified as non-reportable. An accident is considered to be non-reportable by NYSDOT if there was no personal injury and either (a) no motorist report was filed; (b) no dollar value of damage was entered on the accident report; or (c) the amount of vehicular damage did not exceed a specified amount ($1,000). The second largest number of

Table 2-34
Level-of-Service Analysis Results: 2006 Existing Traffic Conditions

Intersection	#	Control Type	Approach	Lane Group	2006 Existing Conditions					
					AM Peak Hour (8:00 – 9:00 AM)			PM Peak Hour (4:30 – 5:30 PM)		
					v/c Ratio	Delay (sec)	LOS	v/c Ratio	Delay (sec)	LOS
Quogue-Riverhead Rd (N-S) @ Old Country Rd (E-W)	1	Unsignalized	Northbound	LTR	0.02	7.8	A	0.01	7.6	A
			Southbound	LTR	0.04	7.6	A	0.02	7.6	A
			Westbound	LTR	0.20	14.2	B	0.19	13.4	B
			Eastbound	LTR	0.34	17.5	C	0.45	19.0	C
			Intersection		Unsignalized			Unsignalized		
Quogue-Riverhead Rd (N-S) @ Lewis Rd (E-W)	2	Unsignalized	Southbound	L	0.17	8.0	A	0.33	9.2	A
			Westbound	L	0.05	20.2	C	0.25	45.6	E
			Westbound	R	0.57	14.1	B	0.44	13.4	B
			Intersection		Unsignalized			Unsignalized		
Lewis Rd (N-S) @ Spinney Rd (E-W)	3	Unsignalized	Southbound	LT	0.01	8.4	A	0.01	8.0	A
			Westbound	LR	0.07	14.7	B	0.03	11.9	B
			Intersection		Unsignalized			Unsignalized		
Lewis Rd (N-S) @ Old Country Rd (E-W)	4	Unsignalized	Northbound	LT	0.05	7.9	A	0.06	8.5	A
			Eastbound	LR	0.13	10.9	B	0.16	12.6	B
			Intersection		Unsignalized			Unsignalized		
Lewis Rd (N-S) @ Box Tree Rd/Old Country Rd (E-W)	5	Unsignalized	Northbound	LTR	0.00	7.4	A	0.00	7.5	A
			Southbound	LTR	0.17	7.9	A	0.28	8.5	A
			Westbound	LTR	0.51	13.1	B	0.66	24.8	C
			Eastbound	LTR	0.35	33.9	D	0.53	87.4	F
			Intersection		Unsignalized			Unsignalized		
Old Country Rd (E-W) @ Central Ave (N-S)	6	Unsignalized	Westbound	LT	0.04	8.0	A	0.04	8.2	A
			Northbound	LR	0.15	13.7	B	0.19	13.9	B
			Intersection		Unsignalized			Unsignalized		
Montauk Hwy (E-W) @ Lewis Rd (N-S)	7	Unsignalized	Eastbound	LT	0.03	9.3	A	0.03	9.5	A
			Southbound	LR	0.34	21.8	C	0.52	31.8	D
			Intersection		Unsignalized			Unsignalized		
Montauk Hwy (E-W) @ Central Ave (N-S)	8	Signalized	Eastbound	LT	0.62	9.5	A	0.78	14.9	B
			Westbound	TR	0.62	9.6	A	0.70	11.4	B
			Southbound	LR	0.80	70.3	E	1.06	122.0	F
			Intersection		Unsignalized			Unsignalized		
Montauk Hwy (E-W) @ Josiah Fosters Path (N-S)	9	Unsignalized	Westbound	LT	0.00	8.6	A	0.01	9.5	A
			Northbound	LR	0.55	32.7	D	0.47	44.1	E
			Intersection		Unsignalized			Unsignalized		
Montauk Hwy (E-W) @ Squires Ave (N-S)	10	Unsignalized	Westbound	LT	0.00	8.5	A	0.01	9.1	A
			Northbound	LR	0.52	29.0	D	0.38	34.1	D
			Intersection		Unsignalized			Unsignalized		
Montauk Hwy (E-W) @ Old Country Rd (N-S)	11	Unsignalized	Eastbound	LT	0.05	8.9	A	0.04	8.9	A
			Southbound	LR	0.37	20.2	C	0.69	43.0	E
			Intersection		Unsignalized			Unsignalized		
Montauk Hwy (E-W) @ Emmet Dr (N-S)	12	Unsignalized	Eastbound	LT	0.03	8.7	A	0.03	8.9	A
			Southbound	LR	0.24	19.0	C	0.28	25.0	D
			Intersection		Unsignalized			Unsignalized		

