

SECTION II: INVENTORY AND ANALYSIS

A. ORIENTATION

The Villages of Head-of-the-Harbor and Nissequogue are located adjacent to each other on the north shore of Long Island in the northwest quadrant of Suffolk County. The Villages lie within the Town of Smithtown, and Head-of-the-Harbor abuts the Town of Brookhaven on the east. The Villages contain approximately 3,862 acres, or 6.2 square miles.

The coastal area of the Villages is diverse, including an estuarine river, dramatic bluffs along Smithtown Bay and a nearly pristine natural harbor. The rural character of the Villages is enhanced by their natural setting which includes steep wooded slopes, wetlands and open fields.

The Villages are principally residential, with some institutional uses, scattered agricultural production, high quality active and passive recreation, and architectural resources. The Town of Smithtown, which surrounds the Villages, provides the commercial support needs of residents.

Section II of this Local Waterfront Revitalization Program presents an inventory of the Villages' coastal resources and analyzes issues and opportunities facing the Villages.

B. EXISTING LAND AND WATER USES

1. Existing Land and Water Uses

The Villages of Head-of-the-Harbor and Nissequogue are predominantly low-density residential communities, as shown in Table 1, and on Maps 3A and 3B.

Table 1

Existing Land Use -- 1983*

<u>Land Use Categories</u>	<u>Head of the Harbor</u>		<u>Nissequogue</u>	
	<u>Acres</u>	<u>Percent</u>	<u>Acres</u>	<u>Percent</u>
Residential	877.3	53.7	1,308.9	56.9
Agricultural	306.4	18.8	88.9	3.9
Institutional	28.2	1.7	73.7	3.2
Conservation/ Open space	144.4	8.8	395.7	17.2
Commercial	0.3	0.02	0	0
Vacant	276.1	16.9	432.3	18.8
Total	1,632.7	100.0	2,229.5	100.0

* Data compiled by the Long Island Regional Planning Board.

There are no high density residential areas in either Village. The average developed residential lot exceeds the principal required minimum lot size of two acres which is established in both Villages' Zoning Laws. In Head-of-the-Harbor, the average developed residential lot size is 2.7 acres, while in Nissequogue it is 3 acres.

A large proportion of the residential land is occupied by estates. In Head-of-the-Harbor, estates account for 290 acres or 33% of the residential land. Two-thirds of the estate property in the Village borders Stony Brook Harbor. In Nissequogue, 40%, or 522 acres, of residential land is in estate holdings. The bulk of the estates in Nissequogue are adjacent to either Stony Brook Harbor or to the Nissequogue River.

The Villages are rather unique in western Suffolk County because they both contain active agricultural land. Head-of-the-Harbor retains over 306 acres of agricultural land. Most of this land is along Fifty Acre Road and along Route 25A, on the east side of the Village. Forty-five acres is permanently protected under the Suffolk County Farmland Preservation Program. This parcel, part of the Perry Farm, is located on Route 25A. Prime soils and favorable climate have made production of field crops the predominant agricultural business in Head-of-the-Harbor. Nissequogue has approximately 88 acres of agricultural land, which accounts for only 4% of its land area. This land is in horse farms.

Institutional uses, such as churches, schools and municipal buildings, occupy a relatively small proportion of land in the Villages. In Head-of-the-Harbor, nearly 28 acres are devoted to churches and parish houses. It also includes the Harbor Country Day School, a private, non-denominational elementary school on Thompson Hill Road; the Mills Pond House on Route 25A run by the Town of Smithtown as an historical site; and the Bay School House, located on Moriches Road. Institutional land uses in Nissequogue amount to about 74 acres, almost all of which are owned by the Knox School, which is a private, non-denominational secondary school. This school has two major holdings, one in the southern part of the Village and the main one in the northeastern part of the Village on Long Beach Road, adjacent to Stony Brook Harbor. Two small institutional parcels are occupied by the fire department and the Village Hall.

In both Villages, recreation and open space is a significant land use. There are 144 acres of land in this category in the Village of Head-of-the-Harbor. This includes 96 acres owned by the Nature Conservancy. The Nature Conservancy parcels are located on Shep Jones Lane and on the west side of Fifty Acre Road. The remainder of the recreational and open space land is wetlands owned by the Village along Stony Brook Harbor and property owned by the Stony Brook Foundation and the Stony Brook Community Fund. It also includes a swim and tennis club and three small cemeteries. Nissequogue has over 17% of its land area in open space and recreational uses. The Nature Conservancy owns 130

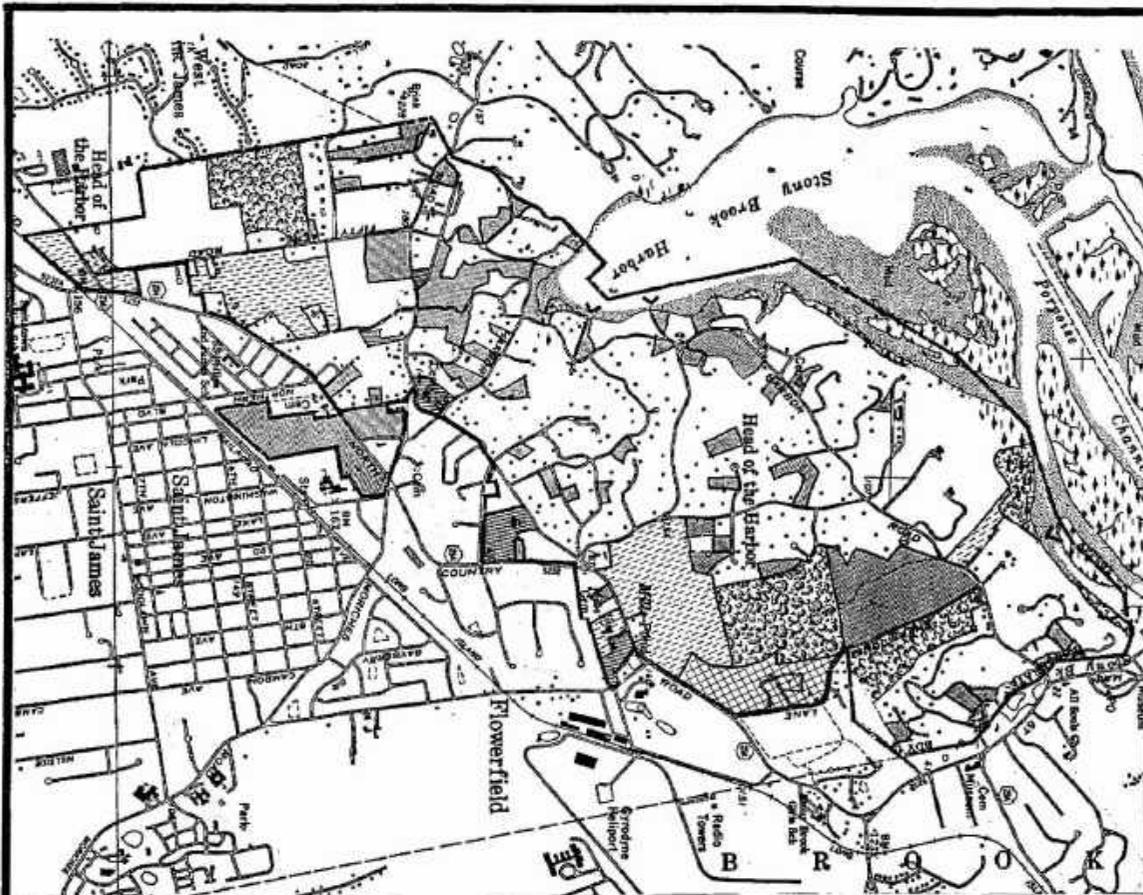
acres, most of which is north of Boney Lane and includes bluffs overlooking Long Island Sound. The Nissequogue Golf Club accounts for another 126 acres, overlooking Stony Brook Harbor. The Town of Smithtown is a major recreational land owner in the Village. The Town has 91 acres comprised of Short Beach Park, a beach and dune complex at the mouth of the Nissequogue River. The Long Beach Park is located on Stony Brook Harbor and provides marina facilities. The Village's principal holding is a wildlife refuge on the eastern end of Long Beach peninsula.

2. Water-Dependent and Water-Enhanced Uses/Public Access and Recreation

There are no commercial water uses in either Village. Neither the Nissequogue River nor Stony Brook Harbor is suitable for any kind of commercial development. Navigational conditions and shallow depths exclude all but small boats. Although the supply of fish is sufficient for recreational purposes, commercial fishing is precluded. Some commercial shellfishing is conducted on a very small scale and limited basis in Stony Brook Harbor; it is severely restricted in the Nissequogue River owing to water pollution. Water-dependent and water-enhanced uses are, therefore, almost exclusively recreational in nature. There are also some educational and scientific pursuits which occur in the Villages because of their waterfront location.

Water-dependent recreation is broken into active uses and passive uses and activities. The Villages themselves provide no active recreational facilities. The Town of Smithtown owns and operates three active use facilities. Two are in Nissequogue -- Short Beach near the mouth of the Nissequogue River and Long Beach on the northside of Stony Brook Harbor; and one at the boundary between Nissequogue and Head-of-the-Harbor, at Cordwood Path. The Long Beach and Cordwood Path facilities are located on Stony Brook Harbor. Long Beach provides a swimming and bathing beach, picnicking, two boat launching ramps, a 167 slip marina, and a mooring basin for 110 boats. Pumpout facilities have been installed and should be maintained and used. The shallow, quiet water at Cordwood Path Beach draws families with young children. This beach is partially artificial, and there are no other natural sand beaches on Stony Brook Harbor. The creation of additional sand beaches would severely impact the harbor's wetland habitats. Short Beach Town Park, located in Nissequogue at the mouth of the Nissequogue River, provides a swimming beach with support facilities and a colonial waterbird preserve.

Motor boat speeding is a major problem in the harbor and the river. In areas where they should be travelling at five (5) mph, they have been clocked by radar at more than 60 mph. This poses safety hazards as well as environmental damage to wetlands caused by erosion and sedimentation resulting from vessel wakes and propeller wash.



- LEGEND**
- Residential
 - Agricultural
 - Preserved Farmland
 - Institutional
 - Conservation & Open Space
 - Vacant
 - Access Points



SCALE: 1" = 200'

MAP 3A

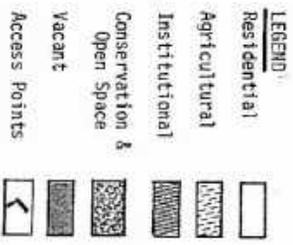
Existing Land Use

Local Waterfront Revitalization Program

Village of Head-of-the-Harbor

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1987



SCALE: 1"=2000'

MAP 3B

Existing Land Use

Local Waterfront Revitalization Program

Village of Nissequogue

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1987

The Villages do provide passive recreational opportunities. The Village of Nissequogue owns a 27 acre parcel at the eastern end of the Long Beach peninsula. This area is used for nature study and a wildlife preserve. The site is accessible only on foot.

Both the Nissequogue River and Stony Brook Harbor are utilized for waterfowl hunting. Public access is provided at Short Beach Town Park on the Nissoquogue River and at park areas on the west banks of the river outside of the Villages' LWRP boundaries.

On Stony Brook Harbor, public access for walking, boating, fishing and waterfowl hunting is available in the form of four public "landings", one in Nissequogue (Smith Lane) and three in Head-of-the-Harbor (at the foot of Thompson's Lane, at Hitherbrook Extension and Shep Jones Lane Extension). These areas permit launching of small boats which are suited to harbor conditions.

Considering the low density of the Villages which allows for private recreation on most sites, plus the existence of the active recreation sites owned by the Town of Smithtown, there is little need for the Villages to develop active recreational sites. Marina accessibility is very limited within the Town; however, Village sponsorship of such a use would have probable significant adverse impacts on wetlands, water quality and habitats.

Privately-owned water-related recreation includes the Smithtown Bay Yacht Club. Pumpout stations are not available and should be installed. There is also a privately-owned beach club with access to Long Island Sound north of Boney Lane, east of Short Beach; both are in Nissequogue.

While recreational facilities are extensive in the two Villages, and public access so open, the number of persons attracted to the beaches and boating facilities is great enough to present a traffic problem especially on summer weekends. Any material increase in active recreational areas would entail escalating costs not only in the provision and maintenance of road access, but in damage, possibly irreversible, to valuable resource areas. For example, enlarging of beaches would entail an increase in erosion hazards, or destruction of wetlands, or both.

Increasingly, the State University of New York at Stony Brook has begun experimental studies in mariculture, clam and oyster rafting, lobster rearing, and related subjects, using the harbor as a living laboratory. The University has also conducted for some time studies of birds and wildlife based upon the inhabitants of the wetlands surrounding the harbor, and of the nesting sites and sanctuaries on the Long Beach and Short Beach sand spit.

3. Vacant Land and Land Available for Development

There are no sites which can be described as underutilized, abandoned or deteriorated within the Villages of Nissequogue and Head-of-the-Harbor.

However, the Villages do have large areas which are currently in agricultural, estate, private recreational or institutional uses which may, all or in part, become available for development. There are also numerous vacant lots, some of which can be further subdivided, in both Villages.

The Suffolk County Planning Department did an analysis of land available for development in each Village in 1983 and 1984. The County's analysis, based on maximum buildout under existing zoning, showed that the number of housing units in each Village could potentially increase by 80-90% over existing numbers.

According to the county studies, approximately 20% of the vacant land in each Village is in individual lots and is immediately available for construction. These lots are scattered throughout the Villages. In Head-of-the-Harbor, 129 new housing units could be built. One hundred seven new houses could be built in Nissequogue.

The large parcels, which are coming under increasing pressure to subdivide, include estate properties and farmlands. In Nissequogue, over one half of all land available for development is in estate and other large parcels. This amounts to 522 acres. There are 283 acres of estate lands in Head-of-the-Harbor which can be subdivided. Farmland is a more significant source of potential building lots in Head-of-the-Harbor than in Nissequogue. Farmland is more likely to be developed before estate properties because it is more easily developed and costs less per acre. This is a threat to continued agricultural production in the Villages.

While not vacant or underutilized at the present time, the Nissequogue Golf Club and the Knox School offer the potential for subdivision and development of additional housing units. Development of country club and institutional properties is occurring in other Long Island locations. Both properties have access to Stony Brook Harbor.

4. Agriculture

Although the Villages are located in a rapidly urbanizing area, they retain an important stock of agricultural land.

