

HARBOR VIEW ESTATES

DRAFT ENVIRONMENTAL IMPACT STATEMENT

HAMLET OF COPIAGUE, TOWN OF BABYLON SUFFOLK COUNTY, NEW YORK

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SUMMARY

The applicant is proposing to join six tax lots to redevelop a 5.03-acre site located at South Great Neck Road and Austin Place in Copiague. Redevelopment includes construction of five (5) residential buildings containing 40 senior citizen units, construction of a 2,436 square foot community center, construction of roadways and parking areas, installation of play courts, construction of a 14-slip community dock on Howell's Creek, and restoration/protection of a 75' buffer area landward of Howell's Creek. The lots are currently served by public water and sewer systems, which will also serve the proposed senior community. Electric, telephone, and gas services are all proposed as underground utilities.

The majority of proposed roadways and private driveways will utilize UNI Eco-Stone permeable pavers as an environmentally friendly alternative to impervious asphalt or concrete. There will be areas of asphalt paving, including the entrance from South Great Neck Road and community parking stalls.

Linear leaching chambers will handle site drainage. Approximately 222 leaching chambers will be installed throughout the project area to contain stormwater from 2.5" of rain in a 24-hour period. The total volume of storage needed for the site is 15,440 cubic feet. Total volume of storage provided is 15,616 cubic feet, which exceeds the volume needed. Storm events exceeding the capacity of the leaching chambers will discharge stormwater via overland sheet flow through the 75' vegetated buffer area adjacent to Howell's Creek.

This site is located in FEMA flood zones AE and X. Zone AE corresponds to the 100-year floodplain and has a base flood elevation of 7.0 NGVD. Zone X lies outside of the 500-year floodplain. Construction is proposed at elevations ranging from 4.0-7.7 NGVD, and as such, will require fill placement to provide first floor elevations of 9.0 NGVD as required. Approximately 11,280 cubic yards of clean fill will be trucked in from an approved upland site for placement at Harbor View Estates.

There are several potential impacts from the proposed project. Beneficial impacts include restoration and preservation of a wetland buffer area, and increases in tax revenue for the Town of Babylon. Potential adverse impacts may include an increase in demand for community services such as garbage, public water and sewer systems, impacts to surface waters from the proposed dock facility, increase in traffic, impacts to road surfaces from construction traffic, and impacts to floral and faunal communities.

As mitigation for the proposed project, and to protect the tidal wetlands of Howell's Creek, a native buffer zone is proposed for 75' landward of the shoreline. This area is currently comprised of mowed turf grasses as well as native/ornamental vegetative communities located along the creek shoreline. The existing native/ornamental buffer will be supplemented with native grasses, trees, and shrubs to provide for a natural looking buffer between the development and Howell's Creek. The only disturbance proposed for the buffer area is a 4' wide woodchip path to access the proposed dock.

Alternatives to the project include no-action, construction of single-family dwellings per current zoning, and construction of single-family dwellings in cluster form.

To implement the proposed action, numerous permits and approvals are required. The change of zone from Residence “B” to Senior Citizen Multiple Residence (SCMR) and subsequent site redevelopment will require permits from the Town of Babylon Town Board, Planning Board, Department of Public Works, and Zoning Board of Appeals, and the Suffolk County Department of Health, Water Authority, and Department of Public Works. NYSDEC approval is required for both the site redevelopment and proposed dock, and NYSDOS and US Army Corps of Engineers approvals are required for the proposed dock.

DESCRIPTION OF PROPOSED ACTION

Project Purpose, Need, and Benefits

The purpose of Harbor View Estates is to provide a luxury senior community in the Copiague area. The community will include luxury townhouses and condominiums, a community center, dock facility, and large recreation area with walking paths and play courts.

Demand for senior housing far outweighs the existing supply throughout Nassau and Suffolk Counties. According to Newsday (www.newsday.com), waiting lists for senior housing are up to five years. According to the US Census Bureau (Census 2000), there are approximately 4,555 seniors ages 55+ living in the Copiague area. There are currently three senior multi-unit housing complexes in the Copiague area, providing 381 units for an estimated 762 residents (based on 2-person occupancy). The demand for additional senior housing in this area is great.

Harbor View Estates will benefit the hamlet of Copiague and the Town of Babylon in several ways. First and foremost, the community will provide additional senior housing for an estimated 80 residents. The community will also incorporate the restoration of a natural buffer area along Howell’s Creek, to enhance and protect the creek’s tidal wetland habitat. Finally, the senior complex will result in tax revenue increases of \$247,828.69--\$321,925.09 for the Town of Babylon (Table 1, Exhibit 16).

Table 1. Existing and proposed tax revenue for the Harbor View Estates site.

EXISTING TAXES			PROPOSED TAXES			
Description	Tax Lot	Existing Taxes*	Description	Per Unit	Site Total	
2005 Taxes	Lot 5	\$698.23	Property Taxes	Condos	\$6,556.26	\$183,575.28
	Lot 6	\$1,065.65		Townhouses	\$13,472.77	\$161,673.24
	Lot 7	\$8,090.04	Star Basic Taxes	Condos	\$5,430.57	\$152,055.96
	Lot 9	\$8,738.46		Townhouses	\$12,347.08	\$148,164.96
	Lot 10	\$1,065.65	Star Enhanced Taxes	Condos	\$4,703.85	\$131,707.80
	Lot 11	\$3,665.40		Townhouses	\$11,620.36	\$139,444.32
TOTAL TAXES	ALL Lots	\$23,323.43	TOTAL PROPOSED TAXES		Minimum (Star Enhanced)	\$271,152.12
					Maximum (Property Taxes)	\$345,248.52

Location

This site is located in the southwest portion of Suffolk County, in the hamlet of Copiague within the Town of Babylon. The property is bounded by South Great Neck Road to the east, Austin Place to the south, Howell's Creek to the west, and Merrineck Shopping Center to the north (Exhibit 1). Approximately 427' of shoreline frontage is maintained along Howell's Creek.

The proposed project is identified on the Suffolk County Tax Map as District 100 Section 192 Block 01 Lots 5, 6, 7, 9, 10, and 11. Please refer to the site plan and tax map for the location of each tax lot (Exhibits 2, 3).

Site History

The subject lots were developed in the 1930's for single-family residential use. Tax Lots 5 and 10 are currently vacant. A dwelling and detached garage were recently removed from Tax Lot 6, which is now vacant except for a wood pier to access Howell's Creek. There is currently a one story frame dwelling with detached garage on Tax Lot 7, a 2-½ story frame dwelling with detached building on Lot 9, and a two story frame dwelling, frame dwelling and shed on Lot 11.

According to the prior owner, the boat basin was constructed in the late 1960's or early 1970's under agreement with the Town of Babylon. The basin was excavated to a depth of 12'-15' and spoil was used as fill for low areas to construct Amityville High School. Although an exact date of construction has not been determined, NYSDEC Tidal Wetland Map #634-502 (1974 aerial photography) shows the boat basin (Exhibit 4).

In 1989, applications were made to the Town for rezoning to Senior Citizen Multiple Residence. A positive declaration was adopted and a draft Environmental Impact Statement (DEIS) was prepared. However, the project was withdrawn in 1993 at the applicant's request.

Proposed Redevelopment Plan

Project Design and Layout

Upland Development

The applicant is proposing to combine the aforementioned tax lots to redevelop this 5.03-acre site as a senior community. Redevelopment includes construction of five (5) residential buildings containing 40 senior citizen units, construction of a 2,436 square foot community center, construction of roadways and parking areas, installation of recreational improvements, construction of a 14-slip community dock, and restoration/protection of a 75' buffer area (native vegetation) landward of Howell's Creek (Exhibit 2). Table 2 (below) provides a comparison of the existing versus proposed lot usage.

Table 2. Area coverage in the project site (see also Exhibit 4).

Category	Existing Acreage	Post Construction Acreage
Buildings	0.13	0.80
Impervious Surfaces (roads, buildings, pavement)	0.12	0.21
Pervious roads, driveways, walkways	0.05	0.73
Surface Water	0.63	0.63
Vegetated Wetlands	0.00	0.00
Lawn/Landscaping	3.31	1.87
Natural/Undisturbed	0.79	0.79
TOTAL	5.03	5.03

Approximately 40 senior citizen units will be provided in the form of twelve (12) 2-bedroom townhouses and twenty-eight (28) 1-bedroom condominium units as described in Table 2A.

Table 3. Breakdown of building and unit size in square feet.

Building	Building Footprint (sq.ft.)	Unit Size (sq.ft.) *includes all floors
TH1	7,834	2,437 (2 units)
		2,355 (4 units)
TH2	7,834	2,437 (2 units)
		2,355 (4 units)
C1	8,308	1,170 (4 units)
		1,178 (4 units)
		1,193 (2 units)
		1,213 (2 units)
C2	4,154	1,167 (1 unit)
		1,174 (1 unit)
		1,193 (2 units)
		1,213 (2 units)
C3	6,923	1,167 (1 unit)
		1,170 (2 units)
		1,174 (1 unit)
		1,178 (2 units)
		1,193 (2 units)
		1,213 (2 units)

All lots are currently served by public water and sewer systems, with connections proposed within the redevelopment plan (refer to Water Resources section). Electric, telephone, and gas services will be located underground, and have been designed with the assistance of LIPA and Verizon to ensure adequate service levels (Exhibit 2).

The majority of proposed roadways and private driveways will utilize UNI Eco-Stone permeable pavers as an environmentally friendly alternative to impervious asphalt paving or concrete surfacing (photo below). UNI Eco-Stone pavers are an approved Best Management Practice under the EPA’s Phase II Stormwater Management regulations. They also qualify for credits under a number of LEED sections (see below). “Properly designed UNI Eco-Stone pavement systems will provide functional pavements for any loading conditions and can be designed to accommodate any needed stormwater management requirement.” (UNI-Group USA, 1993).

UNI Eco-Stone pavers are designed to allow stormwater to penetrate, thereby making the surface permeable and environmentally friendly. Permeability depends on infiltration rates of the joint and drainage opening material, bedding layer, and base materials. This system has been designed to have a permeability of 50%, which translates to 50% of water passing through the pavers (not 50% opening, which is a common, but errant, assumption). In addition to permeability, the paver system is designed to support the traffic load expected with this project. UNILOCK pavers have a lifetime guarantee on structural integrity (UNILOCK, pers. comm.). Please refer to Exhibit 2 for structural and permeability design details.



