

SECTION IV PROPOSED LAND AND WATER USES AND PROJECTS

PROPOSED LAND USES

The existing land development pattern in the Village of Bayville consists of a complex mix of uses. These include stable residential neighborhoods, marine commercial facilities along the waterfront, general commercial uses, private and public recreational facilities, and some institutional uses (Figure 2). In general, these uses will remain.

The Village does not recommend that any of the existing land uses be changed (Figure 4). Specific projects, for the near-term, are identified in Section 4.3; there will be additional projects over the medium-term.

PROPOSED WATER USES

Water bodies within the LWRA support a wide variety of uses, including recreational and commercial fishing, shellfish aquaculture, swimming, boating, and bird watching. The channels and waterways provide access from Oyster Bay Harbor into Mill Neck Creek, and are used by recreational boaters and commercial fishermen. The navigation channels in Mill Neck Creek are clearly marked, and small boats can navigate as far as the Creek Beach mooring area. Beyond that point, the water is shallow during low stages of the tide, and there are no significant boating or mooring facilities. At high tide, small boats are able to navigate well into the Mill Neck Preserve on Oak Neck Creek, or as far as the Beaver Lake Dam, located at the southern end of Mill Neck Creek.

One of the goals of this LWRP is to restore shellfishing certification in Mill Neck Creek, thereby expanding the area that is open for this important in-water use. This can be achieved by means of water quality improvement measures, especially to abate non-point sources of contaminant loadings such as stormwater treatment and inadequately treated sanitary wastewater discharges. In addition to potentially enhancing the availability of the shellfish resource, such measures also would be expected to improve the suitability of the Mill Neck Creek complex for fishing, swimming, kayaking, canoeing, and similar water-dependent recreational activities, especially in the Mill Neck Preserve.

No new water uses are proposed in this LWRP (Figure 4). This local program focuses on maintaining and, as feasible, expanding the existing, well-established and highly valued uses of swimming, fishing, shellfishing, shellfish mariculture, boating, and bird watching. The proposed projects outlined below will improve environmental conditions on both land and water to protect, preserve and where needed, improve these traditional uses.

PROPOSED PROJECTS

This section presents a program of projects that are proposed or recommended by the Village of Bayville in order to advance the goals and purposes of this LWRP. These projects are subdivided into two categories: proposed land acquisition and associated park improvement projects; and proposed capital improvement projects that focus on non-point source pollution control, stormwater runoff abatement, habitat restoration, coastal erosion mitigation, and waterfront revitalization beyond the area addressed under "park improvement projects".

Figure 5 illustrates the projects that the Village proposes or recommends to advance the goals and purposes of this LWRP.

PROPOSED LAND ACQUISITION AND PARK IMPROVEMENT PROJECTS

Land acquisition for park development and other public uses is one way to advance many of the goals and purposes of this LWRP. Some of the policies and goals that can be accomplished through land acquisition include:

- preserving open spaces to enhance and maintain community character;
- minimizing the impact of development by acquiring land that might otherwise become developed;
- protecting scenic resources throughout the Village of Bayville;
- protecting and restoring the quality of natural land and water habitats (e.g., improving water quality in Mill Neck Creek to the point where it can be re-certified for shellfishing);
- minimizing the loss of life, property and natural resources from flooding and erosion by acquiring land in the flood plain;
- expanding opportunities for public access and recreational uses on public waterfront land and waterways; and
- providing land that can be used for the implementation of LWRP projects (e.g., stormwater mitigation).

Past acquisitions of property for public purposes have been vital to the implementation of a variety of projects that have been completed, are in-progress, or planned in conjunction with this LWRP. Future acquisition opportunities generally are limited, because the Village's upland is mostly built-out. However, the Oak Neck Creek area should be targeted for further land procurement efforts, as feasible, in order to augment the natural open space resources at this location. Additional land

preservation in this area would be especially beneficial, due to the area's environmental sensitivity and its past and ongoing susceptibility to development-related impacts such as malfunctioning on-lot wastewater disposal systems.

Bayville Waterfront Commons

This action involves the creation of a waterfront district, referred to as the Bayville Waterfront Commons, which will link together a number of parcels into a single entity to serve the various interests and needs of the Bayville community. Following this approach, commercial and recreational facilities located in this district would be marine-oriented, and would encourage future development and land uses that focus on the marine setting.