Notes: L = left turn, T = through, R = right turn; LOS = Level of Service

Table 2-35

Accident Data Summary: Intersection Locations

Intersection	No. of Accidents (2000-2003)*																													
	2000						2001						2002						2003						4-year Total (2000-2003)*					
	Vehicle-Vehicle	Vehicle-Pedestrian	Vehicle-Object	Other**	Non-Reportable	Total	Vehicle-Vehicle	Vehicle-Pedestrian	Vehicle-Object	Other**	Non-Reportable	Total	Vehicle-Vehicle	Vehicle-Pedestrian	Vehicle-Object	Other**	Non-Reportable	Total	Vehicle-Vehicle	Vehicle-Pedestrian	Vehicle-Object	Other**	Non-Reportable	Total	Vehicle-Vehicle	Vehicle-Pedestrian	Vehicle-Object	Other**	Non-Reportable	Total
Montauk Hwy (CR 80) & Central Ave	1	0	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Central Ave & Old Country Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Montauk Hwy (CR 80) & Squires Ave	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	2
Montauk Hwy (CR 80) & Old Country Rd	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3	0	0	0	0	1	1	2	0	1	0	1	4
Montauk Hwy (CR 80) & Lewis Rd	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Montauk Hwy (CR 80) & Fosters Path	1	0	0	0	0	1	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3
Lewis Rd & Spinny Rd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1
Lewis Rd & Old Country Rd	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Old Country Rd & Quogue-Riverhead Rd (CR 104)	4	0	0	0	1	5	0	0	0	1	0	1	1	0	0	0	1	2	2	0	0	1	1	4	7	0	0	2	3	12
Lewis Rd & Quogue-Riverhead Rd (CR 104)	2	0	0	0	0	2	2	0	0	0	0	2	5	0	0	0	1	6	1	0	0	0	0	1	10	0	0	0	1	11
Lewis Road & Box Tree Rd/Old Country Rd	4	0	0	2	0	6	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	2	0	7
Total	**15**	**0**	**0**	**2**	**1**	**18**	**6**	**0**	**1**	**2**	**0**	**9**	**8**	**0**	**2**	**0**	**2**	**12**	**3**	**0**	**0**	**2**	**2**	**7**	**32**	**0**	**3**	**6**	**5**	**46**

Source: NYSDOT, September 2006.

Notes: *Accident Data for January 1, 2000 through December 31, 2003.

** Other category includes accidents reported as "other" by NYSDOT, as well as collisions with bicyclists and collisions with animals.

accidents (11 accidents over the four year period) was reported at the intersection of Lewis Road with Quogue-Riverhead Road (CR 104). The only other intersection in the study area with a significant number of accidents during the analysis period is Lewis Road and Box Tree Road/Old Country Road, with a total of seven accidents.

Further examination of the accident data revealed that the majority of the accidents (68 percent) involved an injury and that none of the accidents involved a fatality. Rear-end and right angle collisions were the most common types of accidents (see Appendix C for a more detailed accident data table and statistics).

Overall, there appears to be no high accident locations or notable accident patterns within the study area roadway network.