UNI Eco-stone paver system

(Photo taken from Interlocking Paving Systems, Inc.,
http://www.interlockonline.com/uni_eco.html)

Areas of asphalt paving are also proposed for the entrance to the community from South Great Neck Road and the common parking areas. The first 90' of the entrance to Harbor View Estates will be paved, and will be bisected by a landscaped median. The common parking areas will all contain paved surfaces.

Parking for Harbor View Estates will be provided through private driveway and garage areas for the townhouses, and common parking areas for the condominium units. Eighty (80) parking spaces are required per the Town of Babylon. Ninety-one (91) spaces, including four (4) handicapped spaces, are provided (refer to Parking section for details).

In addition to the residential units and roadways, community recreation areas are proposed. As stated above, a 2,436 square foot community building and fountain area with benches is proposed to be centrally located for the use of all residents. A 62' x 18' bocce ball court is proposed southwest of building TH2, and a 50' x 20' horseshoe pit is proposed west of building C3.

Dock

The site adjoins Howell's Creek, with 306'+/- of shoreline within the man-made boat basin. As such, limited water access for the residents will be provided via a 14-slip community dock. The dock will have the following components:

- 4' x 4' ACQ timber stairs
- 21' x 4' fixed ACQ timber catwalk
- 11' x 3' ACQ ramp

- Two ACQ timber floating docks: 87’ x 6’ and 84’ x 6’
- Catwalk and floats will be supported by 12” diameter ACQ timber piles

ACQ (alkaline copper quaternary) is timber treatment that is environmentally friendlier than CCA (chromated copper arsenate). It is a water-based wood preservative that prevents decay from fungi and insects. There are four types of ACQ treatments that allow flexibility in achieving compatibility with different wood species and end use applications. All four ACQ types contain two active ingredients: (1) copper oxide (62-71%), the primary fungicide and insecticide, and (2) quaternary ammonium compound (29-38%), which provides additional fungicide and insect resistance properties. This project will utilize ACQ-D, which contains 66.7% copper oxide and 33.3% quaternary ammonium compound as didecyldimethylammonium chloride (DDAC). ACQ treated timber leaves a dry, paintable surface, and is certified for use on lumber, timbers, landscape ties, fence posts, building and utility poles, land, freshwater and marine pilings, sea walls, decking, wood shingles, and other wood structures.

Buffer Area

To protect the tidal wetlands of Howell’s Creek, and as mitigation for the proposed project, a native buffer zone is proposed for 75’ landward of the shoreline. Buffer planting specifications are provided in Table 2B and Exhibit 2.

The buffer area is currently comprised of mowed turf grasses as well as native/ornamental vegetative communities located along the creek shoreline. The existing native/ornamental buffer will be supplemented with native grasses, trees, and shrubs to provide for a natural looking buffer between the development and Howell’s Creek. The only disturbance proposed for the buffer area is a 4’ wide woodchip path to access the proposed dock.

Table 4. Harbor View Estates 75’ buffer area planting specifications.

		Common Name	Scientific Name	Planting Specifications
<u>Proposed</u> Buffer Plantings	Grasses	Switchgrass	<i>Panicum virgatum</i>	Seeded; 20lbs/acre
		Wildflower mix	(various)	Seeded; 20lbs/acre
	Trees/Shrubs	Bayberry	<i>Myrica penslyvanica</i>	6’ center; min. 2 gal container
		Inkberry	<i>Ilex glabra</i>	6’ center; min. 2 gal container
		Red chokeberry	<i>Aronia arbutifolia</i>	6’ center; min. 2 gal container
	Red maple	<i>Acer rubrum</i>	6-8’ tall, 1.5” caliper dbh	
<u>Existing</u> Vegetation to Remain	Trees/Shrubs	Red maple	<i>Acer rubrum</i>	N/A
		Norway maple	<i>Acer platanoides</i>	
		Tree of Heaven	<i>Ailanthus altissima</i>	
		Oriental bittersweet	<i>Celastrus orbiculatus</i>	
		Japonesse honeysuckle	<i>Lonicera japonica</i>	
		Crabapple	<i>Malas sp.</i>	
		Black cherry	<i>Prunus serotina</i>	
		Northern red oak	<i>Quercus rubra</i>	
		Multiflora rose	<i>Rosa muuultiflora</i>	
		Common reed	<i>Phragmites australis</i>	

Drainage

Drainage on this site will be handled by linear leaching chambers. Leaching chambers are similar to drywells, but are positioned linearly for this project. Drywells are an acceptable water quality management practice per Section 5.1 of the New York State Stormwater Management Design Manual prepared for the NYSDEC (Center for Watershed Protection, August 2003). Approximately 222 leaching chambers measuring 4' x 8' x 2.0-2.5' will be installed throughout the project area.

Leaching chambers have been designed to contain stormwater from 2.5" of rain in a 24-hour period. The total volume of storage needed for the site is 15,440 cubic feet. Total volume of storage provided is 15,619 cubic feet, which exceeds the volume needed. Storm events exceeding the capacity of the drywells will discharge stormwater via overland sheet flow through the 75' vegetated buffer area adjacent to Howell's Creek.

Flood Code Construction

This project lies within a FEMA designated flood zone. According to the Flood Insurance Rate Map (Map #36103C0842G), the property lies within zones AE and X. Zone AE corresponds to the 100-year floodplain, and has a base flood elevation of 7.0 NGVD. Zone X is determined to be outside a 500-year floodplain.

Construction is proposed at elevations ranging from 4.0-7.7 NGVD (existing site elevations). Fill will be placed in these areas to allow for adequate drainage capacity and to provide first floor elevations of at least 9.0 NGVD. Approximately 11,280 cubic yards of clean fill (7,730 cy within NYSDC jurisdiction and 3,550 cy of fill outside of NYSDEC jurisdiction) will be trucked from an approved upland source and placed on site to meet FEMA regulations. No fill will be placed in the 75' buffer area.

As stated, fill will be placed to meet FEMA regulations for first floor elevation. Building C3 will have the lowest first floor elevation at 9.0 NGVD; the remaining buildings will all be sited above 9.0 NGVD. Please note that footings for each structure will be placed on virgin soils and foundation walls will be extended as necessary to proposed grade.

All unit utilities, including HVAC systems and hot water heaters, will be placed above the FIRM base flood elevation of 7.0 NGVD and will not require any special flood proofing. Heating systems will be located inside each unit at the first floor elevation or higher (i.e. ≥ 9.0 NGVD). Air conditioning units will be placed outside adjacent to each unit at a minimum elevation of 7.0 NGVD (the lowest grade adjacent to the proposed structures is 7.25 NGVD).

Leadership in Energy and Environmental Design (LEED) Rating

The U.S. Green Building Council (USGBC) developed the LEED Green Building Rating System as a national benchmark for design, construction, and operation of high performance green buildings (www.usgbc.org). There are five categories of LEED: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, and Indoor Environmental Quality. Buildings and/or sites are given a LEED rating based on a system of credits for incorporating environmentally responsible practices into the development. Such practices include reduced site

disturbance, water efficient landscaping, renewable energy, resource reuse, and carbon dioxide monitoring, among many others.

There are four levels of LEED rating based on the number of credits earned out of sixty-nine (69) possible credits: Certified (26-32 credits), Silver (33-38 credits), Gold (39-51 credits), and Platinum (52-69 credits). The Town of Babylon is currently amending the Town Code to require a minimum Certified rating for all new multiple family developments. Harbor View Estates will incorporate into the project design practices to provide the required LEED Certified rating.

Project Construction and Operation

Construction will be completed in two (2) phases. The first phase includes construction of the Recreation building, one Townhouse building, and one Condominium building. Phase II includes the remaining Townhouse building and two Condominium buildings. Total duration of construction is expected to be two (2) years.

Approvals Required

The following approvals are required for this project:

1. United States Army Corps of Engineers (USACOE)—Clean Water Act
2. New York State Department of Environmental Conservation (NYSDEC)—Article 25
3. New York State Department of State (NYSDOS)—Coastal Consistency Act
4. Suffolk County Department of Health (SCDH)—Waste Water Management
5. Suffolk County Water Authority (SCWA)—Water Connection
6. Suffolk County Department of Public Works (SCDPW)—Sanitary Connection
7. Town of Babylon Town Board—Change of Zone
8. Town of Babylon Planning Board—Site Plan Approval
9. Town of Babylon Zoning Board of Appeals—Variance Approval
10. Town of Babylon Department of Public Works—Curb Cuts

Environmental Setting

Geology, Soils, and Topography

Geology

There are no significant geological features found on this site. The site is relatively flat land, with little topographical relief. The majority of the lot area has been historically disturbed by clearing and construction improvements evident. Howell's Creek, a narrow mud-bottom creek typical of Long Island, adjoins the site on the west. Aerial photography indicates that the majority of the Howell's Creek shoreline has been hardened with bulkhead structures.

Soils

According to the Soil Survey of Suffolk County, New York (USDA, 1975), the project site contains Tidal Marsh (TM) and Riverhead/Haven Soils, graded, 0-8% slopes (RhB) (Exhibit 5). Characteristics of each were taken from the Soil Survey of Suffolk County and are as follows:

Tidal Marsh

Tidal marsh consists of the intertidal areas bordering Howell’s Creek. Tidal marsh soils can inundated daily by the tides, and may also be flooded during high moon or storm tides. Tidal marsh soils drain very poorly and are not suitable for farming or community planning and development.

Riverhead and Haven Soils, graded, 0-8% slopes

This soil classification is made up of the Riverhead series and Haven series of soils. Haven series soils are deep, well-drained, medium textured soils formed in a loamy or silty mantle over stratified coarse sand and gravel. Riverhead series soils are also deep, well-drained soils that are moderately coarse in texture and formed in a mantle of sandy loam over thick layers of coarse sand and gravel. Both of these soil series occur throughout Suffolk County.

Soils are rated for suitability in Town and Country Planning, including sewage disposal fields, homesites, streets and parking lots, lawns, landscaping and golf fairways, and others not applicable to this project. A rating of slight limitation indicates that the soil has few or no limitations for that use, or that any limitations present may be overcome at little cost. Moderate limitation ratings indicate that the limitation is harder to correct or may not be possible to correct in some areas. A severe limitation rating means that it is difficult or may be cost prohibitive to overcome limitations. Limitations on soils are assigned by depth to seasonal high groundwater, permeability, slope, and surface stoniness. As the majority of this site is flat, limitations due to slope are negligible.

