

## **SECTION II      Inventory and Analysis**

### **2.1 Regional Setting and Community Characteristics**

The Town of Hamburg (Town) is located in the eastern central portion of Erie County ([Map 2](#)), and is situated between the City of Lackawanna to the north, Town of Orchard Park to the east, and Towns of Boston, Eden and Evans to the south. The Town shares its western boundary with approximately nine miles of Lake Erie shoreline. Hamburg is considered one of the "Southtowns" of the Buffalo metropolitan area. The Town encompasses over 41 square miles in land area. The Villages of Blasdell and Hamburg are located entirely within the Town municipal boundaries, but outside of the Local Waterfront Revitalization Area (LWRA).

The Town of Hamburg continues to experience overall change from a rural community to a suburban community. The development trends that have occurred in the Town over the last few decades have produced the classic product of "suburban sprawl" that has been consistent with regional and national trends. The growth has included a mixture of residential, commercial, recreational and light industrial uses. This continual growth and development of the Town as a whole has impacted the waterfront and has necessitated the need to update the policies and implementation strategy of the Hamburg LWRP, which was originally adopted by the Town in March of 1987.

The Town of Hamburg is one of the second ring suburbs in the Buffalo metropolitan area, and has experienced changes to the overall land use patterns over the past few decades. Suburban residential and commercial development has increased while active farming and rural land use has continued to decrease. General commercial development has impacted the Town to a large extent, with industrial development experiencing a shift from manufacturing to a service mode.

The different types of land uses in the Town of Hamburg have been influenced by the natural topography, the two villages that exist within the Town limits, and its location within the Buffalo metropolitan area. While Hamburg has experienced substantial suburban growth over the past few decades, there has been no significant increase in population. The Town reflects both the rural and urban nature of a transitional community. Including the two villages, the Town contains various smaller hamlet communities that contribute to the character of the community. Woodlawn, Athol Springs, Wanakah, and Lakeview are some of the smaller communities within the LWRA that characterize this area overall.

### **2.2 Upland Uses**

#### **A. Existing Land Use**

The Town of Hamburg LWRA includes several types of land use, including residential, commercial, industrial, public/governmental, recreational and vacant land. Private residential development is the primary land use along the waterfront (see [Maps 3A, 3B, 3C](#)).

Sub-Area 1 contains the largest mix of land uses. Starting at the southern boundary, north of Camp Road, land use includes small pockets of industrial, commercial and public land uses. Sub-Area 1 is the only part of the waterfront that supports industrial land use, which is limited to three locations with minimal access to Lake Erie. These uses include the Buffalo Crushed Stone operations along the northern Town boundary, the Snyder Tank company and associated uses along Hoover Road, and a trucking terminal at Big Tree and NYS Route 5. Recreational uses include Woodlawn Beach State Park, a ball field associated with the Local UAW office, the Hoover Beach Trail Head Park and a park/picnic area associated with the Hoover Beach residential community. The Southtowns Wastewater Treatment Plant is situated along Hoover Road, just south of Woodlawn Beach Park.

Commercial uses in Sub-Area 1 include the large Gateway office complex (adjacent to Woodlawn Beach State Park) and numerous small neighborhood businesses and restaurants along NYS Route 5 in the Woodlawn hamlet area (which also includes the Woodlawn Fire Company), north of Hoover Beach, and in the Athol Springs hamlet (near Camp and Big Tree Roads). Athol Springs hosts a cluster of restaurants that are located in close proximity to the shoreline, providing views of the lake, Canada and the City of Buffalo. This area also includes the former Foit's restaurant site, which has been cleared of dilapidated structures.

Residential uses in this Sub-Area are situated primarily to the north, where the well-established Woodlawn residential neighborhood is located. This area contains a mix of single and multi-family residential uses that date back to the 1930's and 1940's. The Hoover Beach community is an enclave of about 100 smaller, cottage-style single-family homes (former seasonal cottages that have transitioned to year-round use) situated in close proximity to the Lake. Additional residential uses are found at the southern end of this Sub-Area in the Athol Springs hamlet.

Sub-Area 2 is comprised primarily of residential development. Apartment complexes and multi-family residences are scattered throughout the single-family lakefront neighborhoods of Locksley Park, Mt. Vernon, Clover Bank, Wanakah and Clifton Heights. Recreational uses include the Town Beach and Park, the Seaway Trail Visitor's Center, the Wanakah Country Club (a private use), a small passive park located at the top of the bluff near Mt. Vernon Blvd., and a number of public easements, homeowners' association properties and paper streets that provide informal access to the shoreline.

Commercial uses in Sub-Area 2 are primarily located in the Clover Bank/Wanakah area, along NYS Route 5, including restaurants, a bank, a gas station, a convenience market, medical offices and personal service uses. This area also hosts a local branch of the Erie County public library, Frontier School, some churches and the Lakeshore Volunteer Fire Company.

Sub-Area 3 is almost entirely developed with residential uses. With the exception of a small number of neighborhood business uses at the intersection of Route 5 and Old Lake Shore Road, this subarea is comprised entirely of residential development and open space. Estate properties can be found in the Walden Cliffs, Clifton Heights, and Pinehurst neighborhoods, while Hamburg's lakefront bluffs is the location of more recent residential development. This is the only area of the waterfront where additional residential development could occur. There are a few larger properties in this area where such development could be located.

## **B. Zoning and Other Land Use Regulations**

Zoning along the waterfront is regulated by Chapter 280 of the Hamburg Town Code. As shown on [Maps 4A, 4B and 4C](#), twelve of the seventeen zoning classifications provided for in the Code are represented within Hamburg's waterfront area. In addition, portions of the LWRA are located within the Route 5 and the Lakeview zoning overlay districts. Principal land uses are identified below for the zoning districts within the waterfront study area.

### **RESIDENCE DISTRICTS**

- Single-family Residence-Estate District (R-E) – primarily allows for low-density single-family detached dwellings, places of worship, fire stations, private clubs (golf course), and hospitals. Wind energy conversion systems and bed-and-breakfast establishments are allowed by Special Use Permit. Accessory uses include garages, storage of trailers, a caretaker or guest residence, horse stables, greenhouses, and tennis courts.
- Single-Family Residence District (R-1) – primarily allows single-family detached dwellings, cluster housing (with site plan approve), elementary and secondary schools, public libraries and museums. Barns are allowed by Special Use Permit. Professional residence-offices and Home Occupations are allowed with Zoning Board of Appeals approval.
- Single-Family Residence, Attached District (R-2) – allows all principle uses, accessory uses, and structures permitted in the R-1 district. In addition, two-family dwellings and attached single family dwellings are permitted. Accessory uses are the same as allowed in the R-1 District.
- Multifamily District (R-3) – allows principle uses and structures permitted in the R-2 district. In addition, multi-family housing or condominiums, hospitals, nursing homes and dormitories are permitted in this district. Nursery schools and day-care centers are allowed by Special Use Permit. Accessory uses include those allowed in the R-2 district as well as accommodations for roomers or lodgers within a dwelling.

