Chapter

3

3. Existing Setting Impacts & Mitigation

This section of the document describes the existing environmental conditions of the Town of Lloyd, the potential impacts of the proposed action, and mitigation measures. The level of detail provided in the descriptions is reflective of the generic impacts anticipated as part of the actions. A generic format is appropriate because adoption of the proposed *Comprehensive Plan* will have a wide application, will affect many sites, and will have generic or common effects. Adoption of the proposed *Comprehensive Plan* will provide for a number of new and revised land use policies to guide conservation and development of the Town into the near future. It can provide a rational basis for future changes in land use regulations. The *Comprehensive Plan* is a direct result of a planning process that began in 1997. That planning process is discussed in detail in Chapter 1 Subsection A of this DGEIS.

The proposed *Comprehensive Plan* is consistent with New York State Town Law's mandate that "*Among the most important powers and duties granted by the legislature to a town government is the authority and responsibility to undertake town comprehensive planning and to regulate land use for the purpose of protecting the public health, safety and general welfare of its citizens*" [N.Y.S. Town Law § 272-a.1(b)]. The *Comprehensive Plan* reflects the wishes of Town residents, as expressed in a public opinion survey, at two broadly promoted community planning workshops, and numerous public meetings and public hearings held between 1997 and 2005, and the work of a Comprehensive Plan Committee, meeting regularly in open session for eight years. A broad consensus was reached from this extensive outreach process that certain actions needed to be taken to address development pressures in a manner that has a beneficial effect on the character of the Town, particularly its agricultural heritage, small town rural quality, and scenic resources, while accommodating economically viable businesses in the Town and the growing residential housing market. The *Comprehensive Plan* responds to residents' desires to achieve this broad

goal. Readers are encouraged to consult the full text of the proposed *Comprehensive Plan* to obtain an understanding of the proposal.[1]

Potential impacts and mitigation measures for the proposed *Comprehensive Plan* are discussed below. Adoption of the proposed *Comprehensive Plan* is not expected to result in any significant adverse environmental impacts because the *Plan* consists of recommendations for policies only and will not directly affect or authorize specific land development activities. Moreover, many of the policies in the *Comprehensive Plan* are themselves mitigation measures for possible impacts on the environment since they are designed to limit development in areas of environmental sensitivity by requiring a careful evaluation of the natural resources before development can occur. The effect of these policies will be to protect and preserve the natural and human environment of the Town. The Town's existing environmental setting, which is summarized in each section, is more fully discussed in the *Comprehensive Plan*, which is referenced herein.

A. Land

Existing Setting

Most of Lloyd is characterized by severe or very severe limitations for development. Large portions of the Town are constrained by steep slopes greater than 15 percent gradient, and Lloyd has the greatest concentration of wetlands of any municipality in Ulster County. Approximately 28 percent of the Town's land area has extremely severe limitations to development. These include steep slopes of over 25 percent gradient, State and federal wetlands, and water bodies. The bulk of the Town's undeveloped area is characterized by shallow, rocky soils and wetlands. Two north-south ridgelines shape the overall topography, the eastern one being dominated by Illinois Mountain, with another smaller ridge to the west. Elsewhere, along the major stream valley, are major chains of wetlands. These environmental conditions have, to a great extent, determined the pattern of land use in the Town.

Density throughout the majority of the Town, including areas constrained by environmentally sensitive features, is currently permitted at one unit per acre. However, such density is unlikely to occur in the R-1 District, given the topography and soil conditions covering much of the area. For example, most of Illinois Mountain is zoned for one acre per dwelling. If density in the R-1 District were to occur as currently zoned, it would likely result in a number of adverse environmental impacts. These include increased rates of soil erosion, stream and groundwater pollution stemming from septic field failures, and road maintenance difficulties based upon road distance between residences and difficult terrain.

[1] See Appendix A.

Impacts and Mitigation

Lloyd's capacity to grow is affected by the special conditions of its natural environment. Throughout the northern, western and southern portions of the Town, steep slopes and the presence of wetlands inhibit development potential. In response to these environmental factors, the Town's 1981 *Development Plan* recommended that allowable densities in these areas of the Town be decreased. However, this recommendation has never been implemented. The proposed *Comprehensive Plan* reiterates the recommendation to reduce the allowable density in areas constrained by natural features.

The *Comprehensive Plan* recommends that Illinois Mountain be designated a Critical Environmental Area (CEA) under SEQR and that the Zoning Map be amended to prohibit development above an identified elevation on Illinois Mountain to protect fragile mountain soils and ecological communities on the ridge. To ensure that environmentally sensitive lands throughout the Town are preserved, the *Plan* recommends that the Town's density yield calculations be revised to exclude environmentally sensitive lands before calculating density. These lands include wetlands, wetland buffers, steep slopes, flood zones and other sensitive natural features that are not buildable and should therefore not be included in the calculation of density yields. Excluding these lands from the density yield calculation will result in a "net buildable land area" based on the carrying capacity of the site. (For further discussion regarding density, see "Growth and Community Character" section below.) The *Comprehensive Plan* also recommends that the Planning Board be authorized to require conservation subdivision design (clustering) when a site involves environmentally sensitive features, such as steep slopes, wetlands, aquifer and aquifer recharge areas, flood-prone areas, and lands contiguous to CEAs. Implementation of these recommendations would constitute mitigation of potential adverse impacts on land. No further mitigation is necessary.

B. Water Resources

Existing Setting

Lloyd has the greatest concentration of wetlands of any municipality in Ulster County. The wetlands associated with the Swarte Kill, Black Creek, and Twaalfskill comprise some of Lloyd's most environmentally sensitive lands. Many of these wetlands are biologically rich and support a diversity of rare, endangered, and locally significant plants and animals. The Black Creek/Swarte Kill drainage is one of the most important areas for biodiversity in the Town. It is part of the Esopus/Lloyd Wetlands and Ridges ecosystem, an area recognized by the NYS DEC's Hudson River Estuary Program as a significant biodiversity area. Much of this drainage area contains NYS DEC Class II and Class III designated wetlands.

The Black Creek is an unusually pristine waterway that offers unique opportunities for recreation and for naturalists to observe and study plants and wildlife habitats. The Black Creek drainage contains two significant habitat areas designated by NYS DEC: Riverside Bog and Chodikee Lake. Riverside Bog is considered significant for wildlife and plants. Chodikee Lake is considered potentially significant for wildlife. These areas are part of the Plutarch/Black Creek Wetlands Complex, which the New York State Open Space Plan has identified as a priority project.

Lloyd has three aquifers, including one bordering the Town of New Paltz. These aquifers consist of sand and gravel. Yields of more than 100 gallons per minute may be available from the largest aquifer that Lloyd shares with New Paltz. The other two aquifers are of unknown potential.

Impacts and Mitigation

The *Comprehensive Plan* recognizes a need to protect the Town's environmentally sensitive areas, including ground and surface waters. Groundwater resources are critical to future development in Lloyd. Since much of the Town relies on well water for domestic needs, it is essential to ensure that there is an adequate supply of safe drinking water for future growth, and to protect this supply from potential pollution. Lloyd's streams and lakes are valuable resources not just in terms of water supply, but also for their contribution to the Town's diverse beauty and recreation potential. Wetlands are invaluable for flood protection, wildlife habitat, open space, and water resources.