Much of the foundation work for the Bayville Waterfront Commons project already has been completed. The necessary public acquisitions have been effected, and the Village has completed the development of Bayville Commons. The immediate benefits derived from these projects include:

- Enhancement of the appearance of the main entrance to the Village Bayville along Ludlam Avenue.
- Creation of convenient and accessible public facilities at the Bridge Marina and Bayville Commons, both of which are owned by the Village of Bayville.
- Provision of over-the-water access to the Mill Neck Preserve, via availability of small boats and kayaks for rental at the Bridge Marina.
- Provision of passive recreational opportunities at the Village-owned, former Schmitt property.
- Linkage of various sites and facilities by means of improvements to existing easements, which will unify them into a single, coherent park complex, capable of meeting the needs of a wide range of interests. The easements in question are under the jurisdiction of Nassau County, as part of the existing roadway right-of-way. Accomplishing the recommended improvements to the sidewalks in these areas would require the County's permission and cooperation.
- The unification of these water-related and public uses will encourage other developments, including shops, marine services facilities, and restaurants that feature a maritime theme. This will augment the economic vitality of the Village's downtown area.

The Bayville Waterfront Commons project will expand and improve public access to the waterfront and enhance water-based recreation. This project provides a means for connecting and enhancing many of the unique features that are visible upon arriving to the Village after crossing the Bayville

Bridge. Nowhere else in the Village is there such a variety of waterfront and park facilities in a single area. Beginning at the north side of the bridge, the project area follows along Ludlam Avenue to the intersection with Bayville Avenue. The project includes the following sites:

- **Bridge Marina:** This facility is located on the west side of Ludlam Avenue, adjacent to the bridge. Services include boat and engine sales and servicing, mooring service, dock rentals, and rentals of fishing boats, canoes and kayaks. A clam bar and a small boat launching facility also are featured. The facility has ample parking for the existing uses.
- **Frank M. Flower and Sons, Inc.:** This historic oyster farming enterprise has been present in the Oyster Bay area dating back to the 1890s. Flower and Sons is located immediately adjacent to the Bridge Marina, and includes the business offices, shellfish nursery, docking structures, and related facilities. This property is not part of the Waterfront Commons project, but its location, adjacent to the Village-owned land, contributes to the maritime character of the project area. Flower's privately-owned facility performs state of the art cultivation of oysters and clams, which grows shellfish from seed and transplants them to Oyster Bay Harbor Complex locations for full grow-out and harvesting. Guided tours are available by appointment. The Bayville Historical Museum has an excellent exhibit devoted to the Flower's oyster farming operations.
- **Schmitt Woodlands and Wetlands:** This unique waterfront and woodland complex is located directly east of Ludlam Avenue, across from the Bridge Marina. Three types of wetlands are present at this location - high marsh, intertidal marsh, and coastal shoals/mudflats - thereby displaying a range of marine habitats. The south side the property is bordered by Oyster Bay Harbor, along 2,300 feet of shoreline. Immediately offshore are 10 acres of seasonal shellfishing beds. The woodland on the northern portion of the site contains a variety of trees and scrubs. This open space area is unfenced and open to the public, serving as a walking area with excellent views of Oyster Bay Harbor. Public utilization of this facility would be enhanced by the construction of trails and bike paths in damaged parts of the woodland area, including waterfront walkways; undisturbed woodland areas should be retained for wildlife habitat and passive recreational pursuits using existing trails. Where feasible, habitat enhancement should be undertaken.
- **Bayville Commons:** This park, located at the southeast corner of Bayville Avenue and Ludlam Avenue, was developed and dedicated by the Village in May 1999. It contains landscaped gardens and seating for the public, has a public parking area, and is linked by a public easement to the former Schmitt property and the Bridge Marina.

The Bayville Waterfront Commons will comprise the aforementioned facilities and the interconnecting easements which already exist, as well as adjacent restaurants and other commercial establishments. The Waterfront Commons will foster local awareness of the waterfront's unique

values, expand public access and enhance the quality of this important community asset. The project also will include educational and informational signage.