### **BUSINESS DISTRICTS**

- Neighborhood Commercial General Residence District (NC) – This commercial zoning district allows for commercial uses that serve the needs of the residential neighborhood, without negatively affecting the character of the neighborhood. Permitted uses include principal and accessory uses allowed in the R-3 district, except cluster housing. In addition, minor retail sales (convenience shopping <2,000 square feet), business offices, studios, funeral homes, bed and breakfast establishments, fire stations, meeting rooms for clubs and fraternal organizations, professional offices, and personal services are permitted.
- Local Retail Business District (C-1) – allows less intensive commercial uses in structures less than 15,000 square feet. Principal and accessory uses include those permitted in the NC district (except residential housing), as well as retail sales (except uses permitted in C-2 and M districts), dry cleaning establishments, eating and drinking establishments, hotels, motels,

banks, sports and fitness facilities. Nursery schools and day-care centers are allowed by Special Use Permit.

- General Commercial District (C-2) – allows larger scale regional-type commercial operations (up to 100,000 sq. feet). In addition to the uses allowed in the C-1 district, boat or marine sales/service, Laundry or dry-cleaning plants (>2,000 square feet), custom shops, warehouses, indoor entertainment, dairies, wholesale sales and distribution, commercial swimming pools, drive-in restaurants, theaters and drive-ins, golf driving ranges and miniature golf, and rental/storage facilities are allowed. By Special Use Permit, the following use are allowed: the permitted uses listed above that are >100,000 square feet, nursery schools and day-care centers, new or used motor vehicle sales, trucking terminals, commercial car washes, gasoline stations, and automotive repair garages.
- Office District (C-3) – primarily allows office buildings, sports and fitness facilities and hospitals. Nursery schools and day care centers are allowed by Special Use Permit. Accessory uses and structures include retail, service, restaurants and commercial recreation facilities occupying 15 percent or less of the gross floor area.
- Waterfront Commercial (WC) – this district restricts some areas of the waterfront to mostly water-dependent and water-related or -enhanced uses. The district provides areas for uses that can take advantage of the waterfront assets and complement the nature of these areas. Only certain non-water dependent uses are allowed by special use permit. The WC District creates a transition zone between lakeshore residential areas and the more intensive commercial and industrial districts. It also provides connections to, and complements the tourism and recreational features of the waterfront and takes advantage of the designation of Route 5 as a National Scenic Byway and part of the NY State Seaway Trail System. See Appendix B.

#### **INDUSTRIAL DISTRICTS**

- Light Industrial District (M-2) – allows all the uses permitted in the M-1 district as well as laboratories, manufacturing and truck terminals. Wind energy conversion systems and nursery schools and day-care centers are allowed by Special Use Permit.
- General Industrial District (M-3) – allows the principal and accessory uses in the M-2 district. Additional permitted uses include lumber and coal yards, railroad freight yards, concrete production, storage of petroleum and petroleum products, manufacturing of abrasives, automobile assembly and fabrication, manufacture of heavy machinery, processing of bituminous products, metal casting and foundry products, open storage yards, and adult uses.

#### **OTHER DISTRICTS**

- Park/Recreation Lands District (PR) – provides special zoning classification for passive and active recreation facilities in order to ensure the proper location and protection of recreational lands and activities. Permitted uses include: public recreation uses (passive and

- active), private recreation uses (passive), wildlife sanctuaries, and fishing areas/ponds. Golf Courses, country clubs and sportsman clubs, facilities for racquet sports, skating facilities, facilities and fields for court and field sports, picnic grounds and beaches are allowed with a Special Use Permit. See Appendix B.
- Route 5 Overlay District – this district establishes measures to improve the quality of development and aesthetics along the NYS Route 5 / Lake Shore Road corridor. These measures are designed to improve business conditions and enhance economic development opportunities, as well as to restore and continue the traditional community character of the area. The regulations are aimed at enriching the visual quality of the area and improving the pedestrian environment. This district reaches from the Town boundary with the City of Lackawanna (to the north) to the intersection of Lake Shore (NYS Rte. 5) and Old Lake Shore Roads, and affects all properties that front along Lake Shore Road. It extends through all three sub-areas of the LWRA. See Appendix B.
  - Lakeview Overlay District - the purpose of this overlay district is to preserve the rural nature and important natural resources of the Lakeview area of the Town. This district contains significant tracts of freshwater wetlands and woodlands, as well as wildlife habitats and management areas and designated conservation areas. This overlay district is also intended to encourage the renewal of existing commercial development areas in an effort to revitalize the Lakeview hamlet and provide for diversification of the land uses in this area. See Appendix B.

The zoning for Sub-Area 1 allows for a mixture of land uses (see [Map 4A](#)). It has two large areas zoned M-3 for general industrial use, another large M-2 Light Industrial use district, some smaller areas of general commercial activity and office use, along with R-1 and R-2 residential developments. Parts of the Athol Springs hamlet and the Woodlawn Beach neighborhood include Neighborhood Commercial General Residence Districts (NC). There are also areas of Waterfront Commercial zoning, primarily in the Athol Springs and Hoover Beach areas.

The areas zoned for general commercial and general industrial within Sub-Area 1 contain a large amount of vacant land. The former Bethlehem Steel Plant site, which is situated on the waterfront, is the largest vacant property. Sub-Area 1 also includes a number of properties that are zoned Waterfront Commercial; these districts are found in the Athol Springs hamlet and Hoover Beach area.

Sub-Area 2 includes a few small NC districts that support the residential neighborhoods of Locksley Park and Mt. Vernon, which are zoned R-2 ([Map 4B](#)). The neighborhoods of Athol Springs and Wanakah are located entirely within R-1 districts, with the exception of PR districts that cover the Wanakah Country Club and the Seaway Trail Visitor’s Center. The Lakeview Overlay District includes the section of Sub-Area 2 situated south of Amsdell Road. This overlay is intended to minimize growth, protect natural resources, protect open space, restrict commercial development and improve community character. The Route 5 Overlay District also extends over much of Sub-Area 2.

Sub-Area 3 primarily contains residential development, with a small section of C-1 located on the northern border at the intersection of Lake Shore and Old Lake Shore Roads (see [Map 4C](#)). R-1 and

Residence – Estate (RE) zoning districts border the waterfront, with R-2 zoning found along the inland side of Old Lake Shore Road. The majority of undeveloped land is located in the R-1 and R-2 zoning districts. The Lakeview Overlay District encompasses all of Sub-Area 3.

### **C. Land Ownership Patterns**

Much of the land in the Town of Hamburg LWRA is held in private ownership. There are, however, a small number of properties that are under the jurisdiction of the Town of Hamburg, Erie County and the State of New York. These properties include the following (see [Maps 5A](#) and [5B](#)).

