

**TOWN OF PINE PLAINS ZONING LAW AND MAP
DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT
(DGEIS)**

TOWN OF PINE PLAINS, DUTCHESS COUNTY, NEW YORK

Lead Agency and Contact Person:
TOWN OF PINE PLAINS TOWN BOARD
Pine Plains Town Hall
3284 Route 199, P.O. Box 955
Pine Plains, New York 12567
Contact: Honorable A. Gregg Pulver, Supervisor
(518) 398-8600

FEBRUARY 25, 2009

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Proposed Action: Adoption of Draft Zoning Law and Map

for the

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February 25, 2009

Lead Agency Acceptance Date: March 6, 2009

A public hearing will be held on Saturday, April 18, 2009 at 9:30 AM, and Wednesday, April 22, 2009 at 7 PM, to receive comments on this DGEIS. The public hearings will be held at the Lions Club Pavilion at 82 Beach Road, Pine Plains, NY.

Written comments will be received by the Lead Agency until the end of business day, Monday, May 4, 2009, at 4 PM.

TOWN OF PINE PLAINS ZONING LAW AND MAP
Draft Generic Environmental Impact Statement

Table of Contents

	<u>Page</u>
1.0 EXECUTIVE SUMMARY	1-1
1.1 Brief Description of the Proposed Action	1-2
1.1.1 Location	1-2
1.1.2 Proposed Actions	1-3
1.2 List of Involved/Interested Agencies and Permits/Approvals	1-3
1.3 Potential Impacts and Proposed Mitigation Measures	1-3
1.3.1 Geology, Topography and Soils	1-4
1.3.2 Water Resources	1-5
1.3.3 Ecology	1-5
1.3.4 Transportation	1-6
1.3.5 Community Services and Facilities	1-6
1.3.6 Utilities	1-7
1.3.7 Demography	1-8
1.3.8 Economic Characteristics	1-8
1.3.9 Housing	1-9
1.3.10 Cultural and Visual Resources	1-10
1.4 Alternatives	1-11
2.0 DESCRIPTION OF THE PROPOSED ACTION	2-1
2.1 Introduction and Project History	2-1
2.1.1 Comprehensive Plan and Relationship to Zoning Law Adoption and SEQRA	2-1
2.1.2 SEQRA	2-2
2.1.3 Summary History of Actions	2-2
2.2 Reviews and Approvals	2-3
2.3 Purpose, Public Need and Benefits	2-3
2.3.1 Purpose of the Zoning Law and Map	2-3
2.3.2 Public Need for the Zoning Law and Map	2-4
2.3.3 Benefits of the Zoning Law and Map	2-5
2.4 Project Location	2-8
2.5 Existing Land Use, Proposed Zoning, and Development Potential	2-8
2.5.1 Existing Land Use	2-8
2.5.2 Proposed Zoning Law and Map	2-10
2.5.3 Development Potential	2-14

Table of Contents

February 25, 2009

3.0 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION	3.1-1
3.1 Geology, Topography and Soils	3.1-1
3.1.1 Existing Conditions	3.1-1
3.1.2 Potential Impacts	3.1-6
3.1.3 Mitigation Measures	3.1-7
3.2 Water Resources	3.2-1
3.2.1 Existing Conditions	3.2-1
3.2.2 Potential Impacts	3.2-4
3.2.3 Mitigation Measures	3.2-6
3.3 Ecology	3.3-1
3.3.1 Existing Conditions	3.3-1
3.3.2 Potential Impacts	3.3-12
3.3.3 Mitigation Measures	3.3-13
3.4 Transportation	3.4-1
3.4.1 Existing Conditions	3.4-1
3.4.2 Potential Impacts	3.4-6
3.4.3 Mitigation Measures	3.4-7
3.5 Community Services and Facilities	3.5-1
3.5.1 Existing Conditions	3.5-1
3.5.2 Potential Impacts	3.5-5
3.5.3 Proposed Mitigation	3.5-7
3.6 Utilities	3.6-1
3.6.1 Existing Conditions	3.6-1
3.6.2 Potential Impacts	3.6-7
3.6.3 Mitigation Measures	3.6-8
3.7 Demography	3.7-1
3.7.1 Existing Conditions	3.7-1
3.7.2 Potential Impacts	3.7-8
3.7.3 Mitigation Measures	3.7-9
3.8 Economic Characteristics	3.8-1
3.8.1 Existing Conditions	3.8-1
3.8.2 Potential Impacts	3.8-5
3.8.3 Mitigation Measures	3.8-6
3.9 Housing	3.9-1
3.9.1 Existing Conditions	3.9-1
3.9.2 Potential Impacts	3.9-9
3.9.3 Mitigation Measures	3.9-10
3.10 Cultural and Visual Resources	3.10-1
3.10.1 Existing Conditions	3.10-1
3.10.2 Potential Impacts	3.10-4
3.10.3 Mitigation Measures	3.10-5

