

A. INTRODUCTION

The Village of Patchogue is a 2.3-square mile incorporated waterfront village that fronts on Patchogue Bay/Great South Bay on the south shore of Long Island. Patchogue is bounded on the north, east, and west by the Town of Brookhaven. Patchogue Bay forms the southern boundary of the Village. The Patchogue River and Patchogue Bay/Great South Bay shorelines of the Village of Patchogue together total about 8 miles. The entire Village is part of the Great South Bay watershed. It is also designated as a maritime center in the South Shore Estuary Reserve (SSER) Comprehensive Plan, prepared by the New York State Department of State (DOS). The focus of the Village's commercial and recreational maritime activity is the coastal zone of the Patchogue River, which is about 1 mile long from its mouth at Patchogue Bay north to the street crossing at Division Street. (The Division Street bridge prohibits maritime uses north of the bridge). The Patchogue River maritime center is supported by multimodal ferry-rail transportation in the northeast portion of its waterfront, where the Fire Island National Seashore (FINS) ferries and the nearby Long Island Rail Road (LIRR) station are located (the station is about 0.3 miles from the ferry).

The Patchogue River waterfront has a mix of maritime recreational, commercial, and industrial uses. Maritime industrial uses are concentrated along its west shore, with the east shore oriented toward water-dependent maritime transportation, including the National Park Service's (NPS) FINS facilities, commercial and recreational marinas, and restaurants. Additional Fire Island ferries are concentrated at the south end of the river, where there is also a large parking facility.

As is common with many south shore harbors, former maritime industrial uses that thrived in the early 18th century have disappeared or declined in prominence, and new uses have evolved. While the Village has a number of plans and policies to guide waterfront uses and development, they are recent, and the riverfront includes many uses that have been constructed independently and without the benefit of a master plan that examines land and water uses. Patchogue's waterfront possesses important natural features, historic sites, and scenic qualities that are vital to the local quality of life and economy, and also provide waterfront access and tourism opportunities for Long Island. However, some of these conditions have been damaged and/or threatened by a variety of factors, both environmental and human-induced. Consideration of the coastal zone as a whole would benefit the community and waterfront businesses alike.

As stated above, the Village is one of the six major maritime centers in the SSER area designated by DOS. According to DOS, 90 percent of the State's population and a wide variety of economic activities are concentrated in waterfront communities. Our State's waterfronts are rich in natural resources, with abundant fish and wildlife, beaches, wetlands, forests, and farmland.

Local communities have come to recognize that their waterfronts provide comprehensive benefits, providing new life and energy and creating economic activity, with opportunities for

redeveloping historic and abandoned structures, improving waterfront recreation, and restoring and protecting natural resources. Communities have found that maximizing their waterfront assets is best achieved through a clear vision and plan, with public involvement, creative partnerships, and a step-by-step strategy.

B. REVIEW OF APPLICABLE VILLAGE, STATE, AND REGIONAL COASTAL POLICIES TO DATE

VILLAGE POLICIES

The Village of Patchogue has demonstrated its commitment to the management and redevelopment of its waterfront, and has sought and obtained funding for the purposes of developing a number of coastal zone management studies. These studies have been prepared for the purposes of preserving, maintaining, and enhancing the Village's coastal zone, and include the *Village of Patchogue Local Waterfront Revitalization Program* (1987), *Patchogue River Maritime Center Plan* (1999), *Village of Patchogue Downtown Business District Study* (2002), and *Redevelopment Action Plan for the Patchogue River Northeast Quadrant* (2005).

The Village's principal goal with these studies has been to stabilize and build upon its core waterfront resources by creating a comprehensive marine planning district, with the objectives of benefiting Village residents, the nearby Central Business District, and the region as whole. In prior reports, the Village has concluded that appropriate growth along its waterfront should be encouraged, as long as it is consistent with identified planning objectives, including improving the quality of the waterfront. Moreover, by redeveloping built areas, optimum use is made of existing infrastructure and public access opportunities to and along the river, and the Village waterfront is expanded. These goals are shared at the County level (the Suffolk County Planning Department was the principal author of the *Patchogue River Maritime Center Plan*, described below) and at the State level (DOS was the lead preparer of the *South Shore Estuary Reserve Plan*).

VILLAGE OF PATCHOGUE LOCAL WATERFRONT REVITALIZATION PROGRAM (1987)

The Village of Patchogue has a draft LWRP comprised of six sections. Sections II (Inventory and Analysis) and IV (Proposed Land and Water Uses and Proposed Projects) have information/recommendations pertaining to the study area. The 1987 LWRP conducted field investigations and included a waterfront questionnaire, which was distributed to commercial, industrial, and public land use owners adjacent to the Patchogue River and Tuthills Creek. Based on the field work and questionnaire, it was determined that an estimated 600 boats docked along the Patchogue River and that most marina owners were interested in expanding their facilities. In addition to the fieldwork and survey, the plan recommended that the FINS ferry terminal property be zoned General Waterfront and that the former Hess oil terminal site be redeveloped for water-dependent uses, such as a marina or boatyard, or a commercial vessel loading and unloading area. The 1987 LWRP also included in its findings the Village's request that the U.S. Army Corps of Engineers (ACOE) or Suffolk County undertake periodic maintenance dredging of the channel in the Patchogue River to a depth of 12 feet, and that all "spurs" be dredged off the main channel to service private activities. As a draft LWRP, the Village program did not complete the LWRP review process at the State level (DOS).

VILLAGE OF PATCHOGUE STUDY (1990)

The *Village of Patchogue Study* was initiated by the Village of Patchogue Chamber of Commerce. It discusses issues concerning the vitality of the Main Street business district and the immediately surrounding area. This study also examines housing, historic districts, transportation, and land use changes and related zoning matters for the entire Village. The study highlights the strengths and weaknesses of the Village, and outlines opportunities for preserving the Village's economic competitiveness, while modifying or eliminating weaknesses.

The 1990 report also addresses the Patchogue River. It states that the FINS offers potential as an anchor to the Village's maritime economy and that the opening of the Patchogue River as a recreational gateway to the waterfront would provide the Village with amenities existing in other waterfront revitalized areas, such as Port Jefferson. The study suggests that the removal of the bowling alley at the northeast corner of the river would allow for the expansion of tourist opportunities, which would then complete a walkway system around the river from the FINS terminal. The report also discusses long-term redevelopment plans that would increase tourism and attract visitors, such as waterfront restaurants, shops, scenic views of the waterfront, and boating activities.

More specific recommendations for redevelopment are also made for parcels along the Patchogue River. The report suggests that industrial parcels along the river be converted to waterfront condominiums. Other recommendations include redevelopment of the area containing the Village sewage treatment plant and redevelopment of the southwest corner of Main Street and River Avenue, which would allow direct access to the waterfront and the parking areas south of Main Street. In addition, new retail uses to increase tourism are recommended at West Avenue and Main Street, for purposes of enhancing the proposed revitalized waterfront zone around the FINS terminal.

PATCHOGUE RIVER MARITIME CENTER PLAN (1999)

This study was completed by the Suffolk County Department of Planning. It defined a maritime center as an area where commercial water-dependent and water-enhanced uses are concentrated. The study determined that the Village was a strong maritime center, given the Patchogue River's concentration of maritime uses and ferry services, commercial boating facilities, working boat yards, FINS, and the nearby Central Business District. This plan presented a number of recommendations dealing with specific segments of the river. The plan sought to revitalize the Patchogue River waterfront by improving the economic base of the Village, enhancing public access to the waterfront, preventing and/or mitigating degradation of the marine environmental quality, and increasing the value of the Patchogue River and Bay shoreline areas as commercial and recreational assets.

VILLAGE OF PATCHOGUE DOWNTOWN BUSINESS DISTRICT STUDY (2002)

The purpose of this study was to prepare a plan for the Patchogue Village downtown business district that would identify actions targeted to the improvement and protection of the viability of existing businesses in the downtown district and the overall improvement of the area for the enjoyment and advantage of Village residents, merchants, and visitors.

The Suffolk County Department of Planning prepared the 2002 *Village of Patchogue Downtown Business District Study*. The Department undertook a field survey of the downtown district and analyzed existing development patterns and the status of the stores and commercial development

along Main Street and Ocean Avenue. Recommendations were grouped into six major categories: zoning and land use; redevelopment; parking, traffic flow and signage; storefront uses; aesthetics; and pedestrians. Based on these recommendations, the report provides a four-part strategy to the Village of Patchogue for the growth and revitalization of the downtown business district. The strategies are as follows:

- Encourage retail and destination uses in the downtown core. Destination uses should be focused on arts, entertainment, and restaurant uses.
- Encourage non-retail uses outside of the core business area including office, service, and institutional uses.
- Encourage development of owner-occupied residential units within walking distance of the downtown, comparable with local conditions.
- Assure that basic services throughout the business district are provided at the highest possible level.

REDEVELOPMENT ACTION PLAN FOR THE PATCHOGUE RIVER NORTHEAST QUADRANT (2005)

This study was prepared for Patchogue by Dvirka and Bartilucci Consulting Engineers in association with two other firms. The study builds upon the 1999 *Patchogue River Maritime Center Plan*. The Northeast River Segment was identified as being strategically located at the navigable headwaters of the Patchogue River Maritime Center. The study focused on the bowling alley site and the Hess property as important focal points to the river and a visual gateway to the riverfront, in association with the FINS properties.

For the bowling alley site, the 2005 plan recommended the conversion of the site to an indoor food market and outdoor pedestrian plaza that includes retail shops, a coffee shop, bakery, flower shop, beach bar, a market for Long Island produce and East End wines, and a local fish market and clam bar. The recommendations for the conversion of the bowling alley site also included the creation of a boat yard museum; an entrance or gateway welcome structure for the Patchogue River area, including a streetscape program to provide visual and physical connections to the LIRR station and the Village's downtown area; a nature garden on the FINS property with access from the bowling alley site; an enhanced waterfront promenade along the shoreline of the FINS property in conjunction with the nature garden; and a hand-powered boat launch that would provide recreational activities such as row boating, canoeing, and kayaking.

For the Hess site, the 2005 plan suggested the creation of a privately-owned Resort/Inn/Spa and Marina Complex. This complex would include 75 rooms, a waterview restaurant, a conference center, indoor pool, gym, and spa, in addition to a marine service center, parking, and boat launch.

The overall intent of this plan was to create design guidelines that would promote the area as an entertainment and recreation district within the general parameters of the Waterfront Development zoning designation. These guidelines would encourage "Village-scaled" development that adds character and broadens the market base.

STATE AND REGIONAL POLICIES

NEW YORK STATE COASTAL MANAGEMENT PROGRAM

The New York State Coastal Policies, which are excerpted from the New York State Coastal Management Program, are used to guide the State's efforts to create and maintain clean, accessible, and prosperous coastal areas and inland waterways for present and future generations. They are used to guide local governments in the preparation of LWRPs, to determine the appropriateness of public agency decisions that affect the use and protection of coastal areas and inland waterways, to help set priorities for public and private investment along New York's coasts and waterways, and to improve management of the coast and inland waterways. The 44 New York State Coastal Policies are grouped in the following categories: development; fish and wildlife; flooding and erosion hazards; public access; recreation; historic and scenic resources; agricultural lands; energy and ice management; water and air resources; wetlands; and a general category.

LONG ISLAND SOUND COASTAL MANAGEMENT PROGRAM

In some parts of the State, the New York State Coastal Policies have been refined to take into account regional and local considerations. On Long Island Sound, the State Coastal Policies have been refined in the Long Island Sound Coastal Management Program. The Long Island Sound Coastal Policies consider the economic, environmental, and cultural characteristics of the Long Island Sound coastal region. These policies take the place of the statewide policies. The policies are the basis for federal and State consistency determinations for activities affecting the Long Island Sound coastal area. They also guide development and updates of LWRPs in the region. The 13 Long Island Sound Coastal Policies are grouped in the following categories: developed coast, natural coast, public coast, and working coast.

In accordance with guidance from DOS, waterfront revitalization policies for the Village of Patchogue are based upon the Long Island Sound Coastal Management Program policies. The Patchogue LWRP/HMP refines the regional policies of the Long Island Sound Coastal Management Program to reflect local conditions in the Village.

SOUTH SHORE ESTUARY RESERVE COMPREHENSIVE PLAN

The SSER Comprehensive Plan was the result of the Long Island South Shore Estuary Reserve Act passed by New York State Legislature. The Act created the SSER, which makes up Long Island's South Shore bays and the adjacent upland areas draining to them. The SSER Act calls for the reserve's protection and management. The Act also created the SSER Council, and charged the Council with preparation of a comprehensive management plan for the reserve. The SSER is viewed as three subregions: the western bays, Great South Bay, and the eastern bays. The Village of Patchogue is part of the Great South Bay region.

FIRE ISLAND NATIONAL SEASHORE GENERAL MANAGEMENT PLAN

Beginning in 2006, NPS began the four-year process of preparing an updated General Management Plan (GMP) for FINS. The GMP will lay out a vision for the park and provide guidance for management over the next 15 to 20 years. According to the FINS Winter 07/08 Interim Report, issued by NPS, the GMP seeks to answer several questions, including, "What are the best and most appropriate methods for moving people, goods, and services to [and] from

Fire Island?” It is anticipated that the GMP may call for expanding ferry service from Patchogue to additional areas of Fire Island, and for expanding to year-round operation.

C. EXISTING LAND USES

The majority of the land use within the LWRP study area (see Section I for a description of the study area) is residential. However, along the Patchogue River waterfront and Main Street, the predominant land uses are commercial and industrial. Existing land uses within the Village are a mix of residential, industrial, commercial, recreational, and institutional. Community facilities are another predominant feature throughout the study area. Figure II-1A shows the current study area land use, and Table II-1 provides the composition of land uses in acres.

Table II-1
Land Use within Existing and Proposed LWRP Boundary

Land Use	Number of Parcels	Acreage	Percent of Total Acreage
Residential	1,095	305.3	40.28
Commercial	433	128.7	13.40
Community services and institutional	67	105.8	13.96
Vacant	214	81.9	10.80
Industrial	5	7.3	0.01
Recreational and open space	42	147.6	19.48
Public services	3	7.9	0.01

Source: AKRF, Inc. field reconnaissance, July 2007; Village of Patchogue GIS data, 2007.

As shown in the figure, the LWRP study area north of Main Street in the area around Great Patchogue, Pine, and West Lakes is predominantly single-family residential. The majority of the houses reflects Italianate and Victorian styles, and were built in the 1870s, which is consistent with the early development phase of Patchogue. This land use pattern comprises most of Patchogue—detached single-family residences, interspersed with other uses. However, over the years, many single-family residences have been converted to multiple dwellings and the construction of multifamily apartment complexes has increased. Table II-2 provides a list of multiple dwelling residences within the LWRP study area.

Lands in the central portion of Patchogue, particularly between River and West Avenues, north of the LIRR track and along the Patchogue River, are predominantly commercial and industrial with a mix of other uses, including public, recreational, and residential uses. This land use pattern is consistent with the Village zoning code, which creates districts that zone for one land use, but also allow for other uses when authorized by the Board of Trustees. Between River and West Avenues are vestiges of the Village’s historical waterfront, occupied primarily by maritime industrial uses. At the end of Hammond Street, in the northeast section of the study area, is the Patchogue Sewage Treatment Plant. Commercial buildings occupy the corners of West Main Street with River and West Avenues.

From the LIRR track south to Laurel Street, and between River and Cedar Avenues, a narrow stretch of land between the track and Division Street is occupied by the LIRR as a service yard. At the opposite south corner of West Street is the Patchogue Bowling Center surrounded by

approximately 1.5 acres of parking. FINS property extends L-shaped around the bowling alley site and fronts on Division and West Streets. Directly across West Street are industrial/commercial operations that extend southward to the eastern shoreline, such as the Davis Park Ferry Company, Ke-per Enterprises, and Pier East Marina. Along the bay shoreline, the uses become more recreational, with Sandspit Marina and Shorefront Park.

Table II-2
Multi-Dwelling Complexes within Existing LWRP Boundary

Name	Number of Units	Location
Bayview Gardens	96	West side of River Avenue, opposite Bransford Street
Colonial Gardens	64	West side of River Avenue, south of Bayview Gardens
The Landings	87	East side of River Avenue, between Bransford Street and Riverview Court
Fairfield on the Water	248	West side of River Avenue, south of Weeks Street
Fairfield on the Bay	132	East side of River Avenue, and east of Sutton Avenue, between Crescent and Price Streets
Fairfield at West Lake	37	East of West Lake, on West Main Street
Heatherwood House	192	Waverly Avenue, south of 2nd Street and west of Patchogue Lake
Valmont Garden Apartments	72	Waverly Avenue, south of Mombray Avenue
Water's Edge Habitat	215	6th Street and Pine Lake
Tiffany Apartments	88	Corner of Main Street and Maple Avenue
Terry Apartments	65	Corner of Rider Avenue and Terry Street
Maple Tree Apartments	84	Maple Avenue and Thorn Street
Rider Terrace	22	Corner of Edwards Street and Rider Avenue
Lake Street Apartments	24	Lake Street
Source: Suffolk County Planning Department, 2006.		