In Sub-Area 1, the State of New York State owns the 106-acre Woodlawn Beach State Park facility. In addition to the beach amenities, this multi-use park includes a number of significant environmental features and provides open views of Lake Erie and the surrounding area. Adjacent to the State Park site is the County-owned and operated Southtowns Wastewater Treatment Plant. This facility services the majority of the areas in the Town that have public sewer service. Further south, proximate to Hoover Road and Bayview Road, the Town of Hamburg owns land that contains a former sewage treatment plant. A portion of this site has been redeveloped as the Hamburg Trailhead Park and open space. Additionally, Sub-Area 1 includes the Woodlawn Fire Company facility, the United Auto Workers office and recreation field and St. Francis High School.

Sub-Area 2 includes the Hamburg Town Beach and Park, which offers beach area, recreational amenities, a service building, and a boat launch area. The Town also owns a small property atop the bluff along Lake Shore Road, at Mt. Vernon Blvd. The Seaway Trail Visitor’s Center on NYS Route 5, in Wanakah, is also owned by the Town. Other public uses in Sub-Area 2 include the Lake Shore Fire Company site, the Erie County Library, and Frontier School.

Aside from a National Fuel Gas pipeline easement, which is located near the convergence of Lake Shore and Old Lake Shore Roads, there are no public lands in Sub-Area 3. This area is dominated by private residences and some parcels of undeveloped land.

### **D. Water-Dependent and Water-Enhanced Uses**

The Town of Hamburg LWRA primarily contains water enhanced and non-water dependent uses. The only water-dependent uses in the area include Woodlawn Beach State Park and the Southtowns Wastewater Treatment Plant in Sub-Area 1, and the Town Beach and Seaway Trail Visitor’s Center facility in Sub-Area 2. Sub-Areas 1 and 2 contain a number of restaurants, which are enhanced by their waterfront location, and private residences. Sub-Area 3 is comprised of private residences and undeveloped land.

Sub-Area 1 contains certain lands, some of which are located directly along the shoreline, that support, and are zoned for, non-water dependent industrial use. Future land use planning efforts should be focused on replacing these uses with those that are more appropriate for a waterfront location, and that provide public access to the shore.

## 2.3 Surface Waters and Surface Water Uses

Surface waters in the Town of Hamburg LWRA include eleven creeks and tributaries, minor ponds and Lake Erie. From north to south the creeks include:

- Sub-Area 1:   Blasdell Creek (north of First Street)  
                  Rush Creek  
                  Foster Brook  
                  Waterfalls Village Creek
  
- Sub-Area 2:   Berricks Creek  
                  unnamed creek (south of Glendale Drive)  
                  Wanakah Creek  
                  unnamed creek (at Wanakah Country Club)
  
- Sub-Area 3:   Pinehurst Creek  
                  Unnamed tributary to Eighteen Mile Creek (west of Lakeview Road)  
                  Eighteen Mile Creek

The NYSDEC assigns a stream classification to surface waters in New York State, which identifies the best usage for that stream, based generally upon water quality. Blasdell Creek and Eighteen Mile Creek are identified as Class B fresh surface waters, whose best usage are recreation and fishing. All other streams in the LWRA, which outlet to Lake Erie, are now Class C fresh waters, whose best usage is fishing (these streams were formerly Class D waters).

According to 6 NYCRR Part 701 Classifications - Waters and Groundwaters, Class B streams typically have conditions suitable for primary and secondary contact recreation and water conditions suitable for fish propagation and survival. Class C streams have conditions suitable for primary and secondary contact recreation (although other factors may limit their use for these purposes). These waters are suitable for game fish survival.

### A. Marinas, Docks and Bulkheads

The Town has not formal harbors, facilities or areas for mooring or docking boats. There are also no commercial marinas or docks within the Hamburg LWRA. There is only one public boat launch and dock facility, which is located at the Town Park (Sub-Area 2 - See [Map 3B](#)). The dock has permanent piers in place to support two sixty-foot lengths of floating dock that are installed seasonally.

While in the past there were numerous private residential docks, in recent years fewer are being installed, maintained or replaced. In conversation with representatives from the Hamburg Buildings and Grounds department, it was noted that lakefront residents are no longer utilizing private docks due to the popularity of personal watercraft. In addition, frequently changing lake levels and the need for temporary docks to be removed seasonally are also contributing factors.

## **B. Vessel Use and Navigation**

There is limited navigational use along the Hamburg waterfront. There are no formal, designated navigation channels. Small pleasure craft are used on the lake for recreation and fishing. There are no commercial vessels stationed in the Town, no commercial fishing industry and no commercial dockage. The creeks that are tributary to the lake are not navigable. Some residents along the shoreline have boats and, as previously noted, a small number to utilize private docks but they are not widespread. Furthermore, private docks are used primarily to launch small craft that would not otherwise be docked at a marina.

Off-shore water depths in Lake Erie range between 16 feet at ¼-mile to ½-mile out and 33 feet at approximately one-mile out (at the north and south end of the LWRA). In the larger mid-section of the LWRA, lake water depths are more shallow, ranging from 16 feet at ½ mile out to 26 feet at 3 ½ miles out, in the vicinity of Seneca Shoals. While in most places the shoreline and near-shore bottom is sandy, the lake bottom is flat and predominately mud and silt. According to National Oceanic and Atmospheric Administration navigation charts, there are underwater obstructions in the form of submerged pilings and cribs. There are pilings for abandoned floating docks located near the shoreline in areas up to 6 feet deep. The cribbing is deeper and includes the wastewater treatment plant outfall.

## **2.4 Public Access and Recreation**

Public parkland and waterfront access is somewhat limited within the Town of Hamburg LWRA. Much of the waterfront is only accessible through privately-owned land. Public views of Lake Erie are available from waterfront restaurants in the Wanakah and Athol Springs areas, the Town Park, the Seaway Trail Visitor's Center and Woodlawn Beach. Another option for scenic viewing is the parking lot adjacent to Hoak's Restaurant on NYS Route 5 (in Sub-Area 1). This lot is situated in the roadway right-of-way and the restaurant owner has an agreement with NYSDOT to use the area for parking in exchange for additional use of the area for public access. In recent years the Town has taken the initiative to improve waterfront access and protect and enhance scenic vistas, and supports a network of bike paths and multiuse trails along the waterfront.

### **SUB-AREA 1**

Woodlawn Beach State Park is located at the easterly boundary of Sub-Area 1. It is bordered on the north by the former Bethlehem Steel Plant site; on the east by the Woodlawn residential neighborhood, Route 5, and the Gateway Office Building; and on the south by the Erie County Southtowns Wastewater Treatment Plant. The 106-acre park provides a public swimming beach, playground, picnic area, administrative facilities and parking. The park also includes a 24-acre natural sand beach, vegetated sand dunes, and wetlands. Woodlawn Beach State Park is owned and operated by the New York State Office of Parks Recreation and Historic Preservation and represents the largest public open space within the LWRA. This state-operated facility provides regional recreation, waterfront access and scenic viewing opportunities.

The Town of Hamburg owns and maintains the Hoover Beach Trail Head Park, which is located on the west side of Lake Shore Road, at Bayview Road, at the site of the former sewage



treatment facility. The majority of the park is paved to accommodate parking for bicyclists and others who desire to utilize nearby (and connecting) multi-use trails. The area behind the trail head park is primarily passive green space that is part of the Hoover Beach residential community. It is adjoined by another park, which includes a small recreation area, on the west side of Hoover Road. The 1994 Town of Hamburg Open Space/Recreation Plan calls for the park on the eastside of Hoover Beach Road to be further developed.

