

4.0 NATURAL RESOURCES

Natural resources help to define Southeast's community character. Residents of Southeast can identify with the rolling topography, the streams and reservoirs, and the broad vistas available from many local roads. The quality of this landscape is important to the residents of Southeast. The quality of the landscape is also important to the consumers of New York City's drinking water as well as the consumers of local groundwater. Protecting the Town's natural resources is a significant consideration in the Town's *Comprehensive Plan*.

As concern for environmental quality, and the impact that new development has on the environment, has increased over the last decade, especially with respect to wetland and water quality issues, new regulatory and planning tools have been introduced at multiple levels of government. Local laws and *Comprehensive Plan* policies should be coordinated with the New York City Watershed Regulations, and federal and State wetland laws to ensure a unified approach to natural resource protection. Coordinating protection efforts serves the Town's interests by ensuring that the Town has the first opportunity to protect its own resources; especially as the Town's remaining open spaces and undeveloped lands are considered for potential development. Protecting natural resources and protecting community character go hand-in-hand.

4.1 BACKGROUND

The Town's supply of open spaces (both public and private lands) includes land surrounding the reservoirs and East Branch of the Croton River that is owned by NYCDEP. Significant elements of the Town's open spaces are part of the New York State Department of Environmental Conservation managed Bog Brook Unique Area, the Great Swamp Critical Environmental Area (CEA), the Atlantic White Cedar swamps north of Lake Tonetta and Brewster Pond, and several aquifer areas including one that provides the Village of Brewster with drinking water. Other important parcels are owned by Save-Open-Spaces (SOS), a local land trust. A number of federal, State, and local designated wetlands are also located throughout Southeast. Together these open spaces contribute to the community character and provide clean drinking water for residents of the Town and New York City.

The recently completed Great Swamp Watershed Conservation Strategy study, prepared by The Nature Conservancy, outlines additional levels of protection for this important natural resource. The *1992 Master Plan* outlined several recommendations with respect to the Great Swamp, including revisions to zoning and wetland laws to provide additional protection. This *Comprehensive Plan* echoes those recommendations by reference.

Another study, entitled "Lake Tonetta: A Guide to the Past, Present and Future" and prepared by the Town of Southeast Conservation Commission in 1997, describes the natural and cultural

influences on Lake Tonetta and its water quality.* This document outlines a number of management strategies to ensure the continued quality of the Lake Tonetta environment for use as a Town park and for the rare and important Atlantic White Cedar Swamp located on the lake's northern shore. According to the Lake Tonetta report, this ecosystem has been identified by New York State's Natural Heritage Program as imperiled throughout its range or with a high vulnerability to extinction. The Atlantic White Cedar itself is a protected rare plant in New York State.

According to a Putnam County land use inventory, Southeast contains twenty-four agricultural parcels totaling approximately 855 acres. These agricultural uses are divided between horse farms, dairy farms, orchards, nurseries and greenhouses, and some land currently used for educational purposes or as rural residential property. These properties contribute to the Town's mix of rural and suburban community character, and several are located along scenic roads or entrances to the Town.

4.2 INVENTORY OF NATURAL RESOURCES**

Figure 4-1 identifies some of the important natural features within the Town of Southeast. As the figure indicates, much of the Town's land is characterized by steep slopes, wetlands, or water courses and reservoirs. These features are critical components of the Town's quality-of-life, community character, and watershed protection efforts. Figure 4-2 locates some of the streams and water bodies with Southeast. Figure 4-3 identifies some of the open space resources. Figure 2-3 (see Section 2, "Geographic and Historic Context") identifies some of the historic and cultural resources that add to the Town's character.

TOPOGRAPHY

Southeast lies in the Harlem Valley, with a slice of the smaller, historic Oblong Valley running through its eastern side. Despite this, Southeast is hilly. Southeast's hilliness is interwoven with large, flat parcels, rivers, streams, and waterbodies. With no one water system or range of hills, Southeast's defining feature is the variable texture of its terrain. Its varied elevations are part of the larger Hudson highlands range. The highest hills in Southeast are Joe's Hill at 917 feet, Snake Hill at 770 feet, and Farrell Hill at 766 feet. Other distinguishing hills are Marvin Mountain, partly in the Village of Brewster, and Mount Ebo.