To protect groundwater resources in the Town, the *Comprehensive Plan* recommends adoption of an aquifer overlay zone to protect important aquifers and recharge areas in the Town from contamination and to ensure that an adequate amount of groundwater will be available to provide for future citizen needs. Overlay zoning is well established in New York State as an innovative zoning technique used to maximize protection of a specific resource. In the proposed aquifer overlay zones, development and building would not be discouraged, *per se*, but would have to conform to the Town's goal of protecting this irreplaceable natural resource. This recommendation is consistent with the New York State Department of Environmental Conservation's (DEC) recommended critical area protection programs, discussed in the *FINAL Upstate New York Groundwater Management Program* (Division of Water, 1987) document. This document states that:

> *Land use controls are among the most important mechanisms available to effectively manage groundwater resources. Land use is a very basic determinant of potential groundwater contamination as well as of groundwater use. . . where protection of critical groundwater resources is a sufficiently important and valid public purpose, there appears no reason why carefully developed local land*

> *use controls should not be an essential part of a local groundwater protection program.*

Another respected publication entitled *Local Groundwater Protection*, (American Planning Association, 1987) corroborates the DEC publication by stating that:

> *Zoning and subdivision ordinances are effective means of controlling the location and performance of various land uses that can threaten groundwater resources. . . Land use controls are particularly well suited to sensitive area protection programs because of their geographic basis.*

The aquifer overlay district would prohibit certain uses that could potentially impact groundwater quality, such as disposal wells, toxic chemicals, industrial sludge or radioactive materials, wastewater lagoons and pits for temporary storage of wastewater, underground petroleum storage tanks, and the stockpiling or dumping of snow.

To increase local infiltration rates, reduce runoff from impervious surfaces, improve groundwater recharge, and reduce flooding and pollution problems, the *Comprehensive Plan* recommends that the Town require innovative stormwater management techniques for new development and for retrofits, wherever possible. Infiltration basins should be prohibited in the aquifer overlay district unless the surface water quality flowing into the infiltration basin is of sufficient quality that groundwater will be protected. The *Plan* also recommends that the Town's Environmental Conservation Council monitor the cleanup of the inactive hazardous waste disposal site on the Mead property. These recommendations will have beneficial effects on groundwater resources.

To protect surface waters, including wetlands, streams, lakes, floodplains, the watershed and other environmentally sensitive areas, the *Comprehensive Plan* makes the following recommendations:

- Adopt a local wetlands law and protect all wetlands with a 100 foot buffer area or greater (if justified).
- Amend the Zoning to require site plan approval for all development within 100 feet of wetlands and surface waters.
- Reduce density in the northern area of the Town where substantial wetlands are located.
- Work with neighboring municipalities to develop an intermunicipal corridor management plan for the Swarte Kill, Black Creek, and Twaalfskill and their designated wetlands and tributaries.
- Continue to support the Environmental Conservation Council's efforts to develop a watertrail on the Black Creek.

- Recommend designation of the Black Creek to the New York State Wild, Scenic and Recreational Rivers system.
- Amend the Zoning to establish appropriate setbacks for new development and other techniques to maintain and improve water quality of Chodikee and Lily Lakes.
- Require "zero runoff" of all development proposals so that the rate of runoff from any land tract remains the same or less after the completion of development as it was before construction began.
- Amend the Zoning to permit the Planning Board to require conservation subdivision design (clustering) in and adjacent to environmentally sensitive areas, including areas with significant ground and surface water resources.

Adoption of the proposed *Comprehensive Plan* would constitute mitigation of potential adverse impacts on water resources. No further mitigation is necessary.

C. Plants and Animals

Existing Setting

The Town of Lloyd is home to exceptional biodiversity. Important areas for biodiversity in the Town include the Black Creek/Swarte Kill drainage area and Illinois Mountain. The Black Creek drainage contains two significant habitat areas designated by NYS DEC: Riverside Bog and Chodikee Lake (discussed above). In addition, Lloyd shares with the Towns of Esopus and New Paltz one of the last remaining large blocks of intact forest in the region. This forest is exceptional relative to other forests of the region due to its connectivity and size, which are features that sustain biodiversity. The NYS DEC Natural Heritage Program has also identified significant areas of Hemlock-Northern Hardwood Forest, Appalachian Oak-Hickory Forest, and Dwarf Shrub Bog in Lloyd. Rare species in Lloyd include Northern Cricket Frog (Acris crepitans) and Bog Turtle (Clemmys muhlenbergii). Rare plants have also been found. The wooded bluffs of the Hudson River shoreline are known to be roosting sites for the endangered Bald Eagle and the threatened Osprey. Reintroduced endangered Peregrine Falcon may also now be using the bluffs for roosting and migration. The Poughkeepsie Deepwater Habitat has been designated by the NYS Department of State as a Fish and Wildlife Habitat of Statewide Significance under NYS's Coastal Management Program. It is a major wintering habitat and migratory route for the shortnose sturgeon, an endangered species on the federal and NYS lists.

Impacts and Mitigation

Scientific research has demonstrated that habitat fragmentation—i.e., dissecting large blocks of habitats into smaller fragments through road construction, subdivisions, and forest clear cutting—causes many species to

disappear. Research has also shown that this process can cause human health problems, such as increased incidences of Lyme disease. The Wildlife Conservation Society's Metropolitan Conservation Alliance (WCS/MCA) is currently conducting a biodiversity study for the Town of Lloyd.

To ensure that biodiversity in the Town is preserved, the *Comprehensive Plan* recommends the following strategies:

- Adopt the WCS/MCA's forthcoming report on biodiversity in Lloyd as an addendum to the *Comprehensive Plan*.
- Adopt Biodiversity Assessment Guidelines for use during the SEQR review of a development proposal.
- Adopt Conservation Overlay Districts in portions of the Town identified by the WCS/MCA and the NYS DEC Natural Heritage Program as ecologically important or sensitive.
- Integrate biodiversity issues into the recommended *Open Space Plan*.
- Consider forming an inter-municipal council with the Towns of Esopus and New Paltz to plan for the protection of resources that cross municipal boundaries.
- Encourage land use decision makers to attend training workshops on biodiversity.
- Revise density yield calculations to exclude environmental constraints before calculating density.
- Refer to WCS/MCA publications during review of development proposals.

Adoption of the proposed *Comprehensive Plan* would constitute mitigation of potential adverse environmental impacts on plants and animals. No further mitigation is necessary.

D. Agricultural Land Resources

Existing Setting

Agriculture currently occurs primarily in the southwestern section of the Town in the Agricultural (A) Zoning District, and represents a significant portion of the land use in Lloyd. The Town has one New York State certified agricultural district, Agricultural District 1. Agriculture is a special permitted use in all districts of the Town except the Waterfront Business District (WB), the General Business District (GB), the Light Industrial District (LI), and the Heavy Industrial District (HI). Agriculture continues to have a clear development pattern in the Town, particularly in the southwestern section, although the Ulster County Agricultural and Farmland Protection Plan notes that Agricultural District 1, which comprises many of these lands, "*has*

experienced considerable pressure to convert farmland to housing developments. These pressures are expected to continue."[2] The Planning Board is currently reviewing an application for a 42 lot subdivision on a former orchard in this district. Significant orchards were historically located in the Vineyard Avenue area south of Highland, although much of this area has undergone conversion to residential subdivisions in recent years. The permitted residential density in the A District is one unit per acre for single-family dwelling. One-acre density in the A District was adopted in 1980; previously this district had been zoned four-acre.

Article XIV of the New York State constitution states that it is the policy of the state "*to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands for the production of food and other agricultural products.*" The State constitution recognizes that agricultural lands are a necessary and irreplaceable resource. Agriculture is a significant component of Lloyd's economy and a major contributor to the Town's character and its quality of life. The Town wishes to preserve existing agricultural operations within its borders. Retaining the Town's agricultural industry will maintain a stable tax base and the Town's rural character, as well as provide local residents with fresh local produce.