In Head-of-the-Harbor, 12.9% of the Village area, or 210.6 acres of land, is still actively farmed at the present time; of this, 45.6 acres, or 2.8% of the Village, is preserved under the Suffolk County Farmland Preservation Program.* In Nissequogue, 3.9% of the Village by area, or 88.9 acres, is listed as in agricultural use, and is occupied by horse farms. Although much of the soil in the Villages is the glacial morainal till typical of the north shore of Long Island, virtually all the remaining agricultural land is categorized as prime, and should be preserved as an important resource.

It must be noted, however, that farmland is disappearing in the Villages. More than 100 acres of land under cultivation in Head-of-the-Harbor were acquired for development in the period between October 1983 and October 1984, and by the present time nearly all of this has been developed for residential use. The Dubois Smith farm in Nissequogue, at the corner of Boney Lane and Horse Race Lane, recently was put up for sale.

Eleven of the eighteen acres previously in vegetable crops will be converted. The extremely high market value of building lots has created an enormous pressure to convert farmland, and no doubt the pressure will continue unabated. The resources of private and public preservation programs are limited, and the rising farmland prices strain these resources beyond their capacity to respond except in unusual, or unusually urgent, instances. Communities can rarely afford to acquire such valuable property by the exercise of eminent domain; farmland preservation typically is accomplished, outside of subsidized programs, by zoning to promote agriculture and open-space, and through such means as cluster development.

5. Historic Structures, Sites, and Districts

The history shared by the Villages of Head-of-the-Harbor and Nissequogue is long, and is manifested in the preservation of an unusual number of identifiable sites and structures and other substantial material remains of the past. Extensive archeological findings are connected with the original residents, members of the Nissequogue or Nesaquake tribe, who maintained a permanent and major "royal seat" within the area of the present-day Village of Nissequogue. The records are

* The preserved land, known as the Perry Farm, and lying between State Route 25A and Shep Jones Lane, is not only prime agricultural land, but is also geologically unique, and of great historic interest as land which has been continuously farmed for 300 years.

especially rich along the Nissequogue River, where a complex cultural history going back more than 2000 years can be read, but the entire area of the present-day Villages provides frequent finds of artifacts. An Indian burial ground has recently been identified on the grounds of the Knox School; the high land at the extreme southern end of Stony Brook Harbor was once an Indian meeting or assembly place as well as a lookout point from which the approach of boats could be signalled. Fragments found in conjunction with clay deposits at two sites suggest the existence of potteries. The presence of many tools and weapons fashioned from non-local materials, including flint, provide an idea of the extent of cross-sound commerce and trade. Such remains are often turned up in excavations for new buildings, requiring analysis and mitigation during the environmental review process.

European settlement, commencing in the last third of the 17th century, is thoroughly recorded in remaining sites and structures. Richard Smith, Patentee (1613-1692), is buried in Nissequogue and many of the surviving old houses are connected with Smith's sons or their descendants.

In addition to early colonial structures, the Villages also contain important late-19th century homes designed by prominent architects including Stanford White, Charles McKim, and the firms of Peabody, Wilson and Brown (Archibald Brown), Ford, Butler and Oliver (Lawrence Butler) and I. H. Green of Sayville.

Apart from significant individual structures and sites in both Villages, Head-of-the-Harbor contains portions of three National Register historic districts located along Route 25A. The three districts are, from east to the west, Mills Pond District and the St. James District; the North Country Road District is in four sections and surrounds the St. James District. For purposes of planning and architectural review, the Village of Nissequogue has designated the entire Village a local historic area.

The Villages are jointly proposing an extensive thematic National Register District embracing Stony Brook Harbor estates (c. 1690-1926) which is awaiting approval. Many of the houses in the proposed district are already listed on the National Register.

The lists, beginning on the following page, show those structures and sites considered of importance in each Village.

Sixty-four structures or sites of historic or architectural significance exist in Nissequogue. Where important, the architects are identified.

SITES OF HISTORIC AND ARCHEOLOGICAL SIGNIFICANCE
VILLAGE OF NISSEQUOGUE

<u>Structure or Site</u>	<u>Location</u>	<u>Date</u>	<u>Tax Map Number</u>
J. E. Petty House	207 River Road	1899	801-007-3-11
G. Petty House	201 River Road	1855	801-007-3-11
Boat Club	199 River Road	1900	801-006-2-35
Hawkins-Anderson House	River Road	1909	801-007-1-11
Wiedenkeller House (site of Hawkins house)	River Road		802-11-3-4
Melvin house	194 River Road	1921	802-11-1-3
Adams-Bruemmer house	195 River Road	1873	802-11-1-2
Martin Taylor estate (Ford, Butler, Oliver)	191 River Road	1920	802-11-1-1
Osborne-Delafield house (McKim, Mead, White)	River Road	1914	802-9-3-25
Malcolm Smith house (Ford, Butler, Oliver)	River Road	1916	802-9-3-2
Caleb T. Smith estate Gate House	Horse Race Lane	1870	802-9-3-1
Caleb T. Smith-Hall estate	Horse Race Lane	1869	802-9-1-12
Howell House	Horse Race Lane	1800	802-9-1-11
Matherson-Lane estate (Arthur Little)	Boney Lane	1860	802-1-2-2
Lane Supt. House (Ford, Butler, Oliver)	Boney Lane	1913	802-1-2-4
Lane Stable and Garage (Ford, Butler, Oliver)	Boney Lane	1920	802-1-2-1

Lane estate ice house	Boney Lane	1901	802-1-2-2
Lane estate servants' house	Boney Lane	1909	802-1-2-1
Nissequogue Point Beach, Inc.	Boney Lane	1920	802-2-1-1
Blodgett-Weld house (Polhemus & Coffin)	174A Boney Lane	1915	802-8-1-11.4
Caleb T. Smith cottage	Off Boney Lane	1870	802-2-2-9
DuBois T. Smith Farm	Off Boney Lane	1906	802-2-2-9.3
Turnure-Woody House (George P. Butler)	Off Boney Lane	1934	802-3-1-1.1
Harries tenant house	Long Beach Road	1800	802-9-2-1.1
"Holly-by-Golly" Meserve House Original Richard Smith wing	Long Beach Road	1670	802-9-1-6
Berdell-Fletcher estate	Long Beach Road	1930	802-3-1-1.2
Berdell-Fletcher stables	Long Beach Road	1930	802-3-1-21
Phyfe House	87 Stillwater Lane	1904	802-3-5-1
Raymond Sloan House	Long Beach Road	1939	802-4-2-3
The Knox School (Peabody, Wilson, Brown)	Long Beach Road	1914	802-3-3-1
Seabury-Huntington House	Long Beach Road	1860	802-5-2-1.1
Wash House	Long Beach Road		
Carriage House	Long Beach Road		802-3-5-3
E.T. Smith Farmer's Quarters	Moriches Road		802-9-1-18
Superintendent's House	Moriches Road		802-9-1-20
Harries barn	Moriches Road	1837	802-9-2-1.1
"New" Nissequogue School	70B Moriches Road	1937	802-9-3-31

Job Smith homestead (Malone)	69 Moriches Road	1710	802-9-2-2
Old Nissequogue School	Moriches Road	1808	802-9-2-4
Ryan estate-Niss. Golf Club (Bradley Delahanty)	Moriches Road	1930	802-3-5-27.1
Gade-Delafield house (William Delano)	62 Moriches Road	1926	802-9-3-28.3
"Dick-Nezer" Smith House	Smith Lane	1688	802-10-1-2.3
Reboul-Olney House "Woodcrest" (I.H. Green)	Moriches Road	1895	802-10-3-6.1
Lawson House (Polhemus & Coffin)	Moriches Road	1926	802-10-2-30
Gorham-Paton House (Honohan)	Moriches Road	1930	802-10-3-5.1
Case-Whittemore-Windels "Harbor House" (Ford, Butler, Oliver)	Moriches Road	1930	802-10-4.5
Branglebrink-Hollandia Farm (Ford, Butler, Oliver)	Moriches Road	1880-1909	802-12-1-3
Butler-Schabert House "By-the-Harbor" (Charles McKim)	Moriches Road	1878	802-12-2-12
The "Casino" -Squash Court (McKim, Mead, White)	Moriches Road	1890	802-12-2-13
Butler Estate-Octagonal in-ground water tank	Moriches Road		802-12-2-13
Butler Estate- Superintendent's House	Moriches Road		802-12-2-14
Onet House (Ford, Butler, Oliver)	Moriches Road	1920	802-10-4-9
Boat House	Moriches Road	1920	802-10-4-9

Important archeological sites in the Village of Nissequogue include:

Nissequogue Indian remains, James Creek Cove settlement and burial ground at Rassapeague-Knox School site. Other Indian sites have been identified in Delafield Wood, and off Boney Lane.

"Bull" Smith cemetery, where the Patentee of Smithtown is buried.

Site of the First Church on Moriches Road.

The following natural areas are considered of significance to the Village of Nissequogue:

Delafield Woods	Off River Road	802-9-3-24
"Whip Tree"	Long Beach Road	802-9-1-6
Boldgett-Weld cabin	Off Boney Lane	802-2-1-6
Pig Creek-natural area	Long Beach Road	802-5-1-3-4,5
Long Beach Barrier Beach	Long Beach	802-5;802-6
Hubbs-Huntington Pond	Moriches Road	802-12-1-15
Short Beach	Mouth of the Nissequogue River	

SITES OF HISTORIC and ARCHEOLOGICAL SIGNIFICANCE
in the VILLAGE of HEAD-OF-THE-HARBOR

<u>Structure or site</u>	<u>Location</u>	<u>Date</u>	<u>Tax Map Number</u>
J.L. Mallamo house	Moriches Road	c. 1860	801-007-3-11
Old butcher shop	Moriches Road	c. 1860	801-007-3--11
United Methodist Church	Moriches Road	1898	801-006-2-35
Gibson-Sherman house	Moriches Road	1888	801-007-3-9
Edgar L. Smith-Parke house	Moriches Road	1890	801-007-1-11
T.F. Smith-Parke house	Moriches Road	1877	801-007-3-7
George Newton house	Moriches Road	1890	801-007-3-6
William Collier house	Moriches Road	c. 1900	801-007-3-5
Babcock-Hesse house	Moriches Road	1936	801-007-3-2
Wetherill iron gates (Stanford White)	(now at Wetherhill Lane)	1898	801-006-1-30
"Box Hill" former main gates (Stanford White)	Moriches Road	1885	801-006-1-25
Lessard "Red Cottage"	Moriches Road	c. 1840	801-006-1-24
L. White "White Cottage"	Moriches Road	c. 1840	801-006-1-22
Deacon Hallock house	Off Moriches Road	1740	801-006-1-26
Captain Scott-Hubbs house	10 Moriches Road	1870	801-007-1-11
"Box Hill" appurtenances (Stanford White)	Moriches Road	1880-1906	801-007-1-17, 18,20
Robert White house	5 Moriches Road	c. 1840	801-007-1-19

"Box Hill" main house (1880-1906 additions - Stanford White) (1935 additions - Lawrence G. White)	Moriches Road	c. 1840	801-006-1-15
Friends' Meeting House (Lawrence S. Butler)	Moriches Road	1908	801-007-1-1-2.3
Huntington cottage (Hubbs house)	10A Moriches Road	1839	801-007-1-1
John Collier house	Harbor Hill Road	1890	801-006-2-24
T. Farrell house	Harbor Hill Road	1900	801-006-2-33
Skidmore-T. Smith house	30 Harbor Hill Rd.	1830- 1840	801-006-2-32
Walton cottage	33 Harbor Hill Rd.	1800	801-006-2-16
L'Hommedieu house	35 Harbor Hill Rd.	1858	801-006-2-17
Charles Smith-Daingerfield house	34 Harbor Hill Rd.	1775	801-006-2-27
Paul Wepy house	Harbor Hill Road	1790	801-006-2-21
Soper house and bottling works	46 Harbor Hill Rd.	1840	801-006-2-20
Bartlett house	50 Harbor Hill Rd.	1900	801-004-2-6.1
Capt. Selah Smith house	60 Harbor Hill Rd.	1840	801-004-2-6.2
Lottie Smith-Hubbard house	57 Harbor Hill Rd.	1835	801-006-2-1
Wetherill carriage house (Stanford White)	18 Harbor Hill Rd.	1895	801-006-1-8.6
Wetherill house (Stanford White)		1895	801-006-1-6
"Shore Cottage" - Sayre house (Lawrence Grant White)	3 Harbor Hill Rd.	1913	801-006-1-6

● Stone pump house (ruin) (Stanford White)	Harbor Road	c. 1890	801-006-1-31
Trowbridge-Edwards house	25 Harbor Road	1937	801-004-1-5
Canning house	29 Harbor Road	1901	801-004-1-3
Capt. Obadiah Smith - Giacolone house	Harbor Road	1860	801-0042-7.1
Barton house	Harbor Road	1890	801-004-2-8.1
Olyphant-Lefferts house	39 Harbor Road	1917	801-004-1-8
Emmet-Guenther house	43 Harbor Road	c. 1790	801-004-1-7
Townsend-Benkard house (William L. Bottomley)	Harbor Road	1931	801-004-1-6
Emmet-Bauer house	61 Harbor Road	1858	801-004-1-6
● Becket house (William Huntington)	Harbor Road	1940	801-002-1-17.4
"Sherrewogue" gates (Stanford White)	Harbor Road	1895	801-002-1-19
"Sherrewogue" 1895 alterations (McKim, Mead & White)	at Arbor Lane		
Sculley house	Harbor Road	1680	801-002-1-14.1
"Thatch Meadow Farm" house	Harbor Road	1750	801-001-1-1.1
C.C. Lawrence house (J. Bradlwy Delehanty)	Harbor Road	1952	801-001-1-3
"East Farm" house	Harbor Road	1710	801-001-1-7
Hawkins store/Coen house	Harbor Road	c. 1850	801-001-1-3
Wicks-Webber house	178 Harbor Road	1858	801-001-1-4
● "The Mallows" (Charles Adams Platt)	Harbor Road	1906	801-001-12

Emmet appurtenant buildings (Stanford White)	Harbor Road	1906	801-001-1-11
C. Jayne house	Harbor Road	1790	801-001-2-6
Grist mill	Harbor Road (Rebuilt)	1699 1751	801-001-1-28
Blydenburgh house	Spring Street	1844	801-001-1-16
Schaefer house	Spring Street	1873	801-001-1-28
Williamson-Loretz house	23 Mill Road	1837	801-001-2-33
D.T. Bayles Superintendant's cottage	North Country Rd.	1890	801-001-2-33
Sherry-Clarke house	15 Rhododendron Dr.	1790	801-001-2-22.1
"Windy Crest" - Creiger house	Rhododendron Drive	1800	801-001-2-24
Davis house	Saddle Road	1790	801-001-2-24
Stable	Saddle Road	19th c.	801-001-2-16
Perry farm	Shep Jones Lane	1895	801-003-3-5.2
Freeman house	52 Three Sisters Rd	1900	801-006-2-31
E.M. Jayne house	50 Three Sisters Rd	1890	801-006-2-30
Old School (Stanford White)	Three Sisters Road	1890	801-006-2-29
Foy house	Three Sisters Road	c.1900	801-004-2-2-
Perry house	Three Sisters Road	1835	801-005-2-18
Jerome-Sykes house	18 Three Sisters Rd		801-005-2-12
Snooks' house	Three Sisters Road	c. 1700	801-005-2-24
Harbor Country Day School (Lawrence S. Butler)	Three Sisters Road	1910	801-005-2-24.1