For the purposes of community planning and development, the Riverhead and Haven soils found on this site are suitable. There are only slight limitation ratings with respect to sewage disposal fields, homesites, and lawn/landscape areas; the limitation listed was construction of basements, which is not proposed with this project. A moderate limitation is listed for streets and parking lots, however, this limitation is slight for town or county roads.

In addition to the Soil Survey of Suffolk County, test borings were conducted on site to determine the specific soil characteristics for the property. Six soil borings were conducted to determine specific soil characteristics and depth to groundwater. Results are summarized in Table 3 below and in Exhibit 2.

Table 5. Soil boring locations and depth to groundwater.

Boring	Location	Groundwater Elevation (NGVD)
B1	NW corner in proposed buffer area	+2.00'
B2	SW area of proposed buffer	+2.82'
B3	SW corner in area of proposed sport court	+0.90'
B4	NW corner near proposed condominiums	+2.85'
B5	SE corner in proposed parking area	+2.00'
B6	75' buffer line in area of path *taken at high tide	+2.10'

Analysis of the Soil Survey of Suffolk County and test borings done at the site demonstrate that there are no soil limitations for Harbor View Estates as proposed.

Topography

A topographic survey was performed by John Robinson, Land Surveyor, on 6/28/2004 and referenced to NGVD 1929 (Exhibit 6). The survey shows a minimum elevation of 3.6' and maximum elevation of 8.1' NGVD, with all slopes less than 5%.

Water Resources

Surface Water

The site borders Howell's Creek, a tidal creek that connects to Great South Bay. On the subject property, a man-made boat basin was excavated in the late 1960's/early 1970's (see Site History) to provide additional surface water for recreational activities and to provide fill for a public improvement project. The boat basin averages 80'+/- in width (width varies along length of site) to the west property line.

The waters of Howell's Creek have a NYS Water Classification Standard of SC for saline surface waters [MW7.8, AO-GSB-204 thru 216, tidal tribs to Great South Bay, West (1701-0373)]. Class SC is best used for fishing; waters are suitable for fish propagation and survival. Although recreation is stressed due to urban runoff and storm sewers, water quality is suitable for primary and secondary contact recreation.

Groundwater

Groundwater is the sole water supply source for Long Island (LIRPB, 1978). The site lies south of the Ronkonkoma Terminal Moraine, and is underlined by three principal aquifers, the Upper Glacial aquifer, Magothy aquifer, and Lloyd aquifer. The area's water supply is derived primarily from the Magothy aquifer. The hydrogeologic formations directly below the project site, from bedrock to surface, are as follows: bedrock, Lloyd aquifer, Raritan clay, Magothy aquifer, Upper Glacial aquifer. Detailed information on groundwater hydrology was obtained from the Ground Water Atlas of the United States (USGS, 2006).

The Lloyd aquifer is made up of discontinuous layers of gravel, sand, sandy clay, silt and clay. The sand and gravel beds are composed of various colored, angular to rounded grains of quartz. They contain minor amounts of chert and other stable minerals. Also present are various colored clay lenses, thin lenses and scattered particles of lignite. In the project site, the Lloyd aquifer is approximately 400-500 feet thick, ranging from 1500-1700 feet in elevation below sea level.

The Raritan clay is composed of colored clays and varying amounts of silt and sand. It lies between the Lloyd aquifer and Magothy aquifer, and is approximately 300' thick in the project area. The Raritan clay acts to confine water in the Lloyd aquifer below, and although its conductivity is very low, some movement of water between the lower Lloyd aquifer and upper Magothy aquifer does occur.

The Magothy aquifer is composed of upper Cretaceous sediments. It is located above the Raritan clay layer, and is overlain by Pleistocene deposits that make up the Upper Glacial aquifer. It is composed of lenticular and discontinuous beds of very fine to medium sand that frequently contain thin clay lenses which are interbedded with clay, sandy clay, silt and some sand and gravel. The lower 100-150 feet of the Magothy aquifer frequently contains beds of coarse sand

and gravel, grading from coarser near the bottom to finer grains near the top. In the project area, the Magothy aquifer is approximately 800-1000' thick, and is the main source of water for public supplies.

The Upper Glacial aquifer lies above the Magothy aquifer and consists of late Pleistocene and Holocene age deposits. The upper boundary of this aquifer is the present land surface. Upper Glacial deposits are made of beds of fine to coarse stratified sand and gravel, boulder clay or till. The Upper Glacial aquifer contains the ground water table in the area and is significant because it transmits all of the recharge entering from the surface to the ground water regime including all of the underlying aquifers. Precipitation filtering down through the upper reaches of this aquifer to the water table is the principal source of groundwater recharge, with septic tank and cesspool effluent, irrigation water and infiltration from stormwater recharge basins making up the remainder. Although sand and gravel deposits in the Upper Glacial aquifer are highly permeable and can yield large amounts of water, they are not presently used for public water due to pollution from sanitary effluent, fertilizers and other contaminants.

South of the Ronkonkoma Terminal Moraine, groundwater flows in a southerly direction. Water moves downward into the aquifers and horizontally within the aquifers north of the project area, and then moves upward in the vicinity of the site to discharge into Great South Bay. However, direction of groundwater flow is influenced by pumping of the aquifers. Pumping lowers water levels and induces flow toward the pumped wells (Stumm et.al., 2002).

Stormwater Pollution Prevention Plan

The Stormwater Pollution Prevention Plan prepared for Harbor View Estates can be found in Appendix A.

Water Use

As stated above, there are currently three lots occupied with three single-family dwellings. A single-family dwelling is estimated to utilize approximately 300 gallons per day (gpd), for a total of 900gpd current water usage on this site.

The proposed senior community will utilize an average of 6,000gpd. As such, an 8" water main is proposed to connect to the existing SCWA water mains via two taps, one on South Great Neck Road and one on Austin Place (Exhibit 2). Each of the units and the community building will then have their own 1" water service from the main line.

The Suffolk County Water Authority (SCWA) was contacted to determine if adequate capacity exists to connect to the water main on South Great Neck Road. In a letter dated 11/1/2006, the SCWA states that there is sufficient capacity to connect to the water main (Exhibit 12).

Sanitary Disposal

As with water flow, the three residences on this site generate an estimated 900gpd sanitary flow. Harbor View Estates will generate an estimated 6,146gpd of sanitary flow (Exhibit 2). The Suffolk County Department of Public Works (DPW) was contacted to determine if sufficient capacity exists to connect to the sewer main on South Great Neck Road. In a letter dated

11/29/2006, the Suffolk County DPW issued a letter stating that sufficient sewer capacity exists to connect to Sewer District No. 3 (Exhibit 11).

There is a permanent sewer easement on the southwest portion of the site. Within the easement is a 60' RCP sewer pipe that runs under Howell's Creek and connects to the sewer system on Maple Court (Exhibit 2).

Ecology

Land Use Ecological Services, Inc. conducted field surveys on 8/30/2006 and 9/8/2006 to catalog flora and fauna found at this site. Field observations were used to supplement literature searches on species expected in each habitat type encountered (i.e. wetland, brush, landscaped).

Terrestrial Vegetation

The subject site has been previously disturbed with dwellings, accessory structures, and landscaping. As such, the majority of the site is classified as either landscaped or brush, with no forest areas. Table 6 outlines the species present or expected to be found at this site.

Table 6. Terrestrial vegetation observed or expected at Harbor View Estates, Copiague.

Common Plant Name	Scientific Name
Japanese Maple	<i>Acer japonica</i>
Norway Maple	<i>Acer plantanoides</i>
Red Maple	<i>Acer rubrum</i>
Tree of Heaven	<i>Ailanthus altissima</i>
Garlic Mustard	<i>Alliaria petiolata</i>
Ragweed	<i>Ambrosia artemisiifolia</i>
Mugwort	<i>Artemisia vulgaris</i>
Groundsel Bush	<i>Baccharis halimifolia</i>
Hedgebind Weed	<i>Calystegia sepium</i>
Catalpa	<i>Catalpa spp.</i>
Chicory	<i>Chichorium intybus</i>
Queen Ann's Lace	<i>Daucus carota</i>
Red Fescue	<i>Festuca rubra</i>
Common Strawberry	<i>Fragaria virginiana</i>
English Ivy	<i>Hedera helix</i>
Honeysuckle	<i>Lonicera sp.</i>
White Mulberry	<i>Morus alba</i>
Deer Tongue	<i>Panicum clandestinum</i>
Switchgrass	<i>Panicum virgatum</i>
Virginia Creeper	<i>Parthenocissus quinquefolia</i>
Common Reed	<i>Phragmites australis</i>
Pikeweed	<i>Phytolacca Americana</i>
Kentucky Bluegrass	<i>Poa pratensis</i>
Big Tooth Aspen	<i>Populus grandidentata</i>
Black Cherry	<i>Prunus serotina</i>
Crab Apple	<i>Pyrus spp.</i>
White Oak	<i>Quercus alba</i>
Red Oak	<i>Quercus rubra</i>
Smooth Sumac	<i>Rhus glabra</i>

Common Plant Name	Scientific Name
Multiflora Rose	<i>Rosa multiflora</i>
Black Willow	<i>Salix nigra</i>
Catbriar	<i>Similax</i>
Goldenrod	<i>Solidago spp.</i>
Dandelion	<i>Taraxacum</i>
Poison Ivy	<i>Toxicodendron radicans</i>
Red Clover	<i>Trifolium pretense</i>
White Clover	<i>Trifolium repens</i>
Arrowwood	<i>Virburnum recognitum</i>

Wetlands

NYSDEC tidal wetland map #634-502 (1974) classifies the waters of Howell's Creek as littoral zone (LZ) (Exhibit 4). Article 25 of the Environmental Conservation Law (ECL) defines littoral zone as, "All lands under tidal waters which are not included in any other category...there shall be no littoral zone under waters deeper than six feet at mean low water". This classification of wetland applies specifically to the waters of Howell's Creek. Land Use Ecological Services conducted a field study of the benthic habitat of Howell's Creek in the existing boat basin. In the area of the proposed dock, there was no submergent vegetation observed and the bottom sediments consisted of a dark, anoxic mud that appears to provide only minimal habitat benefits.

The landward limit of tidal wetlands, as observed by Land Use Ecological Services, is synonymous with apparent high water (AHW). Intertidal wetland vegetation is not present at the site. However, one high marsh tidal wetland species, *Baccharis halimifolia*, was observed on site in areas that may flood during moon or storm tides.

Wildlife

Wildlife species observed or expected to be present at the project site are listed in the following species inventories (Tables 7-10). These lists were generated through multiple site inspections and analysis of vegetation assemblages and habitat types.