The Village presently is seeking funding assistance to implement the Bayville Waterfront Commons.

Harrison Williams Woods

The Village is committed to protecting natural resources and enhancing activities associated with sustainable human use or appreciation of natural resources. Harrison Williams Woods is a Village-owned property which constitutes an important natural resource with highly valued aesthetic and ecological qualities. This property also provides a critical buffer for the mitigation of surface water flooding and serves as a groundwater recharge area.

The Harrison Williams Woods comprises more than 27 acres of upland terrain containing a cross section of Bayville's natural upland plant communities. This parcel provides public recreational opportunities, through its extensive network of trails, as well as the efforts of citizen groups in identifying important plants. The site's parkland setting, with its historic estate buildings, has been developed into a public complex that includes the Village Hall, Museum, and Library.

The project for this Village-owned property begins with a modest investment in the trail system and other improvements that will make this facility more accessible to all members of the community. Trail restoration is seen as the first step in future facility enhancements that will be carried out by the Village and local volunteer groups. This project is under way; thus far, the trails have been marked and aerial photographs have been taken of the site for use in mapping out a program of improvements for the Village's consideration. This work should include general cleanup and clearing of overgrowth, elimination of ruts in trails and placement of bark chips or other suitable material to upgrade the walking surface, and removal of invasive plants (such as English ivy). This action will prevent the Woods from falling into disuse because of declining accessibility, thereby ensuring that the land continues to serve multiple purposes, including passive recreation, preservation of a locally important ecological community, and buffering to mitigate stormwater flooding.

Other improvements include the installation of benches placed at appropriate viewing locations, signs to identify important and interesting vegetation, and a kiosk at the entrance to the facility with maps and other relevant information for self-guided tours.

West Harbor Beach

The docks and bulkheads at this Village-owned facility are deteriorated, and need to be upgraded.

Former Schmitt Property

As noted previously, a constructed wetland has been installed on the former Schmitt Property, in the area to the north of West Harbor Drive. This wetland area now provides for the retention and biological treatment of stormwater from the 15th Street area, prior to discharge into Oyster Bay Harbor.

An area of existing wetland to the south of West Harbor Drive on the subject property has been targeted for restoration, in order to enhance wildlife habitat and increase acreage of wetlands along the Village's southerly shoreline. Under this project, which is almost complete, miscellaneous fill material has been removed in order to create the lower elevations needed to restore tidal marsh vegetation. Additional plantings may be undertaken — possibly including eelgrass in adjacent shallow waters of the harbor, in an effort to help provide a favorable environment for the growth of scallops in this area. This project is being undertaken in cooperation with the New York State Department of Environmental Conservation using funding provided under the Clean Water/Clean Air Bond Act of 1996.

PROPOSED CAPITAL IMPROVEMENT PROJECTS

The Village's program of proposed capital improvement projects focuses on non-point source pollution control, stormwater runoff abatement, habitat restoration, coastal erosion mitigation, and waterfront revitalization. The project objectives under these categories are summarized as follows:

Stormwater mitigation projects serve a twofold purpose: amelioration of flooding; and reduction of the impact of non-point pollution.

Flood plain management projects will focus on areas (especially along the shoreline of Mill Neck Creek) that already have been damaged by erosion, or where erosion may be likely to occur, which threatens to damage public and private property and roadway infrastructure. These projects will lessen the extent of storm-related damages to public facilities, in order to decrease public expenditures for repairs and to ensure continuity of the availability of these facilities for public use; reduce claims for reimbursement through the FEMA program, which may allow decreases in policy premiums for owners of properties in the Village's flood plain; and reduce the overall disruption of daily activity caused by flooding events.

Habitat restoration projects will enhance the value of the involved areas for fish and wildlife, especially in the Mill Neck Creek area, thereby improving the vigor and diversity of ecological communities.

Waterfront revitalization projects will enhance public use and enjoyment of existing facilities.