Mills-Peck house	Three Sisters Road	1865	801-005-2-11
Thornton house gates	Three Sisters Road	1917	at Farm Road
Superintendent's house (Peabody, Wilson & Brown)	Pin Oak Lane	1912	801-004-2-24
Thornton garage	Pin Oak Lane	1913	801-004-2-29
Thornton guest house (Peabody, Wilson & Brown)	Pin Oak Lane	1911	801-004-29
Abbott house	Hitherbrook Road	1865	801-005-1-15
Pabst-Rice house	14 Fifty Acre Road	19th c	801-005-1-15
Shields house; Butler estate	50 Fifty Acre Road	c. 1890	801-005-1-25
Brennan-iselin house (Lawrence S. Butler)	Fifty Acre Road	c. 1920	801-007-3-16
Josephus Carman-O'Keeffe house	54 Fifty Acre Road	mid-19 c.	801-007-3-17
Arvid Frank house	Highland Avenue	c. 1900	801-007-3-16
Flinn house/St. James Rectory	Highland Avenue	c. 1890	801-007-3-17
E.W. Smith house	Highland Avenue	1840	801-007-3-12
Tanaka-Cassidy house	Highland Avenue	c. 1880	801-007-3-14
Allister Morris house (Lawrence S. Butler)	Timothy Lane	mid-1920s	801-007-3028
Kerr house (Lawrence S. Butler)	Timothy Lane	mid-1920s	801-007-3-27
Jonas Mills house	North Country Road	c. 1750	801-005-1-24
Jonas Mills bar	North Country Road	1789	801-005-1-23
"Mills Pond House" (Calvin Pollard)	North Country Road	1838	801-005-1-34.1
"Mills Pond House" barn	North Country Road	c. 1705	801-005-1-34.8

"High Hedges"	North Country Road	1880	801-005-1-34,10
Lawson house (alterations - Lawrence S. Butler)	North Country Road	1855	801-005-2-30
"Deepwells" (from Minard Lafever book)	North Country Road	1847	801-007-4-3
"Timothy Stable" (Lawrence S. Butler)	North Country Road	1910	801-007-3-22
"Timothy House" (alterations-Lawrence S. Butler)	North Country Road	c. 1800	801-007-3-29
"Crooked Cottage"	North Country Road	1900	801-007-3-35
G.H. Smith house	North Country Road	c. 1890	801-007-3-32
E.N. Smith house	North Country Road	1908	801-007-3-31
Wicks house	North Country Road	1886	801-007-3-24.1
Finn house	441 North Country Rd.	c. 1900	801-007-1-3

Important archeological sites in the Village of Head-of-the-Harbor include:

Site of Matthew Smith house	Moriches Road, Southeast corner Taylor Lane
Site of Joseph Smith house	Harbor Hill Road near entrance to Bartlett House
Indian shell heaps	East Side Harbor Hill Rd. adjoining large tidal marsh
Jacob's well	Bartlett Marsh

Family cemeteries:

Matthew Smith	South side Moriches Road, just west of Taylor Lane
William Smith/Carmen	West side of Harbor Road near Wetherill house barn
Charles Smith	North of Harbor Road between Three Sisters Road and Stony Brook Harbor
Adam Smith	At "Sherrewogue;" see above

Mills	West of Mills Pond (Extensive; 80 graves)
-------	---

The following natural areas are considered of importance to the Village of Head-of-the-Harbor:

Bartlett Inlet and Marsh	Harbor Road	801-004-2-6
Hitherbrook Pond	Harbor Road	801-005-1-15
Thatch Meadow Scenic Vistal	Harbor Road	801-001-1-1.1
Kettle holes	Harbor Road Moriches Road Fifty Acre Road	801-001-1-25 801-007-3-7 801-007-3-16
"East Farm" preserve	Shep Jones Lane	

6. Zoning

Maps 4A and 4B show the current zoning in both Villages. In Nissequogue, there are two residential zones, R-2 (2 acres) and R-1 (1 acre). The R-2 district covers most of the Village. The R-1 zone is confined to the Town beaches and the dwellings on East Long Beach Road. Although the R-2 district has much more area than the R-1 district, there are only 25 lots which do not conform to the prevailing zoning compared to 45 lots in the R-1 district. Many of the non-conforming lots in the R-1 district are located in the flood hazard zone.

Head-of-the-Harbor has three residential districts. Nearly all of the Village is zoned for residences on at least two acres of land. The only areas where residences are permitted on one acre or more are south of Route 25A and south of Three Sisters Road.

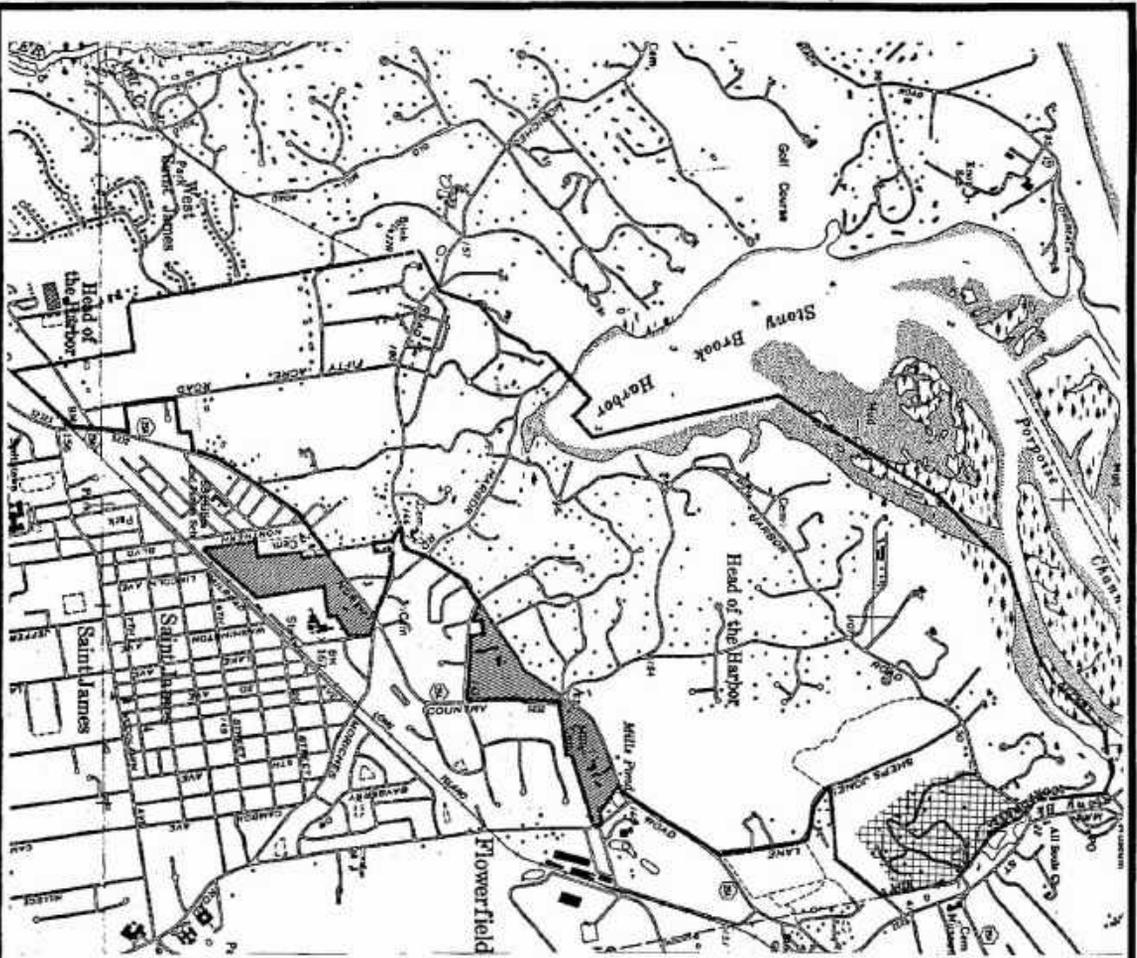
The zoning in the Villages is compatible with the physical constraints of the land. Steep topography, high water tables in some areas, and poorly drained soils limit the ability of the land to absorb intensive development without the construction of public sewer and water. The physical constraints, and the limited population of the Villages also make the construction of public sewer and water economically infeasible.

The existing zoning classifications protect surface and groundwater quality in the Villages in the absence of public infrastructure. An additional benefit is that the rural nature of the Villages is maintained, which protects the integrity of important historic and archeological resources.

C. ENVIRONMENTAL CONDITIONS

1. Soils, Topography and Erosion

The north shore of Long Island, where the Villages of Head-of-the-Harbor and Nissequogue are located, is characteristic of a glacial terminal moraine: occasional scattered transported boulders may be found, but bedrock formations are lacking. Generally the soils of Long Island include much sand and gravel, with frequent streaks of clay, sometimes in extensive layers; where steeply sloped they are often unstable. The most significant soil types in the coastal area are Carver, Riverhead, and Haven.



- LEGEND:
- A Residential (2A)
 - A-1 Residential (2A -- less restrictive setbacks)
 - B Residential (3A)



SCALE: 1" = 2000'

MAP 4A

Existing Zoning Local Waterfront Revitalization Program Village of Head-of-the-Harbor

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

Federal Grant Number: HA-82-AA-D-C2068
Date of Preparation: February 1987



MAP 4B

Existing Zoning

Local Waterfront Revitalization Program

Village of Nissequogue

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1987

In both Villages, Carver soils are found in the steep drainage swales leading to Stony Brook Harbor and to the Nissequogue River. This soils group is more extensive in Nissequogue than in Head-of-the-Harbor. In Nissequogue, Carver soils encompass not only major drainage swales, but also the generally steep slopes which border the harbor and the river. Carver soils are the poorest--excessively drained, coarse-textured, with a very low moisture capacity and a very low natural fertility. Permeability is rapid throughout, leading to droughtiness and to poor filtering ability which could pose a water quality hazard. The major drainage swales and slopes in excess of 25% should remain undeveloped, with undisturbed natural vegetation in order to reduce the potential for surface water quality degradation.

Riverhead soils are deep, well-drained, moderately coarse-textured and found in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. These soils have moderate to high available moisture capacity and good internal drainage. Permeability is moderately rapid in the surface layer and subsoil layer, but very rapid in the substratum. Natural fertility is moderate. Riverhead soils generally pose slight to moderate constraints on development, related to slope. Riverhead soils are relatively extensive in Head-of-the-Harbor, where they tend to be located in a band stretching from south to northwest along the Village boundary line. In Nissequogue, Riverhead soils are located on the ridge which forms the central spine of the Village.

Haven soils are deep, well-drained, of medium texture, formed in a loamy or silty mantle over stratified coarse sand and gravel. They have a high to moderate available moisture capacity, good internal drainage, and permeability which is moderate in the upper layers and rapid in the substratum. Haven soils are the most fertile within the Villages. They tend to be found in the upland areas. Haven and Riverhead soils should be conserved and stockpiled if the land is developed.

Other soils include Sudbury sandy loam, Raynham loam, and Berryland mucky sand, all commonly associated with freshwater wetlands and high water table areas. These, with Plymouth sand and loamy sand, often associated with Carver soils, are unsuitable for development.

Within the Villages there are also areas of beach, dune, escarpment or sandy bluff as well as tidal marshland; the last is extensive. All these soils are extremely susceptible to erosion and to developmental impacts even at moderate levels of use. They require careful protection to maintain their natural capacity to absorb and reduce the effects of coastal storms and flooding. This, in turn, protects property in the Villages from storm damage.

The topography of both Villages is characterized by high land--around 200 to 215 feet above sea level---dropping off sharply towards Stony Brook Harbor. This configuration is characteristic of a glacial moraine, with the harbor representing a giant kettlehole. Both Head-of-the-Harbor and Nissequogue, then, have in profile a ridge, and land descending towards water. In Nissequogue, the ridge is approximately central; Moriches Road, Horse Race Lane and Boney Lane run along its crest; and an intersecting ridge which follows the course of the Nissequogue River meets it at River Road. The ridge above the river is, on the whole, the steeper. In some areas along Nissequogue River Road, near Steep Bank Road, slopes of 50% are common. In one area, an embankment has a slope of 100%. Head-of-the-Harbor, by contrast, has the ridge approximately along its southern western and eastern boundaries.

Another distinguishing feature of Nissequogue are the bluffs along Smithtown Bay. Beginning just east of the Short Beach Town Park, small bluffs (less than 10 feet high) or dunes occur. Moving east, these bluffs rise gradually to 100 feet and plunge to the beach below at a 100 degree angle of repose. The bluffs again decrease in height toward the Long Beach peninsula.

Much of the land at the top of the ridge, as along Moriches Road and North Country Road (State Route 25A), is flat or gently sloping. This area was the first to be settled and cultivated, and much of the most fertile soil is found 'upland'. Flat areas along the eastern riverbank and the shores of Stony Brook Harbor were also farmed by early settlers. From the mid-18th to the mid-19th century, woodcutting was a major economic activity, and nearly all the virgin forestland within the Villages was cleared; but woodcutting before the invention of the chain saw did not involve stripping -- a proportion of trees was always left to stabilize the steeper slopes. Today, much of what was new growth a century ago or more is lofty hardwood forest. Twenty five years ago the greater part of the Villages was undeveloped forested land; today most of the land in the Villages is partially forested, and undisturbed forest can be seen chiefly in preserved tracts, such as those in each Village owned by the Nature Conservancy.

Tree cover, and its understory of shrubs, vines, and other vegetation, is especially important on the steep slopes in the Villages because these slopes are almost entirely composed of Carver soils--coarse, sandy, excessively drained, non-moisture retentive, and easily destabilized when deprived of their natural vegetation.

Until recently, steep slopes in the Villages were almost entirely left undisturbed. As more easily developed building sites have been used up, those with steep slopes and other inherent problems have become more attractive, prompting the enactment of ordinances aimed at placing special constraints upon steep-slope building.