Topography or terrain can limit the type of development considered and may prohibit development altogether depending upon the degree of slope. Slopes in excess of 25 percent may prohibit development. Low-density residential development on these slopes is feasible; however, it is very difficult to build the roads needed to service them. In addition, excessive erosion may result as a consequence of development in these areas. Land having 15 to 25 percent slopes is considered unsuitable for residential development. As of May 2000, the Putnam County Department of Health will no longer approve septic systems on slopes of 15 percent or greater

* Michael T. Ciaiola led many of the efforts involved in this study and was the primary author of the report entitled "Lake Tonetta: A Guide to the Past, Present, and Future."

** Information in Section 4.2 was obtained from the January 1992 *Town of Southeast Master Plan* prepared by Buckhurst Fish Hutton Katz & Jacquemart, Inc. which derives some of its material from a Generic Environmental Impact Statement for proposed rezoning actions within the Town prepared by Manual S. Emanuel Associates. Minor editing has been done.

or on slopes modified to 15 percent. Land with slopes of 8 to 15 percent is considered moderate in degree. These areas can be utilized for both residential and commercial development, but are more conducive to residential development since commercial development may require extensive regrading of the land to produce the required gentle contours. Land with slopes of 0 to 8 percent may be preferred for commercial development, which generally requires large flat areas for building pads and parking lots.

Land with prominent steep slopes can be found in the northeastern quarter of the Town, with the exception of some areas within the East Branch of the Croton River basin. Probably the two most pronounced areas of steep slopes can be found east of the East Branch Reservoir, better known as Joe's Hill, and in the southwest corner of the Town. The northwestern quarter of the Town has a great deal of slopes greater than 8 percent, but only a few considerable large areas of steep slopes exist. The southeastern quarter of the Town has generally slight to moderate slopes and is, therefore, less susceptible to erosion problems compared to more steeply sloped portions of the Town.

SOILS

The Town's soils characteristics are important development and conservation information, as they determine vegetation, wildlife, surface and groundwater resources, and development potential. New development is particularly constrained by shallow soils (shallow depth to bedrock) and poor or slow permeability.

Southeast has a wide variety of soil types resulting from glaciation during the Ice Age and subsequent weakening and erosion of bedrock and glacial till. These soils can be grouped into eight general categories based on their principal properties, such as: presence of rock outcrops, shallow depth to bedrock, extremely stony, slow permeability, shallow depth to seasonal water table, wetland soils (constant shallow depth to water table), well-drained soils, and unclassified or cut-and-fill soils.

Southeast has only three significant concentrations of bedrock outcrops. The first major outcrop area is located in the southwestern corner of Town and extends along the eastern side of two large hills immediately west and southwest of Diverting Reservoir. A second major outcrop area is located in the higher elevations of land immediately east of the East Branch Reservoir (Joe's Hill). The third significant area is located in the northeast corner of the Town in the higher elevations east of Sears Corners and south of Deforest Corners.

Areas within the Town having bedrock at a depth of less than four (4) feet generally correspond to areas of bedrock outcrops, but tend to be more widespread. In addition to the three bedrock outcrop areas, shallow depth to bedrock can be found west and immediately north of the Middle Branch Reservoir, on both sides of I-84 in the northern portion of the Town, and in scattered areas north and south of Bog Brook Reservoir and north of Peach Lake.

Several areas tend to have large boulders or stony soils. These are located in scattered bands, primarily in the northeastern quadrant of the Town and are strongly associated with the presence of bedrock at or near the surface. Other areas of stony soils are located east of the East Branch Reservoir, at the southeastern end of Croton Falls Reservoir, west of the Middle Branch Reservoir, and directly north of Lake Tonetta.