Stormwater Mitigation Projects

Stormwater management facilities are an important infrastructure element that supports adjacent areas of development. Improvements to these facilities will address one of the most urgent and persistent problems in Bayville, namely the periodic flooding that results from the accumulation of stormwater runoff during storms. These events are extremely disruptive and, in severe cases, endanger human health and safety. Flooding also causes malfunctioning of subsurface sanitary systems in low-lying areas, resulting in the overflow of inadequately treated sewage into the environment. The Village of Bayville depends on the recharge capacity of the sandy soils in the shallow subsurface to absorb and reduce the impacts of stormwater. The higher elevation areas of the Village (e.g., the Oak Neck area) have an enormous capacity to accommodate and store stormwater. However, the low lying areas, especially the tombolo at the Village's east end and the areas around the Mill Neck/Oak Neck Creek system at the Village's west end, have limited stormwater storage capacity.

Stormwater control in Bayville takes advantage of the fact that the Village is extensively underlain by highly permeable sedimentary deposits. Runoff first is collected into a network of street drains. Perforated storm sewers allow drainage into the underlying unsaturated soils as the stormwater is transported. Stormwater recharge into the ground also occurs via leaching pools, which are 10 feet in diameter and vary from 5 to 20 feet in depth. Leaching pools are particularly effective in reducing drainage discharge volumes to receiving waters, and providing a suitable environment for the removal of stormwater-borne sediments and associated contaminants. The top of each leaching ring is connected via an overflow pipe linkage to the next ring in the down-gradient direction. With this system, drainage water cascades downhill through the system of structures and is prevented from overflowing onto the streets.

This LWRP proposes the wider use of higher elevation areas in the Village for stormwater control. Preliminary designs have been prepared for a network of interconnected leaching pools which would be located at a number of strategic sites. Many of these proposed leaching fields would be linked to an existing network along Bayville Avenue. This project would abate the discharge of stormwater from areas of higher elevation into the low-lying, flood-prone sections of the Village.

The largest area in the Village for which improved stormwater interception and recharge is needed will be addressed by a number of ongoing and pending projects. These include drainage improvements that are the subject of grant applications for federal highway funds, which are proposed for the Bayville Avenue watershed between School Street to the west and the "president streets" area to the east.

In addition to flood mitigation, the proposed stormwater drainage improvements would be expected to improve the quality of adjacent coastal waters to a certain degree, thereby rendering a secondary beneficial effect in terms of fish and wildlife habitats and, potentially, the availability of shellfish beds for harvesting. The concentrations of contaminants (including pathogens) in stormwater drainage typically are significantly elevated during the period immediately following the initiation

of a rainfall event. Consequently, providing mitigation for this "first flush" of runoff is recognized by public health and environmental officials as being of critical importance to achieving and preserving high quality in coastal waters. This would be especially beneficial in Mill Neck Creek, where more than 70 acres of shellfishing beds currently are closed. Additional leaching capacity would reduce the quantity of runoff discharged to receiving waters during the critical "first flush" portion of storm events, when the concentrations of contaminants (i.e., pathogens and chemical pollutants) in the stormwater generally are highest.

The construction of a wetland on the former Schmitt Property helps to filter out pollutants and sediment from stormwater before it is discharged into Oyster Bay Harbor. Similar projects involving the provision of treatment capabilities for stormwater discharges to coastal waters may be carried out elsewhere in the Village, resulting in further improvements to water quality, thereby increasing the benefit to the local environment.

The following projects will expand the coverage of structural controls in the Village's stormwater drainage system, thereby advancing the LWRP's dual goals of water quality enhancement and abatement of stormwater flooding:

Bayville Park Boulevard: This project will serve a drainage area of approximately 30 acres along Bayville Park Boulevard on the west side of the Village's Oak Neck upland area, and currently is in the planning and design stages. This area has suffered from poor drainage and chronic stormwater flooding, which have damaged the roadways. Further investigation is required in order to determine whether the drainage from this area has been a major source of non-point pollution to the receiving waters of Oak Neck Creek. Preliminary plans call for the installation of leaching pools, which will vary in depth. The leaching pools will be connected to storm sewers. An overflow drainage line will interconnect the upper sections of the drainage rings.

Perry Avenue: This project will augment the existing drainage system along Perry Avenue, thereby augmenting the capture and recharge stormwater from local contributing watersheds. This action will prevent stormwater runoff generated in the project area from draining to adjacent low-lying lands along Bayville Park Boulevard where, as noted above, flooding is common under current conditions.