The west side of the river, from Division Street south to the southern tip of the LWRP boundary, is a mix of uses, which include single- to three-family residential, recreational, commercial, and industrial. Among these uses are Dublin Deck Restaurant and The Landings at Patchogue Condominiums. In addition, the industrial uses include historic maritime uses such as Frank M. Weeks Boat Yard and Leeward Cove Marina.

The area east of Tuthills Creek consists of mainly single-family residences and Bayview Gardens, a 96-unit garden complex interspersed with few commercial and industrial parcels.

D. EXISTING WATERFRONT USES

Patchogue's waterfront was first settled in the late 17th century. Historically, its development was centered largely on a variety of water-dependent activities, including boat building and related businesses, fishing and harvesting of shellfish, and tourism. Shorefront Park was also once home to a hotel complex that was part of Patchogue's growing tourism economy.

As one of the six maritime centers identified in the SSER, Patchogue today hosts a variety of commercial water-dependent and water-enhanced uses. Water uses play a valuable role in the Village's economy. For example, the ferry service to Fire Island communities, recreational boat docking, swimming, and fishing are all water-dependent uses along the Village waterfront, and

the Village supports a large number of waterfront commercial and recreational activities. The Patchogue River has several marinas and boatyards on both sides of the river that are vital to the existing water uses and allow for public use and enjoyment of the water and the waterfront. Additional water uses along the Patchogue River include boatyards, restaurants, and public parks such as Sandspit Marina, Steamers Restaurant and Marina, and South Shore Boat Yard.

There are also some non-water-dependent uses along the shoreline. However, most of the non-water-related commercial uses are located either on the shore or slightly inland. On the east side of the Patchogue River, abutting Mulford Street, there are two parcels owned by Marran Oil Co. Another three parcels are located on the west side of the river and are owned by the U.S. Tape Company.

There is also private open space along the west bank of the Patchogue River, which precludes public access along much of this shoreline. On the east side, public access is available at the FINS ferry terminal, and limited public access is available at Mulford, Laurel, Campbell, and Brightwood Streets. Presently, there is limited access to the other water areas within the Village, including Great Patchogue, Pine, and West Lakes. These lakes have limited water access due to residential and private uses that dominate the waterfront.

Public access to the Great South Bay is available along the eastern shoreline at the two Town of Brookhaven parks, the undeveloped park at the end of River Avenue and Sunset Lane, Sandspit Beach/Marina, and three Village of Patchogue facilities—Pool and Beach Club, Mascot Dock, and Shorefront Park (see Figure II-1A). Barriers restrict access to the shore at two other street rights-of-way: DeWitt Avenue and Bay Avenue.

MARINE INFRASTRUCTURE

Waterfront infrastructure, including docks, piers, and navigational aids, are critical to sustaining the recreational and working waterfront activities of Patchogue. The shorefront also functions as a natural habitat.

South of Division Street, the Patchogue River shoreline is bulkheaded, with the exception of a few areas with natural edges along the western shore. Numerous docks are located along the shoreline, associated with maritime recreational, commercial, and industrial uses, as well as other riverfront uses. The mouth of the Patchogue River is flanked by jetties constructed of boulders, and is also marked by lighted buoys. The western jetty is considerably wider and longer than the eastern jetty.

North of Weeks Street, Tuthills Creek generally has a natural edge. South of Weeks Street, the majority of the creek's eastern shore is natural, while the western shore is bulkheaded and has several docks. Lighted buoys and narrow piers are located on each side of the mouth of Tuthills Creek.

Between Tuthills Creek and the Patchogue River, the Patchogue Bay shoreline consists of sand beach. Along the bay to the east of river, many of the residential properties have seawalls, and Patchogue Pool and Beach Club has a sand beach. Structures extending into Patchogue Bay include Sandspit Marina and Mascot Dock.

E. LAND OWNERSHIP

PUBLIC LANDS

Most publicly owned lands within the study area are dedicated to a specific purpose. Within the study area, there are lands owned by federal, County, and Town governments. Foremost is the presence of the FINS. The Patchogue FINS property is located at the southwest corner of Laurel Street and Argyle Lane, and is the only FINS ferry terminal with adequate intermodal connections to the LIRR.¹ The railroad corridor bisects River Avenue and parallels Division Street, with a station located at the northwest corner of Ocean Avenue and Division Street. The LIRR is under the authority of the Metropolitan Transportation Authority (MTA). In addition, the 5th Police Precinct and the 6th District Court properties are under the jurisdiction of Suffolk County. Table II-3 provides a list of publicly owned lands within the existing LWRP boundary. These publicly owned lands are depicted in Figure II-1B.

Table II-3
Publicly Owned Lands within the Existing LWRP Boundary

Ownership of Land	Tax Map Description		Acres	Status
	Sec-Blk-Lot	Street Location		
Town of Brookhaven	01-01-6.1	Roe Boulevard	6.0	
Village of Patchogue	03-01-32	Mowbray Avenue	1.9	
Village of Patchogue	03-01-37	Mowbray Avenue	1.7	
Village of Patchogue	03-02-04	Ox Bow Road north of North Prospect Avenue and west of Holly Lane	0.1	
Village of Patchogue	04-09-10.1	Patchogue Lake, south of Roe Boulevard and between Shore Drive and Shore Road north of Patchogue-Holbrook Road	36.2	Patchogue Lake – underwater land. Residential lots on east and west sides with a narrow buffer of woods between the houses and the lake. No access on the east or west sides.
Village of Patchogue	05-03-32	That portion of Patchogue Lake between Cedar Grove St; also the general area of the corner of Lakewood Street and Gillette Avenue	0.5	Patchogue Lake – underwater land. Residential lots on most of the eastern and western sides; Roe Boulevard to the north, Patchogue-Holbrook Road to the south.
County of Suffolk	08-01-2.2	North Avenue, north of Brook Street and south of Pine Lake	1.4	
County of Suffolk	08-01-03	Lakeland Road	0.1	
Village of Patchogue	08-01-17.2	Northeast corner of Lakeland and Hillside Avenues	0.6	Playground – access roads are Lakeland Avenue to the west and Hillside Avenue to the south.
Village of Patchogue	08-03-26	Northeast corner of East 2nd Street and Central Avenue	1.3	Neighborhood playground.
County of Suffolk	08-05-2.2	West First Street	0.4	

¹ Fire Island National Seashore Waterborne Transportation System Plan, 2001.

Village of Patchogue LWRP/HMP

Table II-3 continued
Publicly Owned Lands within the Existing LWRP Boundary

Ownership of Land	Tax Map Description		Acres	Status
	Sec-Blk-Lot	Street Location		
Village of Patchogue	08-05-25.8	West First Street on eastern shore of West Lake	2.3	
County of Suffolk	08-05-25.9	Located on eastern shore of West Lake, south of Marshall Street and north of West Lake Drive	0.7	
County of Suffolk	08-05-26	West First Street	0.1	
County of Suffolk	08-06-01	Southeast corner of East 2nd Street and Patchogue-Holbrook Road	1.2	5th Police Precinct – bordered on the north and east sides by East 2nd Street and Patchogue-Holbrook Road, respectively.
Town of Brookhaven	08-07-07	West Lake Drive east of West Lake	0.1	
Village of Patchogue	09-05-18 09-05-25.1	Havens Avenue	0.1 0.1	Havens Avenue – northern access road is Lake Street; southern access road is Main Street. Commercial establishments east of Havens Avenue.
County of Suffolk	09-06-02	West Main Street west of West Avenue and north of Hammond Street	0.2	
County of Suffolk	09-06-11	170 West Main Street just west of West Avenue	0.1	
Village of Patchogue	09-06-15	Hammond Street	0.5	Sewage Treatment Plant (STP) located on Hammond Street.
Village of Patchogue	09-06-16 09-06-17	Hammond Street, south of Main Street	0.2 0.2	Hammond Street – a dead-end street with access road, West Avenue to the east. Surrounded by residential lots, except for the vacant lot to the south.
County of Suffolk	09-06-28 09-06-43.1	West Avenue	0.3 3.1	6th District Court (with parking lot). Good access; Main Street to the north, West Avenue to the west and South Street to the south. The east is bordered by commercial lots.
Village of Patchogue	09-06-70	Hammond Street	0.3	Vacant cleared lot located on the south side of Hammond Street, abutting Village STP (parcel 09-06-15).
Village of Patchogue	12-04-01	West Lake, north of West Main Street	15.1	West Lake – underwater land. Surrounded to the north, west, and east by residential lots and to the south by West Main Street. Access roads include West Main Street and Hillside and Park Avenues on the west side.
Village of Patchogue	12-05-31	Summit Avenue west of Prospect Avenue and south of West Main Street	0.1	
Suffolk County Water Authority (SCWA)	12-06-18.2	West Main Street between Summit Avenue and Waterworks Lane	12.7	Residential lots surround this area owned by SCWA. Access roadways are Waterworks Lane to the east and West Main Street to the north.
Patchogue UFSD	12-07-13	West Main Street west of River Avenue	0.6	

Table II-3 continued				
Publicly Owned Lands within the Existing LWRP Boundary				
Ownership of Land	Tax Map Description		Acres	Status
	Sec-Blk-Lot	Street Location		
Patchogue UFSD	12-07-33	River Avenue south of West Main Street	3.9	
MTA	12-08-19	Bisects River Avenue and parallels north of Division Street	1.9	LIRR – includes the railroad tracks and a vacant lot for employee parking and equipment. Access roadways include a portion of Division Street at the southeastern corner of the parcel and River Ave bisecting the lot.
Town of Brookhaven	13-01-16	Patchogue River	1.5	
Village of Patchogue	13-02-2.1	South Street on eastern shore of Patchogue River	1.1	
Village of Patchogue	13-02-03	North of South Street, west of West Avenue	0.2	Commercial use (Reliance Co.) – access road is South Street.
	13-02-04		0.2	
Village of Patchogue	13-02-05	41 South Street west of West Avenue	0.2	
Village of Patchogue	13-02-25	West of West Avenue north of Division Street	1.0	Residential – access road is West Avenue on the east side.
Village of Patchogue	13-02-29	South Street	0.1	
MTA	13-02-27	Northwest corner of Division Street and West Avenue	2.4	LIRR – area includes railroad tracks and a vacant lot for employee parking and equipment. The access roadway is Division Street to the south.
Village of Patchogue	13-03-31	Southwest corner of West Avenue and Sephton Street	0.4	Commercial – access roads are West Avenue to the west, Railroad Avenue to the east, and Sephton Street to the north. Railroad tracks lie to the south.
NPS FINS	13-09-1.2	150 West Avenue east of Patchogue River	4.6	FINS ferry terminal.
County of Suffolk	14-06-21	143 Carman Street between Bailey and Bay Avenues	0.3	
County of Suffolk	15-02-35.18	Linda Court, west side Linda Court, east side, west of Tuthills Creek	0.7	
	15-02-35.19		0.6	
Village of Patchogue	15-02-37	End of Hill Street	0.8	Tuthills Creek – Hill Street to the southwest borders this parcel and is the only access route. Residential lots are to the west and the LIRR to the south. Vegetation on this parcel includes <i>Phragmites</i> sp., low shrubs, weeds, grasses, and some mature deciduous trees.
NPS FINS	16-03-01	162 West Avenue east of Patchogue River	0.1	FINS ferry terminal.
NPS FINS	16-03-02	166 West Avenue east of Patchogue River	0.1	FINS ferry terminal.
NPS FINS	16-03-3.3	168 West Avenue east of Patchogue River	2.8	FINS ferry terminal.
Village of Patchogue	16-07-45	130 Cedar Avenue between Mulford and Laurel Streets and east of Grenville Avenue	0.2	

Table II-3 continued				
Publicly Owned Lands within the Existing LWRP Boundary				
Ownership of Land	Tax Map Description		Acres	Status
	Sec-Blk-Lot	Street Location		
NPS FINS	16-09-01 16-09-28	Southwest corner of Laurel Street and Argyle Lane	0.6 0.2	FINS; NPS offices.
County of Suffolk	17-01-02	12 Wiggins Avenue north of Danes Street	0.2	
Village of Patchogue	17-02-02	Rider Avenue north of Marvin Street and West of Bailey Avenue	0.2	
Village of Patchogue	17-02-05	Rider Avenue north of Marvin Street and West of Bailey Avenue	0.2	
Village of Patchogue	17-04-22	North of Park Street between Ocean and Rider Avenues	0.2	Patchogue Fire District fire station – bordered to the west, north, and east by residential parcels and to the south by Park Street.
Village of Patchogue	17-05-13	Boyle Lane south of Marvin Street	0.1	
County of Suffolk	17-05-14	Boyle Lane south of Marvin Street	0.5	
Village of Patchogue	17-06-01	Southwest corner of Boyle Lane and Rider Avenue	2.4	Tennis courts – access roads include Rider Avenue to the west and Boyle Lane to the north. Surrounding residential lots are to the south and east.
Town of Brookhaven	18-01-8.8	River Avenue	2.0	
Village of Patchogue	19-03-01	Portion of the river between Pine Boulevard and Sunset Lane	28.7	Patchogue River – underwater land. Direct roadway access to this portion of the river includes Campbell Street to the northeast and Brightwood Street to the southeast. Bordering parcels include residential lots and Sandspit Marina and park to the southeast.
County of Suffolk	19-04-52	5 Willow Walk north of Patchogue Street	0.1	
County of Suffolk	19-05-19	Roosevelt Avenue north of Brightwood Street	0.2	
Town of Brookhaven	19-06-02	Abuts south side of Brightwood Street	1.7	Sandspit Marina and park access roadway. Roadway access provided by Brightwood Street to the north. This lot is bordered by Patchogue River to the west, residential lots to the east and the park to the south.
Village of Patchogue	19-08-65	500 South Ocean Avenue north of Maiden Lane	0.5	
Village of Patchogue	19-09-6.1	28 Maiden Lane between Cedar and South Ocean Avenues	0.4	
Village of Patchogue	19-09-7.3	Abuts south side of Maiden Lane between Cedar and South Ocean Avenues	2.0	Village swimming pool – northern access road is Maiden Lane. Bordering lots are residential to the west.
Village of Patchogue	20-01-02	Abuts south side of Maiden Lane between Cedar and South Ocean Avenues	0.3	Parking lot for Village swimming pool – access roads include Maiden Lane to the north and South Ocean Avenue to the east. Bordering parcels are Patchogue Bay to the south and the Village swimming pool to the west.

Table II-3 continued				
Publicly Owned Lands within the Existing LWRP Boundary				
Ownership of Land	Tax Map Description		Acres	Status
	Sec-Blk-Lot	Street Location		
Village of Patchogue	20-02-14.1	Abuts south side of Park Street between Rider and Bay Avenues	2.4	Park area, including underwater lands. Bordered by residential plots to the east and west and Park Street, which provides access to the north.
Village of Patchogue	20-03-33	Rider Avenue, southwest corner of Smith Street	0.4	
Village of Patchogue	20-04-15 20-04-16	Bay Avenue between Park and Smith Streets	1.6 0.6	
Village of Patchogue	20-04-27.1	Rider Avenue between Park and Smith Streets	14.8	Park area, including underwater lands and baseball fields. Access roadways are Rider Avenue to the west, Smith Street to the south, and Bay Avenue to the east. This parcel contains ball fields and wetlands.
Village of Patchogue	20-05-11	Abuts east side of South Ocean Avenue south of Smith Street	1.1	Marina parking – the access roadway is South Ocean Avenue to the west. Residential lots are to the north and parkland to the east.
Village of Patchogue	20-05-15.1	Southwest corner of Smith Street and DeWitt Avenue	10.9	Parkland, baseball fields – access roadways include Smith Street to the north and DeWitt Avenue to the east. The lot is bordered by Patchogue Bay.
Village of Patchogue	20-06-06	Abuts Bay View Road to the south between DeWitt and Bay Avenues	1.4	Department of Parks Office and Michael Reilly Fireman's Memorial Park – access roadways include DeWitt Avenue to the west, Bay View Road to the south and Bay Avenue to the east. Residential lots are to the north. This parcel is an open grassy area with the exception of the two buildings near DeWitt Avenue.
Town of Brookhaven	21-01-01	River Avenue	4.2	Vacant waterfront area with stands of <i>Phragmites</i> sp., some cherry and birch trees – vacant sandy areas are used by residents for parking. Access roadways are the southern end of River Avenue and the western end of Sunset Lane. Tuthills Creek borders the west side of the lot.
County of Suffolk	22-01-04 22-01-10	Sunset Lane north of Patchogue Bay	0.2 0.3	
Village of Patchogue	22-01-13	Portion of Patchogue Bay without Sandspit Marina and park, within Village jurisdiction	26.7	Patchogue Bay containing underwater lands.
Town of Brookhaven	22-02-01	Southern extension into Patchogue Bay of Sandspit Marina and park	8.0	Bordered to the west, south, and east by Patchogue Bay, to the north by the entrance roadway to the park.
Village of Patchogue	22-02-02	Portion of Patchogue Bay east of Sandspit Marina and park, within Village jurisdiction	70.0	Patchogue Bay containing underwater lands.
Source:	<i>Village of Patchogue Local Waterfront Revitalization Plan, 1987 and verified by AKRF, Inc. in October 2007 through review of Suffolk County Real Property Tax Service Agency 2006 CD-ROM and 2007 Tax Maps.</i>			

UNDERWATER LANDS

With few exceptions, on Long Island the ownership of most lands underwater, or formerly underwater lands that are vested with a public trust, is in three forms: 1) State ownership; 2) local government ownership; or 3) private ownership, either by grant from the State or local government. In most instances where publicly owned underwater lands have been conveyed into private ownership, the public trust interest remains intact.