In Head-of-the-Harbor mandatory building site setbacks from property boundaries have been made flexible on steep slopes (or where a swale exists) so that least damaging sites may be used, access gradients minimized, impermeable paved areas controlled and limited, and alterations in natural drainage patterns forbidden. The aim is to minimize pollutants reaching surface waters and groundwater, and to maintain the natural hydrological system. Watershed management is new to the Villages, but is developing under the guidance of the Suffolk County Planning Department.

2. **Coastal Erosion Hazards Areas/Natural Protective Features**

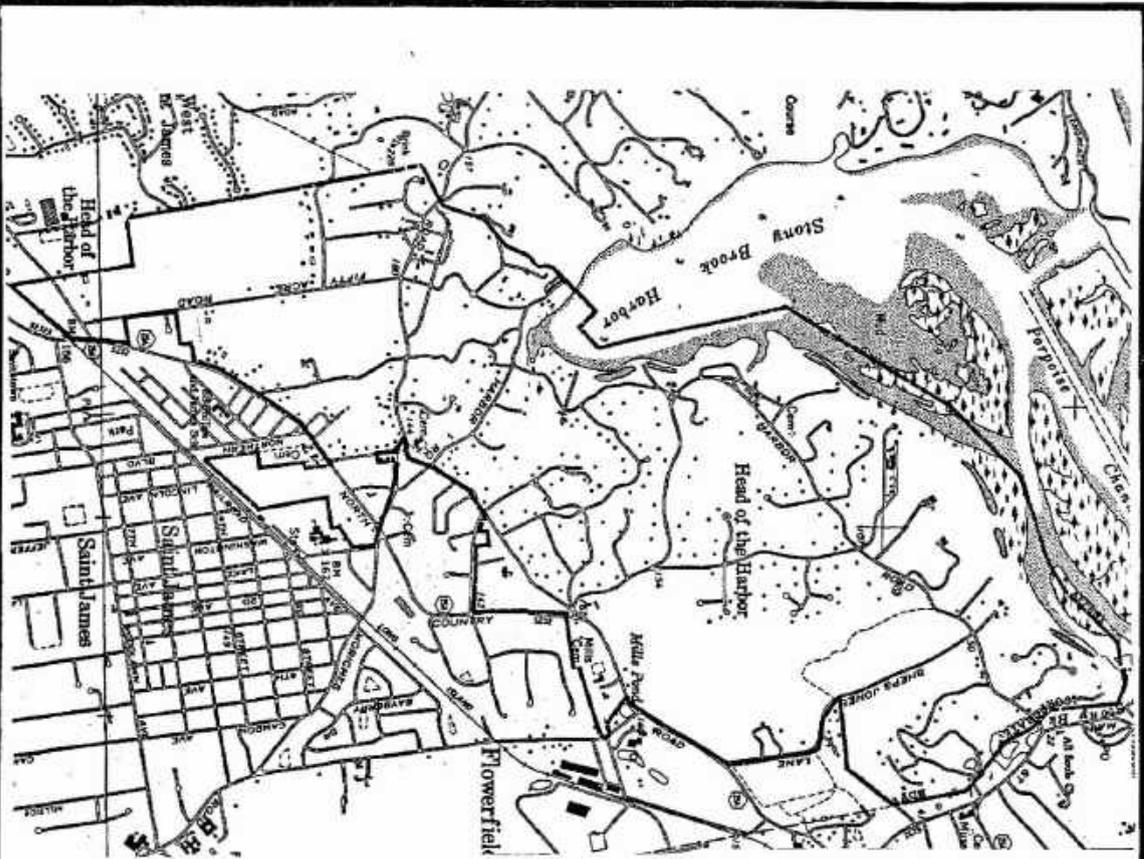
Most of the coastal erosion hazard areas as defined by the Coastal Erosion Hazard Areas Act (ECL, Article 34) are located in the Village of Nissequogue. Head-of-the-Harbor faces only the sheltered waters of Stony Brook Harbor. The shores of the harbor offer few bluffs except at the two extreme ends (the end of Long Beach Road in Nissequogue just before the sand spit begins, and also at the confluence of the harbor and Stony Brook Creek.) At the southern end of the harbor a short stretch of bluffs---200 or 250 linear feet---rise above the tidal marshland, which serves to protect the bluffs against wave action. No other bluffs can be identified around the harbor unless the definition is applied to shore-margins of two feet in height or less.

Nissequogue, however, has bluff areas not only at the Long Beach Road/sand spit juncture, but on the sand spit itself, and these latter face not the sheltered waters of the harbor, but Smithtown Bay/Long Island Sound. Bluff erosion in this area is continuous.

The bluffs are recognized as imposing severe constraints upon development. A setback of 100 feet is required in Nissequogue and 50 feet is required in Head-of-the-Harbor for any structures near bluffs. An increase to a minimum of 150 feet is being considered by both villages. Further revision to bluff erosion prevention measures to bring them into conformity with Article 34 is being discussed.

The beaches fronting Smithtown Bay in Nissequogue have accreted slightly or are stable, according to "Erosion of the North Shore of Long Island", prepared by the Marine Sciences Research Center. The sand is supplied by littoral drift and by erosion of the bluffs on Smithtown Bay. Despite the fact that the beach areas are stable, they can be undermined by inappropriate alteration or use of erosion structures. Consequently, development should be restricted to prevent inappropriate use of beach areas.

Dunes found on Short Beach are fragile structures which can be damaged by insensitive use. Both pedestrian and vehicular traffic can destroy the stabilizing vegetation and shape that makes dunes important natural protective features and habitats for endangered and threatened terns. (See Maps 5A and 5B)



LEGEND:
 Bluffs not designated as
 CEAs



SCALE: 1" = 200'

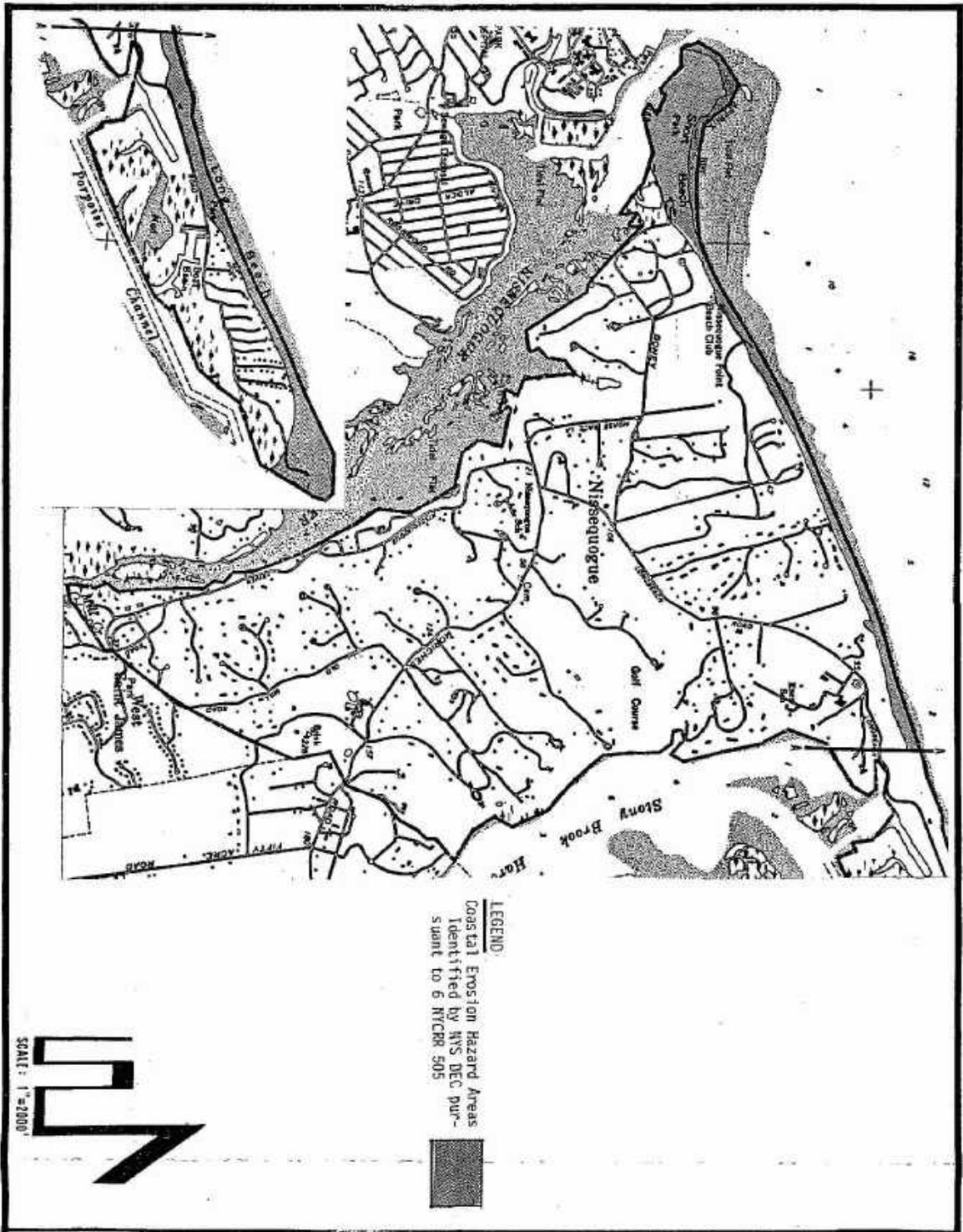


MAP 5A

**Coastal Erosion Areas
 Local Waterfront Revitalization Program
 Village of Head-of-the-Harbor**

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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 Date of Preparation: February 1987



MAP 5B

Coastal Erosion Areas

Local Waterfront Revitalization Program

Village of Nissequogue

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1982

3. Surface and Groundwater Resources

The Villages of Head-of-the-Harbor and Nissequogue lie chiefly in a shallow discharge zone, with some portions in a deep aquifer recharge zone. The flow of surface and subsurface waters from all of Head-of-the-Harbor is to Stony Brook Harbor, with the exception of a small area on the extreme southwestern edge of the Village which sends water into the drainage system of the Nissequogue River. All surface and subsurface flow in the Village of Nissequogue moves towards the river, or to Smithtown Bay (Long Island Sound), or to Stony Brook Harbor.

Development, particularly within the shallow discharge zone, will have the greatest impact upon surface water if it is dependent upon subsurface waste disposal systems. Work done by the Suffolk County Planning Department has shown that subsurface flow from upland areas to areas adjacent to the harbor have been high. Development in deep aquifer recharge zone has the greatest affect on groundwater quality. Impacts upon existing water wells depend upon the type of activities taking place in the area in conjunction with the direction of groundwater flow.

All of Nissequogue, and almost all of Head-of-the-Harbor, depend upon private wells for water supply, as the public water system extends only to short sections (chiefly boundary) of roads in Head-of-the-Harbor, and does not reach Nissequogue at all. A plentiful supply of good quality well water has been available to the present time. An abundance of groundwater is indicated by the extensive areas in both Villages in which the water table is very high, and the presence of many surface springs is very evident. Until recently, good water was obtained from shallow wells. As increasing demand has been placed upon these resources the supply has ceased to be sufficient and in some areas, the water quality has deteriorated.

There are several water quality problems existing in the Villages, one of which is salt water intrusion. Salt water intrusion has become more frequent as more wells are drilled in sensitive locations (as along the Long Beach sand spit). Drilling deep wells (to depths more than 200 feet below sea level) presumably would solve the problem, although the permanence of the solution cannot be guaranteed. Other forms of pollution in groundwater supplies have been identified at sites on or closely adjacent to farms in Head-of-the-Harbor, where fertilizer and insecticide residues have been introduced over a considerable period of time, producing chemical traces, which may be very lasting. Runoff pollution is also increasing. Runoff affects the quality of the coastal waters by the introduction of chemical products: road salt, fertilizers, insecticides, herbicides. Some of the contaminants in runoff will be left behind in that percentage of the water which does not run off, but sinks into the soil, most of which is very permeable. It is difficult to control runoff pollution by direct action, but intensive education programs for local residents showing landscaping alternatives to

cultivating lawns which demand heavy chemical applications, and to using chemical products where others exist, can do the job.

Finally, leachate contamination from cesspools and septic tanks pose serious health problems by introducing E.coli bacteria, heavy metals, and other pollutants into surface and groundwaters. This can be controlled by limiting the intensity of development. Nearly all of each Village is zoned at a 2-acre minimum lot size for one-family dwelling, which puts an upper limit upon development. At this density, contamination of groundwater from sewage disposal systems should not pose a severe threat, but the siting, construction standards, and maintenance of septic tanks and cesspools is important in reducing the potential for contamination.

Water Quality

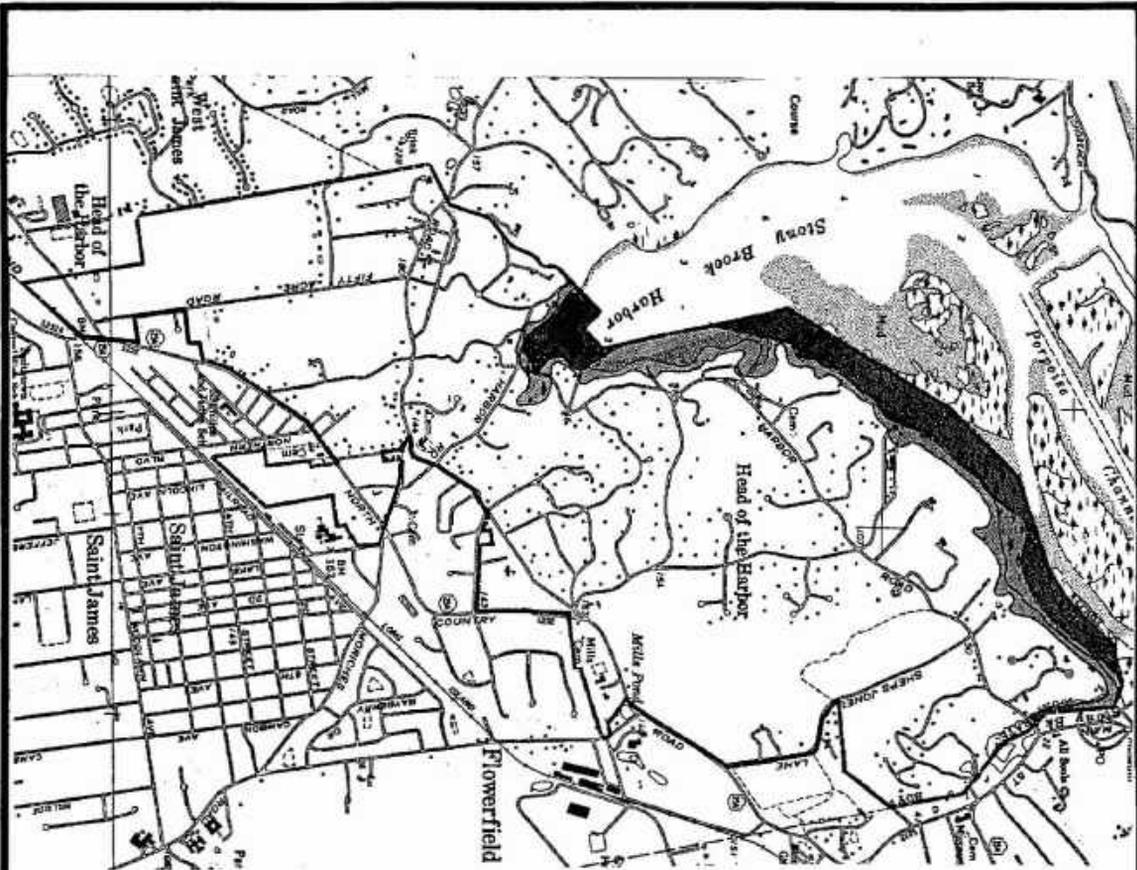
All fresh and saline surface waters in the coastal area have been classified in terms of water quality by the NYS Department of Environmental Conservation. With the exception of Mill Pond and the Stony Brook on the eastern boundary line of the Village of Head-of-the-Harbor and the Town of Brookhaven, which are classified C, all other fresh surface waters are classed D. These surface waters are unnamed ponds scattered throughout the Villages. A "C" classification means that the waters are best suited for the propagation, survival and growth of fish, other aquatic life, and wildlife. Secondary contact recreation (boating) is also appropriate. Waters classified D are too polluted to support fish and wildlife populations.