In Sub-Area 1 there are several private properties that provide physical and/or visual public access to the Lake shore. They include, but are not limited to, the Dock on the Bay Restaurant, the Bedrock Eatery Restaurant, Hoak's Restaurant, and the former Foit's restaurant property on Lake Shore Road in the Athol Springs hamlet.

### **SUB-AREA 2**

The Hamburg Town Park and Beach is located within Sub-Area 2 in the Locksley Park residential area. The 14-acre facility includes a 1,400-foot +/- beach area, recreational amenities, an administration building, a waterfront jetty, parking area and boat launch facilities for Town residents. The boat launch includes a seasonal floating dock. The Town's long range plans for the Town Park include development of a break wall, fishing docks and a marina for up to 200 boats. However, this marina project is a costly endeavor that requires significant planning effort, engineering and funding.

The Town owns a small parcel, south of the Town Beach, along Lake Shore Road at Mt. Vernon Blvd. The land is situated at the top of the bluff and offers views of the lake. It presently includes a few picnic tables, trees and lawn area. This site could be improved for public use but parking is not readily available.

The Town has redeveloped the former Wanakah Water Works property into the Seaway Trail Visitor's Center. This 1.3-acre site contains the refurbished water works building, which provides office space, public meeting and exhibit space and marketing materials for local and regional features and tourist attractions. The area outside the building offers a scenic overlook, picnic facilities, and a stretch of beach that can be accessed through a tunnel that runs beneath Route 5. The next phase of improvements for the site includes an additional viewing platform and terraces and an accessible seawall off the back of the structure. Future plans include a fishing platform.

A large open space and recreation facility at the westerly end of Sub-Area 2 is the privately-owned Wanakah Country Club, which occupies approximately 135 acres on the south side of Lake Shore Road. Other locations for public access in Sub-Area 2 include a number of public rights-of way and easements where local residents can reach the shoreline. These areas are not supervised and no amenities are provided.

### **SUB-AREA 3**

Within Sub-Area 3 there are few points of public access. There are no public parks or beaches. There are two primary reasons for the lack of public access in Sub-Area 3. First, relatively high

bluffs make beach access more difficult for public access. Secondly, all of the parcels in this Sub-Area are, with few exceptions, privately owned single-family residential properties, including the area at the mouth of Eighteen Mile Creek, where a large estate in single ownership represents the largest undeveloped private property along the shoreline.

### **Multi-purpose Trails**

At this time an existing bike trail extends from Seventh Street and Route 5 in Woodlawn, extending through Woodlawn Beach State Park and continuing along Route 5, in front of the Southtowns Wastewater Treatment Plant property, to the terminus of Hoover Road.

The New York State Route 5 Traffic Calming Study will recommend continued waterfront access and recreational trail improvements along the stretch of Route 5 (Lake Shore Road) that extends from the southerly terminus of Hoover Road to Old Lake Shore Road. Route 5 is a segment of the New York State Seaway Trail, which is a designated National Scenic By-way. Whatever alternative is chosen under this project is proposed to have a multi-use trail element, allowing for the continuation of the trail that will extend through the Hoover Beach area.

### **Boat Access Improvements**

Several recent studies and plans that focus on the Hamburg waterfront have identified the need for additional or improved recreational boat facilities, boat launch and marina in particular. The LWRP adopted in 1987 documented the growing demand for both waterfront access and additional boat slips in the region. The Town's original LWRP recommended that a protected site for recreational boaters be developed on Lake Erie in the Town of Hamburg.

The 1991 Horizons Waterfront Action Plan recommended both swimming and boating facilities at what is currently the Woodlawn Beach State Park site. The Horizons plan called for additional public access improvements, which included a "Lakefront Promenade" in Athol Springs; a "Nature Center" at the mouth of Eighteen Mile Creek; a new recreational boat marina; and pedestrian and bicycle access facilities and additional scenic overlooks along Route 5.

The 1994 Town of Hamburg Open Space/Recreation Plan identified conflicts between the boating and swimming uses at the Town Beach Park due to its limited size. It recommended the development of additional boating facilities in the northern end of Town. The Town of Hamburg 2010 Comprehensive Plan identified improvement project(s) for the Town Beach Park that included development of a break wall, fishing access and 200-slip marina. However, such a project is cost prohibitive

Since the development of the Horizons Plan, the State acquired and opened Woodlawn Beach State Park in 1997. In July 1999, the State also adopted a Master Plan/Environmental Impact Statement for the development of the State Park. That plan ultimately did not include a marina or other recreational boating facilities. The previously identified need within the Town of Hamburg for increased recreational boating facilities and launch facilities continues to grow and remains unmet.

## 2.5 Historic and Cultural Resources

The area was first known as Barkerville after the first postmaster here in 1805, Zenos Barker. The Town of Hamburg was officially formed on March 20, 1812. While the northwest sector of the LWRP study area developed with steel mill and industrial uses, the southwest sector (farther from the City of Buffalo) developed as a lake shore residential community. At the time the LWRP was adopted in 1987, no structures within the LWRA were listed on the National or State Registers of Historic Places. However, the Amsdell House (a former stage coach stop) on Route 5 in Wanakah and the Bayview Hotel are historic structures of local significance ([Maps 5A](#) and [5B](#)). There are also a number of older mansions and estate properties along Lake Shore and Old Lake Shore Roads, in Sub-Areas 2 and 3 that should be recognized for their local historic significance.

The Town of Hamburg is characterized by numerous archaeological resources. During the preparation of the Town of Hamburg 2010 Comprehensive Plan, the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) identified three zones of potential archaeological significance within the LWRA. They are located in Athol Springs, Woodlawn and at the mouth of Eighteen Mile Creek.

The Eighteen Mile Creek gorge is a geologically unique area. It is known for fossil deposits which date back 400 million years. These include brachiopods, bryozoans, gastropods, pelecypods, trilobites, echinoderm, ostracodes, corals, and sponges. High quality fossil deposits are found in this area because there was very little metamorphosis of the rock.

### Scenic Resources

Areas of visual significance are depicted in the Town of Hamburg Open Space/Recreation Plan, 1994. The scenic resources along the waterfront in the Town of Hamburg consist primarily of the spectacular vistas of Lake Erie, the Canadian shoreline and the City of Buffalo. There are a number of locations where unobstructed views are available, including Woodlawn Beach State Park and the southern terminus of Hoover Road (in the vicinity of Hoak's Restaurant) in Sub-Area 1; the Town Park and Beach and the Seaway Trail Visitor's Center in Sub-Area 2; and portions of Old Lake Shore Road in Sub-Area 3. Pleasurable views are also available from a number of restaurants and private commercial facilities located along the shore. Scenic views of the lake should be protected and improved wherever possible.