A large portion of the Town's soils is classified as having slow permeability—a property usually resulting from the presence of a fragipan, or impermeable layer of soil. These soils are typically located in areas of moderate elevation and slopes, and can be found in most of the land south and

west of I-84, except at high and very low elevations, and in land near I-684. Two additional areas having the same soil characteristics are located in areas of moderate elevation along the northern portion of Route 22 and along the northeastern border of the Town (extending north to south).

Soils with a shallow depth to the seasonal water table are generally found in areas adjacent to wetlands or in other low-lying areas. These soils are found in only very small bands throughout the Town.

Wetland soils correspond directly to wetland areas in the Town where soils remain saturated for most or all of the year. These soils are widely dispersed throughout the Town. Large areas of wetlands soils are evident south of Diverting Reservoir, north of Peach Lake, north and west of Lake Tonetta, and in low-lying areas north of the Bog Brook and East Branch Reservoirs.

Soils with relatively good permeability (well-drained soils) form a fairly large band in the central portion of the Town. The northern portion of this band is located east of I-84, and extends southward nearly to the interchange of I-84 and I-684. The southern portion of this band begins directly west of this interchange and extends south to the Town border, on either side of I-684.

Unclassified, or cut and fill soils, are generally a result of human activity, but include soils that do not readily fit into any of the other categories described above. These can be found in small pockets along roads in the Town or as dams for the various reservoirs.

WETLANDS

Southeast has abundant freshwater wetlands, identifiable by their soils, vegetation and hydrology. Many used to be called swamps or marshes up until the day they were filled in. Wetlands are now recognized for their many functions and benefits:

- groundwater recharge and discharge;
- flooding and stormwater runoff control;
- sediment retention;
- sediment stabilization;
- wildlife and aquatic diversity and abundance;
- nutrient removal and transformation;
- recreation and open space; and
- visual relief from the built environment.

Wetlands are natural filters, able to remove and transform contaminants from daily runoff and floodwaters before they enter adjoining water courses or groundwater resources. This filtration is especially important as so many homeowners in Southeast are dependent on wells for potable water. As water enters a wetland, its velocity is generally slowed often to the point where its sediment load is deposited. These sediments can contain contaminants such as heavy metals, pathogens, organic matter, and excessive nutrients. Nutrients, such as phosphorus and nitrogen, can be assimilated by wetland plants. Nutrients can also bond to wetland soils where chemical processes can transform them into non-polluting elements.

Protection of wetlands requires more than not filling, draining, or dredging them. A wetland's capacity to perform these functions must be protected through wetland vegetation, gradient, size and the amount of time water is detained. Through its Conservation Commission, Southeast has mapped State-designated wetlands and designated Town-regulated wetlands in order to further protect them. The commission is currently remapping the wetlands and their associated buffer

areas, and revising the wetlands ordinance to make them more consistent with the evolving regulations and science of wetland protection. Development which is proposed to occur within a wetland or a wetland buffer area is governed by the Conservation Commission and the New York State Department of Environmental Conservation (for State-designated wetlands). The United States Army Corps of Engineers also regulates wetlands and has recently revised the thresholds it uses to determine the extent of its involvement in issuance of certain permits required to undertake work in an area containing wetlands. The more stringent Army Corps rules should be considered in efforts to revise local wetland protection ordinances.

There are a significant number of State-designated wetlands located in Southeast. Of these, three notable areas include the Tonetta Brook area located west of Lake Tonetta, the Peach Lake Brook located north of Peach Lake, and an area surrounding the East Branch of the Croton River extending from the East Branch Reservoir to the Town of Patterson.

The Great Swamp is another significant wetland located partially in Southeast. Southeast's upper northeastern corner encompasses the southern tip of the Great Swamp and its drainage basin. This 4,202-acre wetland (other estimates of the size of the wetland areas within the Great Swamp are as high as 6,768 acres) located within a 62,343-acre watershed is a valuable resource and one of the State's largest wetlands. The Great Swamp is a designated Critical Environmental Area in Putnam and Dutchess Counties, is listed as a Priority Conservation Project in the *New York State Open Space Conservation Plan*, as a Priority Wetland by the United States Fish and Wildlife Service, and has been nominated as a National Natural Landmark.