The saline waters of the coastal area, which encompass Stony Brook Harbor and the estuarine portions of the Nissequogue River are classified SA and SC, respectively. The SA classification indicates that Stony Brook Harbor is clean, and is suitable for harvesting shellfish and for primary contact recreation. The extreme southernmost end of Stony Brook Harbor is closed to shellfishing due to excessive E.coli bacteria levels. The Nissequogue River, classified SC, is closed to shellfishing, although it is suitable for secondary contact recreation and finfishing. It is believed that stormwater runoff and contaminated groundwater seeping into the river bottom are the principal sources of water pollution.

Flood Prone and Flood Hazard Areas

Flood hazard and flood prone areas in the Villages, as determined by the Federal Emergency Management Agency, are shown on Maps 6A and 6B.

Flooding is not extensive in either Village because topography confines flood waters to areas immediately adjacent to the coastal waters, with only minor intrusions inland along marsh systems or coastal depressions. For this reason, areas of flooding are coincidental with beaches and with tidal and freshwater wetlands.



LEGEND

V Zones (100 year Flood with high velocity wave action)

A and B Zones (areas of 100 year flood with minor areas of less frequent flooding)



SCALE: 1" = 200'

MAP 6A

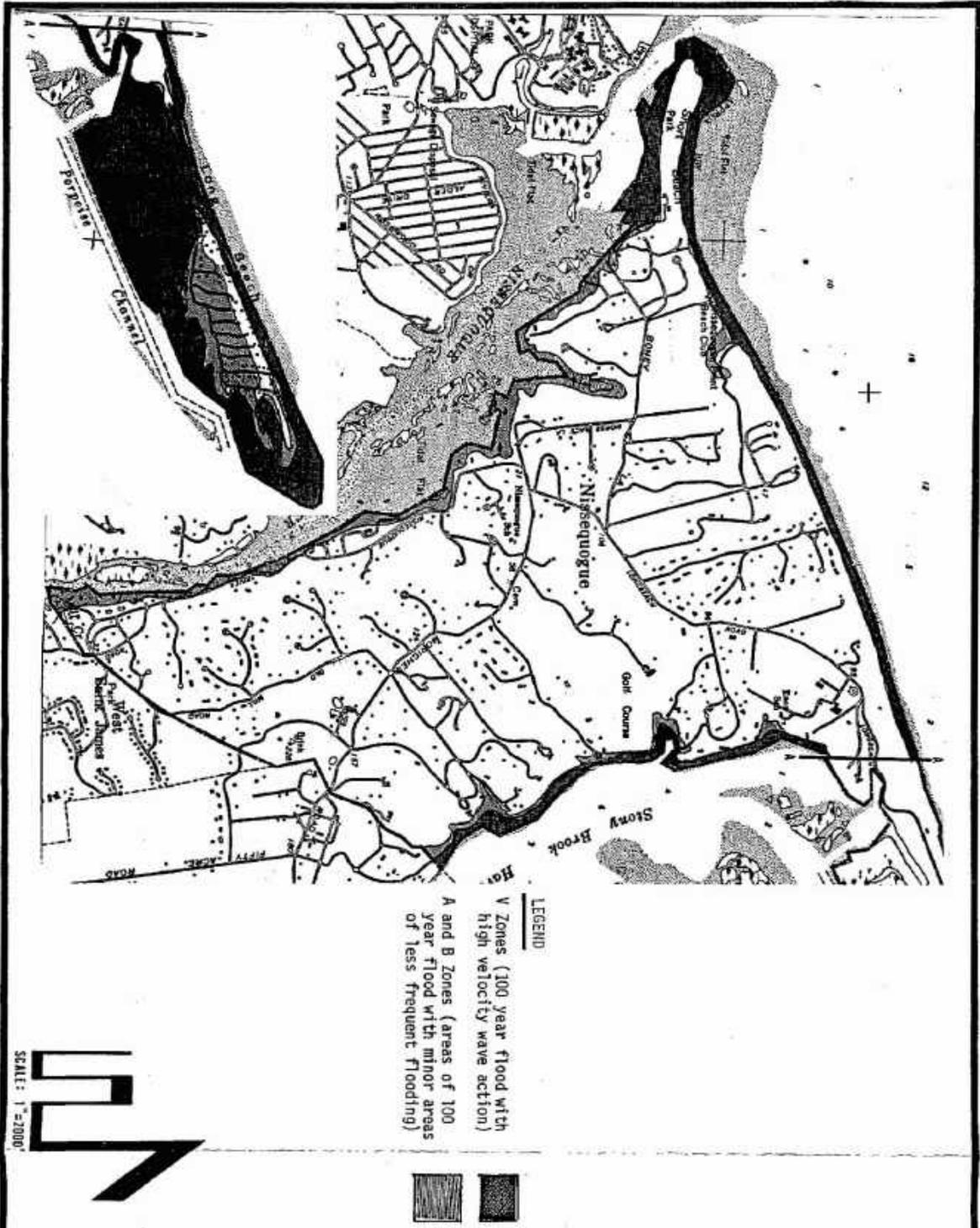
Flood Hazard Areas

Local Waterfront Revitalization Program

Village of Head-of-the-Harbor

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1987



MAP 6B

Flood Hazard Areas

Local Waterfront Revitalization Program

Village of Nissequogue

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1987

Base flood elevations in areas of 100 year floods (A- Zones) average 12 feet. Areas subject to wave action (V- Zones) during a flood are located at the mouth of the Nissequogue River, encompassing Short Beach. The V-Zones extend along the beaches of Smithtown Bay and include the Long Beach peninsula. The shoreline of Stony Brook Harbor also contains V-Zones. Base flood elevations in these areas average 14 feet. Aerial photos show that there are no structures within the V-Zones of either Village. This is due primarily to the slow pace of development that the Villages have experienced until recently, and to the fact that the V-Zones are also tidal wetlands. Aerial photos also show that the only structures currently located within areas of 100 year floods are on the Long Beach peninsula.

The Long Beach peninsula is exposed to the greatest flood hazard. Severe northeasterly storms, especially if they strike behind an incoming tide, can send water over the low-lying parts of the narrow peninsula. These potential breach points do not include residential structures since these are located on higher sand bluffs.

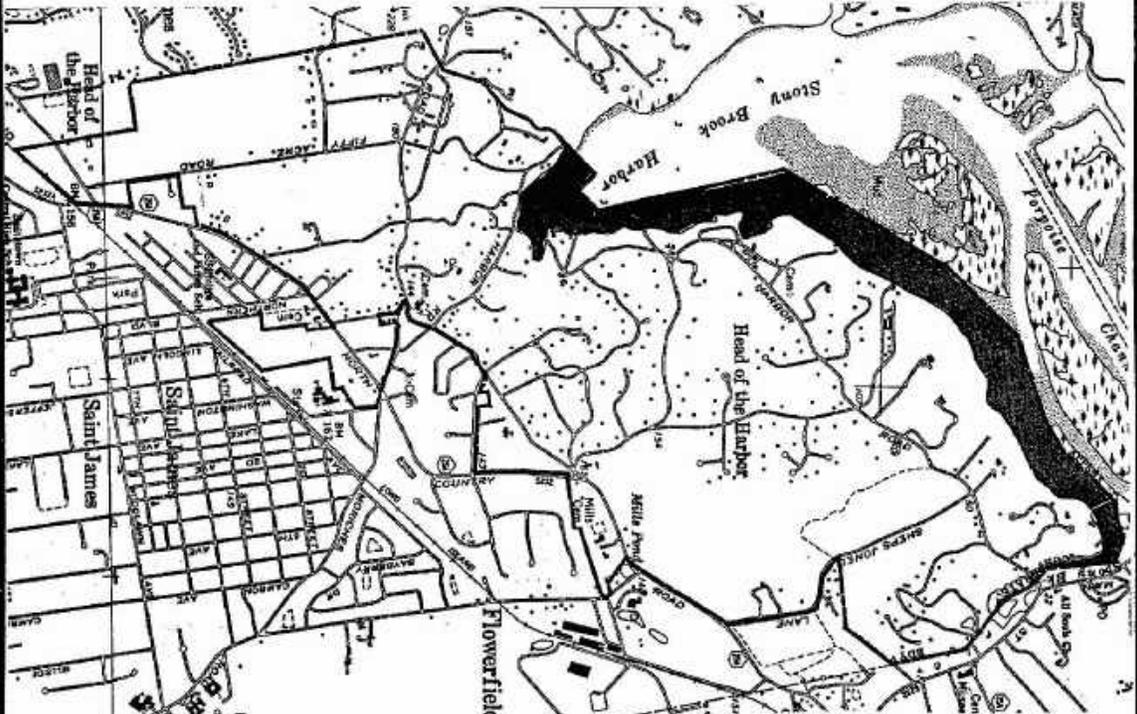
In Head-of-the-Harbor, the area most frequently inundated lies away from the coastal margin, at the southeastern edge of the Village, where Mills Pond, a freshwater pond, occasionally floods in the spring after heavy rains or an unusually rapid thaw. Buildings near the pond are all elevated well above the flood water level. Very heavy rains especially accompanied by the spring tides will occasionally cause road flooding at the southern end of Stony Brook Harbor where the freshwater Bartlett Marsh drains into the harbor. The cause is an inadequate culvert which replaced a small bridge. The culvert should be enlarged or replaced with a bridge.

Building within the 100 year flood plain is permitted in the Villages only if it is carried out in compliance with local flood hazard regulations, modeled on federal standards.

Tidal and Freshwater Wetlands

In Nissequogue and Head-of-the-Harbor, tidal wetlands dominate the coastal area (Map 7A and 7B). Tidal wetlands constitute one of the most productive of ecologic zones, serving as a nursery for fish and shellfish, and providing food and shelter for wildlife. The tidal wetlands serve to control flood and stormwaters, to trap sediment and to act as purifiers of runoff. The wetlands are also valuable for their scenic, open space, and educational benefits.

Tidal wetlands contain a number of different zones classified by vegetation and biological productivity. The intertidal marsh (IM) and coastal fresh marsh (CFM) are the most biologically productive of all tidal wetlands areas. The coastal fresh marsh is uncommon in New York State and is found mostly where freshwater runoff is backed up by daily tides. They are generally bordered by rushes, cattails and brackish water cordgrass, as well as pickerel weed and marsh roses.



Reference should also be made to the NYS Department of Environmental Conservation's final Freshwater Wetlands map.

LEGEND
Tidal Wetlands



MAP 7A

Wetlands

Local Waterfront Revitalization Program

Village of Head-of-the-Harbor

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

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Date of Preparation: February 1987

The coastal fresh marsh is highly productive and has extremely high value for wildlife. Since they receive twice-daily tidal flushing, the vegetation and detritus are readily transported to adjacent waters for use in the estuarine food chain. Their location also makes them the most effective wetlands zones for flood, hurricane, and storm protection. Both their intertidal location and their highly productive nature makes them among the most effective wetland zones for cleansing ecosystems and for absorbing silt and organic material. Because of these high values and their sensitive location at the land-water interface, intertidal and coastal fresh marshes must be stringently protected and preserved. Even small portions of these zones are critically important resources. Consequently, only very limited types of land use and development are compatible with these areas.

High marsh and salt meadow (HM) tidal wetlands constitute an extensive zone of the salt marshes that receives only occasional tidal flooding coincident with extreme lunar tides and occasional storms. These areas are not as productive as intertidal marshes, but they are very important in the marine food chain. Because of their size and location, salt marshes are as important in the absorption of silt and organic material and storm water control as intertidal marshes. Furthermore, because they are located generally in such a way that they are the first tidal wetland area to receive runoff and other materials from the land, they have an important role in cleansing ecosystems. Because these wetlands are usually located adjacent to intertidal marshes and because their values are similar, these areas must also be stringently protected.

Tidal wetlands also include areas classified as shoals, bars, flats and littoral zones. These areas vary in their level of ecological productivity, but are important for flood and hurricane control. Since the jurisdiction of the Village of Nissequogue is defined by mean high water, it does not contain any of these features. Head-of-the-Harbor's jurisdiction extends 500 feet into Stony Brook Harbor, so it does contain some shoals, bars, and flats within the littoral zone.

In the Villages, tidal wetlands are extensive. They stretch around Stony Brook Harbor and into the estuarine portions of the Nissequogue River. Because the shoreline of the harbor and the river are still in their natural state, a large proportion of the highly productive intratidal and coastal fresh marshes remain. Loss of marshes has resulted from dredging rather than development. Dredging operations over the past twenty years have destroyed approximately 100 acres of wetlands in Stony Brook Harbor. Significant marsh and delta areas at the mouth of the Nissequogue River were destroyed through direct removal or spoil disposal during channel dredging in 1960.

Around Stony Brook Harbor, the tidal wetland complex is particularly valuable because it includes areas of coastal fresh marsh. At the extreme southern end of the harbor is an area known as the Bartlett Marsh. The Bartlett Marsh includes an extensive and varied upland, a spring-fed pond, an extensive system of fresh water springs, a very small brook, and approximately ten acres of completely undisturbed wetland in addition to ten acres of upland. It provides habitat for a wide variety of birds and mammals.