In New York State, adjacent upland owners can also apply to lease underwater lands. In the 18th and 19th centuries, the State sold large expanses of public trust lands and waters to adjacent land owners to promote the development of commerce. In many cases these owners placed fill in the water to create new land. In more recent years, private uses of public trust waters include marinas, commercial fishing operations, and docks and piers for shipping and recreational boating. Many grants were limited and a public interest in the underwater land remains. While the courts have consistently recognized the Public Trust Doctrine as a sovereign right held for the people, they have also recognized the validity of grants of public trust land to riparian owners. The courts have held that where some types of grant have been made by the State without any express reservation of the public rights, and the submerged lands were subsequently lawfully filled, the public trust and accompanying public rights are extinguished, although the State may still regulate such lands under its police power and authorize local governments to do so as well. The courts have also held that some grants may be invalid if the grant is not in the public interest.

The importance of the public trust lands for public access and as a recreational resource, and the use of the Public Trust Doctrine to better protect New York's coastal areas, their living resources, and the public's rights to access and enjoy them have recently been re-emphasized. The use of trust lands by the public generates billions of dollars for the State economy. The foreshore and underwater lands of the coast are used for recreation, boating, fishing, swimming, and visual enjoyment. The tidal areas provide habitat and breeding areas for shellfish and finfish of commercial and recreational importance. Private actions that interfere with these activities diminish the public's use and enjoyment of these commercially and recreationally productive areas.

In 1992, the legislature passed Chapter 791 codifying, in part, the public trust in underwater lands. The legislature found that regulation of projects and structures proposed to be constructed in or over State-owned lands underwater, were necessary to responsibly manage the State's proprietary interests in public trust lands owned by the State.

F. EXISTING ZONING AND OTHER LOCAL DEVELOPMENT CONTROLS

ZONING

Zoning within the Village is controlled by Chapter 93, "Zoning," of the *Code of the Village of Patchogue*. Section 93-2, Article II, "Districts," outlines the zoning districts, and Section 93-7, Article III, "District Regulations," provides specific regulations for each district. The Village of Patchogue zoning ordinance is a "modified pyramid design," which means the uses allowed in most of the restrictive districts are allowed in each of the following less restrictive districts. This allows for a mix of uses in the less restrictive districts. Hence, residential districts allow only residential uses, but commercial districts allow both commercial and residential uses (except

one- and two-family dwellings). The industrial district allows industrial uses as well as commercial and residential uses when authorized by the Board of Trustees.

The existing zoning map with a revision date of April 30, 1998 contains 12 zoning categories, including five residential, six commercial, and one industrial district (see Figure II-2). The LWRP study area is characterized by the following: A and C Residence Districts; D1, D2, D3, and D5 Business Districts; E Industrial; and RPO Residence, Professional, and Office Districts. There are two zoning districts—WD Waterfront Development District and GW General Waterfront District—that were added to the Village’s zoning ordinance on June 27, 1983 by Local Law No. 16. These districts are intended for developments or areas that have a direct relationship to, or impact on, the Village’s waterfront. However, these two districts have not been added to the Village Zoning Map (i.e., no property has been zoned WD Waterfront Development or GW General Waterfront). Table II-4 below contains a summary of the permitted uses by zoning district for those districts within the existing and proposed LWRP study area.

According to the zoning ordinance, uses permitted in the WD Waterfront Development District should enhance the waterfront’s recreational, historic, scenic, cultural, residential, and commercial values. It is intended that water-dependent and water-enhanced uses are not preempted by non-water related uses. Development in this district should encourage design features and views that best capture the relationship between waterfront and upland and that create opportunities for pedestrian access to and along the waterfront. Uses permitted in this district include:

- restaurants other than drive-in restaurants, hotels, and motels;
- marinas, cruise piers, commercial boathouses, yacht basins, and boat repair yards that are incidental to other permitted uses in this district;
- facilities for sightseeing and excursion party and fishing boats;
- membership boating and yacht clubs;
- water-related or water-enhanced shops, stores, and other facilities for the sale of goods and services at wholesale and/or retail, when allowed as a special exception by the Board of Appeals;
- single-family dwellings; and
- other customary accessory uses and buildings (including boat storage in boat racks when authorized by special permit from the Board of Appeals), provided that such uses are incidental to the principal use.

The intent of the GW General Waterfront District is to provide for a range of industrial and/or wholesale activities that conform to a high level of performance standards, and are dependent on or particularly benefit from a waterfront location. The following uses, in addition to all of the uses permitted in the WD Waterfront Development District, are allowed in the GW General Waterfront District:

- wholesale distribution of fish and seafood products;
- ship and boat building and repairing;
- marine cargo handling;
- marinas, boatyards, and commercial boathouses;
- barge and ferry operations;

Village of Patchogue LWRP/HMP

- light manufacturing activities when clearly ancillary to boating activities and when authorized by the Board of Appeals as a special exception; and
- boat storage in boat racks when authorized by special permit from the Board of Appeals.

**Table II-4
Permitted Uses by Zoning**

Zoning District	Type	Minimum Lot Area in Square Feet	Minimum Frontage Depth Limitations in Feet	Minimum Frontage Width at Street Line in Feet	Maximum Height Limitations
A	Residence	10,000	30 (40 with improvements)	100	35 ft (3 stories); 50 ft for public, semi-public buildings
		7,500	30	75	
B	Residence & Office	6,000	25 (40 with improvements)	60	35 ft (3 stories); 50 ft for public, semi-public buildings
C	Residence	5,000	25 (35 with improvements)	50	35 ft (3 stories); 50 ft for public, semi-public buildings
RH	Residence	43,600 (1 acre)	50	100	35 ft (3 stories); 50 ft for public, semi-public buildings
D1	Business	5,000	10 (25 with improvements)	40	45 ft (3 stories); 50 ft for public, semi-public buildings; set back 50 ft
D2	Business	5,000	10, rear yard min. 15 ft	--	45 ft (3 stories); 50 ft for public, semi-public buildings; set back 50 ft
D3	Business	5,000	10 (25 with improvements); rear yard min. 15 ft	--	45 ft (3 stories); 50 ft for public, semi-public buildings; set back 50 ft
D4	Business	5,000	10 (25 with improvements); rear yard min. 15 ft	--	45 ft (3 stories); 50 ft for public, semi-public buildings; set back 50 ft
D5	Business	5,000	10 (25 with improvements); rear yard min. 15 ft	--	45 ft (3 stories); 50 ft for public, semi-public buildings; set back 50 ft
E	Industrial	10,000	Not less than 10 (25 max. with improvements); rear yard min. 25 ft	50	45 ft
H	Business	15,000	30 or less; rear yard min. 50 ft	100 or less	35 ft (3 stories)
X	Business	5,000	25 min.; rear yard min. 25 ft	40	45 ft (3 stories); 50 ft for public, semi-public buildings; set back 50 ft
WD and GW	Waterfront Development and General Waterfront***	*40,000 or less	50 min.; rear* yard min. 25 ft	100*	35 ft (3 stories) or less
		7,500 or less	25 min.; rear yard min. 25 ft	75** or less	35 ft (3 stories) or less

Notes: *Lot regulations for hotels, motels, and boatels.
 **Lot regulations for all other permitted uses.
 ***The Village has not incorporated these zoning districts onto the official zoning map.

Source: Code of the Village of Patchogue, Chapter 93: Zoning, 2007.

The bulk of the land available for development or reuse along the Patchogue River south of Division Street is in the zoning district E Industrial. Any lawful business or industrial use that is not injurious, hazardous, noxious, or offensive to the surrounding area is permitted in the E Industrial District. The zoning code lists over three pages of uses that are prohibited in the E Industrial District ranging from abattoirs (slaughterhouses) to yeast plants. The following uses are among the prohibited activities that could be considered desirable:

- boat storage in boat racks except when authorized by special permit from the Board of Appeals;
- commercial center except when authorized by special permit from the Board of Trustees;
- motel;
- personal service shops and stores and shops for the sale at retail of consumer merchandise or services, or both, except when authorized by special permit from the Board of Trustees;
- places of amusement and recreation area, except when authorized by special permit from the Board of Trustees; and
- shops and stores for the wholesale or retail sale of merchandise or services and offices, except when authorized by special permit from the Board of Trustees.

Any use permitted in the H Business District is prohibited in the E Industrial District. H Business allows rental dwellings which include residence hotels, boardinghouses, lodging houses, rooming houses, and motels. Residential purposes of any kind, including all types of dwellings and housing, are prohibited from the E Industrial District except when authorized by special permit from the Board of Trustees.

A small portion of the land available for development or reuse along the Patchogue River within the study area is zoned A Residence. This zoning district allows for single-family dwellings on lots at least 10,000 square feet in size. Other uses permitted in the A Residence District include places of worship, public parks, elementary or high schools, accredited colleges or universities, and private detached garages as accessory buildings.

Existing zoning along and north of the Patchogue River waterfront is predominantly E Industrial. Moving outward from the Patchogue River, zoning becomes more residential, including both A and C Residence districts. A Residence is located along River Avenue on both sides of Division Street up to the bay. The area zoned C Residence consists of large lot garden apartments at the end of Crescent Street and another set on the west side of River Avenue. North of Main Street, in the northern portion of the LWRP study area, along the Great Patchogue Lake, Pine Lake, and West Lake, zoning is predominantly residential. There is a strip of D1 Business along Waverly Street. The business core of Patchogue lies surrounding the intersections of Main Street and Ocean Avenue and is predominantly zoned D3 Business. The periphery of the core is regulated by the D2 Business District.

Along Main Street and east of the river, land is zoned D2. East of the river and along Main Street, land is predominantly zoned D3 Business. Heading south along Ocean Avenue, land is primarily zoned RPO.

Moving south towards Tuthills Creek along Main Street from Summit Avenue, south along the west side of River and West Avenue, lots are zoned D3 Business. Along the eastern shoreline of Tuthills Creek between West Main Street and the LIRR tracks the area becomes E Industrial with A Residence on the western shoreline. Continuing south of the LIRR track, land is still

zoned E Industrial and then changes to A Residence with large lot garden apartments zoned C Residence.

The southern portion of the LWRP study area, along the Bay shoreline from Sandspit Marina to Beach Club and at the west end of Bay Avenue and inland north of Bright Wood Street, Maiden Lane, and Smith Street, as well as a parcel adjacent to Shorefront Park, is zoned A Residence. Along the east and west sides of South Ocean Avenue from Maiden Lane to Gilbert Street, the zoning is predominantly RPO. In the southern- and eastern-most vicinity are areas of recreation such as Shorefront Park, which is an inland park running from Park Street east of South Ocean Avenue and west of Bay Avenue, a public pier at the end of South Ocean Avenue, and the Village Beach Club on Maiden Lane.

G. PUBLIC ACCESS AND RECREATIONAL RESOURCES

THE LAKES

Along the northern portion of the study area are Pine, West, and Great Patchogue Lakes. Public access to West Lake is principally in five locations—Belzak Memorial Park, the west end of Marshall Street, the east end of Park Avenue, West Main Street, and the Town access at West Lake Drive. Pine Lake is accessible via lands adjacent to the northern shore of the lake, such as North Pine Lake Drive and Mowbray Street. Access to Great Patchogue Lake is found at three different locations—the east ends of Second and Sixth Streets, and along Roe Boulevard, located on the north side of the lake. This limited public access is the result of the lakes being surrounded primarily by private, single-family residential properties (see Figure II-1A).

There are also limited recreational activities at Pine, West, and Great Patchogue Lakes. These include boating, swimming, and fishing, mostly by residents of the immediate area.

THE RIVER AND BAY SHORE

The Patchogue River can be accessed at numerous locations, some public and some quasi-public, including private marinas along the eastern and western shorelines, and the FINS property on the east side of the river. The only Town-owned park, Sandspit Marina, is located at the southeast end of the Patchogue River and fronts on the bay shore. This park has facilities such as a marina, bathroom facilities, netted beach, a concession stand, and parking. Recreational activities at Sandspit Marina include fishing, crabbing, and passive scenic enjoyment.

FINS covers about 7.5 acres of land on West Avenue along the east side of the river, including the ferry terminal, marina, parking area, and storage facilities. FINS, through its special permit with Davis Park Ferry Company, provides service to the Fire Island National Seashore, located across the Great South Bay. There are two ferry terminals along the east side of the Patchogue River: the northern terminal, located south of Division Street and west of West Avenue, providing service to Watch Hill; and the southern terminal, located south of Brightwood Street, providing service to Davis Park.

The Village of Patchogue also has many parks and recreational facilities within the waterfront study area (see Figure II-1A). These facilities include:

- Four Sisters Park and Tennis Courts (Rider Avenue);
- Patchogue Pool and Beach Club (Maiden Lane);

- Rider Avenue Park and Rotary Basketball Courts (Rider Avenue);
- Shorefront Park and Softball Field (Smith Street);
- Father Cyrus Tortora Memorial Park (Central Avenue and East 3rd Street);
- John S. Belzak Memorial Park and Tennis Courts (Lakeland Avenue);
- Senior Citizens Center (South Ocean Avenue);
- Mascot Dock and Marina (South Ocean Avenue); and
- Patchogue Village Bandshell (Smith Street).

Photographs of these facilities are included in Appendix A.

H. INFRASTRUCTURE

PUBLIC WATER SUPPLY

The geology of Long Island is composed of many layers of sand, clay, and gravel, underlain by southeasterly sloping bedrock. These various geologic deposits dictate how the Long Island sole source aquifer is recharged by rainfall, and also determine how activities on the land surface might affect the quantity and quality of the groundwater. The geologic composition of most of Long Island consists of three distinct formations underlain by bedrock, described as follows:

- **Glacial Aquifer**—the youngest of the formations and the closest to the surface, it was created 15,000 years ago from glacial deposits of sand and gravel from the retreating glaciers.
- **Magothy Aquifer**—just below the Glacial Aquifer, the Magothy Aquifer was formed 70 to 140 million years ago. This formation consists of fluvial and deltaic deposits and is composed mainly of mixed layers of sand, silt, and clay. It is the primary drinking water source for most of Long Island.
- **Raritan Formation and the Lloyd Aquifer**—beneath the Magothy is a layer of clay, which comprises the upper strata of the Raritan Formation. Below the clay is the Lloyd Aquifer. The Raritan Formation’s confining unit of clay is quite thick and restricts the water flow between the Lloyd and Magothy Aquifers.
- **Bedrock**—bedrock dates back more than 500 million years. It is composed of impermeable schist and gneiss.

In 1978, the aquifers of Long Island were designated by the United States Environmental Protection Agency (EPA) as a sole source aquifer (Federal Register, 43, June 21, 1978), with the finding that the system is the “principal source of drinking water” to the people of Long Island and “if contaminated, would create a significant hazard to public health.”

The Upper Glacial Aquifer is used widely for water supply in areas of central and eastern Suffolk County. While the Magothy Aquifer also supplies the majority of Suffolk County with potable water, the Lloyd Aquifer supplies water to the south shore barrier beach communities. In the LWRP study area, potable water is primarily drawn from both the Upper Glacial and Magothy Aquifers.

According to the Suffolk County Water Authority (SCWA) 2005 *Annual Drinking Water Quality Report*, SCWA maintains 542 wells throughout Suffolk County, with 501 active in 2004. These wells serve more than 1.1 million people in Suffolk County. Presently, 217 wells

draw from the Upper Glacial Aquifer, 321 from the Magothy Aquifer, and only 4 wells draw from the Lloyd Aquifer.

SCWA aims to provide the highest standards, which is why their approach to water quality testing is not only much more frequent than standard, but also much more conservative. SCWA tests for over 290 chemical constituents, including bacteria; inorganic chemicals such as nitrate, chloride, and lead; volatile organic compounds including benzene, trichloroethylene, and trihalomethanes; pesticides such as aldicarb and lindane; and herbicides such as simazine and atrazine.

The Village of Patchogue is located in SCWA Distribution Area 1b. Distribution areas are the underground water piping networks that deliver water to homes, schools, fire hydrants, and wherever else it is needed. The distribution helps insure that adequate water is available at all times. The 2006 SCWA Annual Quality Statement for Distribution Area 1b reported high levels of iron and trichloroethane.¹

Within the Village of Patchogue, SCWA has two well fields. One is Waterworks Road well field, located west of River Avenue between Montauk Highway and the LIRR tracks. The water from this well field is high in iron, and therefore is pumped only during periods of high demand, such as the summer. The other well field is the Barton Avenue well field, which is located north of Sunrise Highway and east of Route 112.²

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

The 1996 Safe Drinking Water Amendment placed a strong emphasis on the protection of surface and groundwater sources used for public drinking water. As a result of these amendments, New York State developed a Source Water Assessment Program (SWAP) to assess and evaluate the sources of drinking water used by public water systems. Each source water assessment includes:

- 1) A delineation of the source water assessment area;
- 2) An inventory of potential significant contaminant sources within the source water assessment area; and
- 3) An evaluation of the source water's susceptibility to contamination.