4.0	ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED	4-1
5.0	ALTERNATIVES	5-1
5.1	No Action Alternative	5-1
5.2	Adoption of a Zoning Law With Different Purposes and Regulations	5-1
6.0	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES	6-1
7.0	GROWTH INDUCING ASPECTS	7-1
8.0	EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES	8-1

Figures

		<u>End of Section</u>
Figure 1-1	Regional Location Map	1.0
Figure 2-1	Existing Land Use	2.0
Figure 2-2	Proposed Pine Plains Zoning Map	2.0
Figure 3.1-1	Bedrock Geology	3.1
Figure 3.1-2	Surficial Geology	3.1
Figure 3.1-3	Steep Slopes	3.1
Figure 3.2-1	Aquifers	3.2
Figure 3.2-2	Water Features	3.2
Figure 3.2-3	Watersheds	3.2

List of Tables

		<u>Page</u>
Table 2-1	Parcels by Land Use Category: Town of Pine Plains	2-9
Table 2-2	Town of Pine Plains Zoning Law - Proposed Zoning Districts	2-10
Table 2-3	Town of Pine Plains Zoning Law - Purpose Statements	2-10
Table 2-4	Proposed Land Uses by Zoning District	2-12
Table 2-5	Town of Pine Plains Zoning Law - Residential Buildout	2-15
Table 2-6	Town of Pine Plains - Comparison of Development Potential	2-17
Table 3.1-1	Town of Pine Plains - Soil Mapping Units	3.1-3
Table 3.3-1	Breeding Bird Atlas Data for the Town of Pine Plains	3.3-5
Table 3.3-2	Breeding Bird Atlas Behavior Code	3.3-8
Table 3.4-1	Road Jurisdiction in Pine Plains	3.4-1
Table 3.4-2	Traffic Counts, State and County Roads, 1971-2000	3.4-3
Table 3.4-3	Accident Comparisons 1982-1984 and 1995-1999	3.4-4
Table 3.5-1	School Enrollment Figures	3.5-2
Table 3.5-2	Recreation Facilities and Open Space	3.5-4
Table 3.5-3	Community Service Demand	3.5-5
Table 3.7-1	Population by Decade 1900-2000	3.7-1
Table 3.7-2	Population Change Pine Plains & Neighboring Towns, 1930-2000	3.7-2
Table 3.7-3	Population Rate of Change Pine Plains & Neighboring Towns 1930-2000	3.7-2
Table 3.7-4	Average Household Size	3.7-3
Table 3.7-5	Population Composition Town of Pine Plains 1960-2000	3.7-3
Table 3.7-6	Residential Mobility	3.7-5

Table of Contents

February 25, 2009

Table 3.7-7	Population Projections	3.7-6
Table 3.7-8	Population Projections: Dutchess County Planning	3.7-7
Table 3.7-9	Share of County Growth 1995 to 2020	3.7-7
Table 3.8-1	Jobs by Earnings Paid	3.8-2
Table 3.8-2	Jobs by Industry Type	3.8-3
Table 3.8-3	Jobs by Employee Place of Residence	3.8-4
Table 3.8-4	Tax Valuation Data: Town of Pine Plains	3.8-5
Table 3.9-1	Housing Units 1960-2000	3.9-1
Table 3.9-2	Total Housing Units: Pine Plains and Pine Plains CDP	3.9-2
Table 3.9-3	Types of Occupancy	3.9-2
Table 3.9-4	Housing Costs 1980-2000	3.9-3
Table 3.9-5	Town of Pine Plains Building Permits 1990-2001	3.9-4
Table 3.9-6	2000 Median Family Income Levels: Dutchess County	3.9-6
Table 3.9-7	2008 Median Family Income Levels: Dutchess County	3.9-6
Table 3.9-8	Housing Problems Output for All Households	3.9-7
Table 3.9-9	Single Family Detached Dwelling Sales Prices	3.9-8
Table 7-1	New York State: Percent Sales by Retail Category	7-1