First Avenue: This project will improve surface drainage in the portion of the low-lying tombolo area of the Village to the east of Ludlam Avenue and south of Bayville Avenue. The project involves the installation of drainage sumps, which will be interconnected by a perforated storm sewer line. An outfall near the southeast corner of Bayville will direct excess stormwater discharges into Oyster Bay Harbor.

Flood Plain Management Projects

The Village's "Floodplain Management and Hazard Mitigation Plan" (December 1998) contains a number of projects and programs that will further the policies and objectives of this LWRP, including:

Drainage System Maintenance Program - eliminates obstructions in drainage structures and maintain capacity of the system, particularly with regard to the removal of accumulated sediment deposits, so as to ensure proper operation; the project also would include a mechanism for tracking complaints regarding system performance, which would provide for timely action to address reports of flooding and other problems.

Village Capital Projects Implementation - includes stormwater mitigation projects described above, and the following:

Creek Road - installation of leaching pools, as an extension of the existing drainage system in the area that has employed the same design; and installation of a gabion wall to protect Creek Road.

Hickory Road - to provide local drainage and elevate selected homes.

Bayville Park Boulevard area (i.e., south of Bayville Avenue, between University Road and Violet Court, and on Ash Court) - including cleaning of existing drainage appurtenances, and an investigation to determine system capacity and identify a plan to augment capacity as needed.

Nassau County Capital Projects - include improvements to the County storm drainage system along Bayville Avenue and Ludlam Avenue, and restoration of County recharge basins by removing vegetative overgrowth.

U.S. Army Corps of Engineers Coastal Study - the U.S. Army Corps of Engineers and NYS Department of Environmental Conservation have finalized an agreement to conduct a feasibility-phase study concerning beach erosion and flooding in the Village of Bayville; the federal funding has been procured, and the project will commence when the state funding is in place, with an expected completion within about three years after commencement, according to the Army Corps of Engineers.

Comprehensive Stormwater Management Plan - a number of improvements have been implemented to mitigate stormwater impacts in the Village, and additional measures are identified in this LWRP to advance stormwater management further, a single plan that brings all of these issues together will allow the establishment of a comprehensive, uniform management system, covering all of the various jurisdictions, which will maximize the effectiveness of stormwater abatement on a Village-wide basis.

Building Elevation Program - achieves a reduction in the flood susceptibility of certain existing buildings by raising the first floors above the respective base flood elevations.

The Community Rating System Program - is a federally-sponsored program that increases awareness of issues associated with flooding and reduces flood insurance costs.

Other projects that are important to the abatement of flooding impacts in the Village are described as follows:

West Shore Road: The Nassau County Department of Public Works (NCDPW) has proposed to raise the elevation of the roadbed on West Shore Road, between the Oyster Bay Railroad Station and the Bayville Bridge. Although this project area is outside the Bayville LWRA, implementation of this action would alleviate flooding of West Shore Road during incidents of severe storm surge, and would eliminate a major obstacle for motor vehicle travel to and from Bayville during such events. This project has been authorized for implementation, using monies provided from the State through the Federal Aid Highways program, based on preliminary engineering work that has been completed.

Bayville Avenue, Western Area: The NCDPW has jurisdiction over Bayville Avenue which suffers from periodic flooding at its western end. This disrupts the business operations in the area, which results in adverse economic impacts and detracts from the general quality of life of the local community. The NCDPW is undertaking engineering design to provide a permanent solution to this flooding problem, with funding through the Federal Aid Highways program. The current design calls for the road bed in this area to be elevated to the level of the 50-year storm.

Bayville Avenue, Eastern Area: The Village has applied to the Nassau County Planning Department for funding under the New York State TEA-21 Program for improvements to Bayville Avenue, between Arlington Lane to the west and Beach Avenue to the east. Supplemental funding may also be sought from the New York State Clean Water/Clean Air Bond Act. The main goal of this project is to alleviate the flooding that occurs along Bayville Avenue due to heavy precipitation and tidal flooding from Mill Neck Creek. Mitigation of these conditions will provide safe passage for residents and emergency vehicles, reduce damage to adjacent homes and other structures, prevent flood waters from reaching low-lying areas, and provide treatment to contaminated first-flush stormwater prior to discharge into adjacent coastal waters. In order to accomplish these objectives, the following measures are proposed:

Additional leaching pools will be installed throughout the drainage system to the west of Ludlam Avenue, providing additional stormwater storage capacity in order to moderate the volume of water flowing overland to adjacent areas of lower elevation.