There are also isolated coastal fresh marshes along the banks of the Nissequogue River which provide food, shelter and fresh water for wildlife. Many very small freshwater wetlands supported by countless freshwater springs ring the harbor and line the banks of the Nissequogue River. Most of these freshwater wetlands are only a fraction of an acre in size, but their undisturbed nature, their rich vegetation, and their supply of drinking water as well as food for animals make them important components of the ecosystem.

Current threats to tidal wetlands include potential intrusion by development, both public and private, road runoff pollution, groundwater pollution, and increasing boat traffic and human access.

The tidal wetlands are vital to the characters of the Villages' waterfront. They create and maintain the open vistas in the Nissequogue River in Stony Brook Harbor. They also help to ensure the availability of breeding and nursery areas for fish, shellfish and wildlife. Consequently, the Villages are very concerned about their preservation.

4. Significant Fish and Wildlife Habitats

All wetlands within the Villages of Nissequogue and Head-of-the-Harbor support valuable fish and wildlife habitats. Three coastal fish and wildlife habitats of statewide significance have been designated in the coastal area. They are the Nissequogue River, the Nissequogue Inlet Beaches, and Stony Brook Harbor (Maps 8A and 8B).

Nissequogue River

The Nissequogue River forms the western boundary of the Village of Nissequogue. It runs north through the Town of Smithtown and empties into Smithtown Bay. The character of the river varies from narrow, enclosed stretches near its headwaters to a broad estuarine mouth. The significant habitat encompasses about 750 acres, extending 7.6 miles. The habitat includes the tidal



LEGEND:
 Fish and Wildlife Habitats of Statewide
 Significance:
 Stony Brook Harbor

SCALE: 1" = 2000'

MAP 8A

Fish & Wildlife Habitats

Local Waterfront Revitalization Program

Village of Head-of-the-Harbor

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

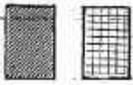
Federal Grant Number: NA-82-AA-D-CZ065
 Date of Preparation: February 1987



LEGEND:
Fish and Wildlife Habitats of Statewide
Significance:

Nissequogue River and
Stony Brook Harbor

Nissequogue Inlet Beach



SCALE: 1"=2000'

MAP 8B

Fish & Wildlife Habitats

Local Waterfront Revitalization Program

Village of Nissequogue

This map was prepared for the New York State Department of State Coastal Management Program with financial assistance from the Office of Ocean and Atmospheric Administration, provided under the Coastal Zone Management Act of 1972, as amended.

Federal Grant Number: 14-R2-AA-D-C2063
Date of Preparation: February 1987

portion of the river which contains mud flats, salt marshes, and freshwater wetlands, bordered by undeveloped woodlands and very low density residential development in the Village. Portions of the Nissequogue River located below mean high water are owned by the Village of Nissequogue, and are being held for conservation purposes.

The Nissequogue River is one of four major rivers on Long Island. The coastal segment of the river remains in a relatively undisturbed condition, and has been officially designated by New York State as a "Scenic River" and "Recreational River" (under Article 15, Title 27 of the Environmental Conservation Law) to encourage preservation and restoration of its natural scenic and recreational qualities. The Nissequogue River also represents one of the largest coastal wetland areas on the north shore of Long Island.

This habitat is important to a great diversity of fish and wildlife species throughout the year. During the spring and summer months, the Nissequogue River provides suitable nest habitat for herons, egrets, Canada goose, mallard, black duck, spotted sandpiper, marsh wren, clapper rail, belted kingfishers, and many passerine bird species. This biologically productive area also serves as an important feeding area for other species nesting in the vicinity, including endangered (E) or threatened (T) species such as least tern (E), common tern (T) and osprey (T) and for a variety of shorebirds and waterfowl during spring and fall migrations.

Endangered species are any species which meet one of the following criteria:

- (1) are native species in imminent danger of extirpation or extinction in New York; or
- (2) are species listed as endangered by the United States Department of the Interior in the Code of Federal Regulations (50 CFR part 17 [see section 182.1(a)(1) of this Part]).

Species of special concern are any native species for which a welfare concern or risk of endangerment has been documented by the Department of Environmental Conservation.

The Nissequogue River is locally significant as a waterfowl wintering area, supporting concentrations of black duck, mallard, Canada goose, and mute swan.

In addition to having significant bird concentrations, the Nissequogue River is a productive area for finfish, shellfish, and other wildlife. The river supports a significant sea-run fishery for brown trout in the fall (September - November, primarily), the only such fishery tributary to Long Island Sound. Other fish

species which use the Nissequogue River as a nursery or feeding area (from April-November, generally) include Atlantic silverside, menhaden, bluefish, striped bass, scup, winter flounder, and blackfish. These fisheries support heavy recreational fishing use, of regional significance. Access to the area for fishing is available from Sunken Meadow State Park west of the river mouth/inlet; and from Short Beach Town Park east of the inlet. Across the river, in Smithtown, major access points for fishing and for active recreation are found, including the Kings Park bluff marina area. The river also contains abundant shellfish resources, including hard clams, soft clams, and American oysters, but these waters are not certified for harvesting shellfish. Diamondback terrapin (SC) nest along the sandy shores of the river near the mouth and use the salt marshes for cover and feeding.

The continued productivity of the Nissequogue River habitat depends upon maintaining and improving water quality and limiting the effects of human use. All species of fish and wildlife inhabiting the river would be affected by water pollution such as chemical contamination, excessive turbidity or sedimentation, oil spills, and waste disposal.

Currently, land development along the Nissequogue River in the Village is minimal and is generally set back from tidal wetlands, across River Road. This distance separation and the low intensity of use diffuses runoff-carrying sediments and fertilizers to some extent. There is the potential, however, for greater water quality impacts as development increases along the riverbank. Without careful control of construction activities and location of driveways, roadways and structures along the steep escarpments to the east of River Road, sandy soils from the slopes could be destabilized and run, as sediment pollution, through swales into the river. Slumping of road shoulders on River Road and use of deicing materials can also degrade water quality. Increased use of fertilizers on new lawns could also create water quality problems by leaching through highly permeable Carver soils or by directly running off after a heavy watering or rain.

Since there are no public sewers in the Village, all development occurs on individual septic systems. Due to the general slope of the land toward the river, to the highly permeable soils, and to the presence of high water tables in certain areas, septic systems can contribute to water pollution. The location of new systems must be carefully evaluated and older systems should be checked to ensure that they are functioning properly.

There has been a significant increase in recreational boating in the area in recent years. Boating, especially motor boats, can affect water quality by increasing the potential for gasoline, oil, and toxic boat hull treatments to enter the water through spills, leaks or chipping. Unless boaters are responsible and discharge sanitary wastes only at approved pumpout stations, water quality can be degraded

by direct discharge of sewage into the river. E.coli concentrations, both from boats and upland sources, would seriously impact the goal of cleaning the river to allow for shellfish harvesting. Wakes generated by boats travelling at high speeds contribute to bank and shoreline erosion. Speed limit and "no wake" zones can minimize erosion and sedimentation.

Alteration of tidal patterns in the river can affect water quality by decreasing flushing in some locations or increasing salinity. This would be a basic alteration of habitat characteristics that would disrupt existing populations. Maintaining existing tidal patterns should be a major concern when evaluating dredging proposals. Dredging should be minimized and scheduled in the late fall and winter to minimize impacts on aquatic organisms, and to allow for spoil disposal when wildlife populations are least sensitive to disturbance.

If dredging were to occur outside of existing channels, it could eliminate valuable intertidal marsh habitats, disrupting many birds, reptiles and mammals.

Increasing human use of the Nissequogue River could lead to the elimination of terrapin colonies along the river if not controlled in mid-April through July. Terrapin egg nests are disturbed by human activity such as vessel wakes and off-road vehicular traffic which erode the shoreline and expose nests.

Nissequogue Inlet Beaches

The Nissequogue Inlet Beaches are located on either side of the Nissequogue River mouth on Long Island Sound. The portion of the habitat within the Village of Nissequogue consists of approximately 50 acres of sparsely vegetated dredge spoil and adjoining sand beach in the Short Beach Town Park. The habitat is subject to some disturbance as a result of the heavy recreational use (e.g. pedestrians, campers, and off-road vehicles) during the summer. A major portion of the Short Beach site has been posted as a tern nesting area since 1980.

The Short Beach portion of the habitat consists of a relatively small segment of undeveloped barrier beach ecosystem. Although the biological communities in this area are not uncommon in Suffolk County, the existence of undeveloped beaches in close proximity to a major inlet is generally rare on the north shore of Long Island. Short Beach Town Park is an important nesting site for least terns (E), common terns (T), and piping plovers (E), with all three species present from 1982-1984. During each of these years, approximately 130-340 pairs of least terns were reported nesting in the area. Short Beach Town Park was one of the five largest least tern nesting colonies on Long Island in 1982 and 1983, and is of statewide significance. An estimated 200 pairs of common terns, and up to 17 pairs of piping plovers were reported here in 1984.

Least terns and piping plover (5 pairs or less) nest on the western sand spit area in the Town of Smithtown. Their numbers have been decreasing steadily. Common terns have not nested there in recent years. Human disturbance from Sunken Meadow State Park may have forced the majority of nesting birds to move to Short Beach. Other birds which use the area include yellow crowned night heron, osprey (T), great horned owl, and red-tailed hawk. Diamondback terrapin (SC) use both areas for feeding and cover, and are confirmed nesters on the south side of the eastern spit.

The nesting shorebirds and terrapins inhabiting the Short Beach peninsula are highly vulnerable to disturbance by humans from mid-April through July. Since the habitat is located adjacent to a heavily used Town beach, there is significant pedestrian traffic and recreational vehicle use of the uppermost beach and spoil areas and the sandy cove to the south of the peninsula. Human intrusion during the plover, tern, and terrapin nesting season will seriously affect the animals, and may eliminate the colonies. There is already evidence that terns and plovers are being driven off the western section of the habitat by human disturbance. Fencing and/or continuing to annually post the area to protect the birds and terrapin is important to maintaining the habitat.

The habitat was partially created by dredge spoil disposal. Unregulated dredge spoil disposal in this area, however, could be detrimental to the nesters by crushing eggs or by changing desirable contours and vegetative cover. Carefully regulated spoil disposal, on the other hand, could be designed to improve the habitat by controlling vegetative succession.

Finally, introduction or attraction of mammalian predators to the Short Beach nesting area would also be detrimental to the populations of nesting wildlife. Control of pets, as well as ensuring that raccoons or fox are not attracted by food refuse, is important.

Stony Brook Harbor and West Meadow

Stony Brook Harbor and West Meadow are located on the north shore of Long Island, between the Villages of Nissequogue and Head of the Harbor and the hamlet of Stony Brook. The harbor itself and Long Beach peninsula lie within the Villages' coastal area. West Meadow Beach is in the Town of Brookhaven. This approximately 1200 acre area is generally defined by the mean high water elevation on all sides. The fish and wildlife habitat includes all of the wetland area behind Long Beach and West Meadow Beach, which contain extensive areas of undeveloped salt marsh, tidal flats, dredge spoil islands, and open water. Also included is the eastern end of the Long Beach barrier peninsula. Water depths in the harbor are generally less than six feet below mean low water, except in dredged navigation channels. The harbor is bordered on the west, south, and east

by residential development and undeveloped woodlands. Small craft harbor facilities predominate the north shore of Stony Brook Harbor, including the Town of Smithtown's Long Beach Marina and boat launching ramp.

Stony Brook Harbor and West Meadow comprise one of the largest and most diverse coastal wetland ecosystems on the north shore of Long Island, of regional significance. This area is important to many fish and wildlife species throughout the year. Least tern (E), common tern (T), and piping plover (E) nest in several locations within Stony Brook Harbor, including Porpoise Channel Island (Youngs Island), the eastern end of Long Beach Peninsula and dredge spoil areas near the Long Beach Marina and the Long Beach boat launch. Approximately 200-300 breeding pairs of least terns, 50-150 pairs of common terns, and 4-9 pairs of piping plovers nested in the area in 1983, 1984, and 1985. In those years, the population of least terns nesting at Stony Brook Harbor was among the five largest on Long Island, of statewide significance. Stony Brook Harbor and West Meadow are also inhabited by a variety of nesting heron species, including snowy egret, black-crowned night heron, and yellow-crowned night heron. The primary heronry is located on the eastern end of Long Beach in the Village of Nissequogue conservation area. As of 1977, this area contained some of the largest nesting concentrations of snowy egret and black-crowned night heron on Long Island, with estimates of 128 and 160 pairs, respectively. Other species nesting in the Stony Brook Harbor and West Meadow area include Canada goose, herring gull, great black-backed gull, wood duck, black duck, mallard, fish crow, red-winged blackbird, and horned lark. The salt marshes, intertidal flats, and shallows in this area are used extensively as feeding areas for birds nesting there, and for many other species during migration (shorebirds in particular). At the extreme southern end of the harbor is the Bartlett Marsh. This coastal fresh marsh includes an extensive and varied upland, a pond, an extensive system of fresh-water springs, and a small creek. The natural cover provides a home for a wide range of birds, including marsh harriers, and for a considerable variety of small mammals such as fox, opossum, muskrat, raccoon, woodchuck, whitefooted mice and deer mice, and others. Year-round bird residents include flickers, downy and hairy woodpeckers, red-bellied woodpeckers, titmice, chickadees, mockingbirds, catbirds, grackles, house and American finches, blue jays, cardinals, nuthatches, and a wide spectrum of sparrows; summer breeders include barn swallows, purple martins, robins, and an extensive list of warblers, including the blue-winged and the prothonotary.

Stony Brook Harbor and West Meadow is one of the most important waterfowl wintering areas (November - March) in northern Suffolk County. Mid-winter aerial surveys of waterfowl abundance for the ten year period 1975-1984 indicate average concentrations of over 375 birds in the area each year (784 in peak year), including approximately 125 black ducks (418 in peak year), along with lesser

numbers of scaup, mallard, Canada goose, oldsquaw, bufflehead, common goldeneye, red-breasted merganser, and mute swan.

Waterfowl use of the area during winter is influenced in part by the extent of ice cover each year. Concentrations of waterfowl also occur in Stony Brook Harbor and West Meadow during spring and fall migrations (March - April and October - November, respectively).

In addition to having significant bird concentrations, Stony Brook Harbor and West Meadow are productive areas for marine finfish, shellfish, and other wildlife. The bay and creeks serve as nursery and feeding areas (from April - November, generally) for winter flounder, bluefish, blackfish, and forage fish species, such as Atlantic silverside and striped killifish. The harbor is inhabited by concentrations of hard clam, soft clam, American oyster, ribbed mussel, and blue mussel but part of the area is not certified for shellfishing. Stony Brook Harbor and West Meadow are readily accessible for a variety of fish and wildlife-related recreational uses, and are popular among local residents for fishing, birdwatching, nature study and waterfowl hunting.