PARKING

Off-street parking facilities are present for most of the land uses in the study area. On-street parking is generally prohibited along the study area roadways however restricted on-street parking is permitted along sections of Montauk Highway, most of which are in the downtown hamlet area.

In November 2006, the Town of Southampton Town Board passed resolution 2006-1453 to modify parking regulations on portions of Montauk Highway in East Quogue by amending Chapter 312, "Vehicles and Traffic," of the Town Code. To better suite the needs of the local community, Local Law No 56 of 2006 extends the permitted parking from one hour to two hour parking on Montauk Highway between Central Avenue and Bay Avenue and between Walnut Avenue and Bay Avenue between the hours of 8 AM and 6 PM.

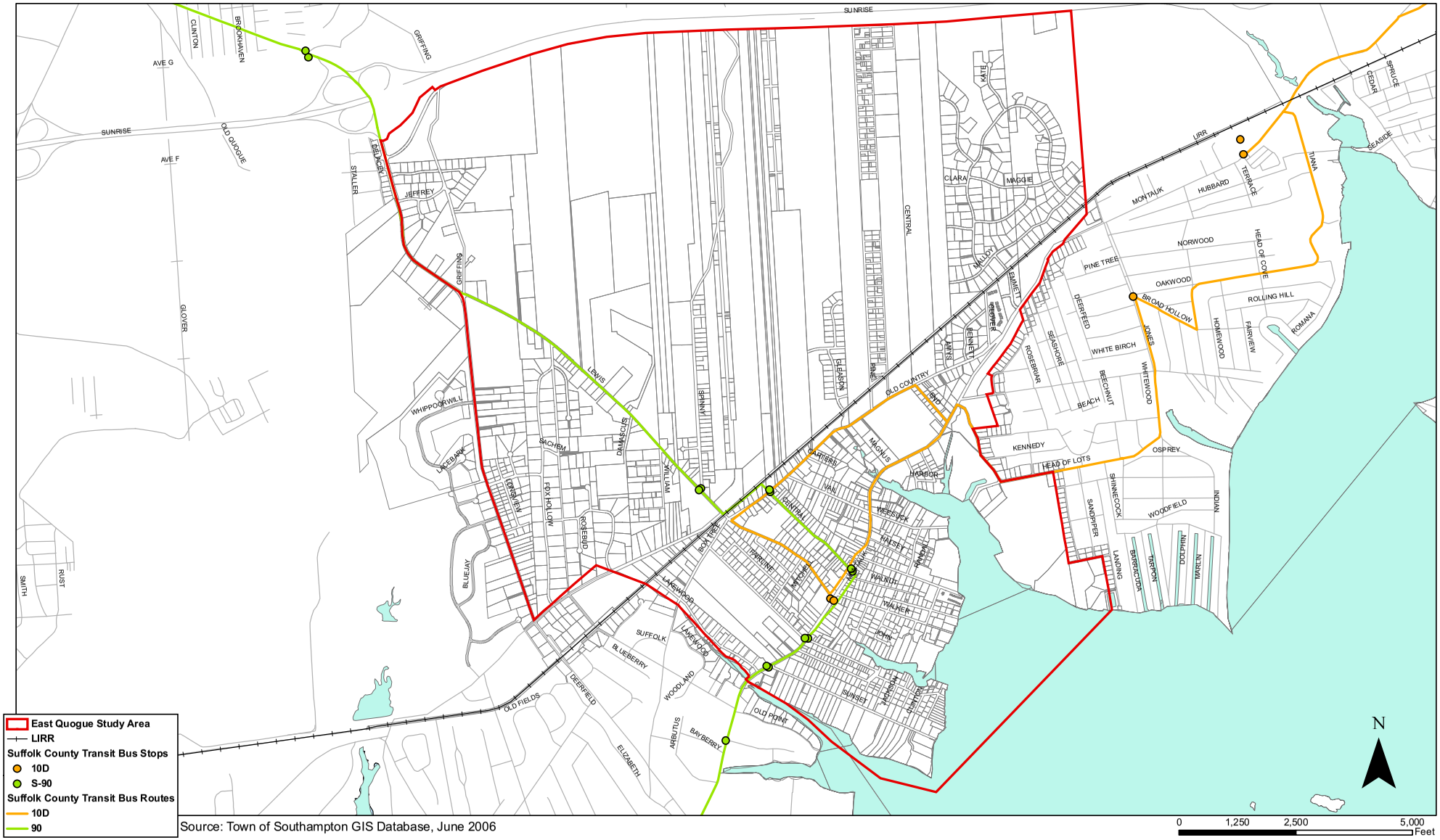
PEDESTRIAN CONDITIONS

Pedestrian volumes were observed to be low to moderate in the study area. Sidewalks exist along the following study area roadways: Montauk Highway, Central Avenue, and Lewis Road, primarily in the downtown hamlet area and in the vicinity of the public school on Central Avenue, as these locations are where most of the pedestrian traffic is concentrated. Observations conducted during field visits showed very low levels of pedestrian activity and no pedestrian facilities (sidewalks, crosswalks) in the other portions of the study area.

PUBLIC TRANSIT

Public rail and bus service is offered in the study area. The LIRR offers commuter rail service near the study area via its Montauk and Ronkonkoma Branches. The Westhampton and Hampton Bays train stations are located approximately 4 miles to the west and east, respectively from the downtown area, while the Riverhead train station is located approximately 7 miles north of the downtown area. Approximately 2 trains stop at each station during the AM and PM commuter hours.

Suffolk County Transit operates the following bus routes within the study area (see Figure 2-36): Routes 10D and S90. These bus routes offer service to several other Suffolk County municipalities. Route 10D travels along Montauk Highway, Lewis Road, Old Country Road, and Josiah Fosters Path in the study area. Route 10D makes 2 to 4 stops in the study area during both the AM and PM peak hours and connects commuters to the LIRR Hampton Bays train station. Within the study area, this the Route 10D bus stops at Montauk Highway and East End Avenue. Route S90 travels along Montauk Highway, Lewis Road, Central Avenue, Old Country Road,