Impacts and Mitigation

Since the adoption of the 1966 *Development Plan,* changes in local agricultural practices and in State government policies have given Towns more innovative tools and techniques to protect their agricultural industry and heritage. These include: the use of Purchase of Development Rights (PDR); the use of Incentive Zoning and a Density Transfer process to transfer development rights (TDR) among two or more property owners within the overall density standards of the Town's zoning regulations; and adoption of local "right-to-farm" legislation.

Continuance of agriculture as a viable economic industry in Lloyd is dependent on maintaining a "critical mass" of working farms. The *Comprehensive Plan* recognizes the need to support the economic viability of farming, preserve agriculture in Lloyd, and discourage incompatible uses. To achieve these goals, the *Plan* recommends the following strategies:

- The Zoning Law should be reviewed to ensure that the laws regulating agriculture are "farm-friendly." For instance, the current Zoning defines agriculture as a special permitted use that is subject to additional standards and conditions, such as stipulating that noise, odor- or dust-producing substance or uses are not permitted within one hundred fifty (150) feet of any street or property line; not permitting advertising on the premises; and not permitting cold storage, processing plants or migrant labor camps.

[2] Ulster County Agricultural and Farmland Protection Plan, page 34.

These requirements could have the effect of unnecessarily restricting agricultural operations in the Town. Moreover, the special permitted use provisions of Article XXV of the Zoning Law require that a special use shall not be more objectionable to nearby properties by reason of noise, fumes, vibration or flashing of lights than would be the operations of any permitted use, which includes residential development. This could potentially jeopardize a farm operation adjacent to a residential development. Defining agriculture as a special permitted use makes it more difficult to establish an agricultural operation, and it sends the message that residences (which are permitted by right) are the preferred land use.

- Permit accessory retail businesses and recreational uses on farms, and amend the Zoning to provide farmers greater flexibility in the use of accessory farm buildings.
- Adopt a local "right-to-farm" law.
- Require that new residential development adjacent to farmland be clustered and provide adequate buffer strips and windbreaks to minimize the potential for conflicts between agricultural and adjacent non-agricultural land uses.
- Strengthen farmers' protection against nuisance suits by requiring a disclosure notice and legally binding disclaimer that homebuyers must sign prior to closing on a home adjacent to an active farm, which includes right-to-farm notices and provisions.
- Require the removal of abandoned orchards to reduce the possibility of infestation of working orchards.
- Secure State and federal funds to purchase development rights from participating farmers. Purchase of development rights allows landowners to derive equitable financial benefit from their open lands without developing them.
- Amend the Zoning to permit a voluntary transfer (TDR) and possible leasing of development rights from farmland to areas of the Town where greater density is desirable. The voluntary TDR program would enable farmers to realize the current development potential of their land while still allowing it to remain in agricultural use. This can help farmers continue farming, protecting an essential industry in the Town. The TDR program would only allow the transfer of development rights to areas in and adjacent to the hamlet of Highland, thereby further protecting agricultural lands.
- Amend the Zoning to permit incentive zoning, and use funds derived from incentive zoning to purchase development rights from participating farmers.
- Adopt a density standard of 4 acres per unit for conventional subdivision and calculated at 2 acres per unit for clustered

subdivision in the A District, which gives agricultural landowners an incentive to cluster in the context of the Town's larger goal to reduce overall density in the Town to reduce potentially adverse impacts on the tax base and on transportation.

- Adopt a GEIS to streamline the review process for clustered development proposals and to encourage participation in voluntary clustering subdivision development.
- Prevent extension of municipal services (water and sewer) into prime agricultural areas. This refers to *municipal* services only, not central water and sewage facilities (such as a community septic system) that might be provided to permit cluster subdivision in individual developments, and which would be designed to serve only the proposed subdivision.

With the exception of clustering, the existing Zoning does not permit any of these techniques, nor does it afford farmers local protection from nuisance suits.

To protect agricultural lands, the authority of the Planning Board to require cluster subdivision has been recommended to include active farmland within a New York State certified Agricultural District, or soils classified in groups 1 to 4 of the New York state Soil Classification System. Cluster subdivision would receive a density bonus over conventional subdivisions as a further benefit.

Adoption of the proposed *Comprehensive Plan* would constitute mitigation of potential adverse environmental impacts on agriculture. No further mitigation is necessary.

E. Aesthetic Resources

Existing Setting

Although much of Lloyd is beautiful, there are several special areas and features that either have exceptional views or contain unique environmental features. The Hudson River shoreline with its dramatic bluffs, and Illinois Mountain, which provides Lloyd with a spectacular natural setting, are the Town's most critical visual resources. Illinois Mountain is also of ecological significance since it provides a great variety of habitats in a small geographic range, including a number of rare, endangered and protected species. In addition, many of Lloyd's local roads greatly contribute to its visual appearance and rural character.

Since there are currently no design guidelines or standards in place for controlling siting and other aspects of new residential and non-residential construction, the Planning Board has little control over the visual appearance of the ridgelines and other areas with aesthetic characteristics. The current

Zoning could have adverse impacts on aesthetic resources because it fails to protect these significant visual features.

Impacts and Mitigation

There is broad consensus in Lloyd that scenic beauty and aesthetic resources should be protected. In the planning workshops and at public meetings conducted in preparation for the *Comprehensive Plan*, Lloyd residents expressed their overwhelming preference to preserve the rural and scenic character of the community. The *Comprehensive Plan* cites protection of the Town's natural beauty and scenic vistas, including open space, scenic viewsheds, scenic roads, Illinois Mountain, and the Hudson River bluffs as key goals of environmental protection.

The *Comprehensive Plan* also recognizes the views towards Illinois Mountain as the Town's most critical visual resource. Care must be taken so that these high points are not impacted by inappropriate development. Their greater elevation makes development highly visible from the valleys and surrounding areas. Protecting the scenic character of Illinois Mountain is important to maintaining the Town's rural atmosphere, sense of place, and scenic landscapes, all of which contribute to the Town's quality of life and its attractiveness for residential and commercial development, as well as for tourism. To protect the scenic character and ecological resources of Illinois Mountain, the *Plan* recommends the following strategies:

- Designate Illinois Mountain a Critical Environmental Area (CEA) under SEQR.
- Amend the Zoning Map to prohibit development above an identified elevation on Illinois Mountain.
- Adopt a telecommunications law to protect scenic resources of Illinois Mountain and other ridgelines in the Town. The law should be structured to require co-location on existing structures on Illinois Mountain rather than constructing new towers. On other ridgelines in the Town, co-location should be encouraged and new towers should be prohibited from protruding above the ridgeline and should be completely camouflaged, either with existing vegetation or through the use of stealth technology that disguises towers as trees or other structures appropriate to the specific area where they are to be located.
- Actively encourage landowners to place conservation easements on the most environmentally sensitive areas of their properties.
- Target specific environmentally sensitive areas on Illinois Mountain for acquisition, and work with local land trusts to seek easements or purchase properties.

To protect the scenic resources of other ridgelines in the Town, and to preserve the aesthetic qualities of open space and forested areas, the *Comprehensive Plan*

recommends adopting guidelines for the appropriate siting of single-family homes below the crest of hills and on the edges of fields and forested areas. The *Comprehensive Plan* also recommends that the Town use conservation subdivision techniques to preserve scenic viewsheds. To develop priorities for preserving scenic resources, including open spaces, views, and other significant natural resources, the *Plan* recommends that the Town prepare an *Open Space Plan* as a component of the *Comprehensive Plan.* The *Open Space Plan* would identify significant scenic resources and detail appropriate policies for assuring their preservation and enhancement.