The sensitive tidal habitats of Stony Brook Harbor are similar to those in the Nissequogue River in that degradation of water quality and intrusion by humans will disrupt the fish and bird populations.

Water quality in Stony Brook Harbor is affected by land runoff and vessel waste discharge. It is suspected that old, malfunctioning, or poorly sited septic systems may also contribute to water quality problems, although more research is required. Since Stony Brook Harbor sits in a bowl, runoff from the higher land and roadways into the harbor can introduce sediments and pollutants. The low intensity of development and the generally wooded character of hillsides and swales currently act to retain some sediments and pollutants. As the Villages become more developed, however, it will be critical to retain as much stabilizing natural cover as possible and to carefully site buildings in order to minimize sedimentation. Introduction of chemicals like road salts, fertilizers, fuels, and boat and dock preservatives are also a concern. Measures to reduce or eliminate chemical pollutants through direct action or public information is necessary.

Like the Nissequogue River, boating is also increasing in Stony Brook Harbor. The shelter that the harbor offers makes it a desirable mooring and docking area. The Town of Smithtown has recently expanded its marina north of Porpoise Channel. The Town has also conducted numerous studies showing that further expansion of boating facilities into the Nissequogue River and Stony Brook Harbor would cause significant scenic and environmental damage. Increased introduction of boat waste discharges into the water would severely affect recreational and commercial shellfishing and the future of any mariculture project,

as well as damaging native fish and shellfish populations. Provision of adequate pumpout facilities, as proposed by the Town of Smithtown, will help reduce discharge pollutants.

Dredging and dredge spoil disposal is a major concern in Stony Brook Harbor. The Marine Sciences Research Center at SUNY - Stony Brook prepared an in-depth analysis of the impact of large scale dredging on the harbor and its habitats. A predictive computer model of six dredging proposals for Stony Brook Harbor showed that, to a greater or lesser extent, all plans would increase tidal range and reduce tidal velocities. The harbor would lose some ability to flush contaminants out to Smithtown Bay and it would also expose larger areas at low tide, adversely affecting habitats.

If limited dredging is to occur, however, it should be scheduled in the later summer and fall to minimize potential impacts on aquatic organisms, and to allow for spoil disposal when wildlife populations are least sensitive. It should be stressed that dredging outside of existing channels would remove intertidal marsh and seriously disrupt habitats. Likewise, filling of the intertidal marsh or altering the surface or subsurface flow of water to the marsh would also be crucial. Unregulated dredge spoil disposal would be extremely detrimental to the habitats of Stony Brook Harbor, however, disposal could be designed to improve habitats for certain species of wildlife.

Nesting birds inhabiting Stony Brook Harbor are highly vulnerable to disturbance by humans from mid-April through July. Recreational activities (e.g. boat landing, picnicking, hiking, etc.) in or near bird nesting areas should be minimized during this period through the use of fencing and/or annual posting.

Finally, construction and maintenance of shoreline structures, such as docks, piers, bulkheads, or revetments in areas not previously disturbed by development, may have a significant impact on the habitat, by interfering with the flow of water or sediments and by introducing human uses directly into habitats.

5. Fishing and Aquaculture

The Nissequogue River and Stony Brook Harbor are used principally for recreational fishing. Due to their shallow depth, commercial finfishing is not feasible. There is limited commercial shellfishing. Recreational anglers fish for bluefish, flounder, fluke, striped bass, weakfish and snapper. These fish run seasonally in the Nissequogue River, Stony Brook Harbor and Smithtown Bay. In Stony Brook Harbor, fishing is done from the shore at the four landings, and from Long Beach, where people surf cast or fish from floating docks and along the shoreline. Small open boats are also used for recreational fishing. In

Nissequogue, surf casting occurs along Short Beach and the shoreline of Smithtown Bay.

Shellfish are found in both the Nissequogue River and Stony Brook Harbor. Oysters, once plentiful in the area, were decimated by overfishing. Baymen and recreational harvesters now concentrate on hard and soft clams. Lobsters are found in the deeper waters of Stony Brook Harbor. Although there are high shellfish populations in the Nissequogue River, the waters have not been certified for harvesting since 1953, due to rising bacterial levels. Stony Brook Harbor was once entirely certified; however, the southern tip of the harbor near Bartlett's Marsh is now closed. In addition, shellfish may not be taken in the general vicinity of the Stony Brook Yacht Club basin between May 15 and October 31. This period coincides with the boating season and suggests that contamination from boats may affect certification. The Stony Brook creek is not certified for shellfishing.

One of the biggest threats to shellfishing opportunities in the coastal area is deteriorating water quality. Isolation of the causes of pollution, and an active program to upgrade water quality is critical to bringing the Nissequogue River back and in arresting further degradation of the harbor.

An adequate and continuous supply of finfish and shellfish requires protection of the habitats and breeding nursery areas of the river and the harbor. This means protecting the remaining tidal wetlands from dredging, dredge spoil disposal, and excessive sedimentation. Also, dredging proposals which would alter tidal patterns or other activities which would cause changes in salinity would upset the physical balance required for propagation and may introduce new predators.

Overfishing has affected the shellfish supply. To increase supplies, the Village of Nissequogue and the Town of Smithtown are cooperating in a mariculture project in Stony Brook Harbor. The project involves rafting of seed clams north of Porpoise Channel adjacent to the mooring area, developing a stock of spawners and transplanting clams from polluted to certified waters for cleansing.

6. Scenic Resources and Important Vistas

The Villages of Nissequogue and Head-of-the-Harbor share a tranquilly beautiful setting on the north shore of Long Island. The vistas and views vary from expanses of marshlands at the mouth of the Nissequogue River, to views across Long Island Sound toward Connecticut, to the quiet enclosed beauty of Stony Brook Harbor. While there are no scenic resources of state-wide importance, water and land vistas within the Villages are significant local resources.

Nissequogue River

The Nissequogue River has been designated as a Scenic and Recreational River, under the NYS Wild, Scenic and Recreational Systems Act (ECL Article 15, Title 27). Boundary and resource evaluation studies have been completed. Within the Village, the river is classified as a recreational river.

The Nissequogue River, where it borders the Village of Nissequogue offers a complex series of views ranging from isolated shady stretches to broad, quiet estuarine areas to dunes at its confluence with Long Island Sound. The lower reaches of the Nissequogue River, toward the south end of the Village, are characterized by steep banks, broad floodplains and a high degree of vegetative cover. The river widens substantially to become a full-fledged estuarine ecosystem. As the river widens, vegetative enclosure of views lessens. Steep slopes continue to occur and large tidal wetland areas predominate at the water's edge. At the mouth of the river, the visual characteristics are complex, with dunes, broad tidal marshes and high escarpments. The entire length of the river corridor in the Village is heavily wooded with few structures visible from the water. The most visible manmade intrusion is the parking area at Short Beach Town Park. The views of the river looking toward the Village are of a highly natural and undisturbed corridor.

A more detailed discussion of the visual characteristics of the Nissequogue River corridor has been extracted from the "Nissequogue River Study", prepared by the Town of Smithtown Conservation Advisory Council. The discussion is broken into two segments. Segment A runs from the southern boundary of the Village to James Neck Road. Segment B runs north to the confluence of the river and Smithtown Bay.

Segment A

The character of this segment is predominantly natural. Several dwellings are visible from the river, however, they do not detract visually. This is due to the fact that they are small objects in the field of view. They act as focal elements and aid in composing a view. The character of the buildings is compatible with their surroundings. The character of the landscaping is also natural, often consisting of virtually no yard or grassed lawns. Most of the homes blend with the natural landscape.

The visual quality of the water is not as high as in upstream zones. The water is slightly turbid as one progresses toward the river's mouth. This does not affect the quality of the middle ground and background views, because the clarity of the water is not evident beyond 50 feet. The movement of the water also decreases.

The water appears still during incoming tides. Due to the meandering channel, the complexity of the edge between land and water is high, adding visual interest.

The visual effect of the terrain is evident in this zone. The complex nature of the landforms can be seen from the river. The slope and change in elevation is more noticeable in this segment than in any other. The set back of the slope from the channel is ideal for the most effect from this landform.

The diversity of vegetation, particularly the wetland-forest contrast, has a pronounced positive effect on the visual quality. The probability of seeing wildlife is high here because of the low number of human inhabitants.

Segment B

Expansive water views with low enclosure by terrain or vegetation characterize the broad mouth of the river. The area toward the mouth of the river has the most diverse terrain. Many landform types including escarpments, steep hills, gentle rises, a sand pit and tidal marshes are apparent simultaneously. Changes in elevation are most evident in this area. High overlooks afford panoramas of Long Island Sound and the Nissequogue River at the same time.

The vegetation near the river's mouth is also diverse. The contrasting form, color and texture of wetlands, woods, dune plants and pioneer species is visually interesting. The edge of the vegetation against the sky is varied and interesting in this area.

The water is fairly clear, although there is some turbidity. Movement is generally low especially at high and low tide. Between tides the current is obvious. Occasional high winds cause white caps in this area. The edge of the water is fairly complex, especially from the overlooks.

The Nissequogue River corridor in the Village of Nissequogue is wooded, rural and natural in character. This is due, in part, to the large minimum lot size, regulations on cutting of trees, topography, architectural review which emphasizes compatibility with a building's setting, and Village ownership of tidelands.

Finalization of the Scenic and Recreational Rivers System designation has strengthened protection of the visual quality of this area. Strict aesthetic performance standards under Part 666, New York Code of Rules and Regulations, are in force in the river corridor.

Stony Brook Harbor

Stony Brook Harbor is framed on three sides by gentle, wooded slopes, beaches and wetland habitats. The main access to the harbor is through Porpoise Channel which sweeps from east to west, leading to the main body of the harbor. The mouth of the harbor is characterized by tidal flats, wetlands and Youngs Island, a former dredge spoil site. Two marinas, a boat basin, and a 600 car parking lot are the principal man-made uses in this area. Viewed from other parts of the harbor this area is one of highly visible and intensive uses. While the marinas and boat basin create some visual interest and color, the parking lot does detract from the scene.

The harbor itself is relatively shallow and is unsuitable for large boats or boats travelling at high speed. Small sailboats, windsurfers and canoes tend to be used in the harbor. They add color and movement to the scene.

The views across Stony Brook Harbor from any point on its shoreline are unusual for the tranquility, harmony and a blend of rural landscape background with a foreground of water and wetland marshes, and the unobtrusive, often historic, architecture. The shoreline's irregular edges, marked by wetland vegetation, provide not only rich habitat areas, but also lend an ephemeral quality to the line where the water meets the land. The tidal lands and wetland vegetation unify the shoreline around the harbor.

The deciduous woodlands surrounding the harbor offer a sense of enclosure. The trees give a strong vertical contrast to the horizontal plane of the water in the winter, and soften the topography when the leaves are out. The trees screen most of the structures around the harbor and soften the lines of those which are visible.

The residences surrounding the harbor, whether historic or more recent, are notable for their sensitive siting. There is a good relationship to topography, as well as subtle coloring, use of materials, and shapes, which makes each contribute to the harmonious character of the harbor.

Village Roadways

There is an overwhelming feeling of rural seclusion as one drives on the Village streets. In both Villages, roads are winding and tree-shaded. Wooded land on both sides creates a sense of enclosure. There are openings in the vegetation showing views of farm fields, open spaces and garden settings for large historic houses. With the exception of a few historic buildings, in themselves of scenic interest, most structures are set back from the road, allowing the roads to remain more like country lanes than Village streets.

D. PUBLIC WATER AND SEWER SERVICE AREA

There is no public sewer service in either Nissequogue or Head-of-the-Harbor. All development occurs on private septic systems which are approved by the Suffolk County Health Department prior to use. The Health Department review examines system distance to surface waters and to the groundwater table, as well as soil conditions to ensure that the system effectively removes pollutants. There is no on-going monitoring of septic system functioning by the Health Department. The Department responds to nuisance complaints, most often generated by surface overflow.

There is concern that some septic systems near the river and the harbor are not functioning efficiently and may be contributing to pollution of these waterbodies. A relatively sophisticated monitoring system is needed to evaluate this concern. The Villages are currently working with the Marine Sciences Research Center at SUNY - Stony Brook to develop a monitoring program for Stony Brook Harbor. In the Nissequogue River, some pollutants may enter the waters from malfunctioning systems along the western bank.

All water in Nissequogue and over 90% of the water in Head-of-the-Harbor is supplied from private wells. Small parts of Head-of-the-Harbor on Fifty Acre Road, Rte. 25A adjacent to St. James, and the Pond Woods subdivision are serviced by three water districts -- the Suffolk County Water Authority, the St. James Water District, and the Stony Brook Water District, respectively. According to the Suffolk County Health Department Water Quality Unit, there have been no reported instances of bacterial contamination in Village wells, and water quality is generally good even for wells tapped into the shallow Upper Glacial Aquifer. Some wells close to the shore may have problems with saline intrusion.

The provision of public water and sewer systems would be an extremely expensive undertaking because of the development patterns in the Villages and the terrain. Since government grants for the construction of public service facilities are becoming more scarce, the Villages cannot count on this assistance. The continued pattern of low density development, combined with use of innovative septic systems in situations where higher densities might be warranted, will help to ensure that residents of the Villages can continue to rely on individual wells and septic systems.

E. HIGHWAY, ROADS, AND MASS TRANSPORTATION SERVICES

The nearest highway to the Villages is North Country Road, State Route 25A, which forms part of the southern border of Head-of-the-Harbor. This road is for the most part two-lane. A historic district is traversed between the Presbyterian Church in Smithtown and the Carriage House Museums complex in the hamlet of Stony Brook.

There is no mass transportation service within the Villages apart from a Town-sponsored bus service operating only in the summer season to and from Long Beach, utilizing school buses. The buses run from peripheral parking lots located outside of the Villages.

The roads in the Villages are of two kinds: municipal and private. Head-of-the-Harbor discourages private roads. Those which exist were built before this policy was adopted. Existing private roads may be taken by the municipality if they are offered for dedication and are first brought up to Village standards. Nissequogue has followed a different policy, and has minimized the extent of Village roads. Municipal standards are required of development roads, but their subsequent maintenance is not a Village concern. Maintenance is therefore uneven in quality.