A new "duck bill" tide gate will be installed on the Adams Avenue outfall, which will serve the dual purposes of preventing the backflow of coastal waters onto the land surface and allowing the settlement of sediments and associated contaminants from terrestrial floodwaters prior to discharge

to adjacent receiving waters. The tide gate will be designed in such way to minimally constrict tidal flow.

A berm will be installed along the southerly shoreline between the intersection of Arlington Lane and Shore Drive to the west and the Flower Oyster property to the east. This berm will raise grades to match the existing elevations at the end points, to approximately 12.5 feet above sea level along the entire length of the berm, which requires filling to achieve a maximum increase in elevation of approximately 3 feet at the lowest point. New discharge pipes, equipped with "duck bill" tide gates, will be installed through the base of the berm to allow flood waters to drain from the land surface. Sediment traps and other mitigation will be installed to provide treatment to the discharged stormwater.

In the area to the east of Ludlam Avenue, an existing, dead-end drainage pipe under Bayville Avenue will be connected to the existing outfall that discharges to the wetland on the former Schmitt property.

Two pump stations are planned in the low-lying areas on Bayville Avenue to either side of Ludlam Avenue. Emergency pumps will be placed into operation at these pumping stations on an as-needed basis to alleviate incidents of flooding in the project area. One or more permanent discharge pipes will be installed to convey flood waters from these pumping stations to an outfall in Long Island Sound.

Flood-proofing in the Valentine Beach Area: This project will relieve chronic flooding in the Valentine Beach area, which lies to the south of Wanser Avenue on Mill Neck Bay. It is proposed that a berm be constructed along the Bay to prevent high tides from entering the area, with pipes installed through the base of the berm (similar to the project component described above with respect to the area between the Arlington Lane and Shore Drive intersection and the Flower Oyster property). In addition, existing structures in the adjacent, flood-prone area that do not conform to FEMA elevation standards would be raised to achieve compliance with those requirements, so as to reduce their susceptibility to flooding. An engineering investigation would be needed, as a first phase of this project, in order to determine the best location for the proposed berm, identify the specific structures that should be raised, and assess the feasibility and cost of increasing the elevations of the selected structures. Implementation would then proceed in accordance with the findings of the engineering investigation. This project could be carried out under the "Project Impact" community program, a designation for which the Village recently has applied (see Section 4.3.3).

Flood-proofing in other areas along Mill Neck Creek and Bay: There a number of structures in proximity to Mill Neck Creek and Bay, outside of the Valentine Beach area discussed above, which routinely experience flooding during heavy storms and tidal surge. Under this proposed project, the affected structures would be raised to achieve compliance with FEMA's base flood elevation standards. An initial investigation would be needed in order to identify the specific facilities that

would benefit from such action before proceeding with implementation. This project also could be pursued under the "Project Impact" community program (see Section 4.3.3).

Habitat Restoration

Two main components of the revitalization plan for the Bayville waterfront identified in this document are the control of non-point pollution (related primarily to inadequately treated discharges of stormwater and malfunctioning on-lot sanitary systems) and habitat restoration. The long-range goal of this work is to improve water quality conditions in the Mill Neck Creek system to the point where it may be re-certified for shellfishing at some time in the future. However, a number of benefits would be derived from more modest water quality improvements in this area, including enhanced habitat value and aesthetic characteristics, and heightened enjoyment of these resources by the public.

The Mill Neck Preserve is a tidal wetland located at the upper end of Oak Neck Creek. This undeveloped Nassau County park is one of the outstanding natural resources in the Village of Bayville, and has been classified by the State as being irreplaceable with respect to its natural resource value. Despite the robust presence of the marsh vegetation, there is evidence that this area is being impacted by non-point source pollution, probably derived from overland runoff, discharges from malfunctioning on-lot sanitary systems, and bird and animal wastes.