Lloyd is fortunate to have numerous scenic roads. However, the growing population and the increased use of cars has also created problems. If traffic volumes on these roads continue to increase it will create congestion. Many of Lloyd's scenic roads were originally intended to move smaller quantities of vehicles primarily between local points. Redesigning these roads to handle higher volumes would attract even more through traffic and negatively impact scenic and rural aspects. The *Comprehensive Plan* recommends that the Town officially designate roads with significant natural, cultural and scenic resources and adopt a scenic roads program to protect and enhance these corridors. It also recommends that new roads be designed to enhance scenic character and conform to the goal of preserving the rural appearance of the community. The *Plan* recommends that the Town's current road standards be revised to adopt a more flexible approach where each road is built to match the function and traffic volume it will actually serve. This will minimize construction and maintenance costs and improve aesthetics.

Numerous studies have shown that proximity to scenic views greatly increases property values. Homes and businesses that have attractive views of mountains, lakes, trails and other scenic resources command premium prices. A study of property values near greenbelts in Boulder, Colorado, for instance, found that the average value of property adjacent to the greenbelt was 32 percent higher than those 3,200 feet away.[3] The preservation and enhancement of scenic resources in Lloyd will maintain a high quality of life and maintain property values.

Adoption of the *Comprehensive Plan* will establish Town policies and recommendations that, if implemented, would constitute mitigation of potential adverse environmental impacts on aesthetic resources. No further mitigation is necessary.

[3] Scenic America, "The Value of Nature and Scenery," Technical Information Series, Vol. 1 No. 3, 1992.

F. Historic and Archaeological Resources

Existing Setting

The Town of Lloyd, particularly its sheltered shoreline coves, is rich in archaeological resources. However, no thorough survey of these resources has been undertaken. The State Inventory of known archaeological sites compiled by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) indicates one prehistoric site (in the waterfront area in the vicinity of Blue Point) in the Town. The Yelverton House, which is the oldest frame house in Ulster County, dating to 1754, is the only historic site in the Town listed on the State and National Register of Historic Places. However, the Town abounds in other sites of historic interest, including the Christina House, the Mid-Hudson Hotel, and the Palmateer House, which were determined by the Department of the Interior to be eligible for inclusion on the National Register of Historic Places. A number of additional sites may be eligible for listing, and others are worth preserving as reminders of the Town's rich heritage. These sites have been documented by the Town's Beautification Committee. Additional points of historical interest appear on Map No. 6 (Cultural Resources) of the Town's Local Waterfront Revitalization Program.

Impacts and Mitigation

Historic structures greatly contribute to the visual appearance and quality of life in Lloyd. The OPRHP maintains a database of historic properties and cultural resources in the Town. The *Comprehensive Plan* recommends that OPRHP's inventory be verified and supplemented, if necessary. Some of these sites may be eligible for listing on the National Register of Historic Places, and all of them have been identified as having historic value. Structures built prior to 1850 that are of historic significance, as identified by the Town Historian and the Town's Beautification Committee, should also be inventoried. To encourage historically sensitive rehabilitation of these properties, the *Comprehensive Plan* recommends that the Town establish an Historic Preservation Committee to review development proposals that involve these structures. In addition, the *Plan* recommends that identified historic properties, including historic barns, be permitted expanded uses to encourage adaptive reuse of these structures and preserve the Town's cultural heritage.

To preserve archaeological resources, the *Comprehensive Plan* recommends that information on potential archaeological sites in the Town be carefully considered during the SEQR reviews of proposed development projects, and newly discovered archaeological sites be filed with the State archaeological survey for inclusion in their database. The *Plan* also recommends that the Town inventory all cultural and historic resources along the Hudson River.

Adoption of the proposed *Comprehensive Plan* would establish policies that would constitute mitigation of potential adverse environmental impacts on historic and archaeological resources. No further mitigation is necessary.

G. Recreation and Open Space

Existing Setting

The Town currently has four major Town parks (Johnson-Iorio Memorial Park, Tony Williams Park, Berean Park, and Village Field), in addition to the Hudson Valley Rail Trail. A new park, Highland Landing, is proposed to provide public access to the Hudson River. The Town's Environmental Conservation Council has been developing a water trail along the Black Creek, and two other trails— a Greenway Trail on Illinois Mountain and a Ridge Trail along the Hudson River shoreline -- are planned. The Town of Lloyd has a very active Recreation Commission that has done considerable work in recent years to enhance recreational opportunities in the Town. The Recreation Commission has developed nine strategies to fulfill its mission to provide year-round, high-quality active and passive recreational programs to improve quality of life for individuals of all ages in the Town. With a growing population, the Town will need to ensure it has sufficient active and passive recreational areas for its present and anticipated future residents.

Impacts and Mitigation

With regards to recreation and open space, the goals of the *Comprehensive Plan* are to encourage use of existing recreational facilities, provide additional recreational facilities, and preserve environmentally sensitive open spaces. The top priorities are trails and Hudson River access. Specifically, the *Plan* recommends expanding the Hudson Valley Rail Trail and Black Creek water trail, developing the Greenway and Ridge Trails, and developing the Highland Landing park. The *Plan* recommends that the Town's recreation fee schedule be reviewed and updated if necessary to mitigate the impacts of new residential development on the Town's recreational facilities, and that a dedicated fund be established for trail and new park development. Preserving open space through the use of conservation subdivisions (i.e. clustering) is also a high priority. In addition, the *Comprehensive Plan* recommends that the Town develop an *Open Space Plan* as a component of the *Comprehensive Plan* to identify and preserve significant interconnected open spaces that can serve as the foundation for developing a network of trails in the Town and for protecting lands of conservation and/or recreational value.

The current Zoning does not have a strong open space component. To address this, the *Comprehensive Plan* recommends the following:

- Amend the Town's open space subdivision regulations to promote conservation subdivision design, and include a list of environmental and cultural resources whose protection is required or recommended.
- Adopt a GEIS for conservation subdivisions to streamline the review process.

- Protect open space by providing incentives for clustering, such as increased allowable densities.
- Establish a standard of at least 60 percent protected open space in new conservation subdivisions as a precondition for achieving full density.
- Amend the Zoning to permit limited development subdivision design, and consider use of average density zoning and conservation density subdivisions.

Adoption of the proposed *Comprehensive Plan* would constitute mitigation of potential adverse environmental impacts on recreation and open space. No further mitigation is warranted.

H. Transportation

Existing Setting

Development in Lloyd has traditionally been influenced by transportation routes. During the 1950s, subsequent to the construction of the New York State Thruway, the Town experienced a 30 percent increase in population, the largest in its history. The impact of the Thruway, which provides direct access to large employment centers in Albany and New York City, is still felt today.

The road system is the most important means of transportation in Lloyd. The existing road pattern has been determined by the Town's physical landforms, particularly the rugged terrain and wetlands, which have defined the logical roadway corridors. Traffic volumes on all roads in the Town have increased considerably since 1973. Due to increased residential and commercial development, levels-of-service have decreased in Lloyd at a number of intersections, most notably Tillson and Toc Drive at Route 44/55, and the intersection of Old New Paltz Road and Route 299. Future inadequacies within the road network are most likely to occur where a small section of the Town is faced with a large development proposal resulting in a sizable increase in traffic volume. In addition, U.S. Census data indicate that people are commuting further to work, which also increases traffic. Increased traffic results in congestion and the need for expensive road improvements and maintenance. Route 9W is currently being widened from four lanes to five lanes between Macks Lane and Woodside Lane. While there are no plans for additional lanes along Route 299, the potential exists for new signals and intersection improvements, particularly at the junction of Route 299 and Eltings Corners Road. The *Buildout Analysis* indicates that the current Zoning has the potential to result in an additional 44,910 vehicle trips per day on roads in the Town.

In terms of public transportation, the only public mass transit in Lloyd is by bus. The Arrow Transportation Corporation presently operates a bus route

between Poughkeepsie and New Paltz, making stops in Lloyd. Ulster County Rural Transportation makes stops along Old New Paltz Road and connects Lloyd to destinations throughout Ulster County. Railroad service in Lloyd was suspended in 1974 when the Poughkeepsie Railroad Bridge was burned and the Penn Central Rail Line was permanently abandoned.