## 2.6 Public Infrastructure

### A. Water Supply

The Erie County Water Authority (ECWA) provides the water supply in the Town of Hamburg from its Sturgeon Point Filtration Plant in the Town of Evans. The privately owned Wanakah Water Company no longer provides water and distribution to the Wanakah area, as it did in 1987 when the Town adopted the LWRP. The LWRP study area, as well as the entire Town, is now serviced by the ECWA through a Lease Management Agreement. The ECWA operates two transmission mains that transport water into the Town; a 42-inch main situated near the CSX and Norfolk Southern railroad corridor and a 48-inch main near Lake Shore Road. These mains traverse the Town through easterly and northeasterly routes. While a limited portion of Hoover Road does not have water service, the water distribution system

supplies water to all residents and businesses within in the LWRP study area. It is also important to note that the Hamburg 2010 Comprehensive Plan indicates that the water distribution system in the Town, with proper maintenance and improvements, is expected to be adequate for 2010 development needs.

### **B. Wastewater Disposal**

The areas of Town with public sanitary sewer service are in either Town of Hamburg Sewer Districts or Erie County Sewer District #2 or #3, or smaller districts such as Woodlawn, Wanakah, or Mount Vernon. The wastewater treatment plants serving those districts are the same ones that existed in 1987 when Town first adopted the LWRP, and include the Erie County Southtown's Wastewater Treatment Plant, the Village of Blasdell Wastewater Treatment Plant, and the Big Sister Wastewater Treatment Plant located in the Town of Evans. The location of the Southtown's Wastewater Treatment Plant is shown on [Map 5A](#).

Sub-Area 1 is located within portions of the following sewer districts: SS-1 Woodlawn, and SS-21 Hamburg Master. Portions of Sub-Area 1 around the former Bethlehem Steel property and Woodlawn Beach area are not within a sewer district. However, these areas are served as out-of district customers to the SS-1 Woodlawn Sewer District, Village of Blasdell or City of Lackawanna wastewater treatment facility, where excess capacity exists as the steel plant has decreased operations.

With the exception of the Bethlehem Steel Property, wastewater in Sub-Area 1 is treated at the Erie County Southtowns Wastewater Treatment Plant. There are no residential properties within Sub- Area 1 that are not served by public sanitary sewer.

Sub-Area 2 is located within portions of the following sewer districts: SS-21 Hamburg Master, SS-5 Locksley Park, SS-2 Mount Vernon, SS-4 Cloverbank and SS-3 Wanakah. With the exception of the southern portion of the SS-3 Wanakah district, wastewater within Sub-Area 2 is treated at the Erie County Southtowns Wastewater Treatment Plant. Wastewater from the southern portion of the SS-3 Wanakah district is treated at the Big Sister Wastewater Treatment Plant located in the Town of Evans. There are no areas within Sub-Area 2 that are not served by public sanitary sewer.

Sub-Area 3 is located within portions of the following sewer districts: SS-3 Wanakah and SS-14 Erie County Sewer District 2. Wastewater from Sub-Area 3 is treated at the Big Sister Wastewater Treatment Plant. There are no areas within Sub-Area 3 that are not served by public sanitary sewer.

### **C. Stormwater Runoff and Storm Drainage**

The Town of Hamburg is traversed by a series of three watersheds (Eighteen Mile Creek, Eighteen Mile Creek to Smokes Creek, and Smokes Creek) which convey normal stormwater runoff and flood waters from the southern and eastern portions of the Town towards the west and Lake Erie. Each of these watersheds possesses its own drainage systems and stream channels, which carry storm water during heavy runoff periods.

All three LWRP sub areas fall within the Eighteen Mile Creek to Smokes Creek watershed. As development increases, runoff increases, which places further burden on the ability of the systems to handle storm water mitigated by stormwater detention facilities.

Stormwater runoff in the Town of Hamburg is managed through a variety of stormwater systems similar to the system that existed in 1987 when the LWRP was adopted. However, some minor changes include more stormwater detention ponds and other requirements mandated by the Clean Water Act. The system still works by draining surface runoff into drainage structures or ditches, which convey the storm water to stream channels that discharge to Lake Erie. There are currently no major drainage problem areas within the Town. While there have been only minor upgrades to the storm water drainage system since 1987, extensive drainage improvements were performed in the Mount Vernon area in Sub-Area 2.

As development occurs in the Town, it is the requirement that the drainage systems be designed to Town standards and typically not increase the peak flows to downstream structures. The Town currently regulates stormwater discharges pursuant to Chapter 226A of the Town Code, which was adopted in July of 2007. This law establishes minimum stormwater management requirements and controls to minimize erosion and protect water quality.

#### **D. Solid Waste Disposal**

In the LWRP study area, as well as town-wide, the Town of Hamburg does not provide collection or disposal services for municipal solid waste, recyclables and yard wastes. The Town does pick up large household items once a month. Residents and business owners contract for solid waste services on an individual basis. Disposal is handled by private contractors. Typical contractors include BFI Waste Systems and CID Refuse Service. Typical disposal sites for solid waste collected in Erie County include the Modern landfill in Lewiston, NY and the CID landfill in Chaffee, NY. There are no solid waste disposal sites located with the LWRP study area.

#### **E. Transportation Systems**

The highway network in the Town evolved from the numerous State and County routes that linked the urban and rural areas of the region. As a result, Hamburg has a well-established system of arterials that traverse the community. Principal arterials that service the LWRA include Lake Shore Road (NYS Route 5), Milestrip Road (NYS Route 179), and Big Tree Road (U.S. Route 20A). Minor arterials include Lake Avenue, Bayview Avenue, Camp Road, Rogers Road, Amsdell Road, Pleasant Avenue, and Lakeview Road. The major arterials provide circulation into and through the LWRA, while the minor roadways provide access NYS Route 5 and Old Lake Shore Road, and to residential areas.

Lake Shore Road (NYS Route 5) is the key transportation element within the LWRA. Throughout the area Lake Shore Road operates at a Level of Service D under the jurisdiction of the New York State Department of Transportation. Currently the New York State Department of Transportation is undertaking a traffic calming study for the area of Route 5 that extends between Big Tree Road to the north and the Old Lake Shore Road merge to the south. Alternatives are being assessed to determine the best solution for managing the volume and speed of traffic that flows through this area. The chosen alternative will include a multi-use pathway and appropriate design and landscaping measures to address identified issues and concerns.

### **SUB-AREA 1**

Lake Shore Road (NYS Route 5) is the principal arterial that provides north-south access through the LWRP Sub-Area 1, linking it to the City of Buffalo and the City of Lackawanna to the north and into the Town of Evans to the south. Milestrip Road (NYS Route 179) and Big Tree Road (US Route 20A) provide primary access from the east into Sub-Area 1. Camp Road (NYS Route 75) also ties into Lake Shore Road from the southeast. Lake Shore Road is a seven-lane arterial from the northern boundary to Milestrip Road. From Milestrip Road to Camp Road, Lake Shore Road has six lanes. The interchange area for Lake Shore Road and Camp Road falls within the LWRP boundary.