Some roads traversing the Villages receive heavy traffic, primarily those serving Town of Smithtown recreational areas in the summertime. Moriches Road, which (with its extensions called Horse Race Lane and Boney Lane) traverses both Villages, leads to Short Beach, Long Beach, and the Town marinas on the northeastern sand spit of Nissequogue. Summer traffic may be very heavy and congestion very great, especially as trailered boats form a significant part of weekend traffic. The road over which they are carried is two-lane, in places sharply curving, and not suited to wide loads. Long Beach Road connects Moriches Road to the marinas and to Long Beach, and suffers the same traffic burden. It was widened in 1982 to accommodate the volume of traffic. The Town of Smithtown contributed to the road widening costs, and contributes a share to the maintenance of the roads within Nissequogue which serve its beaches.

The widening of Long Beach Road slightly eased the traffic congestion, and certainly contributed to road safety; critics have also pointed out, not inaccurately, that neither the rural atmosphere of the Village nor its visual beauty were improved by the removal of trees and the broadening of pavement. The congestion of the access to Short Beach remains. Nearly all car traffic, and all trailered-boat traffic, crosses Head-of-the-Harbor on its way to the Town beaches, but the existence of alternative routes through Head-of-the-Harbor (via Moriches Road and via Fifty Acre Road) has made for less acute congestion, especially as traffic on Fifty Acre Road was generally light. Recent residential development along Fifty Acre Road may alter the pattern in an unfavorable way.

SUMMARY: ANALYSIS, ISSUES, PROBLEMS, OPPORTUNITIES

Analysis

Head-of-the-Harbor and Nissequogue occupy a coastal environment that is unusual, exceptionally attractive, and remarkably unspoiled. The Nissequogue River to the west has suffered, and continues to suffer, from careless and exploitative use, and its future welfare is threatened by conflicting jurisdictions which encumber the process of decision-making; but Stony Brook Harbor has enjoyed a long history during which few injuries have been inflicted upon it. Here there is not a question of revitalizing a waterfront, but of identifying means of preventing its deterioration, and setting forth methods that will be effective, practical, and sufficient.

The coastal zone occupied by the two Villages has never had economic value in the sense of supporting commerce or industry other than a very small commercial shellfishing industry. As late as World War II, most of the area was farmed, and the remainder was in moderately large estates; there was little new building, and a correspondingly slow population growth. But this languid pace of development was not confined to the two small municipalities; the Town of Smithtown as a whole was primarily a farming community, with a negligible amount of industrial development, and commercial activities confined mostly to providing services--banks, shops, medical and dental and other professional services, and the like. In 1945 the entire Town of Smithtown had a population of fewer than 25,000; by 1980 it approached 120,000, and it had changed from a lightly-settled semi-rural area to an outlying suburb, though the economic base for the expansion of population lies much less in metropolitan New York than in the increasing industrialization and commercial development of Suffolk County itself. During the period of most rapid growth of the Town, the two Villages grew at a moderate pace; as the growth of Smithtown slowed, the Villages increased. This is to say that in the decade between 1970 and 1980, the population of Smithtown increased by only 1.7%, its explosive expansion having all taken place between 1950 and 1970; but between 1970 and 1980, Nissequogue's population increased by 30.5% and Head-of-the-Harbor's by 10%.

What this means in applied terms is that two small municipalities, accustomed to a pattern of slow growth, began to have growth creep up on them, and in ways that had not been quite anticipated. Both Villages early adopted zoning; in both virtually all land was designated as 2-acre residential; in each an overall plan sketched in a future of continued rural atmosphere, to be encouraged by careful visual siting of new structures--that is, well back from roads, or property lines, so that to the greatest extent possible houses would be, in the future as in the past, out of eyeshot of each other, or passersby. How well this has worked is evident from a tour through the Villages, which still seem less populated than they are in fact, owing to the virtual invisibility of most structures. What was perhaps insufficiently foreseen was the disappearance of the kind of building land for which the visual siting regulations were devised: gentle wooded slopes which were easy to build upon, and easy to use with slight environmental damage or disturbance. By now most of these "easy" sites are used up; much of what remains is far more difficult to develop in every way, and not least in terms of minimal environmental impact.

Development in the Villages of Head-of-the-Harbor and Nissequoque is confined to residential development, but this does not make questions of land use less important, less urgent, or easier to answer adequately. As yet, Stony Brook Harbor has suffered very little from the transportation of soil resulting from development---i.e., erosion into the harbor from disturbed surrounding hillsides; as yet, increased population has not substantially increased chemical wastes; as yet, there has not been an incursion upon wetlands beyond the very minor. But there is no doubt that unless careful and stringently applied precautionary measures are undertaken in the immediate future, degradation is possible: from slope or bluff erosion, from insufficient maintenance of the natural hydrologic system, from contamination of surface and groundwaters. Control and preventive measures are needed now.

The foregoing applies to what the Villages can do inside their borders where no jurisdictional conflicts exists; but it becomes plain on analysis that much of great importance to the preservation of the coastal area does not lie entirely in the hands of the Villages. The ownership of underwater lands in the harbor rests in the State. The greater part of the beach land within Nissequoque and Stony Brook Harbor, which has very little beach---is owned by the Town of Smithtown. The Town has resisted any kind of control that the Village, or Villages, might try to impose: for example, obtaining building permits for structures on the Town-owned land. It undertakes the licensing of shellfishing without consideration of Village interests. To litigate such matters has always seemed, to the Villages, an unaffordable extravagance and indeed, counter-productive; mutually beneficial cooperative agreements should be possible on all disputed points. Clearly it is an integral part of the Villages' approach to coastal management that such agreements should be negotiated for, reached, and honored. The goal of establishing a program of preservation and conservation for Stony Brook Harbor and its remarkable irreplaceable natural resources is sought by the Villages because it will provide a framework, a set of criteria, a strict guide, within which cooperative actions between the Town and Villages can be achieved.

Issues

Some issues have been touched upon in the foregoing. Still another issue is the extent to which the coastal resources, in particular Stony Brook Harbor, should be devoted to or developed for recreational purposes.

The pressures for expanded water-related recreational facilities exist within the Town. Political pressures can be brought to bear upon members of the Town government to increase recreational facilities which may be detrimental to environmental resources; needless to say, the small population of the two Villages provides them with little pressure-generating power. It ought to be noted that the Villages already provide an extraordinary level of access to recreation for Town residents. In Nissequoque 17.2% of land area, and in Head-of-the-Harbor 8.8%, is given over to recreational use. Less than 6% of the total of 26% is private in use; one-fifth, therefore, of the area of the Villages is devoted to public recreation. This is a figure appropriate for a resort town, but it is very uncommon for two Villages in which recreational uses provide no economic base, and are entirely supported by public funds. It cannot be argued that anything accrues to the Villages from this level of recreational use; if anything, there is an economic cost.*

But this is perhaps the least of the cost. There is no way in which the recreational use of Stony Brook Harbor can be expanded without inflicting grave damage and possible destruction from the environmental resources unless the expansion is extremely selective and strictly limited. Expansion of Cordwood Path Beach in any direction would destroy either a freshwater wetland, a tidal wetland area, or both. Expansion of the marina or encouragement of the use of the harbor by boats travelling at a speed beyond 5 miles per hour, or dredging channels to accommodate large or deep-draft craft will risk degradation of water quality (already indicating stress) or will disturb valuable habitats, or may seriously contribute to siltation which destroys marshland, shellfisheries and juvenile marine organisms. One cannot, in fact, have limitless recreational use of such a highly sensitive environment without destroying it. Limitations of use should be imposed entirely upon a basis of what is good for the environment, which will not long survive, and its loss will be borne not only by the people of the Villages, but by the people of the Town, the County and the State of New York as well. Other issues stem from this one, but presumably most of them will fall into place once the fundamental decision is made; namely, that no action and no use should precede a determination of its adverse impact on coastal resources.

A second category of issues surrounds land use determinations within the Villages, where pressures to develop vacant lands increase as the supply diminishes and the prices rise. It has already been observed that nearly all "good" land--easy to develop, and of a kind which may be developed with mild environmental impact--has already been built upon. A proportion of what remains should not be built upon at all, as a greater percentage of remaining lands demand development constraints, some of which are severe. The price of land in the area has risen to

* The cost has never been exactly calculated; it may not be worth calculating. However, Village property owners do pay their share of taxes to the Town for support of the facilities, and further, pay substantially for the maintenance and repair of the roads which carry, during the summer season, an inordinate amount of traffic. The Town contributes to road costs in Nissequoque, but not in Head-of-the-Harbor. It is questionable whether the contribution leaves Nissequoque paying no more than it would if there were no seasonal beach traffic, or merely alleviates the burden imposed. In any event, the Villages cannot be thought of as denying public access to recreational facilities. But this is perhaps the least of the cost. There is no way in which the recreational use of Stony Brook Harbor can be expanded without inflicting grave damage and possible destruction upon the environmental resources unless the expansion is extremely selective and strictly limited. Expansion of Cordwood Path Beach in any direction would destroy either a freshwater wetland, a tidal wetland area, or both. Expansion of the marina or encouragement of the use of the harbor by boats traveling at a speed beyond 5 miles an hour, or dredging channels to accommodate large or deep-draft craft will risk degradation of water quality (already indicating stress) or will disturb valuable habitats, or may seriously contribute to siltation which destroys marshland, shellfisheries and juvenile marine organisms. One cannot, in fact, have limitless recreational use of such a highly sensitive environment without destroying it. Limitations of use should be imposed entirely upon a basis of what is good for the environment which will not long survive, and its loss will be borne not only by the people of the Villages, but by the people of the Town, the County and of the State of New York as well. Other issues stem from this one, but presumably most of them will fall into place once the fundamental decision is made: namely, that no action and no use should precede a determination of its adverse impact on coastal resources.

such levels that the pressure to develop is extreme, and the possibility of preventing development by municipal exercise of eminent domain, or acquisition of development rights to farmland, is increasingly remote. It is a very real issue in villages such as Head-of-the-Harbor and Nissequogue whether severed developmental restraints can be effectively applied. What is at issue will be, in some instances, the right of a landowner to use his property as he sees fit, subject only to common-law restrictions, versus the constraints imposed by a municipality in the general interest--a general interest that some will surely argue as remote, considering that immediate demonstrated harm to any real, living and present individual or individuals may be difficult to prove.

It is the aim, the intention, and the hope of Head-of-the-Harbor and Nissequogue that their Local Waterfront Program for the preservation and conservation of precious environmental resources will be recognized as a suitable basis for some necessary constraints upon development, and that not only their zoning, but their other land-use regulations, will merge with a coastal management program, as essential methods and techniques for achieving that development which is possible without environmental harm.

Problems and Opportunities

Problems are predictable from the foregoing. Problems exist in reconciling Village interests and Town interests; problems exist in adjusting private and individual interests to public and general interests. These are fundamental problems; they are more difficult to solve than subsidiary ones. But they also offer a very rare opportunity for fundamental solutions.

Working out conflicts in Village-Town interests provides an opportunity for a first-time exploration of possibilities for effective cooperation. In the past, cooperation has been poor to non-existent in almost all areas, and has reflected, more than anything else, relative positions of political power. If the Town and the joined Villages, however, were each to be pursuing a coastal management program, an equality irrespective of political power would require Town consideration of Village interests, and accommodation rather than overriding could provide a genuine basis for identifying common problems and working on their solutions cooperatively. For example, joint efforts in improving shellfish production in Stony Brook Harbor might form a first cooperative project existing within the outlines of both Smithtown's Local Waterfront Program and that of the Villages. The Villages initiated a study conducted by the Marine Sciences Research Center at SUNY-Stony Brook centering on the hydrological mechanics of Stony Brook Harbor; one of the uses to which the study might be put in a practical application is shellfish production. The study provides a mathematical model of the harbor on the basis of which predictions are available concerning siltation, pollutant dispersal direction and dispersal rates, and many other questions of great significance in the management of the harbor environment and ecology; it should make available a guide to action for both the Town and Villages in undertakings of interest to both by giving a factual basis for decision-making. From relatively limited mutual efforts Village-Town cooperation might expand, still within the framework of coastal management, while useless and sometimes damaging conflicts which are ultimately to the interest of neither are minimized or eliminated.

In a similar way, opportunities exist within the coastal management program for bringing private and public interests into more harmonious relations. If it does nothing else, an inventory of resources--and all Village resources are waterfront resources---brings the extremely complex relationship of the many parts to each other and to the whole into focus. In the Villages, it might be said that land and water is all there is, and that the future depends entirely upon the wise use of each.

In spite of generally cautious land use policies on the part of the two Villages, it is clear that the time has come for still greater caution. Groundwater and surface water must be protected from contaminants to the greatest extent possible. Storm-water runoff must be reduced and recharged as close to the source as possible, runoff into and from swales must be controlled, and sediment traps must be employed where stormwater cannot be recharged on site: these steps are necessary to maintain water quantity and quality. Its quality must be protected by minimizing lawn areas which require heavy use of fertilizers and insecticides, and by exploring possibilities of adding to County Department of Health requirements any useful additional Village requirements for the construction of septic systems. Potential flood or erosion areas must be afforded additional attention in Village regulations: withdrawing from development all land in the 100-year flood plain must be considered, and building should be forbidden where the depth to the seasonal high water table is less than 3 feet. Undertaking such protective land-use regulations will, in due course, extend further protection to wetlands by preventing sedimentation from the land side and nutrient loading. Such considerations as these, and there are many others, will limit and inhibit development. Very often private interest can see no further than this; but certainly an opportunity exists within the framework of coastal management to accompany regulation with a serious program of public education, with the aim of making clear the need to harmonize, and if necessary to limit, present desires with the general future welfare.

The Villages have never undertaken educational programs of this nature: none has ever before been needed in communities of such small size and so few seriously competing interests. But it has become increasingly clear, especially in the last five years, that the concept of the two Villages as essentially rural areas has been very considerably eroded. Suburbanization has approached, which means more than an increase in population, new building, and greater demands upon resources. People who have not encountered these resources before should be introduced to keeping these blessings--clean air, clean water, a wonderful range of wildlife, a rich historic heritage, much quiet and serene visual beauty--and be introduced as well to the costs attached to keeping these blessings intact. In the long run there may be no way of ensuring the preservation of these values except by arousing the interest and the affection of many. For that attempt an expansive opportunity exists, and upon using it wisely and effectively rests not only the future of coastal management in the Villages, but the future of a small glacier-born peninsula and a small natural harbor as well.

It is clear from the foregoing pages that the existing waterfront conditions in the Villages of Head-of-the-Harbor and Nissequogue provide several present problems, and the immediate potential for ones which may prove disastrous if not wisely and rapidly confronted. It is for the purpose of confronting these problems, meeting them, preventing deterioration in the waterfront conditions, and restoring damage before it becomes severe, that the Villages have joined together to plan and implement this Local Waterfront Revitalization Program.