The Town has recently made a number of improvements in the hamlet of Highland to enhance pedestrian safety and create a more hospitable environment for those traveling on foot. In recent years, bicycling has grown in popularity nationwide both for transportation and recreation. However, there are few dedicated bicycle facilities in Lloyd other than the Rail Trail. The Route 299 right-of-way includes a bikeway provision that has not yet been implemented. The secondary roads provide a scenic bikeway with limited traffic for moderately skilled cyclists.

Impacts and Mitigation

The *Comprehensive Plan*'s goals for transportation are to minimize the potential for traffic congestion by reducing overall density in the Town and by promoting alternative forms of transportation.

The *Buildout Analysis* indicates that the current Zoning has the potential to result in an additional 44,910 vehicle trips per day on roads in the Town. The *Comprehensive Plan* recommends reducing density in the outlying areas of the Town, which would result in a reduction of approximately one-half of the additional traffic, to 22,720 additional trips per day.

The *Comprehensive Plan* also recommends increasing allowable density in residential areas adjacent to the hamlet of Highland. One of the primary purposes of this recommendation is to reduce traffic congestion by permitting development of compact, pedestrian-oriented residential development in close proximity (walking distance) to shops, services, offices, and civic buildings. To accomplish this, the *Plan* recommends adopting a Traditional Neighborhood Overlay District for this area of the Town. The overlay district would incorporate design standards for a system of relatively narrow, interconnected streets with sidewalks and bikeways that offer multiple routes for motorists, pedestrians and bicyclists and that provide for the connections of those streets to existing and future developments. Such interconnected streets would further encourage pedestrian and bicycling activity. In addition, the *Comprehensive Plan* makes specific recommendations for the use of traffic calming techniques and the promotion of alternative modes of transportation throughout the Town. To minimize road lengths, the *Plan* recommends use of conservation subdivisions outside the hamlet.

To improve transportation efficiency, the *Comprehensive Plan* recommends the adoption of an Official Town Map to identify areas where new through roads should be developed to alleviate congestion on existing corridors. Developers would be required to incorporate these roads into the design of their projects,

or provide rights-of-way for future roads that connect to adjacent parcels. An example of this is the planned north/south connector road (Hilltop Lane) from Old New Paltz Road to Half Moon Road.

To reduce the potential for traffic congestion resulting from commercial development along the major corridors, the *Comprehensive Plan* recommends requiring larger minimum road frontages and minimum lot widths. It also recommends creating internal service roads and shared accesses where possible on all future commercial development along Route 9W and Route 299, and creating pedestrian access to commercial areas from nearby residential areas during site plan review.

Adoption of the proposed *Comprehensive Plan* would establish Town policies to adopt these measures, which constitute mitigation of potential adverse impacts on transportation. No further mitigation is necessary.

I. Growth and Community Character

Existing Setting

Since 1981 when the previous *Development Plan* was updated, the Town has experienced significant growth. Between 1980 and 1990, when the peak building boom occurred, the Town issued 661 building permits for single-family homes, and another 257 building permits were issued during the next decade. Between 2000 and 2003, 44 new lots were approved for subdivision, and a total of 58 lots are currently undergoing subdivision review. New commercial developments in the Town include a hotel and a fitness center on Route 9W, and a proposed home improvement superstore on Route 299.

The current Zoning was adopted in 1975 and is based on the 1966 *Development Plan*, with a few amendments made subsequent to the 1981 *Plan* update, most notably the Planned Unit Development District adopted in 1982, the Waterfront Bluff Overlay District adopted in 1994, and the adoption of an Adult Use Law in 1998. The remainder of the amendments have been minor in nature. Thus a major overhaul of the Town's Zoning has not been conducted in over 25 years.

There are currently nineteen zoning districts in the Town: nine for residential use (including one for planned residential development and three for trailer residence), one agricultural zone, five for commercial uses, two for industrial purposes (both light and heavy industry), a planned unit development district, and two overlay districts (for the Waterfront Bluff and Adult Uses).

The largest zoning districts in the Town are the R-1 (One Family Residence) and A (Agricultural) Districts. These districts cover the bulk of the Town outside the hamlet of Highland, excluding land lining Route 9W and Route

299. Density in both districts is currently at one unit per acre. However, such density is unlikely to occur in the R-1 District, given the topography and soil conditions covering much of the area, as discussed in the "Land" section above. The current permitted density in these districts would also significantly worsen traffic congestion, which is emerging as a problem on several of the Town's roads and intersections, as discussed in the "Transportation" section above. To address these concerns, the 1981 *Development Plan* update recommended that density in the R-1 District be lowered and clustering be encouraged to reduce road lengths and environmental impacts, although these recommendations have never been enacted in the Zoning. One-acre density in the A District was adopted in 1980; previously this district had been zoned four-acre.

The R-2 (One Family Residence) District, which stretches along the Hudson River, has a density of one unit per two acres. The lower density of this district is intended to preserve the environmental integrity of the Hudson River bluffs. In 1994**,** the Town adopted a Waterfront Bluff Overlay District (WBOD) with further restrictions in this area to protect and enhance the Hudson River waterfront's natural, scenic and cultural resources. The WBOD requires site plan approval for construction of new residential and nonresidential structures, including additions to, or modification of, existing structures. It also includes additional landscaping requirements and restrictions on grading and clearing of trees and vegetation to protect scenic qualities and reduce erosion, sedimentation and slope failure. Clustering of buildings and structures in the WBOD is required to save open space and preserve public views of the Hudson River.

Medium to high density residential districts include the one-half and one-quarter acre districts as well as the multi-family districts. Each of these is designed to encourage concentrated, hamlet-type development in carefully selected areas, primarily in and around the hamlet of Highland, and at the junction of Route 299 and North Eltings Corners where the previous *Development Plan* recommended the provision of central water and sewer.

The five commercial business zones include Local Business (LB), General Business (GB), Central Business (CB), Designed Business (DB), and Waterfront Business (WB). The primary difference between the DB zone and the other business zones is the requirement that retail and personal service establishments in the DB zone be part of a planned shopping complex on a site with a minimum acreage of 5 acres; minimum lot area in the CB, LB, and WB zones is 5,000 square feet, and in the GB it is 15,000 square feet. The two industrial zones, the Light Industry (LI) and Heavy Industry (HI) are also primarily distinguished by minimum lot size, the LI having a minimum of 1 acre and the HI having no minimum. The current Zoning designates much of Route 9W and Route 299 for commercial development.

The natural and agricultural lands give Lloyd the beauty that is so valued by its citizens. However, since the adoption of the 1966 *Development Plan*, the configuration of new development has had a noticeable impact on the Town's rural character. Many of the new homes, for instance, line the frontage along major roads, making the visual perception of Lloyd's residential development even greater. The majority of the residential land area is occupied by homes on large lots.

If the current Zoning remains in place, it is expected that it will continue to promote scattered, large lot residential development that will consume the Town's open space and erode its rural character. Moreover, the current permitted densities in the Town's residential districts are likely to have potentially adverse impacts on tax revenue and community services.

The Town of Lloyd has a total of approximately 4,491 acres of land zoned for residential use that are currently vacant and considered buildable. A *Build-out Analysis* conducted as part of the *Comprehensive Plan* planning process estimates that if all the buildable land were developed as currently zoned, this would result in the addition of 4,620 new residential units, and 14,275 additional residents. The implication of this build-out is that the Town could have a 143 percent increase in population to 24,216 people, an additional 3,696 students in the school district, 224 acres devoted to new roads, an additional 46,200 vehicle trips per day on local roads, an additional 2,194,500 gallons of water needed per day, an additional 2,194,500 gallons of sewage to be disposed of per day, and the need to add 14 new police officers and 14 new firefighters.

