

## **F. ENVIRONMENTAL RESOURCES**

### **1. Overview**

Based, in part, upon information in the *Inventory and Analysis* component, the following issues relative to environmental resources have been identified:

- a. *Many of the Undeveloped Areas of the Village Contain Sensitive Environmental Features Such as Steep Slopes, Wetlands and Waterbodies.*

As identified in the “Future Land Use Change” discussion in the *Land Use and Zoning* section of the *Inventory and Analysis* component, a significant proportion of the undeveloped areas of the Village contain sensitive environmental features such as steep slopes, waterbodies, streams, and/or wetlands. Future development of such areas would likely impact these resources. In addition, since many of the undeveloped properties are contiguous, development of these properties could potentially fragment wildlife habitat and biotic corridors.

There are several areas of the Village that contain steep slopes, including: to the north and south sides of Bleakley Avenue; along the east side of Route 9A within a number of undeveloped properties; and the large, undeveloped area to the north/west of Westchester Avenue. Many of these areas, such as the area to the east of Route 9A, along Bleakley Avenue, and the undeveloped property located at the northwest corner of Bleakley Avenue and Route 9A exhibit a significant amount of rock.

One 12-acre NYSDEC-regulated wetland is located within the Village along Dickey Brook. This wetland area is located on portions of a number of undeveloped properties within the M-1 District. A number of additional wetlands areas (or areas likely to contain wetlands due to the presence of hydric soils) are located throughout the Village. The largest such non-NYSDEC wetland is also roughly 12 acres in area. It is located on the undeveloped Con Edison property located to the north/west of Westchester Avenue. Other, smaller wetlands are also located in that area of the Village, as well as additional undeveloped properties in the Village including certain properties along the east side of Route 9A, at the northeast corner of the Bleakley Avenue/ Broadway intersection; and along the length of Dickey Brook.

- b. *Potential Impacts to Dickey Brook and Lake Meahagh.*

The water quality of Dickey Brook and Lake Meahagh, the two principal surface water resources within the boundaries of the Villages, are both potentially threatened. Dickey Brook runs past several of the Village’s industrial properties and the Village’s sewage treatment facility, and receives virtually all of the urban stormwater runoff from the Village. Stormwater runoff from parking lots and roofs of these properties could potentially impact Dickey Brook and its associated wetlands. In addition, the build-out of the Greentown Road industrial park could increase potential water quality threats to Dickey Brook. Lake Meahagh is now

virtually completely surrounded by single-family residential development. Runoff from driveways and roofs and lawn treatment chemicals, and stormwater runoff from the road drainage system could negatively affect Lake Meahagh.

c. *Open Space Preservation.*

Figure IV-8, *Development Potential*, demonstrates that a relatively significant amount of undeveloped land (approximately 150 acres) currently exists within the Village. However, these lands are all *potentially* subject to future development. Figure IV-7, *Existing Land Use*, identifies only three properties in the Village that are permanently preserved (see the “Parks and Recreation” land use classification). Due to the relatively substantial amount of undeveloped land in the Village there may be opportunity to preserve additional open space before such resources are developed and lost.

Open space preservation was identified as the second most important issue in the Public Opinion Survey.

**2. *Planning Objectives:***

- #1: Protect scenic resources and sensitive environmental features (such as water bodies, wetlands, floodplains, steep slopes, and stream corridors) to the maximum degree possible.
- #2: Consider the suitability of the type and intensity of future development as permitted by existing zoning relative to the ability of the land to appropriately accommodate such development, with lower densities permitted on lands less supportive of, and suitable for, additional development and higher densities permitted in areas that contain fewer sensitive natural resources.
- #3: Introduce local programs and regulations that help protect natural resources such as steep slopes, wetlands, stream corridors and watersheds.
- #4: Pursue the preservation of environmentally sensitive lands and/or lands suitable for passive recreation.
- #5: Preserve, protect and enhance important viewsheds, including those of the Hudson River and Lake Meahagh.

### **3. Planning Recommendations:**

- #1: *Require net lot area reductions for areas covered by steep slopes, wetlands, waterbodies and other environmental features, and/or minimum lot areas that are not constrained by environmental resources.*

Many communities place limitations on the proportion of lands covered by sensitive environmental features (e.g., waterbodies, wetlands, steep slopes, etc.) that can be counted towards meeting the minimum required lot area. For example, a common approach is to allow only a certain percentage (e.g., 25% to 50%) of lands that are underwater, covered by wetlands, within a 100-year floodplain, or with slopes greater than 25% to be counted towards meeting the minimum lot area requirement at the time of subdivision or site plan review.<sup>1</sup> In addition, it is commonly required that the lot contain a contiguous area<sup>2</sup> equal to a certain minimum percentage (e.g., 50%, 75%) of the minimum lot area requirement without the specified impediments. The purpose and effect of such provisions is to decrease potential environmental impact by reducing the permitted intensity of development on lands that contain the specified environmental features.

As discussed above, most of the large undeveloped properties remaining in the Village are heavily constrained by environmental resources. Requiring that areas covered by steep slopes, wetlands and other environmental features be deducted (by a certain percentage) from the minimum lot area will serve to reduce the permitted intensity of development on lands that contain the specified environmental features and will focus development on the less environmentally sensitive areas of the land.