Appendices

Appendix A	SEQRA Documentation
Appendix B	Buildout Analysis - Current Land Use Regulations
Appendix C	Buildout Analysis - Draft Zoning Law and Map

1.0 EXECUTIVE SUMMARY

Overview

In 2000, the Town of Pine Plains initiated a comprehensive planning process to establish “goals, objectives, principles, guidelines, policies standards, and strategies for the growth and development of the community.”¹ The planning process relied on data gathered to assist the Comprehensive Plan Committee in the preparation of this land use policy document. The Comprehensive Plan evaluated existing conditions associated with the following:

- Community values (community character);
- Business survey data (economic preferences);
- Natural Resources
- Demography
- Economy
- Housing
- Community Facilities
- Transportation
- Cultural Resources

Based on a review of these conditions, various goals and strategies were devised to address critical issues identified in Chapter 10 of the Comprehensive Plan. Chief among the recommended strategies to achieve the Town’s goals and objectives was to implement a land use program in Pine Plains that has as its primary goal, protection of the environment and rural character. The various land use strategies intended to achieve the Comprehensive Plan’s goals and objectives are set forth in the Town of Pine Plains Comprehensive Plan, Volumes 1 and 2, April 2004. The Town of Pine Plains Town Board adopted the Comprehensive Plan on April 15, 2004.

In order to effectuate the land use and other recommendations of the Comprehensive Plan, the Town Board established a Zoning Commission to draft a set of comprehensive land use regulations to guide the future growth and development of the Town. The Pine Plains Zoning Commission, with the assistance of Nan Stolzenburg, principal of Community Planning and Environmental Associates, commenced preparation of a comprehensive set of land use regulations for the Town on April 26, 2005. The Zoning Commission worked diligently on drafting a proposed zoning law, and presented a final draft of a zoning law, including a proposed zoning map, to the Pine Plains Town Board on July 19, 2007.

In 2007, the Pine Plains Town Board retained Tim Miller Associates, Inc., to review and revise the 2007 zoning law. A second Draft Zoning Law and Zoning Map was prepared and submitted to the Town Board on December 2008. Upon Town Board and public review of the second draft, a third Draft Zoning Law and Zoning Map (February 2009) has been prepared and is the subject of this draft generic environmental impact statement (DGEIS).

New York State Environmental Quality Review Act (SEQRA)

As per the regulations implementing SEQRA:

¹ *Town of Pine Plains Comprehensive Plan, April 2004, Volume 1, p. 4.*

“No agency involved in an action may undertake, fund, or approve the action until it has complied with the provisions of SEQRA.”

In accordance with Sections 264 and 266 of New York State Town Law, the Town of Pine Plains Town Board (“Town Board”) is responsible for adopting the draft Zoning Law. The Town of Pine Plains Town Board, as the agency solely responsible for adopting the zoning law, has assumed the role of Lead Agency for this action. The Lead Agency is responsible for determining whether an environmental impact statement is required in connection with the proposed action, i.e., adoption of the zoning law and ensuring that the environmental impacts associated with the proposed action are considered. The Pine Plains Town Board assumed the role of lead agency on February 19, 2009.

The initial adoption of a municipality’s comprehensive zoning regulations is classified as a Type I action. A Type I action is more likely to require preparation of an environmental impact statement. As the action is deemed a Type I action, the Town Board issued a Positive Declaration on February 19, 2009, requiring preparation of this draft generic environmental impact statement (“DGEIS”).

Section 617.10 of the regulations implementing SEQRA allows a Lead Agency to prepare a "generic" environmental impact statement (“GEIS”). GEISs are broader and more general than site or project specific EISs. They allow a Lead Agency to evaluate the environmental impacts associated with *“an entire program or plan having wide application or restricting the range of future alternative policies and projects, including new or significant changes to existing land use plans, development plans, zoning regulations...”*

This DGEIS is intended to identify existing conditions, anticipate potential significant impacts from implementation of the action and propose mitigation measures, if necessary, to reduce or eliminate impacts. The DGEIS relies on the inventory of data gathered during the comprehensive planning process to assess potential environmental impacts associated with the proposed adoption of the draft Zoning Law and Zoning Map.