While a fiscal impact analysis was not conducted as part of the build-out analysis, the effects of the projected growth on community services like education and fire protection was assessed based on current and comparable figures. The Highland Central School District estimates that single family residences generate 0.8 school-aged children per unit, at a cost to local taxpayers of $7,871 per child.[4] Thus, the projected build-out based on the current Zoning would result in an additional 3,696 school age children, resulting in a cost to local taxpayers of $29,091,216. Similarly, the need for an additional 14 new fire fighters could result in the Town requiring fully paid fire protection. In the City of Poughkeepsie, the cost of fully paid fire protection is approximately $664 per structure. Thus the estimated cost for fire protection for a total of 6,711 dwelling units in the Town of Lloyd would be $4,456,104.

Impacts and Mitigation

The *Comprehensive Plan* recommends that allowable density in most areas of the Town be reduced to minimize potential impacts on natural resources, the tax base and transportation. However, taken by itself, reducing density by

[4] This figure does not include State Aid.

increasing minimum lot sizes will not accomplish the goal to protect agricultural lands and environmentally sensitive locations. Large lot zoning, which forces land to be broken up into uniform parcels that may not be appropriate for the site, can consume open space rapidly, and often leads to sprawl type development unless it is paired with other conservation planning techniques. For this reason, the *Comprehensive Plan* also recommends that the Zoning be amended to include conservation planning techniques such as Conservation Subdivision Design, Limited Development Subdivision Design, and possibly Conservation Density Subdivisions. It also recommends that landowners in the A District receive an incentive for the use of Conservation Subdivision Design.

Specifically, the *Comprehensive Plan* recommends that: portions of the R-1 District in the northern area of the Town be reduced to a two acre minimum lot size to more closely match density with the carrying capacity of the land in areas of steep slopes and wetlands; portions of the R-1 District and the R-2 District in the vicinity of the Hudson River be reduced to a three acre minimum lot size to protect the environmentally sensitive Hudson River bluffs; minimum lot size in the A District be increased from one acre to four acres per unit for conventional subdivisions and be calculated at two acres per unit for clustered subdivisions to preserve agricultural soils and the rural character of these lands; and portions of the R-½ District and R-1 District adjacent to the hamlet of Highland in proximity to Illinois Mountain be rezoned as Planned Residential Development (PRD) to protect Illinois Mountain and to permit a wider variety of lot sizes and some mixed use development in areas adjacent to, or in close proximity to, the hamlet of Highland. See Figures 36 and 37 of the *Comprehensive Plan* for a complete understanding of the proposed Zoning Map amendments.

If the existing Zoning were changed to increase the required minimum lot sizes as recommended in the *Comprehensive Plan*, the total population, school-aged children and infrastructure impacts would be reduced as compared to the existing Zoning as follows: there would be potentially 2,272 new units, and 7,019 new residents. This represents a 70 percent increase in population to 16,960 people, with an additional 1,818 children in the school district, 213 acres devoted to new roads, an additional 22,720 vehicle trips per day on local roads, an additional 1,079,200 gallons of water per day, and the need to add 7 new police officers and 7 new firefighters. Table 1 compares the potential impacts of the current and proposed Zoning.

TABLE 1: TOWN OF LLOYD BUILD-OUT ANALYSIS OF RESIDENTIAL DISTRICTS

Additional:	Dwelling Units	Residents	Acres of Impervious Surfaces	Acreage Devoted to Roads	Cars on Roads	Vehicle Trips Per Day	Police Officers	Fire-Fighters	Gallons Per Day Water Consumed and Sewage Generated
Current Zoning	4,620	14,275	458	224	9,240	46,200	14	14	2,194,500
Increased Minimum Lot Sizes	2,272	7,019	427	213	4,544	22,720	7	7	1,079,200

Reducing permitted densities can be considered a beneficial effect on growth and community character given the overall Town goal to preserve the predominant rural/agricultural character of the Town, the need to protect groundwater, open space and other environmentally sensitive resources, and the need to reduce potential impacts on the tax base and impacts of traffic on the transportation network. While the change in development densities should be viewed as a primarily beneficial impact on the natural and visual environment and on the Town's rural character, it has the potential to affect individual property owners' desires to seek development approvals for conventional "sprawl" type subdivisions at a level of density that has been in effect for many decades.

Minimum lot size requirements of Zoning and its potential effect on speculative development should be put into proper perspective. Lot size requirements must be considered minimums. Section 277(3) of New York State Town Law mandates that plats, in order to be approved, "at least" comply with the requirements of zoning. The statutory requirement is expressed in terms of compliance with zoning minimums or greater requirements by reason of the phrase "at least." The New York State Court of Appeals has upheld the power of local planning authorities, when reviewing an application for subdivision, to impose higher planning and design

standards than are otherwise provided in the local regulations (than the minimum standards) when there exists good reason in the nature of the land. On this basis, it would be highly speculative to attempt to determine the economic impact upon any one individual property owner since the "yield" or number of actual lots that may be subdivided from any one lot of record could vary significantly according to the above conditions.

The impact on a particular landowner resulting from implementation of the proposed *Comprehensive Plan* will depend on whether the landowner is holding land in anticipation of development, or resides on his or her land with no present intention to develop it. The comparison of two density alternatives would depend on the market demand for lots of a particular size, which may vary with timing, general economic conditions, and property values in the community. The task of determining the intent of landowners as to the future disposition of their land would defeat the use of a generic document format to examine potential impacts. Because the proposed *Comprehensive Plan* affects all residents of the Town of Lloyd, the examination of impacts considers the impacts to the Town as one entity.

Furthermore, two recent studies on the economic impact of downzoning have concluded that increasing lot sizes has minimal, if any, impact on the value of land. The widely held view is that a decreased yield of subdivision lots should translate into lower value for the land. However, a study in Baltimore County, Maryland[5] showed that land in a very restrictive 50-acre zone was of equal or greater value per acre than land zoned for 1 lot per 5 acres. The study was based on actual land sales, and was carefully controlled for several confounding variables, including distance from the City of Baltimore and from major roads, varying school districts, accessibility and date of sale. The study found that the price per acre was, in fact, often *higher* in the more restrictive, larger lot zone than in the smaller lot zone. Land traded at a premium in the largest size category, and the sale price per acre declined with the size of the transaction. Several hypotheses were advanced to explain this result. The larger lot Zoning may maintain or enhance land values by preserving the likelihood of high-valued uses. Put another way, the scarcity of available housing sites created by the more restrictive Zoning caused the fewer, but larger blocks that have permitted house sites to enjoy a premium in value. Moreover, buyers appear to be willing to spend more for protection from development. Similar findings resulted from a study done in San Juan County, Washington. This study, which was based on the assessed value of a property rather than its sales price, concluded that very little loss in property value would result from downzoning.

[5] Downzoning: Does it Protect Working Landscapes and Maintain Equity for the Landowner? (Maryland Center for Agro-ecology, Inc., December 2003). See Appendix B.

In addition to decreasing density in the R-1, R-2 and A Districts of the Town, the *Comprehensive Plan* recommends rezoning portions of the R-½ District and R-1 District adjacent to the hamlet of Highland in proximity to Illinois Mountain as PRD districts to permit a wider variety of lot sizes and some mixed use development in areas adjacent to, or in close proximity to, the hamlet of Highland. This will provide for more concentrated development around the hamlet and will take advantage of economies of scale in the delivery of public services. Consolidating high density uses in and around the hamlet, coupled with use of large lot zoning in other areas of the Town, will support the utilization of existing community services rather than creating additional demand for such services in areas that are not currently served, and will permit the Town to react to and accommodate increased demand for services in an orderly fashion.