### **SUB-AREA 2**

Lake Shore Road (NYS Route 5) continues south into Sub-Area 2 as the principal four-lane arterial, providing north-south access and a link to the City of Buffalo through Sub-Area 1. Within Sub-Area 2 primary access from the east is provided from Camp Road, Rogers Road and Amsdell Road.

### **SUB-AREA 3**

In Sub-Area 3, Lake Shore Road breaks into a fork, with Old Lake Shore Road following the shoreline of Lake Erie more closely, and Lake Shore Road (NYS Route 5) continuing south in an alignment that takes it outside of the study area. Within Sub-Area 3 primary access from the east is provided Pleasant Avenue and Lake View Road.

## **Public Transport**

The Niagara Frontier Transportation Authority's (NFTA) Metro Bus/Rail system currently operates public transportation routes for Erie and Niagara counties. This system is made up of various routes, which link urban, suburban, and rural areas of the two counties together. Currently, the Town of Hamburg receives Metro Bus service along four routes that travel through or serve as a destination point within the Town's limits. Two of the transit routes are express buses that travel through the Town to points south (Town of Boston) and west (Town of Brant) with access to Woodlawn, Lake Shore Road (NYS Route 5) south to Lakeview, Camp Road (NYS Route 75), and the Village of Hamburg. Three of the four routes service the Athol Springs Park and Ride facility in Sub-Area 1. This facility serves as an automobile/transit transfer point for commuters in the Hamburg area. The NFTA has expanded and upgraded the facility at Athol Springs to accommodate more passengers and provide more efficient service. This facility is located just off NYS Route 5, on the access road that connects Big Tree Road to the St. Francis traffic circle.

The CSX and Norfolk Southern Railroads operate rail lines for the commercial transport of freight, which traverse the western portion of the Town in a north-south orientation. There is no passenger rail service within the LWRP. While the commercial rail lines are outside the LWRA boundaries, in very limited portions of Sub-Areas 1 and 2 the rail corridor represents the LWRP boundary line. These rail lines represent a separation between the lakeshore neighborhoods and upland neighborhoods. The rail corridor also limits access from the east.

## 2.7 Water Quality

In general, Lake Erie waters, south of the Bethlehem Steel complex, are of high quality. Among the factors contributing to this quality are the presence of modern wastewater treatment systems, the absence of industrial discharges, and the Erie County prohibition on the discharge of phosphates into water bodies. Water quality along the Hamburg lakeshore is monitored during summer months by the Erie County Health Department. Periodically, E. coli bacteria levels at Hamburg Town Beach and Woodlawn Beach exceed acceptable levels for swimming causing beach closures.

## 2.8 Natural Resources

There are a number of significant natural resources in the waterfront area that are regulated to protect their integrity and minimize adverse impacts. Wetland and habitats are important resources and play an important role in maintaining a healthy environment along the waterfront. The Town has taken certain steps to help manage environmental disturbances. The town adopted a Tree Management Law in 2003 that recognizes the value of trees and regulates their preservation and their proper removal and replacement. The Town also allows landowners the ability to preserve open space by granting conservation easements to the Town to restrict environmental impacts (Chapter 87 – Conservation Easements).

### A. Wetlands

Within the LWRA freshwater wetlands, as mapped by the NYSDEC under Article 24 of New York State’s Freshwater Wetlands Act and on the National Wetlands Inventory maps, are primarily located along the shoreline and along Rush Creek and Eighteen Mile Creek. Wetlands occur also upland, outside the LWRA, along the major creek corridors that drain into the study area. There are no New York State-designated wetlands in the local waterfront revitalization area.

The Town of Hamburg regulates wetland disturbances under Chapter 272 of the Town Code (Wetlands Protection). This law was enacted to help avoid, restrict and minimize damage or loss of wetlands in the Town and ensure that wetland areas are properly identified, that State and Federal requirements are met and, where required, proper mitigation is employed.

### B. Significant Coastal Fish and Wildlife Habitats

Within or adjacent to the Hamburg LWRA, three significant coastal fish and wildlife habitats have been designated by the New York Coastal Management Program. They are Eighteen Mile Creek, Smoke Creek Shoals and Seneca Shoals (see maps in Appendix C).

The Smoke Creek shoals habitat is located offshore, within Lake Erie, immediately north of the Woodlawn Beach area. The habitat is approximately 500 acres of open water, generally located within one-half mile radius of the mouth of Smoke Creek. This area encompasses a broad, productive littoral zone, where depths are generally less than 20 feet below mean low water. The bottom substrate is a mixture of sand, gravel and rubble.

Smokes Creek shoals are one of only a few sizable areas of relatively shallow, gravelly shoals in the Erie County portion of Lake Erie. Apparently, wave action and inflows from Smokes Creek provide adequate water circulation in the area to prevent siltation of the bottom substrate. This extensive littoral zone probably serves as an important spawning area for a variety of warm water fish species, especially walleye, along with yellow perch and small mouth bass. Observations of walleye in and around the mouth of Smoke Creek during the spawning period (mid-March, early May, generally) suggest that the adjacent shoals attract a major lake spawning concentration. Concentration areas such as this are unusual in Erie County.

As a result of the abundant walleye populations at Smokes Creek Shoals, this area attracts significant recreational fishing pressure during late spring and early summer, primarily by residents of the Buffalo metropolitan area. Boat access to the fishery is available from the Small Boat Harbor in Buffalo.

Reproduction of walleye at Smokes Creek Shoals may also contribute to the Lake Erie commercial fishery for this species, located farther offshore in waters greater than 55 feet deep.

Seneca Shoals is located approximately three miles west of Sub-Area 1, offshore of Woodlawn Beach. This habitat comprises an approximately 400-acre rocky underwater ridge. Water depths range from 12 to 30 feet in an area where surrounding depths are approximately 50 feet. Seneca Shoals is owned by New York State.

Seneca Shoals is one of the few relatively large and shallow areas in the New York portion of Lake Erie. It is believed to be a major spawning habitat for a variety of warm water fish species; small mouth bass, walleye, yellow perch, rock bass, and other panfish. Seneca Shoals is one of the most popular recreational fishing sites in Lake Erie for anglers in Western New York. In addition, reproduction of walleye and yellow perch probably contributes to local commercial fisheries for these species located farther offshore in depths greater than 50 feet.

The Eighteen Mile Creek Habitat-Lake Erie Habitat is located in the extreme southern end of the LWRA in Sub-Area 3. The fish and wildlife habitat extends approximately five miles from Lake Erie to the confluence of the main and south branches of the creek (outside the LWRA). The creek and a large meandering warm water stream, with rock and gravel substrates, drains approximately 120 square miles of mixed agricultural, wooded and rural residential lands. While Eighteen Miles Creek is situated in a steep-sided, wooded gorge, the lower one-half mile is low gradient and occupies a broader undisturbed floodplain.