The Great Swamp has an important function in the hydrologic cycle of this area, acting as a vast biological filter for the East Branch of the Croton River and the New York City reservoirs downstream. The immensity of this wetland, and its value as a wildlife and rare plant habitat, water filter, backyard wilderness, and prime real estate have been recognized by several recent studies. A study prepared by Regional Plan Association (RPA) put forward a conservation plan with specific recommendations to the towns that share the benefits and responsibilities to protect the swamp. The RPA study contained several recommendations for Southeast:

- Revise the Town wetlands ordinance to expand the designated buffer area to 150 feet for streams and wetlands;
- Recognize the Great Swamp in any new master plan;
- Create a Great Swamp overlay zone which would guide land use decisions, including the dedication of conservation easements, the use of transferable development rights, or other resource protection measures;
- Revise site plan review ordinances to specify that the Great Swamp and other wetlands be included as a positive natural feature in the site design; and
- Revise site plan requirements so that proposed site plans show the location of hydric soils, Town-and State-regulated wetlands, and slopes over 15 percent.

Another study, prepared by the Nature Conservancy in 1999, examined the Great Swamp and its watershed in extensive detail. "The Great Swamp: A Watershed Conservation Strategy" documents the multiple natural resources located in the swamp and its watershed, identifies the many existing opportunities for public access to and use of the Great Swamp, and encourages adoption of six primary initiatives to protect the Great Swamp:

- Increase public awareness of the Great Swamp;
- Foster local leadership on wetland and watershed protection;

- Strengthen wetland protections;
- Improve water quality;
- Protect plant and animal habitat; and
- Encourage compatible economic development and improved land-use planning.

WATER RESOURCES

Southeast's groundwater and surface water system provides not only the Town's own potable water supply, but also part of New York City's municipal supply. Water is critical for residential, commercial and industrial use, and for animal and vegetative habitat. The presence of reservoirs, wetlands, lakes, ponds and streams add immeasurably to Southeast's scenic and rural character.

GROUNDWATER

Nearly all Town residents rely on groundwater obtained from wells for their drinking water supply. Groundwater replenishment occurs through infiltration of rainfall into the ground and then into aquifers. Groundwater recharge depends on the intensity and amount of precipitation, the moisture content of the soil, the porosity or permeability of the ground surface, slope of the land, and amount and type of vegetation. The Town has no control over precipitation or the rock geology that holds the groundwater. The Town can, however, manage the development impacts (e.g., limiting impervious surfaces) on slopes, vegetation and soils to protect and sustain the water supply. For example, some parts of Southeast contain rich deposits of sand and gravel. In their natural state, these are often water aquifers. Where mining and extraction is permitted, the loss of a water resource must be weighed by the Town against the economic benefits of gravel mining.

Two known large aquifers exist in the Town: one around Haines Pond and one southwest of Bog Brook Reservoir, which serves as the Brewster Village public water supply. Southeast also has several fault lines running through it or near it, and occasionally has minor earthquakes. Generally, groundwater collects along faults and geologic fractures, so there is a strong possibility of finding other significant pockets of clean subsurface water with good yields along these lines. Putnam County is currently considering a County-wide aquifer study. Since nearly 75 percent of the residents of the County obtain their drinking water from local groundwater sources a County-wide study would provide valuable information for development of comprehensive groundwater protection strategies.

Groundwater resources can be threatened by inappropriate development, overpumping, drought, leakage from bulk storage of hazardous chemicals, and the continued reliance on individual subsurface septic fields and wells.