The SWAP for Long Island was completed by the New York State Department of Health and the Suffolk County Department of Health Services in 2003. Results of the 2003 assessment showed that 60 percent of drinking water supply wells in Suffolk County have a low susceptibility to contamination by microbials, including protozoa, enteric bacteria, and enteric viruses, while 20 percent of the wells have a medium to high susceptibility. Specifically, shallow wells are more vulnerable to the presence of microbial sources in unsewered areas that have relatively short travel times from the water table to the well, particularly in central and eastern parts of the County.³ In addition, more than 70 percent of the public wells in Suffolk County rated medium

¹ Suffolk County Water Authority, *2006 Annual Drinking Water Quality Report*

² Suffolk County Planning Department *Patchogue River Maritime Center Plan*, 1999

³ New York State Department of Health, *Long Island Source Water Assessment Executive Summary*, 2005

to high for nitrate susceptibility. The high susceptibility rating is likely due to the slow degradation of nitrates in groundwater. About 10 percent of Suffolk County wells were rated as medium to high for susceptibility to pesticides, and almost 70 percent of wells in the County were also rated medium to high for volatile organic compounds (VOCs).

WASTEWATER TREATMENT

Patchogue's first sanitary sewer collection system was constructed in 1907 and discharged wastewater directly into the Patchogue River. In order to remedy the water quality impacts of sanitary discharges, a treatment plant was constructed at the Hammond Street location in 1926. Originally built for primary treatment, the plant was improved in the early 1950s, with numerous extensions of the collection system over the years. The plant was also upgraded to provide secondary treatment of sanitary wastewater in 1987. Secondary treatment removes most of the organic matter together with the corresponding oxygen demand that would affect receiving surface waters. This level of treatment also removes suspended solids and kills viruses and bacteria via chlorination prior to discharge. The design capacity of the Village of Patchogue Sewage Treatment Plant (STP) was increased in the 1950s to 500,000 gallons per day (gpd). In 1959, the maximum rate of flow to the STP was about 120,000 gpd.¹

There are two STPs that currently discharge treated effluent into local surface waters. The Village of Patchogue STP has its outfall into the river adjacent to the plant. The other STP serves the 132 units of Fairfield on the Bay apartment complex, located south of Crescent Street along the western shore of the river. The outfall from this plant is located about 1,500 feet north of the mouth of the river.²

According to the 1999 *Patchogue River Maritime Center Plan*, the Patchogue Village STP operates under State Pollutant Discharge Elimination System (SPDES) discharge permit number NY-0023922, which was renewed by the New York State Department of Environmental Conservation (DEC) in 2006 and is valid until January 1, 2009.

In 2007, the Village of Patchogue received \$573,000 from the 1996 Clean Water/Clean Air Bond Act to improve operations of its wastewater treatment facilities and upgrade the plant to tertiary treatment, in order to address priorities identified in management plans developed for the Peconic Estuary, including water quality impacts and the reduction of nitrogen from wastewater treatment plants.³

The Village also reconstructed North Ocean Avenue and installed a new sewer line from Main Street to the intersection of North Ocean Avenue and Oak Street in 2007. Due to the proximity of the new sewer line to existing drainage, it was also necessary to switch drainage installation.

STORMWATER MANAGEMENT

Topography generally dictates the local drainage patterns in the LWRP study area. Higher elevations and steeper slopes are found along the west side of the Patchogue River as compared to the east side. Overall, however, the Village is generally flat with slight slopes and relief. Elevations range from 16 feet above sea level in the northwest portion of the study area, east of

¹ *Patchogue River Maritime Center Plan*, November, 1999

² *ibid*

³ *Long Island South Shore Estuary Reserve Comprehensive Management Plan*, April, 2001

River Avenue, down to between 5 to 10 feet at the Hess properties, and then 5 feet or less along the bay shoreline. On the east side of the river, elevations range from 5 to 9 feet around the bowling alley parking area, and 7 feet along West Avenue down to about 5 feet at Campbell Street. Upland areas along Patchogue Bay are generally around 5 feet above sea level. The inventory of catch basins, drain inlets, and drainage manholes are represented in Figure II-3, based on the 1999 *Patchogue River Maritime Center Plan*, and are summarized as follows:

- Five storm pipes discharge directly to the west side of Patchogue River. Two of these are adjacent to the paved parking areas associated with high density residential use.
- There are 10 catch basins along Division Street, which are part of the drainage system that extends to the Central Business District. Discharge occurs into the river at the culvert under Division Street.
- Six discharge pipes along the east side of the river are located at the ends of east/west trending streets.
- The parking lot of the bowling alley property at the head of the river has been observed to drain into a nearby swale owned by FINS.
- The parking lot at the FINS ferry terminal facility drains into a bermed retention area located to the west of the bowling alley property, and south of the swale mentioned above. Depending upon precipitation patterns, standing water can remain in this area, creating a pond. Any overflow from the pond is directed north to the swale.
- Parking lot runoff from Sandspit Marina and the Village Mascot Dock is discharged to the bay via five and two pipes, respectively. There are six discharge points to the bay between the two parks.
- Seventeen of the 20 stormwater drainage points that discharge to the bay between Mascot Dock and Bay Avenue are located along Shorefront Park. Three of these are culverts for the creek that drain the freshwater wetland area to the north of Smith Street. Many of the remaining structures return ponded seawater that results from wave overtopping of the bulkhead during storms and periods of strong on-shore winds.

I. TRANSPORTATION SYSTEMS

For vehicular access, the study area is served by main thoroughfares including Patchogue-Holbrook Road (County Road 19), which runs north to south between Pine and Great Patchogue Lakes and terminates at Main Street; and Montauk Highway, which becomes Main Street in the Village. For mass transit access, the LIRR train station is located just north and east of the Patchogue River, within a 10-minute walk from the waterfront. The LIRR station is located at Ocean Avenue and Division Street and is part of the LIRR Montauk branch. Trains generally operate to and from the LIRR Patchogue station every hour, with trains running more frequently during peak hours. MTA LIRR operates additional trains on Fridays during the summer season, starting with Memorial Day weekend. During the summer, approximately four trains operate on Friday afternoons and evenings along the Montauk branch. LIRR also issues summer package tickets to Jones Beach State Park, Long Beach, and Fire Island. The discounted package ticket to Watch Hill includes one-day round-trip rail fare to Patchogue and connecting ferry service to and from Fire Island. The Watch Hill ferry terminal is a short walk from the Patchogue station. The Patchogue station also offers connecting services to Suffolk County Transit Bus lines.

J. CULTURAL RESOURCES

Patchogue's waterfront was first settled by Native Americans who harvested shellfish, clams, oysters, and other nutritional species in the Great South Bay for the need of their families. In the late 1700s, English colonists settled in Patchogue for its waterfront resources. Patchogue means "a place of many streams." The many waterways in the Village attracted the colonists to build the most extensive water mills in Suffolk County, which established Patchogue as a major economic center on Long Island's south shore. The economic development was mainly due to water-dependent activities, such as power and manufacturing, fishing and harvesting of shellfish, shipbuilding, and tourism.

Historic and archeological resources are designated according to three tiers of regulatory protection: 1) federal: the National Register of Historic Places (NRHP) under the auspices of the Secretary of the Interior and NPS; 2) State: the State Register of Historic Places under the auspices of the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP); and 3) local: the Patchogue Board of Historic Preservation and Architectural Review. Resources within the study area that have been designated at each level are described below.

NATIONAL AND STATE REGISTERS OF HISTORIC PLACES

The National Register of Historic Places catalogs and recognizes the nation's most valuable cultural resources. Authorized under the National Historic Preservation Act of 1966, the National Register coordinates and supports public and private efforts to identify, evaluate, and protect historic and archeological resources. National Historic Landmarks are historic places that are nationally significant because they possess exceptional value in illustrating the heritage of the United States. The Landmarks are designated by the Secretary of the Interior.

The following four properties in the Village of Patchogue are listed on the NRHP, and are located just outside the LWRP boundary (see Figure II-4):

- Congregational Church of Patchogue, located at 95 East Main Street;
- St. Paul's Episcopal Church, located at 31 Rider Avenue;
- United Methodist Church, located at 10 Church Street; and
- US Post Office-Patchogue, located at 170 East Main Street.

Three of the four abovementioned properties are listed on the State Register:

- St. Paul's Episcopal Church;
- United Methodist Church; and
- US Post Office-Patchogue.

LOCALLY DESIGNATED LANDMARKS AND HISTORIC STRUCTURES

In 1987, the Village of Patchogue adopted a Historical Preservation and Architectural Review ordinance in order to "to preserve and enhance the character, historical interest, beauty and general welfare of the Village." This ordinance, part of Chapter 93, "Zoning," of the *Code of the Village of Patchogue*, established the Board of Historic Preservation and Architectural Review to maintain "the desirable character of the Historic District and of designating historic and cultural landmarks."

As part of the ordinance, the Board designated the entire Village, with the exception of properties zoned A Residence, as a Historic District. Any landmarks or structures within this district must adhere to the historic preservation ordinance.

Based on a field survey and research, properties of local significance include but are not limited to Weeks Boatyard, the Patchogue Theater, and the former Winona Hotel.

K. ARCHAEOLOGICAL RESOURCES

The OPRHP website was searched for a determination of whether the LWRP study area contains any archaeological significance. According to the New York State Historic Preservation Office online Geographic Information Systems (June 22, 2007), the Village of Patchogue and the area encompassing the LWRP boundary is located within an archaeo-sensitive area for historic and prehistoric resources.

L. SCENIC RESOURCES AND VISUAL CHARACTER

The scenic qualities and values of the coast play a vital role in the Village's waterfront. The overall built form of the Village consists of single-family residences along quiet, tree-lined public streets, and the shorelines of Pine, West, and Great Patchogue Lakes; low-rise commercial and industrial structures dominate the streetscape along Main Street; the Patchogue River is lined with commercial maritime uses and recreational facilities, as well as ferry operations, with the exception of the bowling alley site at the north end of the river and a large parking area at the south end; and recreational/open space along the Great South Bay-East shoreline. The most scenic element of the study area is the Patchogue River. The riverfront is a mix of maritime commercial/recreational, historic maritime, industrial, commercial, and residential structures, the majority of which are low-rise (less than 30 feet tall). Due to the generally flat topography of the Village, there is limited visual access to scenic waterfront areas, such as Tuthills Creek, the Patchogue River, and Pine, West, and Great Patchogue Lakes from major thoroughfares. Views of the water are generally limited to the immediate waterfront. Therefore, accessing the visual quality of the coastal area is largely prohibitive and the significant resource that plays a vital role in attracting people to the Village is not maximized.

Scenic resources of the LWRP study area include:

- Tuthills Creek;
- Patchogue Bay, Great South Bay-East, and Fire Island;
- Shorefront Park;
- Mascot Dock;
- Pine, West, and Great Patchogue Lakes; and
- Patchogue River.

Street trees and vegetation are also scenic resources that enhance visual quality within the LWRP area. In April 2008, the Village of Patchogue conducted an inventory of existing street trees within the Village boundary, which includes the LWRP study area. Data were collected regarding tree location, condition, and species, as well as tree pits. Approximately 300 trees were recorded within the LWRP boundary. The tree inventory data will be used to implement a tree planting program and will help determine future maintenance needs for existing trees, locations where additional trees are necessary, and species of trees that should be planted.

Non-contributing or detracting elements to scenic vistas within the LWRP study area include:

- Deteriorated waterfront structures along Pine, West, and Great Patchogue Lakes, as well as the Patchogue River;
- Outdoor storage of materials on commercial and industrial properties;
- Large paved areas on the waterfront, such as Sandspit Marina parking;
- Not well maintained or screened industrial buildings; and
- Outdoor repair of motor vehicles.

Photographs of various scenic views within the study area are provided in Appendix B.

M. TOPOGRAPHY AND GEOLOGY

Most of Long Island's geology is defined by terminal moraines, or remnants of the advances of glaciers during the last ice age (the Pleistocene epoch). The two morainal ridges—the Harbor Hill Moraine and Ronkonkoma Moraine—run the length of Long Island and diverge to the east to form the North and South Forks, respectively. The moraines are made of poorly sorted glacial till deposited at the glacial terminus. South of the moraines are outwash plain deposits of sands and gravel.

As shown in Figure II-5, topography within the study area is characterized by gently sloping landforms with elevations ranging from sea level to approximately 30 feet above sea level. The lake and river fronts generally descend gently, but can be steeper, to the level of their respective waterbodies. The coastal morphology is comprised of beaches, wetlands, and a gentle embayment, which is Patchogue Bay.

Pine, West, and Great Patchogue Lakes, as well as Tuthills Creek and the Patchogue River, are all natural drainage basins. All drainage is directed south towards Patchogue Bay, the embayment of the Great South Bay-East. Drainage of surface water on outwash plains is mostly by infiltration. The porous soils readily soak up precipitation.

The unconsolidated surface deposits, such as sand, gravel, silt, and clay, range from 1,700 to 1,900 feet in thickness and rest on seaward-sloping bedrock surface. The bedrock is about 2,900 feet and is relatively impermeable. Lying above the bedrock is the Raritan formation, consisting of Raritan clay and Lloyd sand members. The Raritan clay member consists of clay and silt with interbedded layers of sand. The Lloyd sand member consists of fine to coarse sand and gravel, interspersed with some thin layers of silt and clay.

Based on the 1975 *Soil Survey of Suffolk County, New York*, the Village's coastal area consists of one major soil association, the Riverhead Plymouth-Carver Association. This type of soil consists of deep, nearly level to gently sloping, well and excessively drained, moderately coarse and coarse textured soils on the southern outwash plain. The predominant soil type is cut and fill land, gently sloping (CuB), as depicted in Figure II-6. This unit is made up of level to gently sloping areas that have been cut and filled for nonfarm uses. Slopes range from 1 to 8 percent; texture is dominantly loamy fine sand or coarser textured material throughout; and this land type has few, if any, limitations to use as building sites.

N. WATER QUALITY

OVERVIEW

Water quality monitoring under the Clean Water Act Section 305(b) and Section 303(d) is used to set priorities and implement water quality controls and protection activities. New York State's monitoring and assessment program is implemented on a five-year rotating cycle. The DEC Division of Water maintains an extensive inventory of waterbodies in New York State and provides summaries of water quality conditions, tracks the degree to which the waterbodies support (or do not support) a range of uses, and monitors progress toward the identification and resolution of water quality problems and sources. It is this information, provided in the Waterbody Inventory/Priority Waterbodies List, which is used to compile the Clean Water Act Section 305(b) Water Quality Report. This publication identifies Patchogue Bay as an impaired water body with well documented water quality problems that result in precluded or impaired uses. The principal cause of this impairment is from pathogens deposited by urban/stormwater runoff sources. Thus, shellfishing is restricted in these waters. Once a water body is listed as impaired, New York State must consider the development of a Total Maximum Daily Load or other strategies to reduce the input of site specific pollutants that restrict water body uses to restore and protect such uses. Since urban/stormwater runoff is an issue affecting numerous surface water resources within this area, a plan to address the general problem instead of the site-specific problem facing Patchogue Bay is anticipated.

Figure II-7 depicts the New York State water quality classifications for major waterbodies in the Village. The major surface waters within the Village of Patchogue include Patchogue Bay, Tuthills Creek; Patchogue River; and Pine, West, and Great Patchogue Lakes. Patchogue Bay is classified as SA, which indicates the best usages are shellfishing for market purposes, primary and secondary contact recreation, and fishing. These waters are also suitable for fish propagation and survival. The tidal portions of Tuthills Creek and Patchogue River are classified as SC, which indicates these saline surface waters are best for fishing. These waters are also suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Class C fresh surface waters within the LWRP boundary include Patchogue River from the LIRR to its source, as well as northern portions of Tuthills Creek. The best usage for these types of waters is fishing. Class C waters are also suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Pine, West, and Great Patchogue Lakes are classified as Class B surface water, which is best used for primary and secondary contact recreation and fishing. These waters should also be suitable for fish propagation and survival.

GREAT SOUTH BAY

The surface waters in the Village are included in the Great South Bay (Easterly Section) Drainage Basin. Great South Bay has extensive impervious surfaces in its watershed. Nutrients, sediment, and coliform bacteria are the principal pollutants carried by stormwater runoff into the subregion's tributaries and ultimately Great South Bay. For this reason, polluted stormwater runoff is the primary issue. Nonpoint source pollution presently degrades the quality of ground and surface waters in the South Shore Estuary. Nonpoint source pollution generally results from

stormwater runoff, precipitation, atmospheric deposition, drainage, seepage, and alterations to waterways. In the SSER it poses potential hazards to human health, causes the periodic closure of bathing beaches, and has forced the closure of approximately 34,643 acres of hard clam beds in the SSER, about one-third of its total area.¹

DEC has identified the dominant effect of nonpoint source pollution on water quality in the SSER as polluted stormwater from urban areas, from new and existing development, and from roads, highways, and bridges. Polluted stormwater runoff from urban areas—from new and existing development and from roads, highways, and bridges—have been identified as the primary pollutant responsible in nearly all of the SSER waterbody segments listed with impaired uses in its 2004 Priority Waterbody List.

Point sources of pollution, while not as widespread as and comparatively less significant than nonpoint sources, can still cause water quality degradation in their immediate areas. Point sources within the LWRP study area include discharging into Great South Bay; and the Village of Patchogue plant that discharges into the Patchogue River. Point sources also include other discharges regulated by the SPDES, inactive hazardous sites, and inactive and active solid waste sites.