Source: Town of Southampton GIS Database, June 2006

Suffolk County Transit Bus Routes and Stops
Figure 2-36

and Quogue-Riverhead Road in the study area. Route S90 makes approximately 2 stops in the study area during both the AM and PM peak hours and connects commuters to the LIRR Riverhead train station. Within the study area, this bus stops at Central Avenue and Montauk Highway.

AIR QUALITY

Under the Federal Clean Air Act, the EPA established standards for air pollutants of nationwide concern. As part of that act, six "criteria" pollutants were identified with National Ambient Air Quality Standards (NAAQS) established for those pollutants. The six pollutants are sulfur dioxide (SO2), carbon monoxide (CO), photochemical oxidants (ozone), nitrogen dioxide (NO2), total suspended particulates (TSP), and lead (Pb). In addition, New York State has established its own set of standards (Ambient Air Quality Standards or AAQS), which are equal to and in some cases more stringent than the NAAQS. CO is the pollutant that is most associated with gasoline powered mobiles sources such as cars and trucks.

EPA has designated Suffolk County as in attainment for CO, NO2, SO2, PM10 and lead. The CAA requires that a maintenance plan ensure continued compliance with the CO NAAQS for former non–attainment Areas.

On December 17, 2004, EPA took final action designating the five boroughs of New York City as well as Nassau, Suffolk, Rockland, Westchester and Orange counties as PM2.5 non-attainment areas under the CAA. State and local governments are required, by early 2008, to develop implementation plans designed to meet the standards. As described above, EPA has revised the PM standards. PM2.5 attainment designations would be effective by April, 2010, PM2.5 SIPs would be due by April, 2013, and would be designed to meet the PM2.5 standards by April, 2015, although this may be extended in some cases up to April, 2020.