1.1 Brief Description of the Proposed Action

1.1.1 Location

The Town of Pine Plains is an unincorporated area located in Dutchess County, New York. This approximately 31-square mile community is located in northern Dutchess County, and is generally bounded by Columbia County to the north, the Town of Milan (Dutchess County) to the west, the Town of Northeast (Dutchess County) to the south and east, and the Town of Stanford (Dutchess County) to the south. **Figure 1-1** illustrates the regional location of the Town of Pine Plains.

1.1.2 Proposed Action

The Town Board formed a Zoning Commission to assist in the preparation of the Town’s first zoning local law. The Zoning Commission was assisted by a planning consultant, Community Planning and Environmental Associates, in this endeavor. The Zoning Commission, over a period of two years, crafted land use regulations that were released to the Town Board and the general public in July 2007. At the end of 2007, the Pine Plains Town Board retained Tim Miller Associates to review and revise the first draft zoning law and zoning map. The draft Zoning Law and Map which is the subject of this DGEIS represents the third draft document to be reviewed

and considered by the Town Board. If adopted, the Zoning Law and Map would be the first adopted land use regulations for the Town of Pine Plains. The third draft of the Zoning Law and Map is available for review on the Town of Pine Plains website, is on file with the Town Clerk, and is incorporated herein by reference. Section 2.0 of this DGEIS provides a detailed overview of the content of the draft Zoning Law and Zoning Map. The February 2009 draft of the law is incorporated herein by reference.

1.2 List of Involved/Interested Agencies and Permits/Approvals

The Town of Pine Plains is the Lead Agency responsible for the review of the proposed action, i.e., the adoption of the Zoning Law and Map. This action requires the following reviews and approvals:

Involved Agencies/Approvals

- Town of Pine Plains – Adoption of Zoning Law and Map

Interested Agencies

Notice of the completion of the DGEIS and/or a copy of the DGEIS will be sent to the following agencies:

- NYS Dept. of Environmental Conservation
- NYS Office of Parks, Recreation and Historic Preservation
- NYS Department of Transportation, Region 8
- NYS Department of Agriculture & Markets
- Dutchess County Department of Planning and Development
- Dutchess County Health Department
- Dutchess County Public Works
- Dutchess County Water and Wastewater Authority
- Town of Pine Plains Planning Board
- Town of Pine Plains Conservation Advisory Council
- Pine Plains Central School District
- Town of Northeast
- Town of Milan
- Town of Stanford
- Town of Ancram
- Town of Gallatin
- Columbia County
- Columbia County Department of Planning/Economic Development

1.3 Potential Impacts and Proposed Mitigation Measures

The baseline conditions analyses prepared as part of the Town of Pine Plains comprehensive planning process have been used to describe the "existing conditions" in this DGEIS. Based on an evaluation of the policy and regulatory implications of adopting the Zoning Law and Map, various impacts are identified. This section of the DGEIS summarizes the potential impacts described in the DGEIS, and any mitigation measures that are required to limit these impacts. It is noted that most of the policies and regulations outlined herein and the relevant documents are intended to improve the Town's character, including its environment and socioeconomic

conditions. Thus, many of the "impacts" associated with the adoption of the proposed actions result in beneficial impacts to the Town of Pine Plains as outlined in the DGEIS. Nothing herein is intended to limit any board or agency from conducting a site-specific SEQRA review of any application or activity associated with future development and/or proposed capital improvements.

1.3.1 Geology, Topography and Soils

It is anticipated that site-specific development that is proposed in accordance with the draft Zoning Law and Map may result in impacts from clearing, grading and alteration of the landscape to accommodate buildings, uses and infrastructure. These types of impacts must be evaluated on a site-specific basis. However, the draft Zoning Law and Map include standards and regulations to reduce overall potential impacts associated with development. In addition, because the potential development buildout in the community has been reduced, it is anticipated that adoption of the Zoning Law and Map would result in an overall positive impact to soils, geology, and topography. A number of measures and standards are incorporated into the draft Zoning Law to protect the Town's sensitive geologic, topographic and soils against the impacts associated with development.