Mammals

Mammal species expected on this parcel are commonplace species tolerant of suburban, fragmented habitats and human activity. These species are expected to be distributed throughout the property, but may be particularly abundant near Howell's Creek. Raccoon (*Procyon lotor*) tracks were frequently observed along Howell's Creek. Smaller mammal species, including Eastern cottontail (*Sylvilagus floridanus*), White-footed mouse (*Peromyscus leucopus*), and Short-tailed shrew (*Blarina brevicauda*), are expected in thickets of shrubs and vines as these areas provide protection from avian predators.

Table 7. Mammals observed or expected at Harbor View Estates, Copiague.

Common Name	Scientific Name	Observed or Expected
Short-tailed Shrew	<i>Blarina brevicauda</i>	Expected
Opossum	<i>Didelphis virginiana</i>	Expected
House Mouse	<i>Mus musculus</i>	Expected
Little Brown Bat	<i>Myotis lucifugus</i>	Expected
White-footed Mouse	<i>Peromyscus leucopus</i>	Expected
Raccoon	<i>Procyon lotor</i>	Tracks Observed
Norway Rat	<i>Rattus norvegicus</i>	Observed
Eastern Mole	<i>Scalopus aquaticus</i>	Expected
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	Observed
Eastern Cottontail	<i>Sylvilagus floridans</i>	Observed

Avians

This project site has been previously disturbed by human activity, including dwellings, docks, and landscaping. As such, the majority of avian species expected are those tolerant of suburban, fragmented habitats and human activity, similar to the mammal species above. Table 8 lists the avian species observed on site, expected with these habitat characteristics, or listed in the New York State Breeding Bird Atlas (NYS BBA) for the project area. Of the sixty-six (66) bird species listed in Table 8, only fifty-one (51) species have been observed or are expected to inhabit this habitat type; the remaining fifteen (15) species are listed on the NYS BBA for this quadrant but are not expected to be found on the site due to differing habitat requirements. Please note the NYS BBS quadrant for this site includes coastal areas along Great South Bay, which offer substantially different habitat types than those found on the project site.

Three main habitat types are found onsite: (1) woodland (not forest), (2) brush/field, and (3) marsh or habitat adjacent to water. A variety of birds utilize this area for nesting, foraging, or resting. Dominant species observed were upland species adapted to suburban, fragmented habitats and human activity, including the Red-winged blackbird (*Agelaius phoeniceas*), Tufted titmouse (*Baeolophus bicolor*), Northern cardinal (*Cardinalis cardinalis*), American goldfinch (*Carduelis tristis*), House finch (*Carpodacus mexicanus*), and American crow (*Corvus brachyrhynchos*). Please note that the Mallard (*Ana platyrhynchos*), a marsh/pond species, is also tolerant of human activity and typically settles near parks.

The NYS BBA lists twenty-eight (28) species that are confirmed breeders in this quadrant, and twenty-three (23) species as probable or possible breeders. However, fifteen (15) of these species are not expected within the project area due to different habitat type requirements such as beaches, sandbars, or oyster beds, none of which are found in the project area.

Table 8. Avian species, breeding status, species observed at Harbor View Estates, Copiague. Observational data from field surveys; breeding status from the NYS Breeding Bird Atlas (Blocks 6250D and 6350C, 2000).

Common Name	Scientific Name	Breeding Status*	Observed/Expected	Habitat
Red-winged Blackbird	<i>Agelaius phoeniceas</i>	Confirmed	Observed	Wet marsh/brush
Saltmarsh sharp-tailed sparrow	<i>Ammodramus caudacutus</i>	Confirmed	NOT Expected (listed in BBA)	Salt marshes
Seaside sparrow	<i>Ammodramus maritimus</i>	Confirmed	NOT Expected (listed in BBA)	Salt marshes
Mallard	<i>Ana platyrhynchos</i>	Confirmed	Observed	Ponds/parks
Wigeon	<i>Anas americana</i>	N/A	Expected	Sheltered salt water
American black duck	<i>Anas rubripes</i>	Possible	NOT Expected (listed in BBA)	Salt marshes
Gadwall	<i>Anas strepera</i>	N/A	Expected	Sheltered salt water
Great Blue Heron	<i>Ardea herodias</i>	N/A	Expected	Trees near open water/fields
Tufted Titmouse	<i>Baeolophus bicolor</i>	N/A	Observed	Mature, deciduous woods
Canada goose	<i>Branta Canadensis</i>	Confirmed	Expected	Adjacent to water
Northern Cardinal	<i>Cardinalis cardinalis</i>	Confirmed	Observed	Brushy habitat at wood edge
American Goldfinch	<i>Carduelis tristis</i>	Confirmed	Observed	Fields
House Finch	<i>Carpodacus mexicanus</i>	N/A	Observed	Suburban upland
Great Egret	<i>Casmerodius albus</i>	Confirmed	Expected	Trees near water
Willet	<i>Catoptrophorus semipalmatus</i>	Confirmed	NOT Expected (listed in BBA)	Beaches, marshes
Belted kingfisher	<i>Ceryle alcyon</i>	Possible	Possible	Sheltered water with abundant fish
Chimney swift	<i>Chaetura pelagica</i>	Probable	Expected	Suburban upland
Killdeer	<i>Charadrius vociferous</i>	Probable	Expected	Open ground upland
Common Flicker	<i>Colaptes auratus</i>	N/A	Expected	Upland woods
Rock pigeon	<i>Columba livia</i>	Confirmed	Expected	Suburban upland
American Crow	<i>Corvus brachyrhynchos</i>	Probable	Observed	All habitat types
Blue jay	<i>Cyanocitta cristata</i>	Probable	Expected	Woods
Mute swan	<i>Cygnus olor</i>	Confirmed	Expected	Ponds/bays near humans
Yellow warbler	<i>Dendroica petechia</i>	Confirmed	NOT Expected (listed in BBA)	Brushy, wet habitat
Gray Catbird	<i>Dumetella carolinensis</i>	Confirmed	Expected	Woods
Snowy egret	<i>Egretta thula</i>	Confirmed	Expected	Trees near water
Tricolored heron	<i>Egretta tricolor</i>	Possible	NOT Expected (listed in BBA)	Open shallow water or marshy pools
Willow flycatcher	<i>Empidonax traillii</i>	Possible	NOT Expected (listed in BBA)	Brushy, wet habitats
Common yellowthroat	<i>Geothlypis trichas</i>	Probable	Expected	Brushy, wet habitats
American oystercatcher	<i>Haematopus palliatus</i>	Probable	NOT Expected (listed in BBA)	Sandbars, oyster beds
Barn swallow	<i>Hirundo rustica</i>	Probable	Expected	Man made structures
Wood thrush	<i>Hylocichla mustelina</i>	Probable	NOT Expected (listed in BBA)	Mature forest
Baltimore Oriole	<i>Icterus galbula</i>	Probable	Expected	Woods
Northern Junco	<i>Junco hyemalis</i>	N/A	Expected	Woods w/brush
Herring gull	<i>Larus argentatus</i>	Confirmed	Expected	All habitat types

Common Name	Scientific Name	Breeding Status*	Observed/Expected	Habitat
Great black-backed gull	<i>Larus marinus</i>	Confirmed	NOT Expected (listed in BBA)	Coastal habitats
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	Probable	Expected	Mature forest
Song Sparrow	<i>Melospiza melodia</i>	Confirmed	Expected	Brush, open field, suburban
Northern Mockingbird	<i>Mimus polyglottus</i>	Confirmed	Expected	Brushy fields, suburban
Brown-headed Cowbird	<i>Molothrus ater</i>	N/A	Expected	Open/patchy woods
Great crested flycatcher	<i>Myiarchus crinitus</i>	Probable	Expected	Mature deciduous woods
Monk parakeet	<i>Myiopsitta monachus</i>	Confirmed	NOT Expected (listed in BBA)	Introduced, scattered habitats
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	Confirmed	NOT Expected (listed in BBA)	Trees at water edge
House Sparrow	<i>Passer domesticus</i>	Confirmed	Expected	Suburban
Indigo Bunting	<i>Passerina cyanea</i>	N/A	Expected	Open brush near trees
Downy Woodpecker	<i>Picoides pubescens</i>	N/A	Expected	Woods
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Probable	Expected	Brush, clearings
Glossy ibis	<i>Plegadis falcinellus</i>	Confirmed	NOT Expected (listed in BBA)	Marshes, nest in trees near herons
Black-capped Chickadee	<i>Poecile atricapilla</i>	N/A	Expected	Woods
Blue-gray gnatcatcher	<i>Poliptila caerulea</i>	Probable	Expected	Wet woods and thickets
Purple martin	<i>Progne subis</i>	Confirmed	Expected	Near water, nests only in man made houses
Common Grackle	<i>Quiscalus quiscula</i>	Confirmed	Expected	Nests in trees, forages open fields
Black skimmer	<i>Rynchops niger</i>	Possible	NOT Expected (listed in BBA)	Sandbars
Eastern Phoebe	<i>Sayornis phoebe</i>	N/A	Expected	Open woods, edge of trees
White-breasted Nuthatch	<i>Sitta carolinensis</i>	N/A	Expected	Woods
Chipping Sparrow	<i>Spizella passerina</i>	N/A	Expected	Open woods with brush
Field Sparrow	<i>Spizella pusilla</i>	N/A	Expected	Fields w/brush, trees
Common tern	<i>Sterna hirundo</i>	Confirmed	NOT Expected (listed in BBA)	Open water
European Starling	<i>Sturnus vulgaris</i>	Confirmed	Expected	All habitat types
Tree swallow	<i>Tachycineta bicolor</i>	Probable	Expected	Open fields or trees near water,
Carolina wren	<i>Thryothorus ludovicianus</i>	Probable	Expected	Dense brush in woods
House Wren	<i>Troglodytes aedon</i>	Probable	Expected	Brush at wood edge
American Robin	<i>Turdus migratorius</i>	Confirmed	Expected	All upland habitats
Eastern kingbird	<i>Tyrannus tyrannus</i>	Possible	Expected	Brush/trees near water
Red-eyed Vireo	<i>Vireo olivaceus</i>	Confirmed	Expected	Woods
Mourning Dove	<i>Zenaida macroura</i>	Probable	Expected	Suburban

*Breeding status obtained from the NYS Breeding Bird Atlas, 2000 (<http://www.dec.state.ny.us/website/dfwmr/wildlife/bba/>).