Accommodating higher density in and adjacent to the hamlet of Highland will also help fulfill the *Comprehensive Plan*'s goals to "*maintain the historic role of Highland as the center of commercial, institutional and cultural activities*" as an alternative to scattered sprawling development throughout the Town. *(Comprehensive Plan*, page 1-5). The *Comprehensive Plan* makes numerous recommendations to achieve this goal, which will have beneficial impacts on community character by discouraging sprawl and maintaining the Town's historic settlement pattern. These recommendations include (among others):

- Retaining civic institutions in the hamlet, such as the Library, Town Hall, and Police Department.
- Expanding the hamlet's Commercial Business District (see Figures 36 and 37 of the *Comprehensive Plan*).
- Expanding the Planning Board's responsibilities to include architectural reviews of historic structures and new commercial development in the hamlet, and adopting design standards for such reviews.
- Permitting transfer of development rights from farmland and other important open spaces to areas designated for increased residential density.
- Adopting a Traditional Neighborhood Overlay District with illustrated design standards for areas of the hamlet served by public water and sewer and immediately adjacent areas where mixed-use is feasible.

Increasing minimum lot sizes in the R-1, R-2 and A Districts could potentially have the effect of increasing the cost of single-family dwellings, if not paired with other strategies to enhance housing affordability. If Lloyd is to maintain a diverse population, it must allow a variety of housing options, including smaller lots that are less expensive to purchase and develop. While the *Comprehensive Plan* recommends downzoning the R-1, R-2 and A Districts, it

also recommends greater density in the vicinity of Highland. The proposed PRD District would permit greater density in and adjacent to the hamlet of Highland and would ensure that the Town continues to provide a diversity of housing styles, types and sizes to accommodate households of all ages, sizes and incomes. Moreover, greater density could be achieved in the PRD and the hamlet of Highland if development rights were purchased from agricultural lands through implementation of a Transfer of Development Rights program (as recommended by the *Comprehensive Plan*), which would identify the PRD and the hamlet as "receiving" districts. Thus the benefits of protecting Lloyd's open space and natural environment will be achieved without a significant loss in the provision of affordable housing options.

The *Comprehensive Plan* recommends a number of additional strategies to encourage the development of affordable housing units in the Town. These include encouraging the development of two-family homes within the Town's water and sewer district, permitting apartments above commercial structures in the hamlet, and adopting incentive zoning provisions that would grant a density bonus to developers in exchange for providing affordable housing units. The *Plan* also recommends adopting senior citizen housing districts and encouraging the development of senior citizen housing in the hamlet. Finally, reducing the overall density in the Town through downzoning the R-1, R-2 and A Districts will increase housing affordability by mitigating future potential impacts on the school district and local property taxes, as analyzed in the *Build-out Analysis* and as discussed more fully above. These measures will mitigate potential impacts on affordable housing resulting from the increased minimum lot sizes in outlying areas of the Town.

The proposed *Comprehensive Plan* also recommends that density be separated from lot size and conservation subdivision (clustering) should be encouraged and in some cases, required. Implementation of these recommendations would have beneficial impacts by achieving the *Comprehensive Plan*'s major goal to protect Lloyd's rural character and natural environment.

Real estate and development professionals often express concern that the smaller lot sizes of clustered development do not appeal to the average American homeowner, even though this type of development permanently protects open space. However, a number of studies have shown that proximity to open space and the provision of recreational facilities such as walking and biking trails enhance property values.[6] A national survey of people who shopped for or bought a home during 1994 revealed that, "*of 39 features critical to their choice, consumers ranked 'walking and biking paths' as the*

[6] See, for example, Mark R. Correll, Jane H. Lillydahl, and Larry D. Singell, "The Effects of Greenbelts on Residential Property Values: Some Findings on the Political Economy of Open Space," Land Economics 54:2 (May, 1978): 207-217. National Association of Home Builders (NAHB) surveys can be found online at www.nahb.org.

second- and third-highest rated aspects affecting their decision."[7] Another measure of the demand for open space among homebuyers is the fact that "*nearly 40 percent of people living in golf course developments do not even play the game. According to published reports, these people are buying 'the parklike view of open space, views that can command a premium in a home's initial sale price and its resale value.'*"[8] In 1996 the fastest selling subdivision in its price range in Bucks County PA was a clustered development called "Farmview" where large homes were located on lots one-third to one-half the normal size. According to Randall G. Arendt, "b*ecause more than half the land has been preserved, most homes command long views over the protected fields, which have been donated to a local land trust. When given a choice, consumers have demonstrated their clear preference for buying homes that look out onto farmland or other open space, rather than houses where the only view is of their neighbor's picture window or backyard.*"[9] In another example, the "Garnet Oaks" Subdivision in Bethel Township, PA, lots that adjoined the woodland preserve or central wooded open space were the first lots to sell, even though they commanded the highest prices.[10] These studies indicate that homeowners are willing to pay a premium for the assurance that adjacent open land will never be developed.

To determine the impacts of clustered development on property values, a study entitled "*An Examination of Market Appreciation for Clustered Housing With Permanent Open Space"* was conducted by The University of Massachusetts/Amherst for the Center for Rural Massachusetts in 1990[11]. The purpose of the study was to determine whether the market appreciation rates for clustered housing with associated open space were equal to those for conventionally developed housing types.

The study compared the market appreciation rates of clustered housing with those for conventional housing in the same municipalities and over the same time period. The communities selected for study were Concord, MA, and Amherst, MA. In the case of Concord, a clustered development was compared with town-wide data on conventional residential development because a comparable, conventional subdivision (similar age, house size, location, etc.) could not be identified in the Town. In the Amherst case, a clustered development was compared with a conventional development that shared similar basic characteristics—i.e. both were built at the same time, had the

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[7] Randall G. Arendt, *Conservation Subdivision Design for Subdivisions*: *A Guide to Creating Open Space Networks*, Island Press, 1996, page 12

[8] Pennsylvania Department of Conservation and Natural Resources, *Growing Greener: A Conservation Planning Workbook for Municipal Officials in Pennsylvania*, prepared by the Natural Lands Trust, June 1997, pages 3-4.

[9] Randall G. Arendt, *Conservation Subdivision Design for Subdivisions*: *A Guide to Creating Open Space Networks*, Island Press, 1996.

[10] *Ibid.*, page 11-12. See also the National Association of Home Buyers (NAHP) and NAHB Research Center's recent publication "Building Greener, Building Better, the Quiet Revolution," available on-line at www.nahbrc.org, which states that "environmentally friendly site design, tree preservation and storm water maintenance swales can add value to new communities," page 3.