SURFACE WATER

Southeast's surface water, although a part of its natural beauty, is largely a product of human effort. In the late 1800s, New York City's Croton Watershed System was created through the damming of the East Branch and Middle Branch of the Croton River. Southeast has five of the watershed reservoirs in its borders: part of the Croton Falls, and all of the Middle Branch, Bog Brook, East Branch and Diverting Reservoirs. In addition, the Town is laced with streams, creeks, small ponds and the large natural waterbodies of Peach Lake, Haines Pond, Brewster Pond, and Lake Tonetta. Protection of surface water is important to Town residents. Clean surface water enhances property values and aesthetic values, provides recreation opportunities, and protects the drinking water supply. Figure 4-2 shows the location of many of the streams

within Southeast and indicates the 100-foot buffer required by the NYCDEP Watershed Regulations. The 300-foot buffer to reservoirs is also shown.

The stress of development on lakes has led to eutrophication of Lake Tonetta, Peach Lake, and the New York City reservoirs. (Eutrophication is a process by which a buildup of organic material, sediments, and nutrients results in chemical and physical changes within a waterbody). Lake Tonetta and Peach Lake require immediate attention to ensure that water quality and the scenic and recreation values are preserved. Lake Tonetta is a Town-owned water body that requires immediate measures to improve water quality. Peach Lake is a privately-owned water body. The Town, as part of the *Croton Plan* effort, has identified possible infrastructure improvements that could improve water quality in Tonetta Lake and Peach Lake. At Peach Lake, selection of water quality improvement measures is ultimately a decision that residents of the Peach Lake community (in Putnam County and in Westchester County) need to make.

New York City Department of Environmental Protection monitors the quality of water within its reservoirs and institutes regulations and policies to protect the integrity of this drinking water resource. In 1990, a far-reaching surface water protection program began when New York City moved to protect its watershed. The Watershed Rules and Regulations were developed to protect the water quality from any additional degradation resulting from wastewater discharges into surface and groundwater, land use practices that result in non-point source runoff, and improper use of storage of materials such as pesticides, de-icing salt and solid waste.

Eutrophication of waterbodies is generally driven by the quantity of phosphorus entering the water. Too much phosphorus creates algae, weeds, slimes and other organic by-products which degrade water quality. New York City considers any “non-source water” reservoir containing 20 milligrams per liter or more of phosphorus to be “Phosphorus-limited.” Of the five reservoirs located within Southeast, only the Bog Brook is not currently designated as phosphorus-limited at this time. In addition, the Muscoot Reservoir, the watershed for which extends into Southeast, is phosphorus-limited. The Section 2 of the *Croton Plan* provides detailed descriptions of water quality in each of the major water bodies in Southeast.

SCENIC RESOURCES

One final element of Southeast’s natural resource inventory is the visual perception of the collected resources. Southeast’s scenic quality is one of its most important resources from the perspective of quality-of-life or community character. The scenic quality includes the Town’s varied texture of hills and water, uplands and wetlands, farm fields and tightly gathered village core, old cemeteries, cedar stands and old meadows. The scenic quality is not created solely, however, by the naturally occurring formations; the human impact on the landscape contributes to the historic and cultural landscape.

The historic and cultural landscapes are those that have been altered through human involvement with the earth or which have some historic association. They are the visual reminders of particular episodes or times in Southeast’s history. Thus, the active Salinger and Ryder farms are cultural landscapes that are integral to Southeast’s overall community character. The Duke & Benedict farm is also a contributing element of Southeast’s community character. (Chapter 7 includes a discussion of measures the Town can take to ensure that these components of the landscape are protected.) Land use and conservation proposals are needed to ensure the survival of working farms and cultural landscapes. The open pit of the famous Tilly Foster Mine could be an attractive historic landscape and a reminder of the Town’s early mining history. In addition, old cemeteries play an important role in Southeast’s character. These scenic resources

are small patches of designated open space, inserted into a local woods or meadow corner, and serve as a reminder of a time when families buried relatives close at hand near the fields they had worked and the home where they had grown up. (See also Figure 2-3 which maps some of these important resources).