- #2: *Use “average density” (also known as “cluster” or “conservation development”) subdivision as an effective means of protecting environmental resources - particularly those not already specifically protected.*

The use of “Average density” subdivision (known as “cluster development” in New York State Village Town Law) is recommended because it can serve as an important and effective means of protecting critical resources - particularly those not already specifically protected. Under the use of “average density” subdivision the dimensional requirements in the Zoning Code are allowed to be modified so as to provide an alternative permitted method for the layout, configuration and design of lots, roads, utility lines and other infrastructure in order to preserve the natural and scenic qualities of open land.<sup>3</sup> An important feature of “average density” subdivision

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<sup>1</sup> These communities also require similar net lot deductions for areas within utility or other easements and areas covered by overhead utility lines.

<sup>2</sup> This area is commonly required to be located in a position on the lot that makes development on it feasible in light of zoning setbacks and other considerations.

<sup>3</sup> In accordance with New York State Village Law, use of this technique shall *not* result in greater density (i.e., number of housing units) than if the land were subdivided into lots conforming to

is that landowners and developers are encouraged to pay close attention to the unique topography and natural features of their properties, and to shift development away from ecologically sensitive areas. It simply encourages that development occur in areas of a site that are most suitable to development and sets aside areas of land which would remain undeveloped. The lands set aside using “average density” subdivision can be preserved using a variety of measures, including acquisition by local government or a non-profit conservation group, ownership by a homeowners association, or through conservation easement. Such benefits are typically not achieved under a standard (non-“cluster”) subdivision of property. The Village can also mandate average density, cluster or conservation development under certain circumstances.

The use “average density” subdivision should be considered when there is opportunity to set aside or protect land for one or more of the following purposes:

- Preservation of steep slopes, stream buffer areas, wildlife habitat areas or other environmental resources not specifically protected through other means;
- Preservation of community character through the preservation of buffer zones along roadways and other property boundaries;
- An extension of a public park or linear connection between parks; and/or
- The preservation or protection of streams, wetlands or waterbodies and the lands surrounding such areas.

Considering the limited number of large parcels subject to future subdivision the use of this technique is expected to be limited. However, “average density” subdivision would be a very useful tool if any of the large undeveloped residentially-zoned properties identified in the “Future Land Use Change” discussion is proposed for subdivision (particularly those to the north/west of Westchester Avenue).

*#3: Identify properties worthy of preservation for future open space purposes and means by which to preserve such properties.*

The following areas have been identified as particularly suitable for future open space purposes:

- The clay hole pond and surrounding lands at the northeast corner of Bleakley Avenue and Broadway.

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the normally applicable minimum lot size and other dimensional requirements of the zoning district in which the property is located.

- The four-acre parcel located between the Lake Meahagh and Bel Lago subdivisions (now or formerly the Absenger property) – Additional public access to Lake Meahagh was identified by the Master Plan Committee as an important planning issue. This property presents the last feasible opportunity to provide access to Lake Meahagh within the Village. Such access could be gained either through acquisition (fee simple or easement) or through preservation of an access area using “cluster subdivision” if the property were to be subdivided in the future. Currently there is no access from the Absenger property to the lake.
- Expansion of Lent’s Cove Park via donation, purchase, conservation easement or license agreement of the northern and undeveloped portion of the Entergy center site.

The following are a number of common mechanisms for preserving open space:

- Land acquisition by donation, gift, or direct purchase
- Conservation easements
- Purchase of development rights
- Mandatory and voluntary cluster and preservation
- Establishment of Critical Environmental Areas (CEA) in accordance with SEQR and special protective standards
- Obtaining rights of first refusal to purchase key properties
- Funding mechanisms for the purchase of land, development rights and/or easements include special taxes, the creation of special bonds, and developer contributions to special funds

*#4: Amend the Village’s Subdivision Regulations and site plan standards to reflect the most up-to-date best management practices.*

The Village’s Subdivision Regulations should be reviewed in order to determine whether there are standards contained within it that are inconsistent with the objective of minimizing overall land disturbance during subdivision development. For example, many communities have found it appropriate to reduce the required roadway widths and required cul-de-sac dimensions in order to reduce the amount of land disturbance and impervious surfaces.

The Village should require that land use development proposals (e.g., subdivisions and site plans) incorporate best management practices with regard to stormwater management, erosion and sedimentation control, tree preservation, and issues of environmental protection. The Village should review its subdivision regulations and

site plan design standards and revise them to reflect the most up-to-date best management practices.

**#5: *Implementation of the Phase II Storm Water Program***

Since 1990, the U.S. Environmental Protection Agency (EPA) has targeted stormwater as a significant water pollutant contributor. At that time, the EPA promulgated several regulations that required large municipalities (with a population over 100,000), industries, and construction sites over five acres to implement stormwater plans and obtain discharge permits.