Vessel waste discharges and waterfowl are also contributors to the bacterial load of nutrients, sediment, and coliform bacteria. Elevated levels of coliform are responsible for the year-round closure of 12,886 acres of shellfish beds in Great South Bay and the periodic closure of three of its bathing beaches. Nutrients and sediments in stormwater runoff threaten fishing, fish propagation, and fish survival in the subregion's tributaries and coves. Hydromodifications—alterations of water level and stream flow—and lowering of groundwater levels also have significant effects on fishery resources in tributaries.

Another environmental issue is impairment of waters for shellfishing. During the mid-1980s, an emergency action taken by DEC resulted in a dramatic increase in the area uncertified for shellfishing in Great South Bay-East, south of Patchogue River and east of Blue Point. The exact cause of the elevation of coliform levels was not known. Streams that emptied into the bay and the Patchogue STP effluent were potential sources, but relative contributions by source were not established in an overall coliform budget. After the upgrade of the STP, water quality monitoring during the late 1980s showed improved water quality, and this reduced the area closed to shellfishing. The STP upgrade is believed to have contributed to this result. Effluent from the plant now has very low fecal and total coliform counts.

O. NATURAL RESOURCES

OVERVIEW

Natural resource communities in Patchogue include tidal and freshwater wetlands, beaches, limited wooded areas, and open water. In general, due to the older development patterns of early harbor settlements along the Long Island coast, large tracts of undeveloped upland and coastal forest land are rare in developed villages such as Patchogue. The primary land use pattern within the LWRP boundary is medium density development with pockets of more intense residential use on parts of land separated by waterways. However, along the shoreline are significant areas of green space dedicated as parklands and preserves, as well as key habitats of the Village,

¹ *Village of Ocean Beach Local Waterfront Revitalization Plan*, July 2004

including its marine waters, tidal wetlands of Great South Bay, and the three freshwater lakes in the northern portion of the Village—Pine, West, and Great Patchogue Lakes.

The Village of Patchogue's tidal and freshwater wetland resources provide significant benefits (see Figure II-8). Wetlands in New York State are classified as either tidal or freshwater, based on soil conditions, hydrology, and botanical indicators. The type of vegetation is largely determined by salinity and the length of time the soil remains saturated. The depth of water and the predominance of certain vegetative indicator species distinguish different types and classes of wetlands.

TIDAL WETLANDS

Tidal wetlands have been inventoried and mapped by DEC and the National Wetlands Inventory (NWI). Tidal wetland boundaries were officially adopted in 1977 when the State's Tidal Wetlands Regulations (6 NYCRR Part 606, adopted pursuant to Article 25 of the Environmental Conservation Law) went into effect.

Tidal wetlands include intertidal marsh, high marsh, formerly connected tidal wetlands and coastal shoals, bars and mudflats. The major environmental values of these wetland resources are that they serve as nurseries for fish and shellfish, are vital to marine production, provide valuable wildlife habitat, supply flood and storm control measures, and are a natural pollutant removal and ecosystem cleansing feature. All mapped tidal wetlands and freshwater wetlands are locally essential water areas for natural resources and scenic and recreational purposes, and any development activity in land areas near surface waters comes under the jurisdiction of DEC.

Within the LWRP study area, there are DEC regulated and NWI mapped tidal wetlands. Tidal wetlands within the LWRP study area consist of coastal flats, bars, and shoals, with meager developing vegetation. NWI has indicated areas of estuarine and marine wetland sites along the Patchogue River and Tuthills Creek. Most development of tidal wetlands found along the Patchogue River and Tuthills Creek came with the development of several marinas, water-related commercial operations, apartment complexes, and single-family residences.

FRESHWATER WETLANDS

Freshwater wetland systems have also been inventoried and mapped by DEC and NWI. Benefits of freshwater wetlands include flood and stormwater control, wildlife habitats, water supply and quality, fisheries, food chains, recreation, open space/aesthetic appreciation and education/scientific research; however, all benefits are not supplied equally by all wetlands. The degree to which wetlands supply benefits depends on many factors, including their vegetative cover, ecological associations, hydrological and pollution control features, and their distribution and location.

Freshwater wetland systems in the Village are a portion of a wetland system that extends northward of the Village. These wetland systems are sustained by groundwater underflow, but receive substantial stormwater runoff. DEC regulated freshwater bodies are found north of Division Street and the LIRR and include the northern portions of Tuthills Creek and the Patchogue River, and Pine, West, and Great Patchogue Lakes. In addition, freshwater wetlands can be found in the southeastern portion of the LWRP study area between Marvin Lane and Smith Street.

DEC is responsible for classifying and mapping all freshwater wetlands greater than or equal to 12.4 acres, pursuant to the 1975 Article 24 of the Environmental Conservation Law (ECL). In

February 1984, with the passage of “Interim Permit” procedures, DEC assumed regulatory authority over freshwater wetlands less than 12.4 acres in size that were of unusual local importance. Chapter 51, “Freshwater Wetlands,” of the *Code of the Village of Patchogue* adopts the standards of the ECL and states, “The Village of Patchogue shall fully undertake and exercise its regulatory authority with regard to activities subject to regulation under the Act in freshwater wetlands, as shown on the Freshwater Wetlands Map (as such map may from time to time be amended) filed by the Department of Environmental Conservation pursuant to the Act, and in all areas adjacent to any such freshwater wetlands up to 100 feet from the boundary of such wetlands. Such regulatory authority shall be undertaken and exercised in accordance with all of the procedures, concepts and definitions set forth in Article 24 of the New York Environmental Conservation Law and Title 23 of Article 71 of such law relating to the enforcement of Article 24, as such law may from time to time be amended, with the following exceptions, additions and modifications.” Regulated activities include, but are not limited to, building of structures, draining, excavation, and bulk heading.

SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS

Great South Bay-East is defined by the Brookhaven Town Line to the west and by the Smith Point Bridge over Narrow Bay to the east. It includes local bay areas, such as Patchogue Bay. Great South Bay-East is connected to the ocean by Fire Island and Narrow Bay. The fish and wildlife habitat is an approximately 32,000-acre area, generally defined by the mean high water elevation on the north and south sides. Great South Bay-East is a designated DOS Significant Coastal Habitat (see Figure II-8).

Great South Bay-East comprises approximately half of the largest protected shallow, coastal bay area in New York State. This expansive body of water is highly productive, and supports a tremendous diversity of fish and wildlife species. There are many species of migratory birds found nesting or feeding in natural areas along the north and south shores of Great South Bay-East. They include: green-backed heron, northern harrier (T), osprey (T), least tern (E), herring gull, willt, horned lark, fish crow, marsh wren, red-winged blackbird, sharp-tailed sparrow, and seaside sparrow. Great South Bay-East supports the largest wintering waterfowl concentrations in New York State, and is probably one of the most important areas for diving ducks in the northeastern United States. Nearly all of Great South Bay-East is open to the public for waterfowl hunting, but due to the limited amount of emergent wetlands within the bay, hunting pressure is of only local significance.

This area is extremely productive, mainly due to the salt marshes and tidal flats found throughout the Great South Bay. The area serves as a key spawning, nursery, and foraging habitat for winter flounder, kingfish, bluefish, blue claw crab, and forage fish species, such as Atlantic silverside, striped killifish, mummichog, northern pipefish, and sticklebacks. A total of 56 fish species were collected during an intensive survey of Great South Bay in 1981.

The entire Great South Bay-East area, as the only South Shore bay with major riverine input, is inhabited by concentrations of hard clams along with local concentrations of American Oyster. These living resources have been significantly affected by diminished tributary water quality. The loss of tidal marshes and other coastal habitats has reduced estuarine productivity and eliminated critical feeding and nursery habitat for finfish, shellfish, shorebirds, and colonial waterbirds. Additionally, in the past 25 years, the hard clam harvest in Great South Bay has fallen by more than 93 percent to record lows.

WEST LAKE FISH STOCKING

Per the 1987 LWRP, DEC stocks West Lake with freshwater fish such as rainbow trout and brook trout. Because of their warm waters, the other lakes in the Village are not stocked. However, existing fish such as bass, pickerel, and sunfish reproduce naturally and in quantities that are sufficient to support limited recreational fishing activity.

AVIAN SPECIES

The *Second New York State Breeding Bird Atlas Project (2000-05)* divided the State into geographic blocks, and with the assistance of volunteers, inventoried those blocks for birds. Table II-5 lists bird species identified in two blocks, 6651A and 6651C. The LWRP study area is located within these blocks. It should be noted that some of the species may have been identified within the blocks but outside the LWRP study area. Several bird species identified in the blocks are protected.

Common Name	Scientific Name	Behavior Code ¹		NY Legal Status ²
		Block 6651A	Block 6651C	
American Black Duck	<i>Anas rubripes</i>		P2	Game Species
American Coot	<i>Fulica americana</i>	P2		Game Species
American Crow	<i>Corvus brachyrhynchos</i>	D2	FL	Game Species
American Goldfinch	<i>Carduelis tristis</i>	T2	S2	Protected
American Redstart	<i>Setophaga ruticilla</i>		FL	Protected
American Robin	<i>Turdus migratorius</i>	FL	FY	Protected
Baltimore Oriole	<i>Icterus galbula</i>	UN	FY	Protected
Bank Swallow	<i>Riparia riparia</i>	FS	X1	Protected
Belted Kingfisher	<i>Ceryle alcyon</i>		P2	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	S2	FL	Protected
Blue Jay	<i>Cyanocitta cristata</i>	FY	FY	Protected
Blue-winged Warbler	<i>Vermivora pinus</i>		X1	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	S2	T2	Protected
Brown-headed Cowbird	<i>Molothrus ater</i>	S2	P2	Protected
Canada Goose	<i>Branta canadensis</i>	NY	FL	Game Species
Carolina Wren	<i>Thryothorus ludovicianus</i>	S2	FL	Protected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	P2	FL	Protected
Chimney Swift	<i>Chaetura pelagica</i>	D2	P2	Protected
Chipping Sparrow	<i>Spizella passerina</i>		T2	Protected
Common Grackle	<i>Quiscalus quiscula</i>	NE	FY	Protected
Common Tern	<i>Sterna hirundo</i>		FY	Threatened
Common Yellowthroat	<i>Geothlypis trichas</i>	T2	FL	Protected
Cooper's Hawk	<i>Accipiter cooperii</i>		X1	Protected-Special Concern
Downy Woodpecker	<i>Picoides pubescens</i>	T2	FL	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	D2	FL	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	T2	T2	Protected

Section II: Inventory and Analysis

Table II-5 continued
Bird Species Identified During the 2000 Atlas Survey in the Study Area

Common Name	Scientific Name	Behavior Code ¹		NY Legal Status ²
		Block 6651A	Block 6651C	
Eastern Wood-Pewee	<i>Contopus virens</i>		X1	Protected
European Starling	<i>Sturnus vulgaris</i>	NY	FY	Unprotected
European Starling	<i>Sturnus vulgaris</i>		NY	Unprotected
Field Sparrow	<i>Spizella pusilla</i>		FY	Protected
Fish Crow	<i>Corvus ossifragus</i>	T2	T2	Protected
Gadwall	<i>Anas strepera</i>	P2	P2	Game Species
Gray Catbird	<i>Dumetella carolinensis</i>	FY	FL	Protected
Green Heron	<i>Butorides virescens</i>	T2	X1	Protected
Green Heron	<i>Butorides virescens</i>		T2	Protected
Hairy Woodpecker	<i>Picooides villosus</i>	X1	X1	Protected
Hairy Woodpecker	<i>Picooides villosus</i>		X1	Protected
House Finch	<i>Carpodacus mexicanus</i>	FL	T2	Protected
House Sparrow	<i>Passer domesticus</i>	ON	FY	Unprotected
House Wren	<i>Troglodytes aedon</i>	T2	FL	Protected
Killdeer	<i>Charadrius vociferus</i>		DD	Protected
Mallard	<i>Anas platyrhynchos</i>	FL	FL	Game Species
Marsh Wren	<i>Cistothorus palustris</i>		FL	Protected
Mourning Dove	<i>Zenaida macroura</i>	FL	NE	Protected
Mute Swan	<i>Cygnus olor</i>	NE	FL	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	T2	FY	Protected
Northern Flicker	<i>Colaptes auratus</i>	T2	FL	Protected
Northern Mockingbird	<i>Mimus polyglottos</i>	FY	FL	Protected
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	T2	B2	Protected
Orchard Oriole	<i>Icterus spurius</i>	T2	FY	Protected
Osprey	<i>Pandion haliaetus</i>		NE	Protected-Special Concern
Pied-billed Grebe	<i>Podilymbus podiceps</i>		X1	Threatened
Pine Warbler	<i>Dendroica pinus</i>	T2	FL	Protected
Prairie Warbler	<i>Dendroica discolor</i>		X1	Protected
Purple Martin	<i>Progne subis</i>	ON	FY	Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	X1		Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>			Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>		FL	Protected
Red-tailed Hawk	<i>Buteo jamaicensis</i>		P2	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	FS	FY	Protected
Rock Pigeon	<i>Columba livia</i>	ON	ON	Unprotected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>		X1	Protected
Saltmarsh Sharp-tailed Sparrow	<i>Ammodramus caudacutus</i>		FL	Protected

Table II-5 continued

Bird Species Identified During the 2000 Atlas Survey in the Study Area

Common Name	Scientific Name	Behavior Code ¹		NY Legal Status ²
		Block 6651A	Block 6651C	
Song Sparrow	<i>Melospiza melodia</i>	FY	FL	Protected
Spotted Sandpiper	<i>Actitis macularia</i>		P2	Protected
Tree Swallow	<i>Tachycineta bicolor</i>	FL	ON	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	FY	FY	Protected
Warbling Vireo	<i>Vireo gilvus</i>		T2	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>		X1	Protected
White-eyed Vireo	<i>Vireo griseus</i>		S2	Protected
Willow Flycatcher	<i>Empidonax traillii</i>		T2	Protected
Wood Duck	<i>Aix sponsa</i>	FL	X1	Game Species
Yellow Warbler	<i>Dendroica petechia</i>	DD	FL	Protected
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>		T2	Protected

Notes: ¹ **Behavior Codes**

Possible Breeding (PO)

X1-Species observed in possible nesting habitat or singing male(s) present in breeding season.

Probable Breeding (PO)

S2-Singing male present on more than one date in the same place.

P2-Pair observed in suitable habitat in breeding season.

T2-Bird (or pair) apparently holding territory.

D-Courtship and display, agitated behavior or anxiety calls from adults suggesting probable presence nearby of a nest or young; well-developed brood-patch or cloacal protruberance on trapped adult. Includes copulation.

N-Visiting probable nest site. Nest building by wrens and woodpeckers. Wrens may build many nests.

Woodpeckers, although they usually drill only one nest cavity, also drill holes just for roosting.

NY-Nest with young.

NE-Nest and eggs, bird on nest or egg, or eggshells beneath nest.

B-Nest building or excavation of a nest hole.

Confirmed Breeding (CO)

UN-Used nest found.

FL--Recently fledged young.

ON-Adult(s) entering or leaving nest site indicating occupied nest.

FS-Adult carrying fecal sac.

FY-Adult(s) with food for young or feeding young.

² **NY Legal Status**

Protected Species are defined in ECL 11-0103 as all wild birds except those named as unprotected. Some of these birds, such as waterfowl and gallinaceous birds, are also listed as game species with seasons set, while others may not be taken at any time.

Game Species are defined as "big game," "small game," or "game bird" species in ECL 11-0103. For some species, there are seasons set when they may be legally hunted. For those species, there are no seasons set and the species may not be hunted or taken at any time in New York.

Endangered Species are determined by the New York State Department of Environmental Conservation (DEC) to be in imminent danger of extinction or extirpation in New York State, or are federally listed as endangered. All such species are fully protected under New York State ECL 11-0535.

Threatened Species are determined by the DEC as likely to become endangered within the foreseeable future in New York State, or are federally listed as threatened. All such species are fully protected under the New York State ECL 11-0535.

Special Concern Species are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. The Special Concern category exists within DEC rules and regulations, but such designation does not in itself provide any additional protection. However, Special Concern species may be protected under other laws.

Unprotected Species are those that may be taken at any time without limit. However, a license to take may be required.

Source: New York State Breeding Bird Atlas 2000.

RARE, ENDANGERED, AND THREATENED SPECIES

The New York State Natural Heritage Program (NHP) maintains a database of endangered, threatened, and rare plants and animals in New York State as well as information on the location of such species within the State. NHP is a partnership between DEC and the Nature Conservancy. The U.S. Fish and Wildlife Service (USFWS) maintains similar information for species of concern nationwide.

Both the USFWS and NHP were contacted to inquire about the existence of designated endangered and threatened species and other species of concern within the LWRP study area. A response was received from NHP on July 27, 2007, which indicated the LWRP study area is located adjacent to a designated Significant Coastal Fish and Wildlife Habitat. This habitat is part of New York State's Coastal Management Program, which is administered by DOS.

NHP also reported the existence of one designated threatened plant and two designated endangered plants in the LWRP study area within the Village of Patchogue. The threatened species include smartweed (*Polygonum hydropiperoides* var. *opelousanum*), and the endangered species include pale duckweed (*Lemna valdiviana*) and silvery aster (*Symphyotrichum concolor* var. *concolor*). In addition, the pirate perch (*Aphredoderus sayanus*), an unlisted species, was reported within NHP's database.