[11] See Appendix C.

same proximity to schools and the Town center, were served by municipal water and sewer, were projects of similar size, and contained housing units with similar amounts of usable living space. In addition, both developments contained only single-family, detached homes on privately owned lots. In fact, both subdivisions had been designed by the same landscape architect.[12]

The study found that market appreciation occurred at a higher percentage rate for the clustered subdivisions than the conventional subdivisions in both cases. In Concord, the cumulative appreciation rate for the clustered subdivision was 167.9 percent (21.0 percent annually), while the Town's rate was 141.9 percent (18.4 percent annually). [13] The data showed an appreciation rate 26 points higher for the cluster development with protected open space than for conventional residential properties with significantly larger private yards, but without associated open space. This was the case even though the average lot size for the conventionally developed properties was almost five times larger than the lot size in the clustered development.[14]

Similarly, in the Amherst case study, the clustered development exceeded its conventional counterpart in open market, sale-price appreciation. Homes in the clustered subdivision increased in average sales price at an average annual rate of 22 percent (462 percent cumulative), while homes in the conventional subdivision increased in average sales price at an average annual rate of only 19.5 percent (410 percent cumulative).[15] In this case, the average home in the clustered subdivision yielded a higher rate of return on investment than the one in the conventional subdivision despite a nearly 2:1 lot size differential.[16] The study concludes that "*this research indicates the home-buyer, speaking in dollar-terms through the market place, appears to have demonstrated a greater desire for a home with access and proximity to permanently-protected land, than for one located on a bigger lot, but without the open space amenity.*"[17]

Clustered subdivisions are also cost effective for developers because they are less expensive to build. By locating homes closer together on a parcel, infrastructure, engineering and construction costs are reduced. Streets and utility runs can be shortened and less regrading of the land is necessary, reductions that become greater as the development pattern becomes more compact. Since infrastructure constitutes approximately half the cost of residential subdivision construction (road construction alone costs an average

[12] See Appendix C for a complete discussion of the study's methodology.
[13] Sales data for the clustered and conventional subdivisions was collected from 1979 through 1988.
[14] Of the 116 residential units inventoried for the Town (i.e. the conventional lots), the average lot size was 33,453 square feet. The average lot size in the clustered development was only 7,232 square feet per housing unit.
[15] Sales data for the clustered and conventional subdivisions was collected from 1968 through 1989.
[16] The average lot size in the clustered subdivision was 12,189 sq. ft., while in the conventional subdivision it was 24,352 sq. ft.
[17] Jeff Lacey, "An Examination of Market Appreciation for Clustered Housing with Permanent Open Space," 1990, page 12.

of $100 per linear foot), considerable savings result from development that is more compact. Moreover, to the extent that street pavement is reduced, the cost of stormwater management facilities is also lessened and water quality and quantity impacts are reduced.

Many studies have compared the costs associated with conventional and clustered subdivision designs. For instance, the South Carolina Coastal Conservation League (SCCCL), assisted by the Westvaco Development Corporation, compared the costs of developing a 96-acre parcel in a conventional pattern to the costs of developing the parcel using a compact cluster development pattern. The study found that the costs of developing the conventional plan would be $26,000 per lot, compared with to $16,000 per lot for the clustered plan. The cost savings in the cluster development are primarily attributed to savings in per lot land costs and site preparation costs, such as excavating, landscaping, grading and paving. These cost-savings can be passed on to buyers. A homebuyer looking to purchase a 1,500 square-foot home in the conventional development of the SCCCL case study would pay $95,000, while a home of the same size and quality would cost only $82,000 in the cluster plan, a savings of 14 percent. Thus compact development can result in more affordable housing. A portion of these cost-savings could also be allocated to provide amenities, such as bike paths, to enhance the community's quality of life.

Finally, clustered subdivisions are also more cost effective for municipalities. The shorter street and utility systems resulting from more compact development reduces the municipality's long-term infrastructure maintenance costs. And by providing natural and recreational areas in each development, clustering reduces the demand for public open space, parkland and other areas for active and passive recreation.

A 1997 study of *The Costs of Current Development Versus Compact Growth* conducted by the Southeast Michigan Council of Governments (SEMCOG) (see summary in Appendix D) found that compact development would save Michigan communities 12 percent on local road construction, 15 to 18 percent on utility costs (water and sewer), and 6 percent on housing costs. The cost revenue impacts to municipalities and school districts would decline about 3 percent annually. The SEMCOG study compared eighteen Michigan communities of various types and sizes and in different geographic settings. The study cited ten other nationwide studies that reached similar conclusions. In some areas of the country the savings were even higher. Studies undertaken in California, Florida, Minnesota and New Jersey indicate average savings resulting from compact development of approximately 25 percent for roads, 5 percent for schools and 15 percent for utilities. Nationwide, compact development is estimated to save 43 percent of overall land consumed by development over a twenty-year growth horizon. The studies showed that, in compact communities, the consumption of agricultural land was reduced by

18 to 29 percent, and 20 to 27 percent more fragile environmental lands were protected. Clustered, compact development saves farmland, preserves fragile environmental lands, increases the amount of open space available for recreation, reduces commercial strip development, reduces traffic congestion, and minimizes costs to communities. In sum, compact development occasions noticeable savings over current suburban-style development trends, while protecting rural character and quality of life.[18]

Commercial development throughout the Town can also have adverse impacts on community character if not properly designed. This is particularly true for such features as architecture, signage, lighting, parking, and landscaping. The current Zoning designates much of Route 9W and Route 299 for commercial development. At full buildout, this could result in commercial strip development along the highway corridors that would undermine the Town's rural character and create traffic congestion. Although the *Comprehensive Plan* recommends a slight increase in commercial districts along these corridors to enhance the tax base, it also recommends that the Planning Board's responsibilities be expanded to include architectural reviews, and that the Town adopt illustrated design standards for planning, siting and construction of all new development, including such features as architecture, landscaping and buffering, signage, parking and lighting to encourage innovations in design that reflect vernacular site layout and architectural styles. The purpose of these standards would be to capture the overall aesthetic characteristics desired by the community.

In the same vein, the *Plan* recommends that the Zoning be amended to include more detailed requirements for signage, lighting, parking and landscaping (particularly along major corridors) to improve the Town's visual environment and encourage development that is compatible with the Town's rural and historic character. The *Comprehensive Plan* recommends that the Town's parking standards be revised based upon the recommendations of the National Parking Association, resulting in less asphalt in the Town (and more space for landscaping), and that parking lots should be located to the rear or side of new structures to reduce their visual impact. With regards to lighting, the *Plan* recommends that the Zoning be amended to include lighting standards based upon the Illuminating Engineering Society and International Dark Sky Association recommendations. The *Plan* also recommends that development along the main corridors use alternative plaza designs (with buildings fronting the road and parking to the rear), and that the Town adopt

[18] See also the National Association of Home Builders (NAHB) and the NAHB Research Center's recent publication "Building Greener, Building Better, The Quiet Revolution" available on-line at www.nahbrc.org, which touts smart growth and green building "because it helps developers save on development costs," and "adds value to new communities" (page 3). As one developer in the article states, with smart growth, "the amount of open space is bigger, and you don't have to put in as many streets, roads and pipe" (page 3).

a GEIS with a threshold of 50,000 square feet for new retail development to streamline the review process for small scale development and discourage 'big box" retail establishments. To ensure that light industrial development enhances community character, the *Comprehensive Plan* recommends that the Zoning be amended to incorporate special use permit provisions and design standards for light industry to ensure it does not have adverse impacts on natural resources and community character.

In conclusion, beneficial impacts on the growth and character of the community as a result of adoption of the zoning amendments include the following. No mitigation measures are required for beneficial impacts.

- Increase housing affordability and availability by rezoning lands adjacent to the hamlet of Highland to allow for greater density with smaller, more affordable lot sizes, and by permitting two-family homes and apartments above commercial uses in a mixed use building in the hamlet.
- Downzone the R-1, R-2 and A Districts to reduce the total number of housing units that may be constructed in these districts and somewhat reduce housing growth in an area of the Town where it is essential that open space resources be protected for present and future generations.
- Protect and preserve open space and significant cultural and natural resources through mandatory clustering of residential subdivisions, where deemed appropriate by the Planning Board, and the use of conservation subdivision design principles.
- Creation of greater residential density in the PRD District, along with larger lot requirements in the R-1, R-2 and A Districts will work toward stabilizing the rate of residential growth, with a concomitant slowing of demand for community services, particularly infrastructure, police, fire and education. This should have a beneficial effect on local property tax rates, as well as helping to retain Lloyd's rural character.
- Provide for more commercial growth opportunities in the Town by increasing the size of the Central Business District in the hamlet of Highland and by slightly increasing the commercial zones along Routes 299 and 9W, with strict design standards to ensure that commercial and light industrial development enhances community character.