The Storm Water Phase II Final Rule is the next step in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. Effective March 2003, the Phase II Regulations are intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. The Phase II program expands the Phase I program by requiring operators of stormwater sewer systems (a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) in urbanized areas and operators of small construction sites involving disturbance to 1 or more acres, to implement programs and practices to control polluted storm water runoff. The program required municipalities within urbanized areas to apply for a National Pollutant Discharge Elimination System (NPDES) permit by March 10, 2003. The Village of Buchanan developed and submitted a Phase II storm water program.

The Storm Water Management Plan (SWMP) outlines a 5-year program identifying specific actions, measurable goals and timelines, and responsible parties to implement the EPA Phase 2 regulations. The program is designed around the following six approaches toward reducing adverse impacts from stormwater runoff:

- 1) Public education and outreach;
- 2) Public involvement and participation;
- 3) Elicit discharge detection and elimination;
- 4) Construction site runoff control;
- 5) Post construction stormwater management; and
- 6) Pollution prevention/good housekeeping including maintenance and record keeping.

This plan will require the Village to prepare revisions to existing regulations, adoption of new regulations, and expanded responsibilities and training for board

members, departments and staff. Equally important is the effect on proposed land development. The Phase 2 regulations apply to all proposed development involving more than one acre of disturbance. Each such development must provide on-site treatment of stormwater runoff to ensure water quality prior to discharge to any receiving wetland, stream or water body.

The Village is required to submit Municipal Compliance Certificates (MCC) and Storm Water Management Program Annual Reports (SWMPAR) by June 1<sup>st</sup> of each year starting in 2004 and the SWMP must be fully implemented by January 8, 2008.

Examples of recommended improvements include the following:

- Upgrade stormwater drainage system catch basins to include larger sumps to collect sediment.
- Increase the frequency of catch basin cleaning and removal of trapped sediment.
- Install oil/water separators to trap oil and other contaminants in the catch basins and prevent discharge to streams and wetlands.
- Construct water quality basins to trap sediments, excess nutrients and water borne contaminants and cleanse stormwater runoff prior to discharge to receiving bodies of water such as Dickey Brook and Lake Meahagh. With proper design, these basins can be attractive features and require very little maintenance.
- Require incorporation of water quality improvement techniques and facilities into all new construction and also as part of redeveloped or improved sites. The New York State Stormwater Management Design Guideline manual provides numerous examples of mechanisms for a large variety of circumstances. Features such as swales, groundwater recharge basins and even sub-surface detention and recharge chambers and sand filters are examples of just some of the many options to improve water quality with new construction.

*#6: Update the Village Freshwater Wetlands Protection Law.*

Many communities are reviewing and amending, and sometimes replacing their wetlands laws with more effective regulations that reflect the advances in the knowledge, science and understanding of the values and functions that wetlands and related water resources provide and their importance to the health, safety and welfare of the public.

- The Village should review and update its wetland law consistent with current practice and standards.

#7: *Adopt regulations for the protection of steep slopes.*

#8: *Ensure the health of Lake Meahagh.*

Lake Meahagh is relatively shallow, has become shallower due to years of sedimentation from adjoining lands and the stormwater drainage system. The health of the lake is stressed by these shallow depths which reduce water volume, contribute to large changes in temperature that in turn encourage excessive algae and other plant growth that deplete oxygen levels and kill fish populations. In addition, stormwater runoff carries dissolved pollutants including salt, heavy metals and petrochemical residue from cars, and nutrients such as nitrogen and phosphorous, among other things.

- The Village, in cooperation with the Town of Cortlandt which owns the lake, should seek financial and technical assistance from Westchester County and New York State to test, monitor and develop a comprehensive plan to restore and ensure the long-term health and viability of this important community asset.
- Consideration should be given to employing a naturalist to conduct water quality tests on the Lake and to recommend remedial action.

#9: *Protect and encourage wildlife and habitat diversity.*

- The Village should ensure appropriate review and consideration of wildlife and habitat as part of the review of development plans as well as Village sponsored projects.
- Large contiguous areas of forest and relatively undeveloped areas should be kept intact to the extent possible. These areas function as wildlife corridors and many sensitive species require such large areas for protection from predatory and competitive animals and species. Such large areas also provide a protection from development, noise, light, pollution and invasive species.
- The Village and residents should work with landscape supply and design companies to discourage the sale and use of invasive species and to promote the use of species that are native to the region. Non-native species often require irrigation and use of fertilizers and chemicals and many are invasive and out-compete native species and alter the wildlife habitat. Native species are specifically suited to our climate and as such do not require the use of fertilizers, pesticides or irrigation, thereby reducing secondary adverse impacts on the environment.

#10: *Require performance and restoration bonds for construction activities.*

The Zoning Law and Village Code should be amended to require performance and restoration bonds for construction activities. Despite excellent plans and conditions of approval designed to avoid, minimize and mitigate adverse environmental impacts, a large percentage of adverse impacts still occur as a result of construction activities that are not conducted in accordance with the plans and approval requirements.

The requirement of performance and restoration bonds prior to initiation of construction helps to ensure that the contractors and property owners understand the requirements of approval and have a financial commitment to adhering to them throughout the project. If violations or unforeseen problems occur during the construction process, the Village has funds available to ensure timely and appropriate remediation of any damage or potential hazards.