P. FLOODING AND EROSION

DEC determined that, pursuant to Article 34 of ECL, certain low-lying near-shore coastal areas shall be deemed as Coastal Erosion Hazard Areas. For Long Island, these include all areas which directly border the Long Island Sound or the Atlantic Ocean. The Village of Patchogue does not border either of these water bodies and its waterfront areas do not contain any Coastal Erosion Hazard Areas.

With respect to flooding, the Federal Emergency Management Agency (FEMA) is responsible for designating specific zones that are prone to coastal flooding. Flood-prone areas are shown on Flood Insurance Rate Maps (FIRMs) and are published by FEMA. These flood zones define the limit of 100-year flooding within the Village, and 500-year flooding. Figure II-9 shows the flood zone areas within the Village LWRP boundary. Currently, FEMA is in the process of updating the Long Island FIRMs. Nassau County's floodplain boundaries were updated in 2008 and FEMA has released preliminary versions of its revised flood maps for Suffolk County. Based on the preliminary maps, fewer buildings in Patchogue may need to be insured. The new maps were plotted using more precise and accurate measurements. The revisions are intended to encourage the public to prepare for the possibility of flooding and to make emergency response more efficient.

The Village waterways include tidal and fresh waters. Erosion in the freshwater areas of Pine, West, and Great Patchogue Lakes, and portions of Tuthills Creek and the Patchogue River, as well as erosion in the tidal areas of Tuthills Creek, the Patchogue River, and the shorefront areas abutting Patchogue Bay is not significant, except for areas that are in a 100-year flood zone. These areas are classified Zones V and A. Protection from flooding and erosion in these areas is primarily provided through bulkheading.

Flood-prone areas within the Village are also related to stormwater runoff. As previously indicated, stormwater runoff from various sources that terminate near the Patchogue River, Great Patchogue Lake, and West Lake also affect water quality.

In 2006, the Village of Patchogue completed a *Floodplain Management and Hazard Mitigation Plan*, prepared by J.R. Holzmacher P.E. LLC. The purpose of the plan was to identify both natural and man-made hazards that could affect the community, with mitigation measures that would reduce those hazards. The plan was also used to support efforts to obtain funding for flood prevention and storm protection projects. The plan recognizes hurricanes, nor'easters, general storms, and other hazards that can result in property damage. Recommendations in the plan include:

- Improving Little Creek drainage (Little Creek flows through Shorefront Park);
- Road elevations (at Argyle Lane, Laurel Street, Pine Boulevard, and Campbell Street);
- Reducing tree hazards;
- Public outreach to inform the public, property owners, and stakeholders of the objectives of the plan and its implementation, including providing data on the Internet;
- Improvements in stormwater outlets to comply with the requirements of the Clean Water Act and to enhance natural resources protection;
- Coordination among federal, State, Town, and Village agencies with respect to responding to all hazards that may occur within the Village;
- Upgrading evacuation facilities and plans; and
- Provision for emergency power.

Q. ENVIRONMENTAL MANAGEMENT

There are several environmental permits for air and water handling and emissions, as well as permits relative to the management of hazardous materials, within the study area (see Figure II-10).

There are 9 facilities in the Village with air emission permits; one is located in the LWRP study area:

1. Hans & Jay Corp. located at 445 West Main Street.

There are 15 facilities in the Village with permits for discharges to waters; 2 are located in the LWRP study area:

2. The Village of Patchogue Water Pollution Control Plant (see description above) located at Hammond Street; and
3. Watergate Garden Apartments located at 53 Midship Drive.

There are 174 facilities registered to handle hazardous materials in the Village. These facilities include sites that contain generators, transporters, treaters, storers, or disposers of hazardous waste and, according to the EPA, can include liquids, solids, contained gases, or sludge. They can be the by-products of manufacturing processes or simply discarded commercial products like cleaning fluids or pesticides. Of the 174 sites listed in the Village, 12 are located in the LWRP study area:

4. Bush Boake Allen Inc. located at 245 West Main Street;
5. Felices Sunoco Service located at 283 West Main Street;
6. Fire Island National Seashore located at 166 West Avenue;
7. Hans & Jay Corp. located at 445 West Main Street;

8. Former Hess Patchogue terminal located at 363 River Avenue;
9. Auto Tire Store located at 72 Division Street;
10. New York State DEC located at 72 West Avenue;
11. Patchogue Car Care Center located at 439 West Main Street;
12. Patchogue-Medford School River Elementary School located at 46 River Avenue;
13. Closed service station located at 471 West Main Street;
14. Sweezy Real Estate Development located at 225 West Main Street; and
15. Tire Store Inc. located at 161-B River Avenue.

R. NAVIGATION AND DREDGING

INTRODUCTION

The Village's navigable waters include tidal systems of Tuthills Creek, the Patchogue River, and the portion of Patchogue Bay lying within the jurisdiction of the Village, as well as freshwater systems and inland waters.

Figure II-11 is a navigational chart reproduced from charts of the National Oceanic and Atmospheric Administration. The chart shows locations of marinas, dangers and aids to navigation, and other information useful to boat operators. As indicated in the chart, water depth averages 5 feet in Tuthills Creek and ranges from 2 to 7 feet in the Patchogue River.

WATERWAY MANAGEMENT

Chapter 91, "Waterways and Watercraft," of the *Code of the Village of Patchogue* establishes regulations for navigable waters within the Village boundary, "except when the provisions...are in conflict with the laws or ordinances of the United States, the State of New York or any political division or administrative authority thereof having jurisdiction thereover." Section 91-8, "Navigation Regulations," requires careful and prudent operation of boats; restricts throwing up of dangerous wakes when an operator is approaching another boat; limits boat speed to 4 miles per hour or less in the Village's navigable waters; requires use of a muffler to reduce engine exhaust noise; and prohibits boat operation within 600 feet of municipal bathing beaches. Chapter 91, "Waterways and Watercraft," also requires a permit for use of any dock owned by the Village; prohibits littering on Village docks; establishes hours of operation for Mascot Dock; includes provisions for "boats not in motion" (e.g., moored boats, sunken vessels, etc.); restricts operation of motorboats on inland waters (specifically West Lake, Pine Lake, Mill Pond, North Cove, South Cove, and Rider Avenue Park Ponds); and restricts use of houseboats in Village waterways. Appendix C provides the full text of Chapter 91, "Waterways and Watercraft," of the *Code of the Village of Patchogue*.

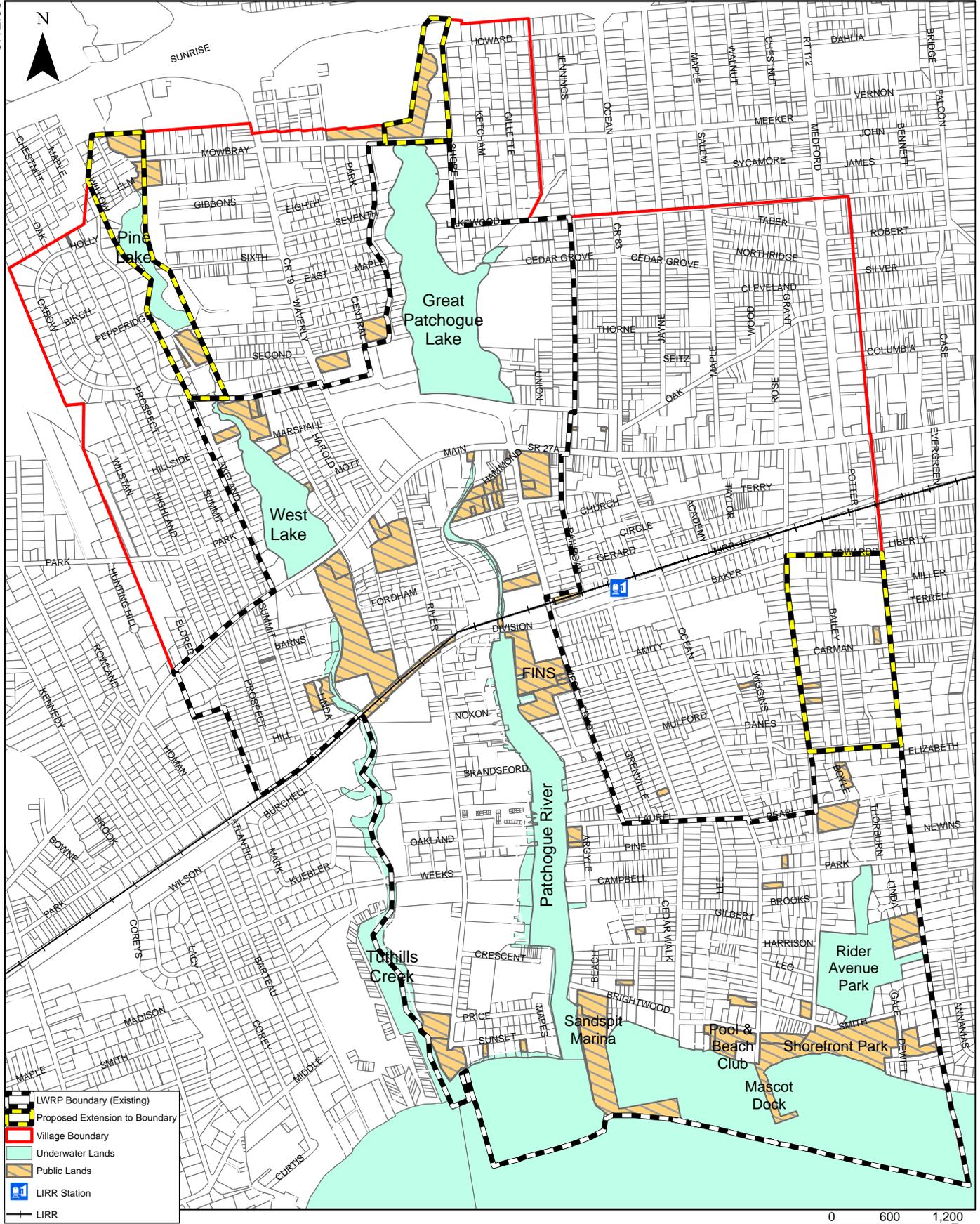
DREDGING

The ACOE last dredged the Patchogue River, which is federally regulated (designated by the River and Harbor Act of 1902), in 1969. Since then, the navigable portion of the River clogged again due to the heavy traffic of passenger ferries and recreational boats. There are a variety of State and federal permits, in addition to local permits, which must be obtained prior to dredging activity being undertaken. In addition, ACOE and DEC permits are required. ACOE permits are

required for dredging, bulkhead construction, and similar activities. DEC permits are required for freshwater and tidal wetlands dredging, bulkhead construction, and similar activities.

Beginning in the fall of 2007, the Village undertook a collaborative project to dredge the Patchogue River channel, financed with State, County, Town, Village and private funding. The \$1.2 million project dredged and piped ashore approximately 28,000 cubic yards of dirt from the bottom of the Patchogue River into polypropylene mesh tubes, also known as Geo-Tubes. The tubes allowed for the materials to dry over a 2- to 3-month process, after which the sediments were trucked to the nearby Brookhaven Town landfill in Yaphank. Temporary storage for the tubes was provided on a former industrial property on the west side of the River. The DEC has approved the use of Geo-Tubes as a less environmentally intrusive method of de-watering, and this method lessens the amount of time needed to de-water spoils.¹ *

¹ New York Times, *In Patchogue, a Novel Cure for Old Muck*, December 2, 2007 posted on www.nytimes.com, accessed on December 3, 3007.



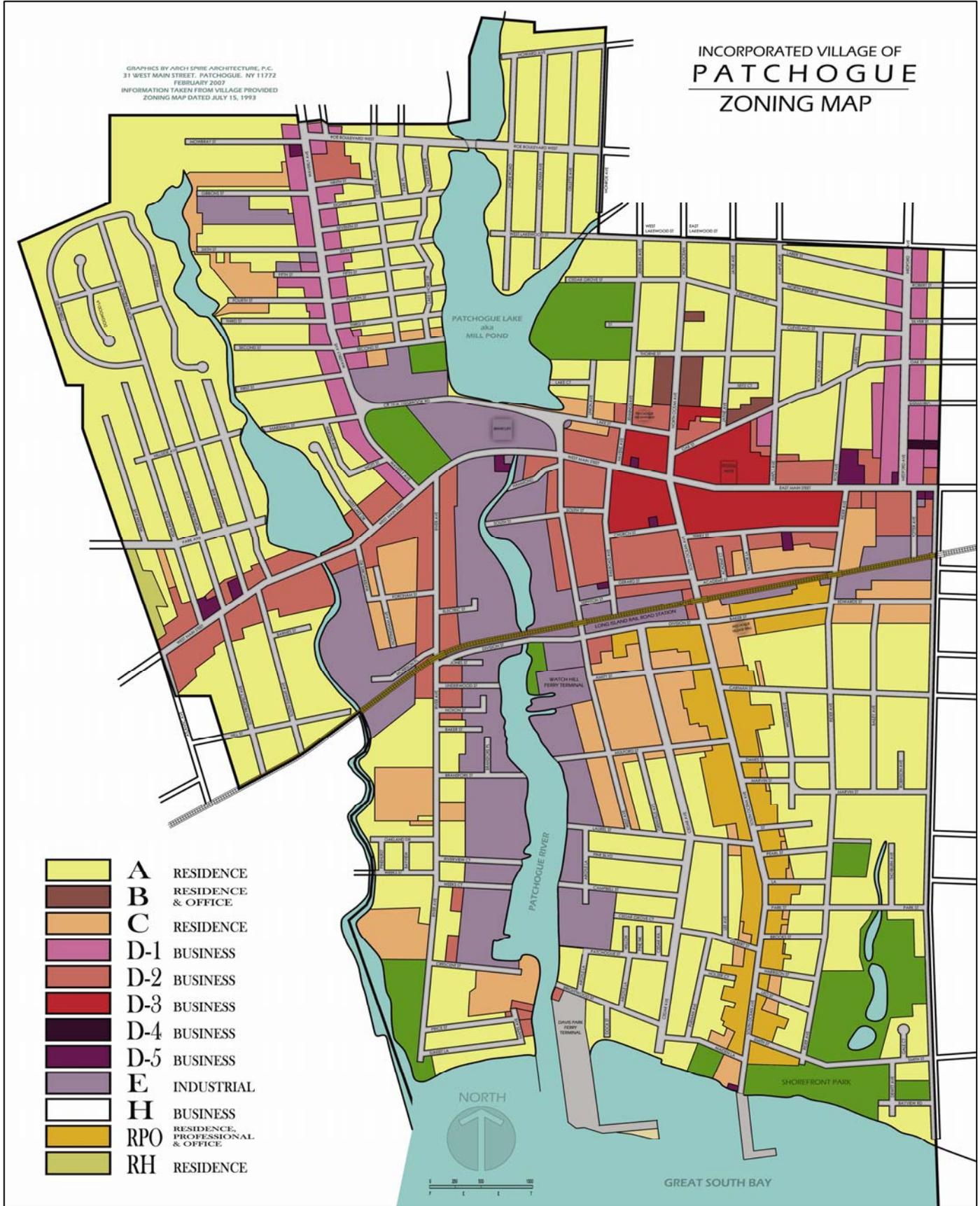
Source: Village of Patchogue Local Waterfront Revitalization Plan, 1987 and verified by AKRF, Inc. in October 2007 through review of Suffolk County Real Property Tax Service Agency 2006 CD-ROM and 2007 Tax Maps.