In addition to the primary pollutants, both Nassau and Suffolk Counties have been designated as "severe non-attainment areas for ozone" under the federal Clean Air Act. Ozone is a form of oxygen that results from the chemical reaction between sunlight and nitrogen oxide, which forms with the partial combustion of fossil fuels and emissions from chemicals d certain solvents. In Suffolk County, the non-attainment status is caused for the most part by its proximity to ozone-producing areas. Suffolk County is downwind of New York City and New Jersey, which are primary sources of emissions of hydrocarbons and oxides of nitrogen. Together, in the presence of sunlight and high temperatures, ozone is created, which then blows over Suffolk County.

NOISE CONDITIONS

There are few industrial or stationary sources of noise in the study area. Therefore, the principal source of noise would be mobile sources and vehicle and truck traffic, particularly along the major roads. However, the Gabreski Airport is located to the west of the study area. This noise source primarily impacts the agricultural and sand mining uses in the study area and therefore is not expected to pose significant impacts to the local residents within the study area. Field observations of the area have shown that the background levels are generally within the acceptable range for most residential areas. The study area is entirely comprised of both County and local roadways, which generally do not generate unacceptable noise levels within residential areas. Given that noise levels diminish with distance, and the heavy vegetation that is present on much of the study area, it is expected that noise levels would decrease quickly from the county road traffic corridors. Certainly, the local roadways that compose the side streets of the study

area are quiet side streets and the only sources of noise are isolated construction and landscaping equipment and wildlife.

L. SOLID WASTE MANAGEMENT

OVERVIEW

Solid waste management is an issue in most municipalities, particularly when there are no locally available disposal options. This section focuses on solid waste collection, transfer, and recycling systems pertaining to the East Quogue study area. A description of these systems as well as an assessment of how these systems could be impacted under the proposed plan is provided. This section also assesses whether the proposed plan has the potential to result in any conflicts with the Town's comprehensive solid waste management and recycling program.

SOUTHAMPTON TOWN SOLID WASTE MANAGEMENT AND RECYCLING PROGRAM

The Town has a comprehensive waste management program that focuses on recycling, which is required by law for residents and businesses. The Town does not provide municipal curbside garbage and recyclables collection service. Instead, Southampton Town residents and small businesses can opt to either arrange for collection through private carters or become a self-hauler by bringing trash and recyclables to a local recycling center. High volume generators of trash and recyclables (such as industrial and commercial operations) are prohibited from using the Town's recycling centers, and must instead hire a private carter to handle refuse removal and recyclables collection.

The Town operates four recycling and disposal centers: North Sea, Sag Harbor, Hampton Bays, and Westhampton. All of the disposal centers accept household garbage in official Town Garbage Bags and recyclables, which must be purchased by residents and businesses as part of the Town's Pay-Per-Bag program. Yard waste (except grass clippings, tree stumps, logs, and other land-clearing debris) is accepted at the North Sea, Hampton Bays, and Westhampton Recycling and Disposal Centers while bulk items are accepted at the North Sea and Hampton Bays centers. In addition, the North Sea Recycling and Disposal Center accepts scrap tires and construction material.

Wastes and recyclables received at the Town's disposal centers are transported outside of the Town for final disposal. Specifically, the non-recycled garbage, including bulk items, is transported to Babylon Town where it is incinerated. The recyclables are transported to regional receiving centers. Depending on the status of the recycling markets, the Town may then receive payment for the recyclable materials.

Southampton also endorses a grass recycling program called "Just Mow It," which prohibits disposal of grass clippings at the Town's recycling centers and transfer stations. Instead, individuals are encouraged to leave grass clippings on their lawns so they can decompose.

In order to ensure safe disposal of household hazardous waste, Southampton has initiated a "Stop Throwing Out Pollutants" (STOP) program. Receiving locations rotate among the four recycling and disposal centers.

In addition, the Town sponsors public education programs to encourage continuing sound solid waste disposal practices within the Town, and provides staff to conduct recycling education programs in local schools. ✷