Herpetiles

Although there were no herpetiles observed during site visits in 2006, the table below represents species that are expected to inhabit the project area. The majority of these species will be found near the water, in the wetlands and protected buffer. The Eastern garter snake may be found upland in and around structures.

Table 9. Herpetiles expected at Harbor View Estates, Copiague.

Common Name	Scientific Name	Observed or Expected
Fowler's toad	<i>Bufo woodhousei fowleri</i>	Expected
Spring peeper	<i>Hyla crucifer</i>	Expected
Eastern box turtle	<i>Terrapene carolina carolina</i>	Possible
Northern diamondback terrapin	<i>Malaclemys terrapin terrapin</i>	Possible
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	Expected

Finfish

Howell's Creek is a brackish (salinity 5-25ppm) creek that connects to Great South Bay. The terminus of the creek is just north of the project site, leading to minimal mixing of waters from Great South Bay. A field survey of the benthic habitat revealed that the bottom is anoxic mud supporting very little life. These factors limit the finfish species expected in Howell's Creek adjacent to the project site.

Table 10 lists finfish species expected or observed in Howell's Creek. In addition to species observed or expected, species for which Great South Bay is designated an Essential Fish Habitat (EFH) by National Marine Fisheries Service are listed. In accordance with the 1996 amendments to the Magnuson-Stevens Fisher Conservation and Management Act, an assessment of the potential impacts of the proposed dock facility at Harbor View Estates on the EFH for the species listed is provided in this DEIS.

Table 10. Finfish species observed or expected in Howell's Creek, and their EFH designations.

Common Name	Scientific Name	EFH Designation	Observed/Expected
Bay anchovy	<i>Anchoa mitchilli</i>	NONE	Expected
Fourspine stickleback	<i>Apeltes quadracus</i>	NONE	Expected
Black sea bass	<i>Centropristus striata</i>	Adult (Seawater* only)	NOT Expected
Atlantic sea herring	<i>Clupea harengus</i>	Juvenile, Adult (Seawater only)	NOT Expected
Sheepshead minnow	<i>Cyprinodon variegatus</i>	NONE	Expected
Mummichog	<i>Fundulus heteroclitus</i>	NONE	Expected
Striped killifish	<i>Fundulus luciae</i>	NONE	Expected
Threespine stickleback	<i>Gasterosteus aculeatus</i>	NONE	Expected
American plaice	<i>Hippoglossoides platessoides</i>	Juvenile, Adult (Seawater only)	NOT Expected
Summer flounder	<i>Paralichthys dentatus</i>	Juvenile, Adult	Expected
Atlantic butterfish	<i>Peprilus triacanthus</i>	Egg, Larvae, Juvenile, Adult (Seawater only)	NOT Expected
Winter flounder	<i>Pleuronectes americanus</i>	Egg, Larvae, Juvenile, Adult	Expected
Pollack	<i>Pollachius virens</i>	Juvenile (Mixed/brackish** only)	NOT Expected
Bluefish	<i>Pomatomus saltatrix</i>	Juvenile, Adult	NOT Expected
Ninespine stickleback	<i>Pungitius pungitius</i>	NONE	Expected
Cobia	<i>Rachycentron canadum</i>	Egg, Larvae, Juvenile, Adult	NOT Expected

Common Name	Scientific Name	EFH Designation	Observed/Expected
Atlantic salmon	<i>Salmo salar</i>	Adult (Seawater* only)	NOT Expected
Atlantic mackerel	<i>Scomber scombrus</i>	Egg, Larvae, Juvenile, Adult (Seawater only)	NOT Expected
King mackerel	<i>Scomberomorus cavalla</i>	Egg, Larvae, Juvenile, Adult	NOT Expected
Spanish mackerel	<i>Scomberomorus maculatus</i>	Egg, Larvae, Juvenile, Adult	NOT Expected
Windowpane flounder	<i>Scophthalmus aquosus</i>	Egg, Larvae, Juvenile, Adult	Expected
Scup	<i>Stenotomus chrysops</i>	Juvenile, Adult (Seawater only)	NOT Expected

Of the finfish species for which Great South Bay is listed as an EFH, only the Winter flounder, Windowpane flounder, and Summer flounder are expected within the waters of Howell's Creek. The remaining species are not expected in Howell's Creek due to decreased salinity.

Endangered and Threatened Species (TES)

There were no endangered or threatened species observed during field inspections. Letters were sent to the U. S. Fish and Wildlife Service (USFWS) and the NYSDEC Natural Heritage Program to determine if there were any listed species in the vicinity of the project. According to the USFWS, there are no federally listed species in the vicinity of the project site (Exhibit 7).

The NYSDEC Natural Heritage Program issued a letter stating that there is one threatened species, Slender crabgrass (*Digitaria filiformis*), found in the vicinity of the project (Exhibit 8). However, this species was last observed in Amityville in 1937; there is no recent data on the status of the species. Please note that the species is listed as globally secure, is not listed on the USFWS list of endangered and threatened species, and was not observed on the subject property.

Invasive Species

Asian Long Horned Beetle (Anoplophora glabripennis)

According to the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS), the project area lies within a quarantine region for the Asian long horned beetle (Exhibit 18). Asian long horned beetles bore deep into host trees to lay eggs. Larvae then develop within the tree, feeding on living tree tissue. Once mature, adults exit the tree and feed on its exterior. The host tree is eventually killed.

Asian long horned beetles grow and reproduce within healthy and stressed deciduous hardwood tree species. Host species include Maple (*Acer* spp.), Birch (*Betula* spp.), Horse chestnut (*Aesculus* spp.), Poplar (*Populus* spp.), Willow (*Salix* spp.), Elm (*Ulmus* spp.), Ash (*Fraxinus* spp.), Mountain ash (*Sorbus* spp.), Hackberry (*Celtis* spp.), Sycamore (*Platanus* spp.), and Mimosa (*Albizia julibrissin*).

Although there have been no trees infested with Asian long horned beetles on the subject property, there have been numerous infested trees in the surrounding vicinity. Upon detection of an infested tree, that tree is removed, cut and chipped and/or burned to eradicate the pest. The tree is then replaced with a non-host species such as Dogwood (*Cornus* spp.), Serviceberry (*Amelanchier* sp.), Oak (*Quercus* spp.), or Beech (*Fagus* spp.).

Host species that are within quarantine areas are treated in the spring and fall with imidacloprid, an insecticide that has been proven to reduce beetle populations in the US (APHIS Factsheet, 2003). Uninfested host trees within 1/8 mile from infested host tree locations are also treated. Imidacloprid is applied through the tree trunk or soil injections with USDA supervision. The insecticide then spreads up into stems, twigs, and foliage, where beetles are expected to feed and lay eggs.

Since beetle larvae live deep within the host tree, beetles are easily transported (usually unknowingly) in firewood, live trees, and fallen timber. As such, quarantine areas, in addition to treatments for beetle infestation, are also subject to strict regulations governing transport of materials into and out of the areas.

Land Use and Zoning

Subject Property

The subject property is currently zoned Residence B (Exhibit 9). The proposed senior community would necessitate a change of zone to Senior Citizen Multiple Residence (SCMR). The requirements for each zone are listed in Table 11 below.

Table 11. Comparison of existing versus proposed zoning requirements for project site.

Description	Existing	Proposed
Zone	“B” Residence	“SCMR” Senior Citizen
Minimum Area	10,000 square feet	2 acres
Minimum Street Frontage	80 feet	None
Minimum Front Yard Setback	30 feet	30 feet
Total Side Yard Setbacks	30 feet	40 feet
Minimum Side Yard Setback	12 feet	20 feet
Minimum Rear Yard Setback	40 feet	25 feet
Height Limit	35 feet or 2.5 stories	2.5 stories
Maximum Building Area	20%	None

Area Development

There are several classes of zoning in the area of the proposed project, including Residence (A, B, C), Business (E), and Multiple Residence (MR) (Exhibit 9). Immediately adjacent to the site are Residence A, Residence B (includes site), Residence C, and Business (E) zones. The MR zone lies just south along Howell’s Creek.

The proposed project involves a change of zone from Residence B to Senior Citizen Multiple Residence (SCMR). Although none of the adjacent sites are zoned SCMR or MR, there is an MR zoned site on West Drive just south of the project site, and an SCMR parcel at Howard Avenue and Cedar Avenue just north of Montauk Highway from the proposed project (Exhibit 9).

In addition to the zoning map, the applicant obtained a map of all multiple residential developments and senior developments for the Town of Babylon (Exhibit 9A). This map shows that there are 89 multiple residence developments (all ages) plus 37 senior developments within

the Town; 6 multiple family developments and 3 senior developments lie within a one mile radius of the project site. It should be noted that all of these developments required a change of zone approval from the Town of Babylon prior to construction.

Finally, the applicant reviewed multiple family developments that were constructed adjacent to tidal wetlands. Anchorage Condominiums, located south of the project site on West Drive, is an all age multiple family development with 230 condominiums, community center, and docking along 3,000 feet of bulkheading on Howell's Creek. Victoria Drive Townhouses, located on Bayview Avenue and Victoria Drive in Amityville, consists of 28 townhouses on the waterfront of Ketchans Creek. Adjacent to Santapogue Creek in West Babylon are the Garden Apartments, 300 units of multiple family residences, and Bay Point Apartments, 55 units of senior multiple family residences.

Town of Babylon Comprehensive Plan

In 1998, the Comprehensive Plan Committee for the Town of Babylon developed "A Plan for the Future of the Town of Babylon". The plan included five major themes for the future of the Town: (1) maintain and strengthen the Town's suburban character, (2) respond to the changing population, (3) improve the quality of life in economically-distressed areas, (4) promote jobs and economic development, and (5) foster stewardship of sensitive natural resources.

One focus of the Plan was senior housing. As it relates to this project, the Plan called for locating Senior Citizen Multiple Residential (SCMR) zoning districts near community centers, shopping malls, and neighborhood convenience shops. Harbor View Estates will be located just south of Montauk Highway, an area lined with businesses and services. In addition, the Central Business District for Copiague is located just north of the project site at the railroad station and Oak Street.

A second recommendation of the Plan was to locate SCMR housing along the ends of highway corridors in each hamlet, and specifically mentions Montauk Highway in Copiague. Although Harbor View Estates is not proposed along a highway, it is proposed one block south of Montauk Highway in Copiague. As stated above, this will provide residents with easy access to businesses such as retail shops and services.

Finally, the Town Comprehensive Plan recommendation is the rezoning of vacant retail areas to SCMR. This project involves rezoning of developed parcels from Residence B to SCMR.