The substantial reduction in street runoff that will be accomplished by the drainage projects discussed in Subsection A, above, will reduce first-flush impacts. However, other non-point sources, especially malfunctioning on-site sanitary systems, also are significant contributors to the degradation of local coastal waters. A number of measures are available to mitigate these impacts, including: establishing a maintenance and servicing schedule for existing systems; and providing unique designs for individual systems located in areas that are otherwise difficult to serve due to high groundwater levels, poor soil drainage properties, and similar factors.

Discharges of inadequately treated sanitary wastewater to the Mill Neck Creek system primarily are derived from sources that lie outside the Village of Bayville. Of particular concern are certain areas of residential development to the west of Oak Neck Creek, in the unincorporated community of Locust Valley. Consequently, a cooperative approach among neighboring municipalities is needed in order to achieve this LWRP's water quality goals related to the mitigation of non-point source pollution. This LWRP calls for the preservation of natural areas within the Mill Neck Creek system (including Oak Neck Creek), to sustain fish and wildlife habitat and support suitable recreational opportunities. However, these uses would be enhanced by certain environmental restoration actions in the subject area, including actions to protect the shoreline from erosion and to improve water quality.

The Village of Bayville also is calling for the enhancement of low-intensity public access to the Mill Neck Preserve, to improve its availability to pedestrians and non-motorized boats (e.g., canoes, kayaks, etc.), in a manner and at a level that will not result in adverse impacts to the ecological

resources of the preserve. Implementation of this action should raise public awareness of the preserve's natural resource value, and of the need to maintain vigilant control over point and non-point discharges so as to protect this important area.

In order to accomplish revitalization of Mill Neck Creek, the Village proposes the following project steps:

Collect inventory information and undertake water testing to identify the areas of major non-point source discharges. This project will be conducted in cooperation with the Nassau County Department of Health, which has agreed to provide a qualified inspector to verify any unauthorized sewage discharges that are identified through the study. Such verification is necessary to document the problem in a legally sufficient manner, so that responsible party can be compelled to take appropriate mitigative action.

Investigate and implement suitable methods for mitigating these non-point sources.

Waterfront Revitalization Projects

Bridge Marina Upgrade: This Village-owned facility requires a general facility upgrade in order to improve its attractiveness to potential customers, so as to increase utilization. An evaluation should be undertaken, during the initial phase of this recommended project, to determine the scope of improvements that should be implemented.

West Commercial Area: This project includes aesthetic and architectural enhancements to the Village's west commercial area, which lies in the northwest corner of the Village, to the north of Oak Neck Creek. Ransom Town Beach, located directly across Bayville Avenue, opposite this small commercial area, is an important destination which attracts people to the area and supports the local businesses. An upgrade of the existing architectural facades of the commercial buildings would serve to increase user appeal. In addition, it is recommended that Nassau County proceed expeditiously with a planned project to moderate the curvature of the existing sharp bend at the western end of Bayville Avenue, opposite the entrance to Stehli Town Beach, in order to improve the public safety aspects of this road.

Mill Neck Creek Dredging: Dredging is an historical practice in Mill Neck Creek for maintaining channel depth and providing access to waterfront facilities. Areas that once were navigable or useful for mooring and docking of boats now are becoming too shallow for these uses, reducing the availability of local waters to recreational boaters. This problem is becoming particularly acute at the Village's Creek Beach facility, which was last dredged more than 20 years ago. The Village has initiated discussions with agencies that have regulatory authority over dredging activities (e.g., NYS Department of Environmental Conservation and U.S. Fish and Wildlife Service). Landfilling appears to be the most realistic disposal option, at this time.