Scenic roads are another visual resource. These roads, some of them dirt, provide less-traveled ways to experience some of the Town's visual qualities including wide vistas of meadows and hillsides, and views of the reservoirs. The Town Board adopted a Local Law allowing the Town to designate scenic roads. The Town has already designated Old Milltown Road as scenic. Maple Road and Lower Mine Road are considered potential scenic roads.

4.3 COMPREHENSIVE PLAN RECOMMENDATIONS

GOAL AND POLICY

The Town of Southeast is committed to protecting its natural resources as a critical component of the Town's quality-of-life, rural and scenic character, and the region's water supply. Wetlands, watercourses, open space, woodlands, and agricultural lands contribute to the quality and character of Southeast, and their preservation, enhancement, and restoration must be considered in all actions that may affect them.

IMPLEMENTATION ACTIONS

To accomplish these goals, the Town of Southeast intends to:

- Revise the Town wetland law to better protect local wetlands and synchronize local, New York State, and federal wetland regulations. Among the revisions to be considered are increasing buffers from 50 feet to 100 feet on both sides of a wetland or watercourse and redefining "wetlands" to make smaller wetlands subject to protection measures.
- Establish a zoning overlay district to provide additional protection to the Great Swamp Critical Environmental Area. The overlay district should, for example, require decreased allowable development coverage (impervious surfaces) and on-site stormwater management.
- Continue to rigorously enforce environmental protection regulations in the Town Code, especially wetland and steep slope protections.
- Create a natural resource inventory (NRI) and adopt an open space master plan to identify and prioritize sites, parcels, and features to be protected, preserved and/or acquired. The inventory and plan should be incorporated into the site plan approval process.
- Increase the recreation fee for residential subdivisions to give the Town the option to pursue acquisition of additional park land or capital improvements to existing Town parks.
- Consider designation of new Critical Environmental Areas (CEAs), including:
 - The Village of Brewster wellfield and wetland system;
 - The aquifer area in the vicinity of Haine's Pond;
 - The Atlantic White Cedar swamps just north of Lake Tonetta and Brewster Pond;
 - The scenic area between the Diverting and Croton Falls Reservoirs with historic importance as the location of old mines and habitat importance as the home of a large bat community; and
 - Bog Brook Wildlife Management Area.

- Take measures to improve the water quality in Tonetta Lake to improve this important recreational resource.
- Examine ways to assist the Peach Lake community through infrastructure improvements or inter-municipal agreements with North Salem.
- Consider additional designations of scenic roads.
- Adopt a local law to enable the Town to designate local historic districts, sites (Tilly Foster mine, cemeteries), and/or structures. Such a law could provide protection measures and/or incentives to preserve historic structures.
- Create a tree protection ordinance to ensure protection of significant trees.
- Consider a ridgeline protection ordinance to protect notable view sheds within the Town.
- Consider a stonewall protection ordinance to maintain stonewalls as important elements of the Town's visual character.

4.4 ENVIRONMENTAL ANALYSIS

The proposed implementation actions of the Comprehensive Plan create a framework through which natural resources will be protected as the Town continues to accommodate development. The design of these policies integrate community character considerations by ensuring the enhancement of existing natural resource elements.

COMMUNITY CHARACTER

Natural resources and community character are inherently linked within the Town of Southeast. For many residents, the quality-of-life in the Town is tied to its natural resources including the rolling topography, the streams and reservoirs, and the undisturbed patches of forest. The implementation measures being considered for natural resource protection as part of the *Comprehensive Plan* would protect the Town's rural community character.

NATURAL RESOURCES

WETLAND AND STEEP SLOPES REGULATIONS

Proposed revisions to the Town's wetland law would ensure that local regulations are stringent enough to envelop State and Federal regulations, and provide protection to any areas not covered under existing criteria. Wetland protection with refined local standards would be geographically specific to sensitive areas within the Town, mandating that wetland delineation be conducted as new developments are proposed on a project-by-project basis.

A new zoning overlay district for the Great Swamp Environmental Area would employ the stipulations of the revised local wetland regulations by ensuring the delineation of on-site wetland areas, and designating new development to portions of the site not deemed to be ecologically sensitive areas. New development within this zone would be required to retain on-site stormwater without discharging it to off-site locations.