Natural resources were a second major focus of the Plan, specifically protection and/or restoration of surface waters, groundwater quality, and wetlands. This project incorporates restoration and protection of a 75' buffer area adjacent to tidal wetlands. The project also incorporates stormwater management practices for additional protection of wetland and adjacent areas. Finally, Harbor View Estates will be a sewer community, so impacts to groundwater will be negligible. These measures will preserve and protect natural resources on this site.

Protection of natural resources, according to the Plan, should also be achieved by limiting development density in flood zones and near watercourses, including Howell's Creek. However, the Plan also recommends higher density use within the sewer district(s). This project would

involve a higher density use than is recommended, but would be located within a sewer district, which would mitigate impacts of higher density.

Development Restrictions—NYSDEC

Howell's Creek is a NYSDEC regulated tidal wetland, and therefore subject to additional developmental restrictions. Article 25 of the Environmental Conservation Law (ECL) regulates tidal wetlands and their adjacent areas. In this case, the adjacent area extends 300' from the wetland boundary, which was delineated at the shoreline bank as no wetland vegetation is present landward of this area. Article 25 development restrictions include the following:

- Setback: no structures are permitted within 75' of a regulated tidal wetland.
- Lot Coverage: a maximum 20% impervious lot coverage is allowed in the adjacent area.
- Density: the minimum lot area for any principal building is 20,000 square feet.

Harbor View Estates will meet the above development restrictions. No structures are permitted within 75' of the tidal wetland boundary; this area is proposed as natural buffer. The adjacent area lot coverage is calculated to be 18.92%, which is under the maximum 20%. Finally, there are seven (7) principal buildings proposed within the NYSDEC regulated tidal wetland area (a principal building is defined as two condo/townhouse units). The area encompasses approximately 143,340 square feet, which is more than the 140,000 square feet required in the Article 25 density development restriction.

Development Restrictions—NYSDOS

The New York State Department of State (NYSDOS) Coastal Management Program regulates coastal development through the State Coastal Policies. The NYSDOS requires that applicants respond to policies applicable to their individual project, and issues a General Concurrence for projects found to be consistent with these policies. Below are the responses to coastal policies applicable to the Harbor View Estates project:

Policy #2—Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.

The proposed project involves construction of the Harbor View Estates senior community, which includes construction of a safe recreational dock to facilitate water recreation activities such as boating, fishing, and swimming for its residents. The project is consistent with this policy.

Policy #7—Significant coastal fish and wildlife habitats will be protected, preserved, and where practical, restored so as to maintain their viability as habitats.

The fish and wildlife habitat of Howell's Creek will be only minimally affected by the proposed project. The dock is proposed in a creek lined with private boat docking, within a historically dredged boat basin on the subject property. Field inspections of the site revealed the benthos to be devoid of vegetation with minimal inhabitants.

Construction of the dock will have following impacts to the habitat of Howell's Creek: physical disturbance, increased turbidity during construction, and increased boater traffic. The dock structure will physically disturb the waters and benthos of Howell's Creek; increased boater traffic will have physical impact to the creek, as well as an impact to water quality. However, as stated above, the benthos is already devoid of vegetation with minimal inhabitants, so these impacts are expected to be negligible. Turbidity will temporarily increase during construction activities, but sediments will resettle once work is complete.

The proposed buffer area will protect the waters of Howell's Creek, acting as a filter for runoff and pollutants that may otherwise enter the creek. The project is therefore consistent with this policy.

Policy #11—Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.

Harbor View Estates has been designed to minimize damage to property from flooding and erosion. Buildings are set a minimum of 75' landward of the high water line and with first floor elevations per FEMA requirements. A 75' vegetated buffer area will lie between the buildings and the creek.

The proposed dock has been designed so that no flooding or damage to structures will occur as a result of its construction, nor will there be any threat to human lives caused by flooding or erosion as a result of this project. The project is therefore consistent with this policy.

Policy #12—Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands, and bluffs.

This project incorporates a 75' vegetated buffer to protect the natural shoreline of Howell's Creek. The proposed dock will have no impact on flooding or erosion. The project is therefore consistent with this policy.

Policy #17—Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.

Harbor View Estates incorporates a natural protective wetland buffer area to protect not only the wetlands of Howell's Creek, but also the upland structures associated with the senior community. There is no bulkheading or other hardened shoreline protection structure associated with this project. It is therefore consistent with this policy.

Policy #21—Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related uses along the coast.

The proposed project involves construction of a private dock facility to facilitate water dependent recreation activities such as boating, swimming, and fishing, for residents of the proposed senior community of Harbor View Estates.

Policy #22—Development, when located adjacent to the shore, will provide for water-related recreation, whenever such use is compatible with reasonable anticipated demand for such activities, and is compatible with the primary purpose of the development.

This project involves construction of a private dock facility as part of the proposed senior citizen community of Harbor View Estates. The parcel is privately owned, and is surrounded by privately owned residences and a multiple family development just south of Howell's Creek, many of which have dock facilities. The purpose of the private dock is to facilitate water dependent activities such as boating, swimming, and fishing among the residents of Harbor View Estates. The project is therefore consistent with this policy.

Policy #30—Municipal, industrial, and commercial discharge pollutants, including but not limited to toxic and hazardous substances, into coastal waters will conform to state and national water quality standards.

No discharge of any kind is proposed by this project.

Policy #38—The quality and quantity of surface water and groundwater supplies, will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.

The quality and quantity of surface and groundwater supplies will not be affected by the proposed project. A comprehensive Stormwater Pollution Prevention Plan has been prepared for this project (Appendix A). The plan includes erosion and sediment control practices, pollution prevention, and permanent water quality control measures, all designed to conserve and protect surface water and groundwater.

Stormwater runoff for the development will be handled by leaching chambers that have been designed to handle runoff from a 2.5" rain event. Runoff exceeding the capacity of the chambers will discharge via overland sheet flow through the vegetated buffer area, where it will be filtered prior to entering Howell's Creek.

The only impacts to surface water or groundwater are expected during construction of the proposed dock, where surface waters may be temporarily affected from siltation associated with construction activities.

Policy #40—Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to state water quality standards.

This policy is not applicable to this project, as no discharge of any kind is proposed.

Policy #44—Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.

The senior community and proposed dock have been designed to preserve and protect tidal wetlands associated with Howell's Creek. All structures associated with the senior community are proposed landward of a 75' vegetated buffer area that will act to protect tidal wetlands. The vegetation proposed is native species usually found adjacent to tidal wetlands that will act to filter any runoff and pollutants before they enter Howell's Creek.

The dock is proposed within a dredged boat basin that has no wetland vegetation. The greatest impact to tidal wetlands will be physical disturbance and increased boater traffic in the creek. However, as stated above, water quality in the creek is already impacted by boater traffic, and the benthic habitat is anoxic sludge devoid of vegetation and inhabitants. Therefore, these impacts will be negligible.

Increased turbidity is expected during construction; once the dock is complete, sediments will resettle. The boat basin is deep enough such that vessels will not cause disturbance to the sediments once the dock is constructed. Impacts from turbidity are therefore expected to be negligible.

Transportation

Roads

The project site is currently served by South Great Neck Road and Austin Place. Both of these are two-lane roadways. The northern terminus of South Great Neck Road is Montauk Highway (Route 27A), which is a four-lane highway.

Parking Facilities

A total of ninety (90) parking spaces will be provided for Harbor View Estates. The twelve (12) townhouses will each have a garage and driveway, providing two spaces per unit. Parking for the twenty-eight (28) condominium units will be provided in three parking lot areas adjacent to the condos. Michael Court will provide twenty-four (24) stalls for sixteen units, and Carolyn Court will provide eighteen stalls (18) for twelve units. Carolyn Court, as well as eight (8) stalls along Richard Way, will provide parking for the recreation building. Finally, there will be sixteen (16) landbanked parking spaces provided north of the recreation building.

The Town of Babylon establishes the following criteria for parking: 1.5 spaces for each 1-bedroom unit and 2.5 spaces for each 2-bedroom unit. Therefore, seventy-two (72) spaces are required for homeowners. In addition, 10% visitor parking is required, which equates to an

additional eight (8) spaces. A total of eighty (80) parking spaces are therefore required on site. As stated above, there are ninety (90) spaces proposed, which exceeds the requirements.

Traffic Control

The intersection of South Great Neck Road and Route 27A is controlled by a traffic signal. The intersection of South Great Neck Road and Austin Place is controlled by a stop sign on Austin Place. Based on the Traffic Impact Study conducted by Eschbacher Engineering (Appendix B), key intersections are and will continue to operate at good levels of services, and will therefore require no mitigation measures. The study did recommend, however, that parking restrictions be placed in the vicinity of the site to ensure two full lanes are available along South Great Neck Road at all times.

Access to Site

Ingress to and egress from the site will be through one driveway (Main Street) off South Great Neck Road. A gated driveway is proposed off Austin Place for emergency purposes. According to the Traffic Impact Study, the proposed on site driveway provides satisfactory ingress and egress to the site.

Traffic Levels—AM and PM Traffic Flow

As stated above, Eschbacher Engineering conducted a Traffic Impact Study for the proposed project (Appendix B). Hourly traffic volumes were collected along South Great Neck Road in the vicinity of the project site using Automatic Traffic Recorder (ATR) machines. In May 2005, ATR machines collected traffic counts over a 24-hour period for four days. Results indicate that South Great Neck Road carries 6,300 vehicles per day during weekdays, and 6,000 vehicles per day on weekends. Peak hour volumes are summarized in Table 12 below.

Table 12. Vehicle counts for South Great Neck Road.

Day	Peak Hour	South Great Neck Road (vehicles per hour)
Typical Weekday	7:30-8:30am	416
	5:45-6:45pm	518
Saturday	1:00-2:00pm	454
Sunday	1:00-2:00pm	454

Existing intersection turning movement counts were manually collected during weekday peak hours of 7:00am to 9:30am and 4:00pm to 6:30pm, and during Saturday peak hours of 11:00am to 3:00pm. Results are summarized in Appendix B.

To assess traffic impacts of the proposed Harbor View Estates, the Institute of Transportation Engineers (ITE) *Trip Generation, 7th Edition* was used to determine trip generation. A total of 18 trips (3 entering, 15 exiting) would be generated during AM peak hours, 21 trips (14 entering, 7 exiting) during PM peak hours, and 19 trips (10 entering, 9 exiting) during Saturday peak hours. Site generated trips were then assigned to the roadway network and compared with the existing, no build, and build conditions. Results are summarized in Table 13 below.