PROPOSED ENVIRONMENTAL PLANNING STUDIES

The following investigations are recommended in order to advance the objectives, goals and policies of this LWRP:

- On-site sanitary systems have been malfunctioning or overflowing in some areas of the Village where the soil is poorly draining, causing the discharge of inadequately treated sewage to adjacent coastal waters. This problem becomes particularly acute during times of heavy rainfall, when groundwater levels rise and when surface flooding occurs as a result of poor stormwater drainage or inundation by storm surge. A study is needed to evaluate the extent of the problem, and to identify measures that could be taken to prevent such non-point discharges to coastal waters from these sources. This investigation should include monitor groundwater levels and groundwater quality.
- Prepare a comprehensive stormwater management plan for the flood-prone portions of Bayville, as detailed in the Bayville "Floodplain Management and Hazard Mitigation Plan".
- Conduct a non-point source survey, to identify sources of pathogens discharging into Mill Neck Creek.
- Investigate methods for abating inadequately treated septic wastewater discharges from the area to the west of Oak Neck Creek (i.e., the Birches, or Davis Park, subdivision).
- Study erosion and sediment control methods along the Village shorelines on Oak Neck and Mill Creeks, Oyster Bay Harbor, and Long Island Sound, with emphasis on soft protection measures.
- Undertake appropriate planning actions to further mitigate susceptibility of the Village of Bayville to various hazards. Bayville is exposed to natural forces along both the north and south sides, and has limited vehicular access to the mainland, via only two roadways (i.e., Ludlam Avenue to the south and Bayville Avenue to the west). These factors make Bayville especially susceptible to hazards of all kinds, particularly in relation to impacts of severe storms, such as hurricanes and "nor'easters", which include strong winds, serious flooding due to inadequate stormwater drainage and storm surge, and coastal erosion. These types of events can give rise to a number of detrimental secondary effects, such as preventing the safe passage of residents and emergency vehicles, as well as public health threats related to contamination from sewage and hazardous chemical spills. Ice storms, fires, vehicular accidents and other incidents of this type engender their own set of hazards.

In order to be better prepared for some of these hazards, the Village completed a "Coastal Storm Emergency Response Plan" in cooperation with the NYS Emergency Management

Office (SEMO). This plan, which was adopted by the Village Board of Trustees on December 11, 2000 (Resolution 2000-207), is designed to provide detailed procedures to minimize the adverse impacts of coastal storms and other events that cause Bayville to become isolated from the mainland of Nassau County. In addition, the Village has applied to SEMO and FEMA to receive designation as a "Project Impact" community. If the Village is successful in achieving this status and implements the elements of Project Impact, it will become a "Disaster Resistant Community." This program will involve the participation of both the public and private sector, and will include environmental groups, local businesses, other government agencies, and utilities (water, electric, and gas). The program will be a vital planning tool to implement disaster-resistant measures, which possibly would include the following:

hurricane-proofing of structures and public shelters;
provision of emergency response systems to ensure that the community can survive and operate when completely isolated;

development of plans and procedures to avoid hazards or minimize the effect of hazards;

establishment of forecasting systems to detect hazards and prepare for emergencies in advance (e.g., tidal and weather alerts);

emergency response for significant hazards (e.g., accidents, oil spills, and explosions); and

hazard-proofing of utilities (e.g., back-up power, security systems, and placing utility lines underground).

PROPOSED PROCEDURAL ACTIONS

The following new or amended procedural actions are recommended in order to advance the objectives, goals and policies of this LWRP:

- Take steps to earn Community Rating System (CRS) credit, and to otherwise achieve flood insurance rate reductions.
- Take steps to secure funding to implement the approved Bayville Avenue flood management projects, including the Centre Island Beach and Tides Motel sections.
- Prepare and submit grant applications for recovery of expenditures for completed and partly completed projects, including Bayville Waterfront Commons.

- Prepare and submit grant applications for new projects, including the installation of additional drainage rings.
- Complete planned or ongoing surveys to define jurisdictional boundaries in the Bayville LWRA, including resolving ambiguities and uncertainties regarding the boundary between the Village and the Oyster Bay National Wildlife Refuge, and update these boundaries as appropriate.

PROPOSED PUBLIC EDUCATION PROJECTS

Public education programs will be pursued to raise awareness regarding adverse impacts to the quality of adjacent coastal waters caused by malfunctioning on-site sanitary systems. Programs also will be undertaken to address: the environmental impacts caused by the overuse of lawn fertilizer and turf chemicals; the improper disposal of vessel wastes, hazardous wastes and animal wastes; the benefits derived from on-site retention and recharge of stormwater runoff; and the undesirable consequences of feeding and cultivating a population of local, year-round waterfowl. Public education will be included as a component of the Harrison Williams Woods and the Bayville Waterfront Commons project proposals.