Village of Patchogue LWRP/HMP

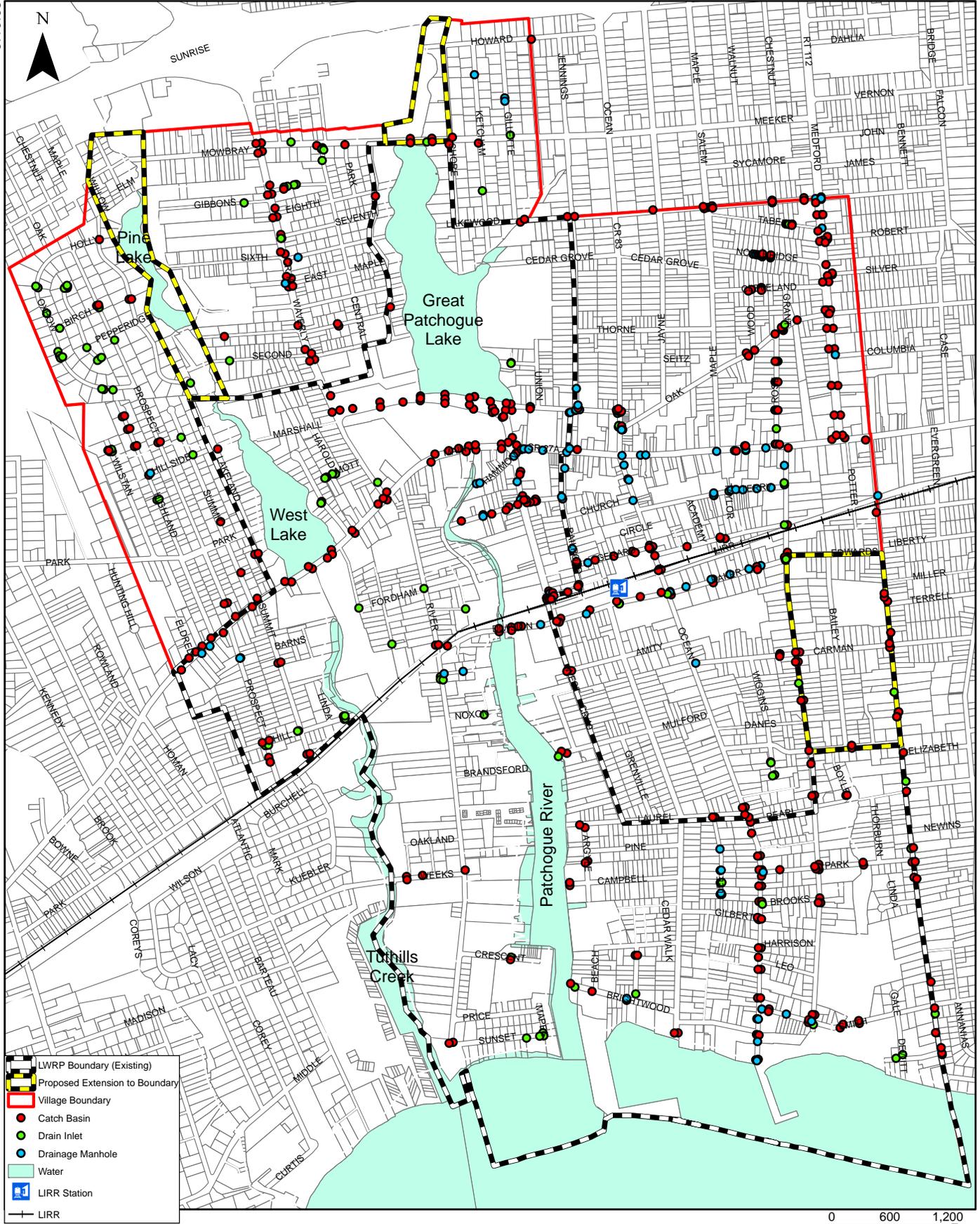
Publicly Owned Lands
Figure II-1B

GRAPHICS BY ARCH SPIRE ARCHITECTURE, P.C.
31 WEST MAIN STREET, PATCHOGUE, NY 11772
FEBRUARY 2007
INFORMATION TAKEN FROM VILLAGE PROVIDED
ZONING MAP DATED JULY 15, 1993

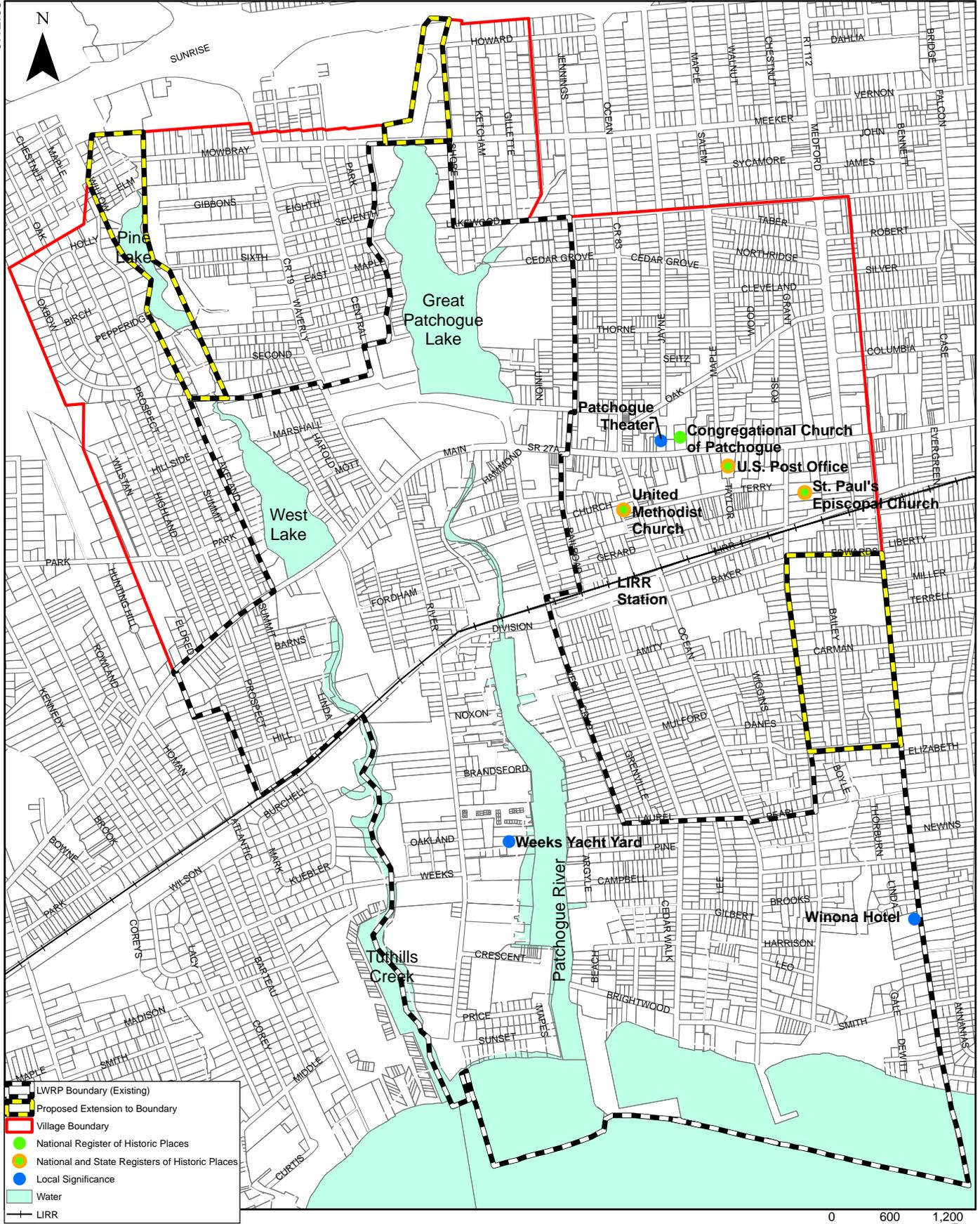
INCORPORATED VILLAGE OF PATCHOGUE ZONING MAP



Source: Village of Patchogue, July 15, 1993



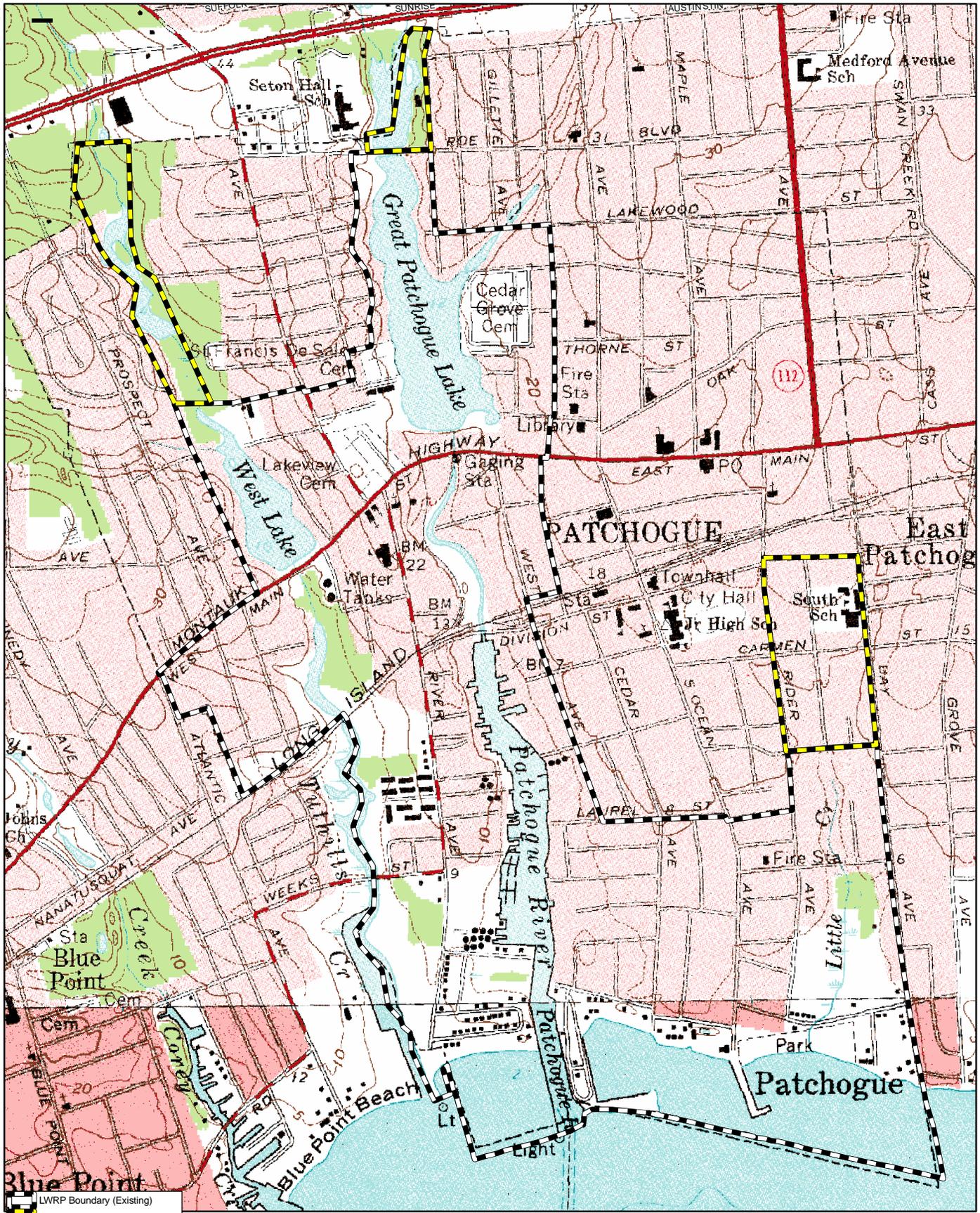
Source: Suffolk County Real Property and Village of Patchogue, 2007



Note: With the exception of properties zoned A Residence, the entire Village is a local historic district. See Figure II-2.
 Source: Suffolk County Real Property and Village of Patchogue, 2007
www.nationalregisterofhistoricplaces.com/NY/Suffolk/state5.html, accessed on August 14, 2007.

Village of Patchogue LWRP/HMP

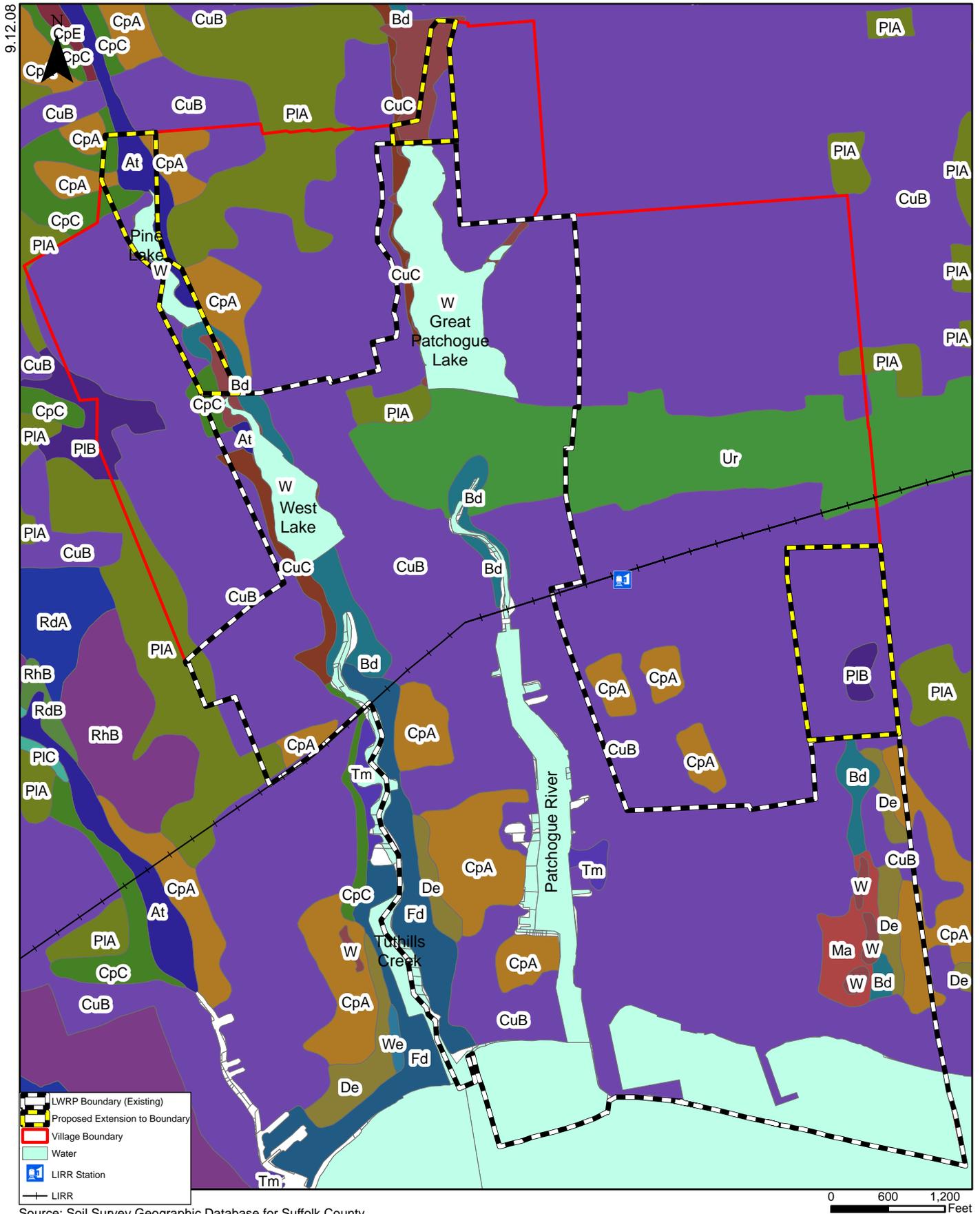
**Historic Resources
 Figure II-4**



Source: United States Department of the Interior Geological Survey, Patchogue Quad, 1967