Table 13. Comparison of existing, no build, and build scenarios on the signalized intersection of Route 27A and South Great Neck Road.

Peak Period	Existing		No Build		Build	
	Delay (sec)	LOS*	Delay (sec)	LOS*	Delay (sec)	LOS*
AM Peak Hour	13.0	B	15.2	B	17.3	B
PM Peak Hour	6.1	A	6.4	A	6.5	A
Sat. Peak Hour	9.6	A	11.1	B	11.9	B

*LOS = level of service (A = ≤ 10sec, B = > 10 sec and ≤ 20sec)

Analysis shows that performance of the key intersection of Route 27A with South Great Neck Road is satisfactory during all periods, and therefore no mitigation is necessary.

NYS Department of Transportation (NYSDOT) conducted a traffic study of this intersection as well, as part of a request from the Town of Babylon for a left turn signal on the westbound side of 27A and a realignment of the northbound lane of South Great Neck Road at the intersection of 27A. The NYSDOT traffic analysis showed that the left turn signal was not necessary, however, the NYSDOT will re-stripe the northbound right lane of South Great Neck Road and relocate the stop bar southward ten feet. A completion date for this work was not specified.

In conclusion, the proposed forty-unit residential development will not have an adverse impact on the existing road network. The development will generate only minimal traffic during peak periods, which can be accommodated by the existing road network without any mitigation measures, and key intersections will continue to operate at good levels of service.

Traffic Levels—Construction Traffic

Area residents will experience construction vehicles and workmen adjacent to their neighborhood for a period of approximately 2 years. However, the majority of the earthwork and use of heavy machinery will occur during the first year of construction. The developer will comply with all applicable Town regulations regarding work times and noise levels.

Public Transportation

The project site is in the vicinity of the Copiague station of the Babylon branch of the MTA Long Island Railroad (LIRR). The Babylon branch is well traveled by commuters, and the Copiague station is less than five miles from the project site.

The site is also served by the MTA Long Island Bus service, specifically routes N19 and N72. As with the LIRR, the Long Island Bus service is well traveled for commuters.

Community Facilities and Services

Fire and Ambulance Services

The Harbor View Estates community will fall under the jurisdiction of the Copiague Fire District. On October 18, 2006, a letter was sent to the fire department to assess their capability to handle emergency calls for the projected eighty residents within the community. The Department issued a letter on November 28, 2006 stating that they were capable of handling emergency calls to Harbor View Estates, and have no outstanding issues relating to the development (Exhibit 10).

Police Department

The Harbor View Estates community will fall under the jurisdiction of the Suffolk County Police Department's 1st Precinct. On October 18, 2006, a letter was sent to the police department to assess their capability to serve and protect the development. On November 17, 2006, Captain Paul Ryan of the 1st Precinct confirmed verbally that they are capable of serving Harbor View Estates with existing resources.

Solid Waste

In a letter dated 10/25/2006 (Exhibit 13), the Town of Babylon states that the proposed senior community of Harbor View Estates will not significantly impact the ability of the Town to pick up and process municipal solid waste produced by the complex.

School

The proposed project involves construction of a senior housing complex for ages 55+. There will be no school age children permitted to live permanently in the housing development, and as such, the Copiague School District was not contacted to determine capacity to handle students.

Coastal Evacuation Zone

The subject property lies within Zone B of the Town of Babylon Office of Emergency Preparedness' Disaster Plan. In the event of a hurricane or other disaster requiring evacuation, residents will be advised by emergency agencies via public address system. The nearest American Red Cross shelter is the Copiague Junior High School, located at 2650 Great Neck Road in Copiague.

Demographics

According to the US Census Bureau (Census 2000), approximately 21,922 people reside in the hamlet of Copiague. Harbor View Estates is a 40-unit complex that is projected to house 80 residents. Table 14 is a breakdown of existing demographics and demographics projected with implementation of this project.

**Table 14. Breakdown of demographics for Harbor View Estates
(existing data taken from US Census Bureau, Census 2000).**

Description	Existing		Proposed	
	Value	%	Value	%
Population Age 55+	4,555	20.8%	4,635	21.1%
Housing Units (5-9 units per structure)	67	0.9%	107	1.4%
Owner-Occupied Units with Value >\$500,000	28	0.6%	68	1.4%
Household Income >\$100,000 (1999)	1,430	19.9%	1,470	20.5%

Although the proposed townhouses/condominiums are in the upper range of value, and therefore household income, the percentage of each for Copiague will not change significantly. Harbor View Estates is a small development when considered in terms of demographics, and will therefore have no effect on the demographics of Copiague.

Aesthetics and Cultural Resources

Visual Resources

The site has been historically altered by human activities, including residential development and landscaping. The majority of the area proposed for development has previously been cleared. Areas that are natural are mainly in the proposed buffer area and will not be altered with the proposed development. Photographs showing visual resources are found in Exhibit 17, and a discussion of visual resources of the project area is provided below.

From South Great Neck Road (photos #1-5), one currently sees single-family residences and cleared land with scattered trees and shrubs. Howell's Creek is shielded from view by native vegetation, which will remain with the proposed project. Construction of the senior community would entail loss of cleared and landscaped land, as well as existing single-family residences. Howell's Creek will still be shielded from view by the proposed buffer area. In addition, the view of Harbor View Estates will be screened by landscape plantings, including trees and shrubs.

From Austin Place (photos #6-8, #11-13), the view is currently of single-family residences, as well as cleared land and more numerous trees. Implementation of this project would only minimally impact this view shed, as single-family residences are replaced with the senior complex and landscaping to screen from the road. Note that the majority of the site is shielded from view by existing residences that are not part of this project.

From Maple Court (photos #9-10), one currently sees a fence at the dead end. Looking over the fence, the view is of cleared land and areas of dense brush. This portion of the project includes the buffer area as well as landscaping and the bocce ball court.

Finally, from Howell's Creek, one currently sees areas of dense brush, with only very small openings to the cleared land beyond. Implementation of this project will result in construction of a recreational dock that will be visible from Howell's Creek. However, the buffer area will act to screen the senior community from view.

Cultural Resources

Given the site history, it is highly unlikely that any cultural or archeological resources exist on site. However, the NYS Office of Parks, Recreation and Historic Preservation (SHPO) was contacted to verify this assumption. Letters and supporting documentation were sent on 10/18/2006, 11/16/2006, and 2/5/2007. At this time, the project consultant is corresponding with the NYS SHPO, but a final determination has not been made.

Potentially Significant Adverse Impacts

Water Resources

Surface Water

Surface waters may be impacted by the proposed dock and by discharge of stormwater into Howell's Creek. As stated above, the dock is proposed in a man-made boat basin of Howell's Creek. During construction, temporary impacts including physical disturbance and increased turbidity are expected. However, upon completion of construction, sediments will settle.

No permanent impacts are expected as a result of the proposed dock. The creek has adequate depths (Exhibit 2) such that vessels will not impact benthos by prop dredging or vessel hulls contacting the creek bottom at low tide. The waters of Howell's Creek are currently used by boaters; increased boat traffic is not expected to significantly impact the waters of Howell's Creek. Please note that only small vessels will be permitted to utilize the community dock.

Surface waters may also be impacted by discharge of sediment-laden stormwater into Howell's Creek. However, as noted in the SWPPP, leaching chambers will handle runoff from a 2.5" storm event. Storm events exceeding the capacity of leaching chambers will discharge stormwater via overland sheet flow through the 75' vegetated buffer area, which will filter sediments and contaminants prior to discharge into Howell's Creek.

In conclusion, there will be no significant negative impacts to surface waters of Howell's Creek. The only impact will be physical disturbance caused by the proposed dock structure, however, this is typical of any dock structure in any body of water. It should be noted that the dock structures will be seasonal and will provide mooring for only small vessels similar to those already utilizing the creek.

Groundwater

There will be no significant impacts to groundwater hydrology with this project. The project proposes to connect to public sewer and water, and will implement stormwater pollution prevention practices to prevent impacts to groundwater.

Water Use

There will be a significant increase in usage of public water supply with this project. It is estimated that 900 gpd are utilized currently, with a projected use of 6,000 gpd. This is an increase of 5,400 gpd. However, the Suffolk County Water Authority states in their letter that sufficient capacity exists to accommodate the additional use (Exhibit 12).

Sanitary Disposal

Significant increases to the sanitary sewage flow will also be realized with implementation of this project. Sewage flow would increase to 6,146 gpd, up from an estimated 900 gpd. The Suffolk County DPW issued a letter stating that sufficient capacity exists to connect to Sewer District No. 3 (Exhibit 11). Therefore, there are no impacts to groundwater, surface water, or wetlands associated with sanitary disposal.

In addition to the sanitary disposal associated with the proposed project, there is a 60' RCP sewer pipe within the permanent sewer easement on the southwest portion of the site. This pipe runs under Howell's Creek and connects to the sewer system at Maple Court. The pipe is under ground in a portion of the buffer that is naturally vegetated and slated to remain untouched. Therefore, the pipe has no effect on the buffer area. The pipe is also well south of the boat basin, and will therefore not be impacted by the proposed dock facility.

Ecology

Wetlands

The proposed senior housing complex will have negligible impacts on the Howell's Creek littoral zone wetlands. This site has been previously developed with single-family dwellings and landscaping, with no vegetated wetlands present. Although the proposed multi-family development is a higher density use, impacts to the wetlands will be negligible. The proposed development incorporates a vegetated buffer area, stormwater controls, and will be connected to the sewer district, all of which mitigate impacts to wetlands commonly associated with higher density use.

The proposed dock, however, will impact littoral zone wetlands. Impacts are expected to be temporary in nature and minimal in effect. The entire shoreline of Howell's Creek is improved by dock facilities with vessels moored along its length (Exhibit 15). Impacts of the proposed dock facility include physical disturbance, increased turbidity during construction, and increased vessel use in Howell's Creek. Increased turbidity is expected to be only temporary; once construction is complete, turbidity will decrease as sediments settle. Physical disturbance and increased vessel use in Howell's Creek are both permanent impacts. However, as stated above, benthic surveys of Howell's Creek were conducted to determine the extent to which docks and vessels may impact tidal wetlands and the benthic habitat. In the area of the proposed dock, there is no vegetation and the bottom is a dark, anoxic mud that supports only minimal life. Therefore, although the dock will be situated in Howell's Creek and creek will experience increases in pollution from increased boater use, the seasonal use and barren nature of the creek, coupled with flushing of the waters twice daily by tides results in minimal impacts.