Areas where undisturbed steep slopes exist are stabilized by thick vegetative covers which create soft visual boundaries and continuous ecological corridors. Similarly, wetlands provide a natural habitat for small animals and a variety of plant species to survive. In better defining the criteria for separating developable land from wetlands and steep slope areas, healthy flora and fauna

would be preserved—a desired element in maintaining the rural and natural character of the community on private parcels of land.

OPEN SPACE DESIGNATION AND CRITICAL ENVIRONMENTAL AREAS

A clearly defined open space strategy is necessary for the protection of valuable parcels of undeveloped land within the Town. Open spaces provide valuable recreational resources for all citizens of the community to enjoy active and passive outdoor activities in an environment which is scenic and rich with natural resources. Preserving open spaces requires a strategy whereby policies will be in place to acquire and lend support to maintaining park land and natural resources for public use and enjoyment. The adoption of an open space plan and natural resource inventory (NRI) would outline such a strategy and define areas of scenic and recreational importance and value to the Town.

The designation of additional Critical Environmental Areas (CEAs) would ensure that undeveloped areas which already contain unique natural resource attributes are given the enhanced protection from new development that designation as a CEA affords. Where undeveloped areas are known to contain healthy ecosystems or sensitive habitats exist, new CEAs would indicate the special features inherent to the land.

The maintenance, preservation, and acquisition of park lands, open spaces, and CEAs requires permanent designated funding sources at the local level. Without prohibiting development, recreation fees for new residential subdivisions would contribute to financing these initiatives that protect the natural resources integral to the character of the Town. The result would be mutually beneficial for the Town and its natural environment, since preserved recreation areas, open spaces, and natural resources would increase the value of developed properties over the long-term.

HISTORIC AND SCENIC RESOURCE PROTECTION

Historic and scenic resources are a vital component of the identity of a community and constitute the backbone of its aesthetic quality and character. In Southeast, the protection of these resources would be recognized as a high priority, since many of the existing historic and scenic resources have not been overshadowed by the effects of new development. To ensure that historic buildings and streets that define the unique character of the Town's past would be preserved, a local historic preservation law would encourage the preservation of designated resources by future development interests.

Many of the most scenic areas of the Town are areas where development has not yet occurred and natural resources are abundant. In conjunction with other natural resource protection initiatives, designated scenic areas would be more stringent than other areas in determining the types of development to be permitted along certain roads through Town. To preserve the integrity of its visual resources, the Town would create an inventory of its historic and scenic resources, and develop criteria for guiding development around designated resources in the community.

WATER QUALITY PROTECTION

The cumulative effects of the implementation actions would ensure that water resources within the Town would be protected as goals and objectives for balancing development and natural resource needs are realized. The water quality impact analyses contained in the *Croton Plan* are incorporated herein by reference. Those analyses identify the potential water quality effects of

new development (see Section 2.4 of the *Croton Plan*) and potential infrastructure improvements that may be required to further protect water quality.

The protection of wetland areas is necessary to retain groundwater recharge areas that act as filters for surface runoff collecting in low-lying areas. As the water permeates through the soil, it recharges subsurface aquifers which are sources of drinking water for most residents. Steep slopes protection would ensure that soil and root systems of vegetation are not disturbed or removed, which would create unstable slopes, soil erosion, and subsequent increases in levels of suspended solids and pollutants in larger water bodies.

Large expanses of permeable land act as filtration devices for surface water re-entering the natural hydraulic system. Contained areas of impervious surfaces—such as developed areas where surface water is unable to penetrate—decrease chances of flash flooding and the need for large, expensive, and cumbersome storm sewer networks. The preservation of continuous tracts of open space linkages, park lands, Critical Environmental Areas, and natural scenic corridors serves to increase water protection by ensuring that criteria are clearly delineated for allowing managed growth, as well as the protection of natural resources. ❖