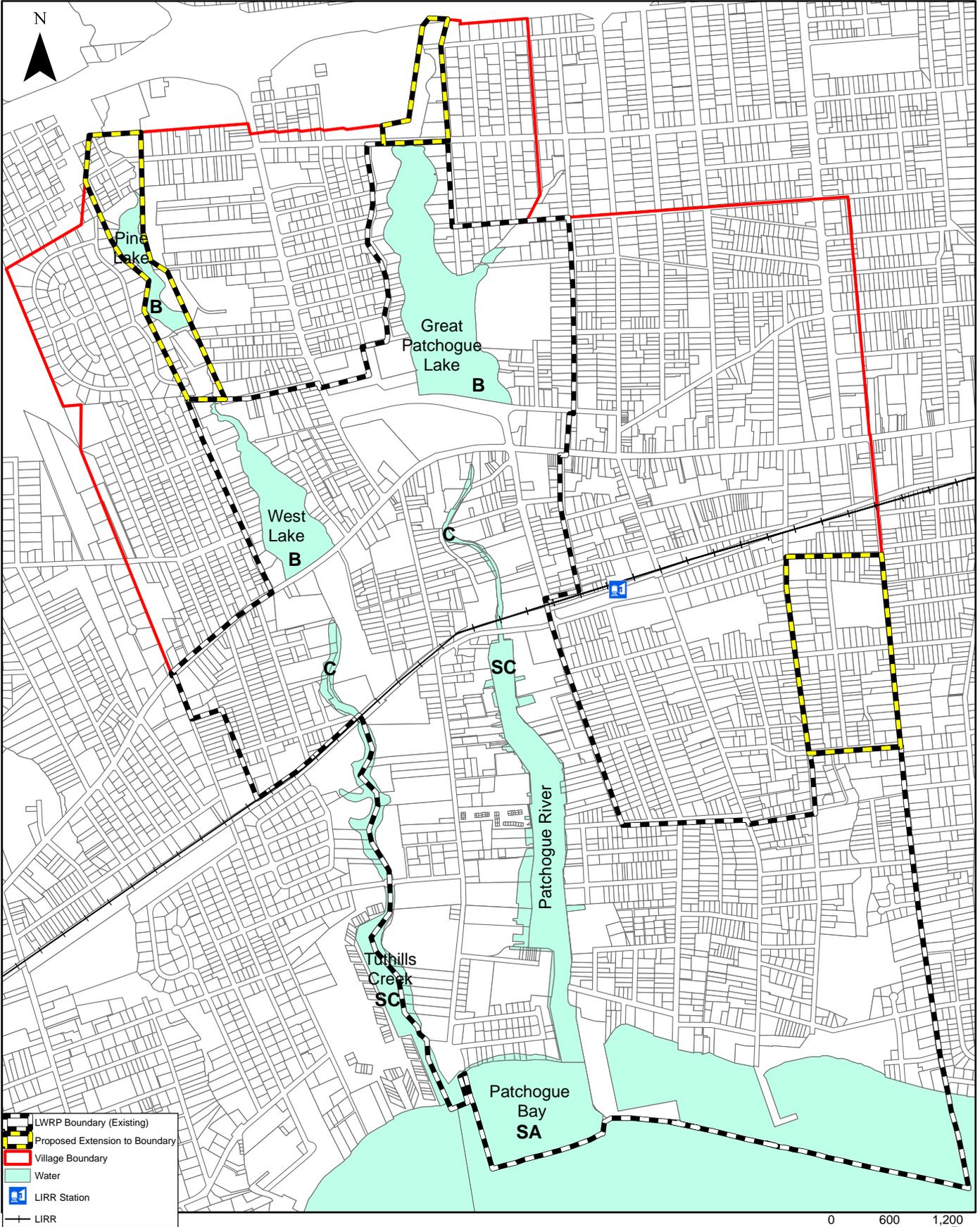
Village of Patchogue LWRP/HMP

USGS Topographic Map
Figure II-5

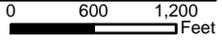


Village of Patchogue LWRP/HMP

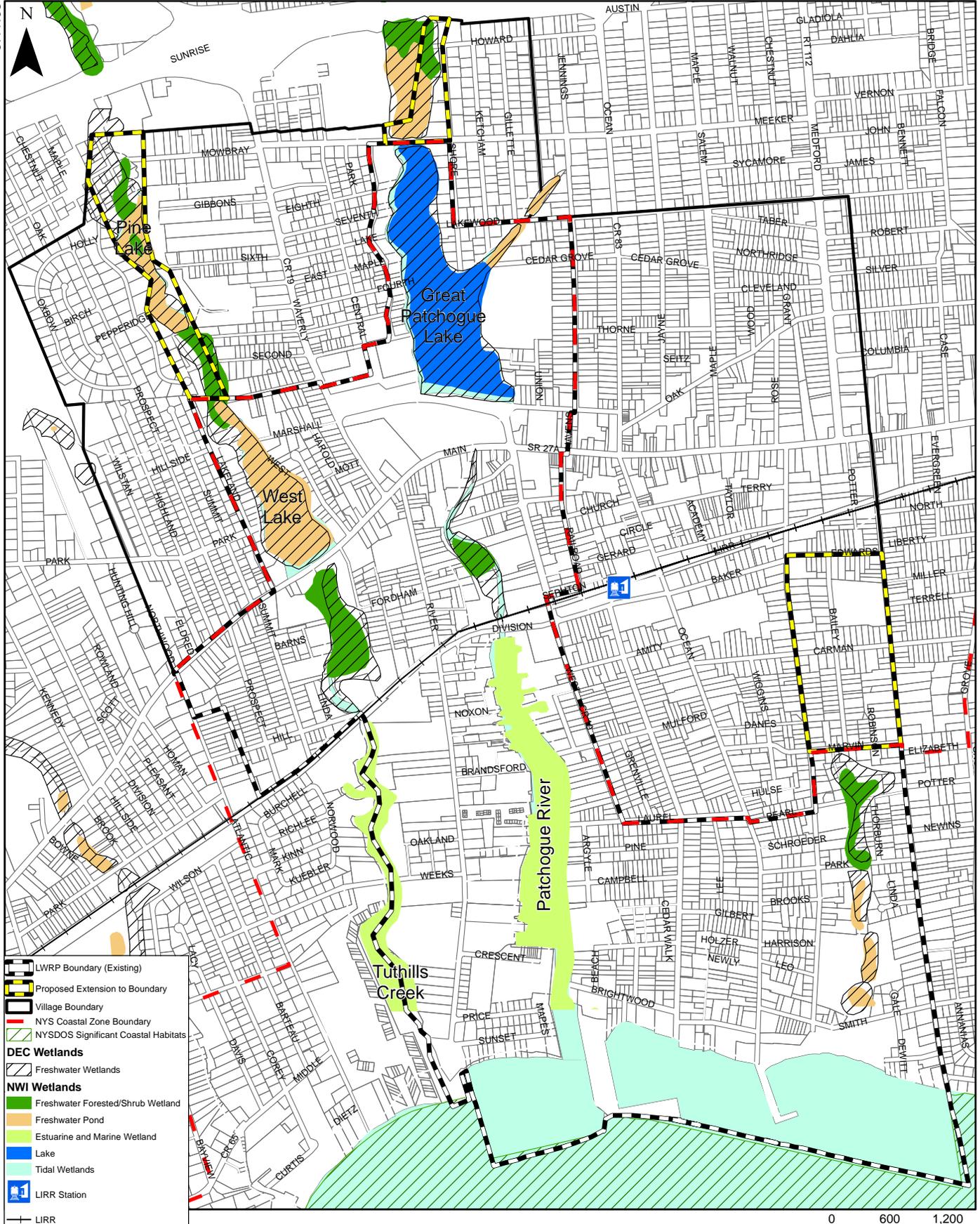
Soils
Figure II-6



- LWRP Boundary (Existing)
- Proposed Extension to Boundary
- Village Boundary
- Water
- LIRR Station
- LIRR



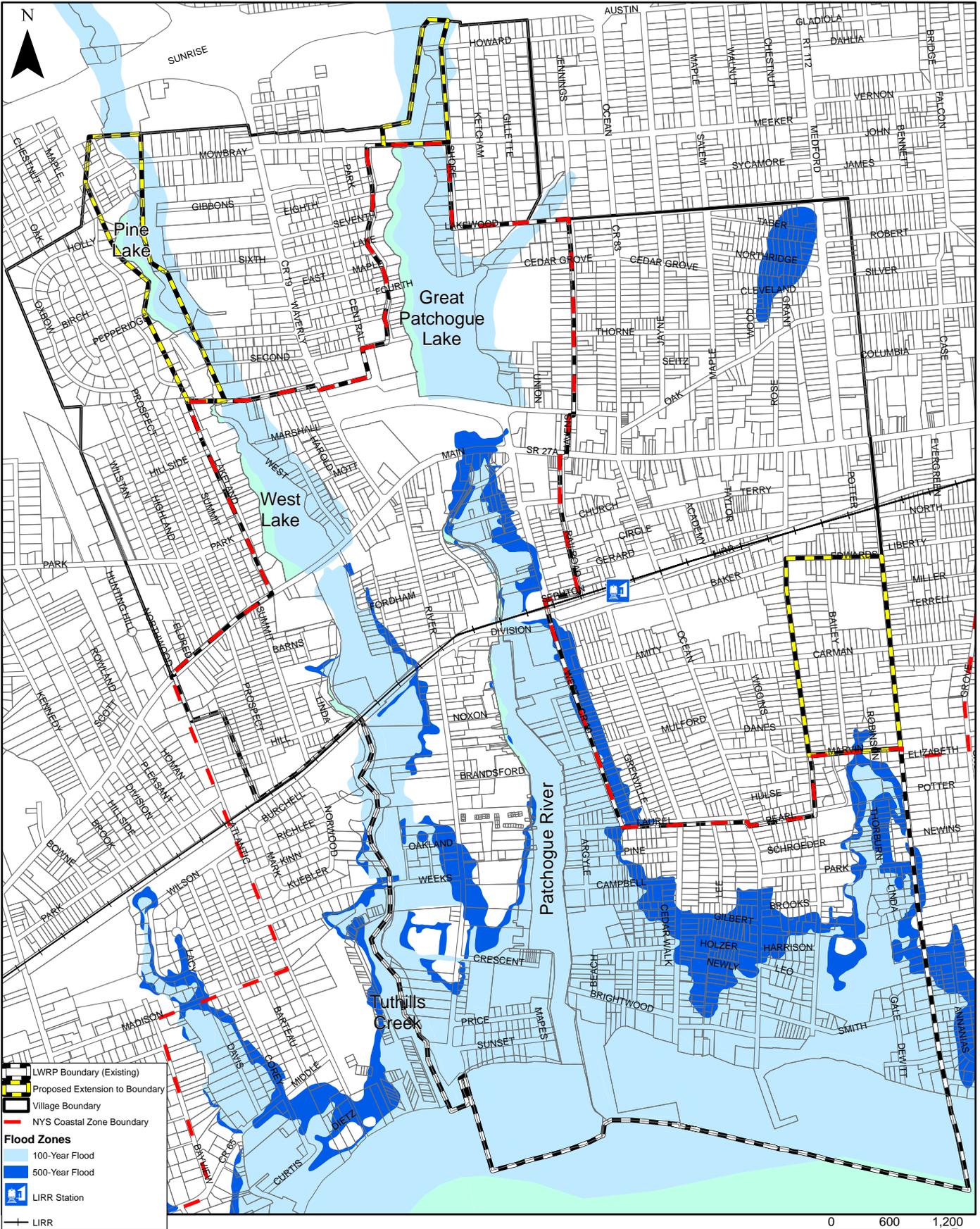
Source: Suffolk County Real Property and Village of Patchogue, 2007
 New York State Department of Environmental Conservation, 2006



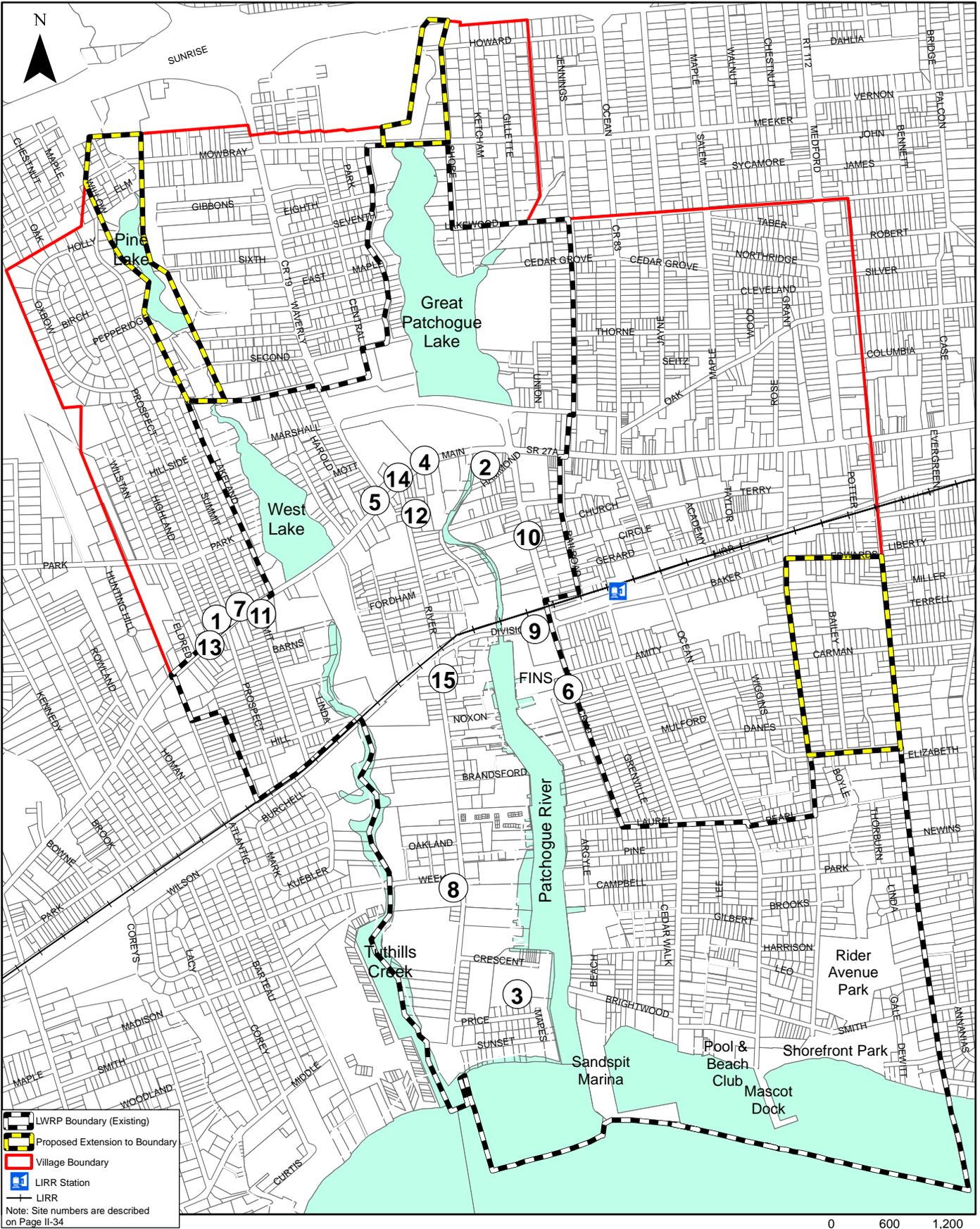
Source: Suffolk County Real Property and Village of Patchogue, 2007
 Soil Survey Geographic Database for Suffolk County,
 US Department of Agriculture, Natural Resource Conservation Service, 2006

Wetlands and Significant Habitats
 Figure II-8

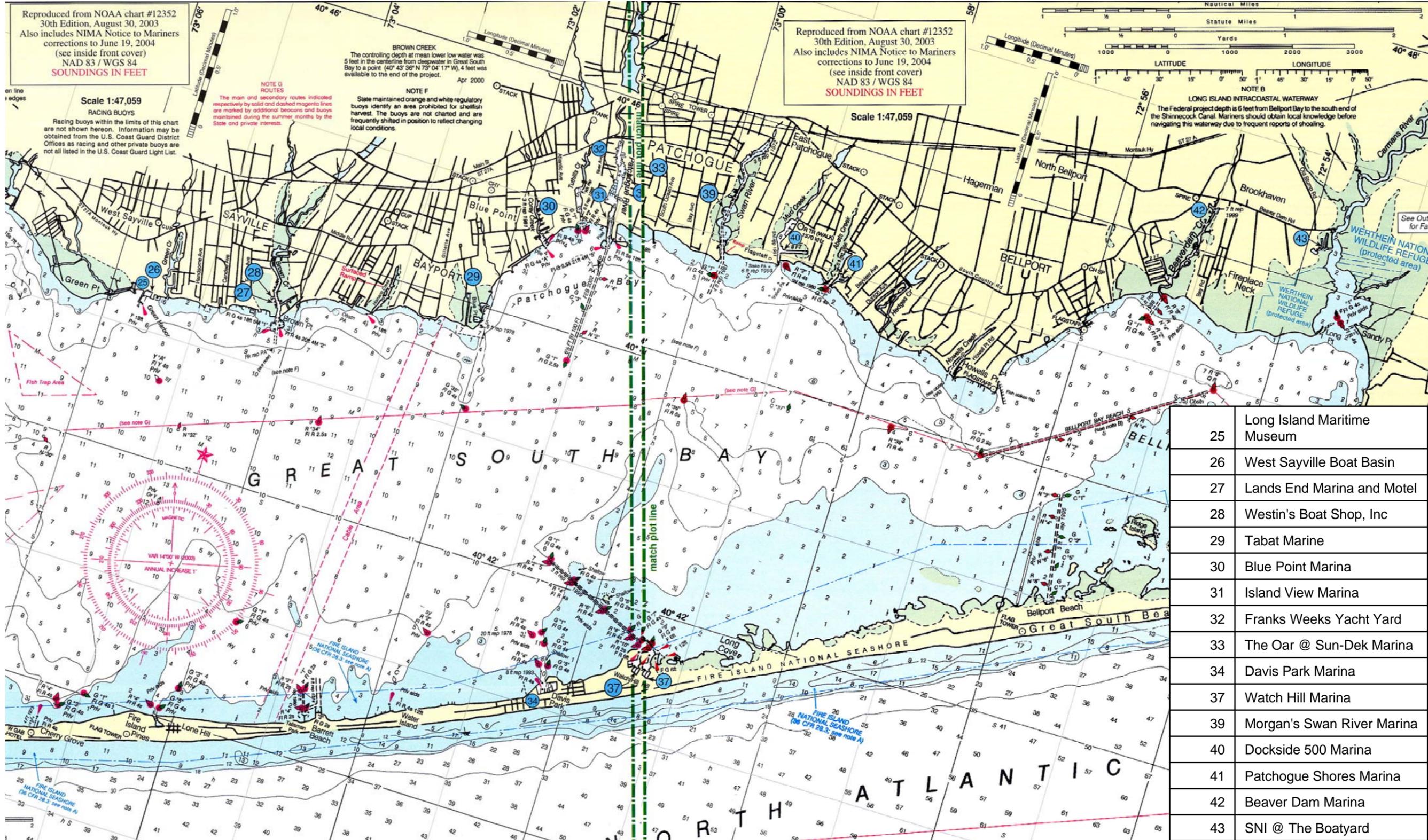
Village of Patchogue LWRP/HMP



Source: Suffolk County Real Property and Village of Patchogue, 2007
 FEMA, Flood Insurance Rate Maps, 2006



Source: Suffolk County Real Property and Village of Patchogue, 2007
 US Environmental Protection Agency, 2007



Source: Richardsons' Chartbook and Cruising Guide, South Shore of Long Island and New York Harbor, 2004

25	Long Island Maritime Museum
26	West Sayville Boat Basin
27	Lands End Marina and Motel
28	Westin's Boat Shop, Inc
29	Tabat Marine
30	Blue Point Marina
31	Island View Marina
32	Franks Weeks Yacht Yard
33	The Oar @ Sun-Dek Marina
34	Davis Park Marina
37	Watch Hill Marina
39	Morgan's Swan River Marina
40	Dockside 500 Marina
41	Patchogue Shores Marina
42	Beaver Dam Marina
43	SNI @ The Boatyard