In conclusion, due to the nature of Howell's Creek, the proposed dock facility will have negligible effects on the creek's littoral zone wetlands.

Wildlife

Impacts to mammals, avians, and herpetiles are expected to be negligible. As discussed, this site has been previously developed for residential use, and therefore, little natural habitat remains. The only species observed on the site were those tolerant of human activity.

Finfish

A review of life history and habitat requirements for Winter flounder (*Plueronectes americanus*) suggests that the proposed dock could have potentially adverse impacts on the EFH. Habitat disturbances due to dock construction activities in Howell's Creek may cause mortality of demersal eggs, larvae, and juveniles, and foraging success of adults may decrease due to low

light resulting from turbidity. Please note, however, that Winter flounder are not expected to inhabit Howell's Creek in large numbers, and therefore these impacts will be minimal.

Impacts of the proposed dock to the reproductive success of the Windowpane flounder (*Scophthalmus aquosus*) are negligible. Increased turbidity may temporarily reduce the available habitat for foraging and development of juvenile and adult Windowpane flounder, which use estuarine habitat throughout the year. However, this species is highly motile, and individuals will likely relocate to suitable habitat until construction is complete and sediments resettle.

Construction of the proposed dock during winter months may impact the extremely rare Summer flounder (*Paralichthys dentatus*) individuals that overwinter in the vicinity of the project area, through habitat disturbance. However, this impact is expected to be negligible, as surveys indicate that this species is most abundant in Great South Bay.

Land Use and Zoning

This project requires a change of zone from Residence B to Senior Citizen Multiple Residence (SCMR), which will result in a higher degree of use of the property. Although this conflicts with the Town Comprehensive Plan recommending lower density use adjacent to waterways, this site lies within a sewer district, which the Plan recommends for higher density uses. The 75' vegetated buffer area, coupled with the stormwater management plan and sewer connection, should therefore act to mitigate impacts to the waterways from higher density use adjacent to waterways.

In the Town of Babylon, there are several multiple family complexes adjacent to wetlands and waterways. Anchorage Condominiums, located south of the project site on West Drive, is an all age multiple family development with 230 condominiums, community center, and docking along 3,000 feet of bulkheading on Howell's Creek. Victoria Drive Townhouses, located on Bayview Avenue and Victoria Drive in Amityville, consists of 28 townhouses on the waterfront of Ketchans Creek. Adjacent to Santapogue Creek in West Babylon are the Garden Apartments, 300 units of multiple family residences, and Bay Point Apartments, 55 units of senior multiple family residences. All of these developments required a change of zone for approval.

Harbor View Estates has been designed to meet NYSDEC Article 25 (Tidal Wetland) development restrictions to minimize impacts to tidal wetlands, and will therefore require variances for front and side yard setbacks from the Town of Babylon. The minimum front yard setback is 26', where 30' is required. The north side yard setback is 18', where 20' is required. This project will be similar to other multiple family residential projects approved in the vicinity with a change of zone, including four developments adjacent to tidal wetlands that do not meet the required Town of Babylon zoning setbacks. In conclusion, the proposed Harbor View Estates conforms to the character of Copiague and the surrounding area, and impacts to the waterways or wetlands from higher density development will be mitigated by the 75' vegetated buffer, stormwater management plan, and connection to the Suffolk County sewer system.

Community Services

Although Harbor View Estates will cause increases in demand for water, sanitary, and garbage services, sufficient resources exist to serve the community (Exhibits 11, 12, 13). This is also true

for the fire, ambulance, and police services. No children are permitted to reside in the senior development, so there will be no impact to the Copiague School District.

Mitigation Measures

The present 40-unit community configuration evolved through recognition of various design parameters, including preservation of buffer habitat, beneficial use of stormwater management, reduction in the loss of mature vegetation, and conformance with NYSDEC and Town of Babylon regulations. As a result, several mitigation measures will be incorporated into the community design in order to minimize or eliminate negative impacts associated with development. They are outlined below:

1. Restoration and preservation of a 75' native buffer area landward of Howell's Creek. The buffer area will be planted with native species and will remain natural except for a 4' woodchip path leading to the proposed dock facility. The buffer area will preserve important habitat for wetland wildlife.
2. Prevention of slope/wetland degradation during construction through implementation of a comprehensive erosion and sediment control plan (Appendix A). Provisions of the plan include the following:
 - a. Existing vegetation to remain shall be protected and remain undisturbed.
 - b. Clearing and grading shall be scheduled to minimize the size of exposed areas and the length of time that areas are exposed.
 - c. The length and steepness of cleared slopes shall be minimized to reduce runoff velocities.
 - d. Runoff shall be diverted away from cleared slopes.
 - e. Sediment barriers (silt fence, hay bale or approved equal) shall be installed prior to the start of construction as required along the limits of disturbance for the duration of the work. No sediment from the site shall be permitted to wash onto adjacent properties, wetlands or roads.
 - f. Graded and stripped areas and stockpiles shall be kept stabilized through use of temporary seeding as required. Seed mixtures shall be in accordance with Soil Conservation Service.
 - g. Graded and stripped areas and stockpiles shall be protected from sediment build-up through the use of sediment barriers, sediment traps, etc. as required.
 - h. Proper maintenance of erosion control measures is to be performed as indicated by periodic inspection and after heavy or prolonged storms. Maintenance measures include, but are not limited to, cleaning of sediment basins and traps, cleaning or repair of sediment barriers, cleaning and repair of berms and diversions, and cleaning and repair of inlet protection.
 - i. Appropriate means shall be used to control dust during construction.
 - j. Sediment barriers and other erosion control measures shall remain in place until upland disturbed areas are permanently stabilized. After permanent stabilization, paved areas shall be cleaned and drainage systems cleaned and flushed as necessary.

3. Restriction on size of vessels that utilize the proposed dock facility. Only small vessels will be permitted.

Adverse Environmental Effects that Cannot be Avoided if Project is Implemented

Analysis of the significant environmental impacts and proposed mitigation measures result in the following adverse impacts that cannot be avoided:

1. Increased demand on community services, including recreational facilities, police and fire service. Adequate services are available.
2. Increased demand on utility service, including water, sewer, electric and gas. Service is available.
3. Increase in vehicle traffic patterns over present levels.
4. Increase in boater traffic and resulting pollution in Howell’s Creek.

Alternatives

There are three alternatives to the proposed project. Alternatives are compared in Table 15 and discussed below. Please note that all alternatives assume maximum 20% lot coverage and a 75’ buffer area landward of the shoreline.

Table 15. Comparison of alternatives for the proposed Harbor View Estates.

Alternative	#Housing Units	#Residents	Water Flow	Sanitary Flow	Taxes (min.)
Harbor View Estates senior community	40	80	6,000gpd	6,146gpd	\$247,828.69
No Action	3	9	900gpd	900gpd	\$23,323.43
Single-family dwellings	11	33*	3,300gpd	3,300gpd	\$96,123**

* # Residents based on average household per US Census Bureau, Census 2000.

** Estimate based on taxes for Lot 9, currently occupied with a single-family dwelling (Table 1).

No Action

A No-Action alternative would be beneficial with respect to environmental impact attributable to development, i.e. geology, topography, vegetation and wildlife would not be impacted. There would be no impact on sewage disposal, water supply, solid waste disposal, traffic and transportation, or emergency services. The land would remain in its present state.

However, a No-Action alternative would not incorporate the buffer restoration area. The proposed project includes planting of the 75’ buffer area with native grasses, shrubs, and trees to provide natural habitat for wildlife species. Without the restoration, the 75’ buffer area would remain disturbed, with only small pockets of shrubs and trees.

In addition to the above, a No-Action alternative is not economically feasible for the applicant or the Town of Babylon. Harbor View Estates, as proposed, would result in tax revenue increases of at least \$247,828.69 per year; these revenues would be lost with a No-Action alternative.

Single-family Dwellings as Currently Zoned

This site is currently zoned Residence “B” in the Town of Babylon, which requires a minimum lot size of 10,000 square feet. Although NYSDEC minimum lot size is 20,000 square feet, variances have been granted allowing for smaller lot sizes that conform to the character of the neighborhood. As such, we have used the 10,000 square feet minimum lot size for comparison of alternatives.

Given the configuration of lots, a minimum lot size of 10,000 square feet would allow for a possible eleven (11) lots for construction of single-family dwellings (Exhibit 19). This alternative has less impact on development and community services than the proposed senior community, and would likely result in more natural acreage. However, this alternative would likely place structures closer to Howell’s Creek wetlands than the proposed project. In addition, the 75’ buffer area would likely not be implemented; that area would remain disturbed with only small pockets of natural vegetation for wildlife.

Assuming that all owners would have water access with this alternative, a recreational dock with eleven (11) slips would be proposed. This is not significantly smaller than the fourteen (14) slip dock proposed with the Harbor View Estates senior community. Impacts would therefore be the same as discussed above.

This alternative is not economically feasible for the Town of Babylon or the property owners. Single-family dwellings would result in an increase in tax revenue from the No Action alternative, but would be significantly less (\$152,000+/- less) than the tax revenue calculated for the proposed senior community.

Single-family Dwellings in a Cluster Design

A single-family cluster dwelling design would be very similar to the above alternative with respect to number of units, dock design, water usage, sanitary flow, and taxes. The difference would be that with a cluster design, structures and disturbance would be clustered together, allowing for natural areas to be contiguous and would result in greater wetland setbacks (Exhibit 20).

A cluster design would result in lot sizes significantly smaller than the current lot sizes or the proposed lot sizes with current zoning, to provide the area of open space. In addition, because there are only small pockets of natural vegetation currently on the site, a cluster design would have to incorporate native plantings to have similar beneficial impacts as the current proposal. As with the above alternative, cluster dwellings would result in tax revenues significantly lower than the proposed senior community.

Irreversible and Irretrievable Commitment of Resources

Construction of Harbor View Estates as proposed or as modified by an alternate design will entail the loss of open space in the form of lawn or landscaped area. This loss represents a resource that cannot be replaced once the site is committed to this use.

Growth Inducing Aspects

Harbor View Estates is located within one of the few remaining privately owned vacant acreage parcels located within the Copiague vicinity. Due to the high demand for senior communities, its approval and construction may encourage ancillary or similar growth on other parcels. However, the project vicinity has already been developed with single-family dwellings and commercial businesses, which will limit growth potential. Finally, the small size of Harbor View Estates will not necessitate the construction of any ancillary facilities such as shopping centers, schools, hospitals, commercial, business, or recreational facilities.

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