Eighteen Mile Creek represents a rare ecosystem type in the region. It is the second largest tributary to Lake Erie in New York State. It has a relatively undisturbed border of mature vegetation. The creek is important as a relatively undisturbed tributary stream that provides spawning habitat for salmonids and other lake-based fish species. Eighteen Mile Creek is significant because concentrations of coho salmon, Chinook salmon and brown trout migrate from Lake Erie through this area to spawn (although unsuccessfully in most instances). The Eighteen Mile Creek gorge also supports small mouth bass, and runs of other lake fish. Although access is limited, the stream attracts a large number of anglers, mostly residents of the Erie-Niagara Region. The area is also ideal as a natural area for scientific and educational use.



The shoreline and near shore portions of Lake Erie also attract numerous migrating waterfowl and migratory raptors. The summer resident waterfowl population is not significant and is basically restricted to a few nesting mallards, shorebirds and seagulls.

The pristine nature of the Eighteen Mile Creek gorge provides an ideal small animal habitat. Additional undeveloped areas in the southern portions of the waterfront area (south of the junction of Route 5 and Old Lake Shore Road) provide similar habitats. The Eighteen Mile Creek gorge also contains many varieties of trees and vegetation, including some species that are on the New York State list of protected plants.

### **C. Fish and Wildlife**

Abundant varieties of fish are found along the entire Hamburg shoreline; in particular concentrations occur at Woodlawn, Hoover Beach, Locksley Park, Pinehurst and Seneca Shoals. According to the Buffalo and Erie County Fishing Guide – Hot Spot Fishing Map, published by Erie County Department of Environment and Planning, the game fish species commonly found in Lake Erie in the LWRA include small mouth bass, walleye, rainbow trout and brown trout. Panfish species include perch. According to the adopted LWRP salmonid spawning activities resulted in large numbers of trout and salmon in the tributaries and near-shore waters in the fall. During the spring and early summer, the walleyes and small mouth bass migrate to the near-shore waters to spawn.

## **2.9 Topography, Geology and Soils**

Town-wide, Hamburg's topography is relatively flat having a slope gradient less than eight percent. Within the LWRA there are some areas of steep slopes along the creeks and streams, drainage channels and near the shoreline, particularly in the vicinity of Eighteen Mile, in Sub-Area 3 ([Maps 7A](#), [7B](#), and [7C](#)). The northwestern part of town (Sub-Area 1) is located on a lake plain or "lowlands" (Earth Dimensions Inc., June 1981). Sub-Area 1 southwest to approximately Hoover Beach (approximate mid-point of Sub-Area 1) the shoreline is relatively flat. Woodlawn beach is located in this area and upland, the Woodlawn residential area is located within a flat shallow basin between Route 5 and Woodlawn beach. From Hoover Beach southwest, through the southern portion of Sub-Area 1 and all of Sub-Areas 2 and 3, steep bluffs and cliffs up to 40 feet high characterize the shoreline. The base of these bluffs often terminates in narrow sandy or gravel beaches, and is cut by steep stream banks. With the exceptions of the bluffs and stream banks, there are no areas with steep slopes or slopes that would warrant development concerns.

The soils within the LWRA fall into nine series, as characterized by the United States Department of Agricultural Soil Conservation Service. These include Churchville, Cazenovia and Niagara (silty loam); Remsen, Darien, Angola and Lakemont (silty clay loam); Aurora (shaly silt loam); and Manlius rock outcroppings.

Drainage of these soils is poor due to a high clay content resulting in low permeability. This, coupled with a high water table, causes seasonal wetness in many areas. An exception is the Cazenovia series which is well drained but lacks stability in sloping areas. This condition occurs in the Pinehurst vicinity only. Soil nutrient throughout the Hamburg waterfront is capable of supporting most northeastern

vegetation; however, seasonal wetness, and lake exposure, limits the variety of indigenous species. Bedrock throughout the Hamburg waterfront is generally five feet below grade or deeper with the exception of the Angola series where a two-foot depth is common. This occurs along the immediate Lake shore for a distance two miles north of Eighteen Mile Creek.

## 2.10 Flooding and Erosion

The Town of Hamburg contains flood zones that have been designated by the Federal Emergency Management Agency (FEMA) as areas subject to flood hazards ([Maps 6A, 6B and 6C](#)). These areas or flood zones are depicted on the FEMA Flood Insurance Rate Maps developed for the Town. The flood zones are established based upon the degree to which an area is susceptible to flood damage. The three general flood zones that exist within the Town include:

"A" Zone – (also called the area of special flood hazard) is that area of land that would primarily experience still water flooding, without significant wave activity, during the 100 year storm;

"B" Zone – those areas that fall between the limits of the 100-year flood and the 500 year flood, or certain areas that are subject to 100-year flooding with average water depths of less than one foot or where the contributing drainage area is less than one square mile (B Zones also include areas protected by levees from the base flood);

"C" Zone – areas of minimal flooding.

The 100-year flood plain extends inland over portions of Woodlawn and Athol Springs in Sub-Area 1 ([Map 6A](#)), where there is an absence of steep bluffs and elevated shoreline. It also extends along the corridors of Blasdell and Rush Creeks and Foster Brook. In Sub-Areas 2 and 3, the 100-year flood plain is situated near the toe of the bluffs, closer to the mean low water mark, and along the corridors of Eighteen Mile Creek and Wanakah Creek.

Major lake flooding occurs from severe wave action during peak periods of intense storms due to the directions of the prevailing winds and lack of offshore structures to deflect wave action. This is especially problematic in the Hoover Beach and Athol Springs areas of Sub-Area 1. During storm events with strong wind action, lake levels rise and the water is pushed up and over the existing seawall and onto NYS Route 5. This situation has resulted in roadway accidents, especially during freezing conditions, and on occasion forces the Town to close this section of Route 5. Lake storms send large quantities of debris onto the road creating driving hazards and requiring extensive roadway maintenance. Local residences and shoreline restaurants in the area have sustained damage due to these conditions.

### Natural Protective Features and Erosion

The entire Town of Hamburg shoreline is designated as a "Natural Protective Feature Area" by the New York State Department of Environmental Conservation, under provisions of the State's Coastal Erosion Hazard Areas Act. Coastal Erosion Hazard Area maps were prepared in June of 1988, subsequent to adoption of the LWRP in 1987. Furthermore, following the adoption of the LWRP in 1987, the Town adopted a local Coastal Erosion Hazard Area Law (Chapter 85 of the Town Code).

The entire stretch of the waterfront contains beach that varies in width. Wider areas of beach are located in Sub-Areas 1 and 2. The width of the beaches is regulated by the lake. During the winter season, the beaches are subject to wave action, wherein sand is moved to bars off shore. During the summer season, the sand is moved back on shore.

The beach area at Woodlawn Beach State Park, in Sub-Area 1, includes areas of sand dunes. This is the only area along the waterfront where dunes exist. Portions of Sub-Areas 2 and 3 include bluff areas of varying height, with the steepest areas found in Sub-Area 3.

As previously noted, wave action from lake storms can be quite damaging to shoreline properties. For this reason, many properties have abandoned any type of permanent dockage. Large portions of the shoreline have been “armored” with rock rip rap and concrete seawalls to prevent shoreline erosion. Seawalls can be found along the base of the bluffs and the seaward extent of many shoreline properties throughout the area, particularly in Sub-Area 1 and 2. Shoreline protection for each sub-area is discussed, as follows, and documented on aerial photographs found in Appendix D.

#### **SUB-AREA 1**

The northern end of town is relative flat, with wider expanses of beach and no bluffs. This is evident in the vicinity of Woodlawn Beach State Park, stretching south toward Hoover Beach. Seawalls have been put in place in Hoover Beach to protect residential development along the shoreline in this area. This area also shows evidence of the prior use of small rock jetties to capture and hold sand carried in the littoral drift. Further south along the Hoover Beach shoreline, concrete seawalls armor the shore to provide stability and protection from the destructive wave action of winter storms. There is limited to no beach remaining in the area between the Dock on the Bay restaurant and the mouth of Foster Brook. South of Foster Brook, the beach is re-established seaward of the seawalls.

At the southern end of Hoover Road, at its intersection with NYS Route 5 (Lake Shore Road), large stone riprap is used to stabilize the shoreline. This gives way to an 860-foot stretch of concrete seawall that was originally constructed in 1928 to support Route 5 in the Athol Springs area, between Hoak’s restaurant and the Foit’s property, and mitigate storm impacts. In this area, the road is situated parallel to the lake and exposed to the full impact of storm waves.

During periods of high lake levels, water rests at the base of this wall. During low lake levels, the wall gives way to a sand beach that covers underlying shale substrate. This wall regularly experiences heavy wave run-up and overtopping during severe storm events.

#### **SUB-AREA 2**

Beyond the Foit’s property, a natural rock ledge that averages about 20 feet in height replaces the concrete seawall. The rock ledge is followed by a long expanse of stone riprap that protects Route 5 from wave impacts. This riprap extends between Beach Avenue and Stratford Terrace, almost all the way to the Town Park. The area between Stratford Terrace and Waveland Court is natural rock bluff, with some beach, that gives way to the Town of Hamburg Park and Beach. This area of the shoreline has been established with lawn and landscape and a wide, sandy

beach. Stone riprap has been used in certain locations to stabilize the shoreline and add protection to the Town's boat launch ramp area.

South of the Town Park, between Mt. Vernon Blvd. and Rogers Road, the beach diminishes and the bluff rises. With the exception of an occasional stairway, this area remains natural and unprotected by seawall structures. The mouth of Berricks Creek flows through the cavernous walls of the bluff, which continues south along the shoreline through the Clifton Parkway and Mt. Vernon area. South of Rogers Road, some shoreline protection can be found seaward of the homes along Clifton Parkway. In a few places more elaborate structures, containing what appear to be boathouses and stairways, have been constructed on or into the bluff. Further south, beyond Norton Avenue, the height of the bluff decreases somewhat; here the shoreline has been reinforced in some areas with stone rip rap and concrete seawalls. Again, there is evidence of boathouses and other similar structures. In the vicinity of Cloverbank Road and south to the Seaway Trail Visitor's Center property, the shoreline is protected with an almost continuous collection of concrete seawalls and stone rip rap that is situated seaward of shoreline residences and businesses. There is little to no beach available throughout this area.

The bluff at the Seaway Trail Visitor's Center has been reinforced with large stone riprap as part of a former NYS Department of Transportation roadway protection project. South of this area the bluff disappears and the shoreline is protected with a series of low concrete seawalls. The remnants of former rock jetties are found here, along with wider areas of beachfront. In the area just north of the Wanakah Country Club (in the vicinity of Beach Drive), the natural rock bluff reemerges and then subsides near the southern extent of Sub-Area 2 (Pleasant Avenue). Here, the shoreline is protected with low level concrete seawalls that are fronted by narrow beach. Some small boathouses and private launch ramps are found along this stretch of the shoreline.

### **SUB-AREA 3**

Sub-Area 3 begins with a long, narrow stretch of beach that is backed up by numerous low-lying concrete seawalls or stone riprap. There are also a number of small boat ramps along the shore. These structures support the residential uses located along the shoreline in the Clifton Heights area of the Town. This area gives way to a steadily increasing rock bluff.

Beyond the Clifton Heights area in Sub-Area 3, Old Lake Shore Road follows the shoreline along the top of the bluff. The bluff extends over 80 feet in height, with a narrow stretch of sand or gravel beach at the toe. As a result of its height and layered structure, it represents the most significant geologic feature along the shoreline. At one location, in the vicinity of Lakeview Terrace, there is a small jetty that has caused a small build up of sand. As noted above, the bluffs are slowly eroding, endangering the structural integrity of Old Lake Shore Road.

Moving south of Lakeview Terrace, the bluff gradually decreases in height, with an increase in vegetative cover. This is also where Old Lake Shore Road is oriented further inland, away from the shore, with the area between the lake and the roadway developed with large residential properties. As the bluff descends, the beach widens and the slope of the bluff becomes more

acute. In this area there are a few properties that have fortified the shoreline with large stone rip-rap or concrete seawalls.

Continuing south, in the area generally north of Lakeview Road, the bluff tends to get steeper and its surface becomes more modulating. There is a limited extent of beachfront throughout this area and no shoreline protection structures. The bluff along this stretch averages about 80 to 100 feet in height. Moving further south, more vegetation is found along the top of the bluff and in a few areas on the face of the bluff.

Beyond Lakeview Road, the bluff face eventually becomes more steep and smooth before moderating in slope, with a widening beach, as the shoreline rounds toward the mouth of Eighteen Mile Creek. There is one large wooden stairway that reaches down to the beach in this area, but no evidence of shoreline hardening structures. The width of the beach diminishes at the mouth of the creek, giving way to a heavily vegetated slope. A long sand spit that extends from the south shoreline of the lake protects the mouth of Eighteen Mile Creek.

The seriousness of the erosion problem in Sub-Areas 1 and 3 has prompted action by the Army Corps of Engineers (ACOE) to remedy the problems. The Corps completed a feasibility study to determine effective mitigation measures for the Athol Springs area, where NYS Route 5 parallels the shoreline. Although the existing concrete retaining wall has worked well to control erosion and the rate of shoreline recession, the ACOE study has revealed evidence of lakebed scour in several locations along the base of the wall, by as much as one foot. If the wall fails, random fill would be easily washed away and a section of Route 5, situated 10 to 15 feet inland of the wall, would be seriously threatened. To remedy this problem, the ACOE has recommended the construction of a revetment to provide stability to the existing retaining wall and significantly reduce run-up. This project is currently in design.

A second feasibility study was conducted by the US Army Corps of Engineers, in conjunction with Erie County, for a stabilization and erosion protection project along Old Lake Shore Road in Sub-Area 3. This is an area with steep bluffs that have been slowly eroding away, threatening the integrity of Old Lake Shore Road. Because erosion will continually be a problem for this road, possible alternatives that should be evaluated for this area might include making Old Lake Shore Road one-way, relocating the road or even abandonment and re-utilizing the road for a recreational trail. The result of the study indicated that over \$1 million would be needed to remedy the problems in this area. Without the availability of funding, the County is monitoring the area until further action can be taken.