- In determining areas to set aside as open space as part of a conservation subdivision, slopes of twenty-five percent (25%) or greater and ridge lines have been identified as primary conservation features not to be disturbed.
- In calculating the allowable residential density as part of any new residential site plan or subdivision application, lands constrained by slopes 25 percent and greater must be excluded from the calculation. Only 50 percent of lands with slopes between 15 and 25 percent are included in the calculation of density (see 100-16 of the draft Zoning Law).
- The draft Zoning Law requires that most major subdivisions be designed as conservation subdivisions. Conservation subdivisions require that a minimum of 50 percent of the gross area of a property be set aside as protected open space. The result is that development will be concentrated on the remainder of the property, thereby limiting overall development disturbances (see 100-31 of the draft Zoning Law).
- Section 100-42 of the draft Zoning Law would result in the implementation of stormwater management and soil erosion control measures.
- Landscaping standards are also proposed to address potential impacts associated with soil erosion by ensuring adequate ground cover is introduced to minimize impacts.
- The AG-O restricts development from areas with soils that are conducive to agricultural operations.

No mitigation measures are proposed.

1.3.2 Water Resources

It is anticipated that site-specific development that is proposed in accordance with the draft Zoning Law and Map could potentially impact water resources and wetlands as a result of proposed clearing and grading activities and alterations to the landscape to accommodate buildings, uses and infrastructure. These impacts must be evaluated on a site-specific basis. However, adoption of the draft Zoning Law and Map is anticipated to result in an overall reduction in potential impacts that results from the decrease in development buildout described in Section 2.0 of this DGEIS.

- The draft Zoning Law incorporates a specific purpose in Section 100-3 related to water resource and wetland protection: “D. To protect the Town’s sensitive environmental features, including but not limited to ridgelines and steeply sloping hillsides; **streams, wetlands, flood plains and other surface water features; groundwater resources; and ecosystems, including protection of the Town’s biodiversity.**”
- Section 100-16 of the draft Zoning Law also requires that areas constrained by the 100-year floodplain and wetlands be subtracted from a parcel’s gross area when determining the residential yield of a residential subdivision application or a residential site plan application.
- In designing conservation subdivisions, surface water resources, including but not limited to wetlands, watercourses, water bodies and the 100-year flood plain, are considered primary conservation features which are to be protected to the maximum extent.
- Sections 100-40 and 100-41 of the Zoning Law establish regulations to protect freshwater wetlands and local streams, respectively.
- Approval of special use permits require that the Planning Board find that the special use is suitable to its site upon consideration of its scale and intensity in relation to environmentally sensitive features, including but not limited to wetlands and watercourses.
- The draft Zoning Law incorporates regulations that establish standards for stormwater management. The purpose of Section 100-42 is to establish minimum stormwater management practices to protect and safeguard the general health, safety, and welfare of the public residing within the jurisdiction, to protect water quality, maintain habitat, and prevent stream bank and lake shore erosion.

Based on the foregoing, it is anticipated that the draft Zoning Law and Map will not have a significant impact on the environment and no mitigation measures are proposed.

1.3.3 Ecology

Site-specific development that is proposed in accordance with the draft Zoning Law has the potential to impact ecological communities and associated flora and fauna. Adoption of the draft Zoning Law and Map will result in a reduction in the potential development buildout of the Town.

- As mentioned in Section 1.3.2, the draft Zoning Law proposes enactment of regulations intended to protect freshwater wetlands and natural streams in the community. This will have the resulting effect of providing some protection of species associated with wetland communities.
- A purpose of the draft Zoning Law is to protect the Town’s ecosystems, including protection of the Town’s biodiversity (see 100-D.3).
- In formulating open space areas associated with conservation subdivisions, habitats identified by the NYSDEC Natural Heritage Program as critical habitat associated with any species identified on the New York State or Federal listings of rare, threatened, endangered or special concern species are designated primary conservation features.
- The overall pattern for land development in the Town of Pine Plains will be to concentrate development within the hamlet areas and limit development in the outlying low density rural areas. Sensitive ecological habitat, including Stissing Mountain and the Thompson Pond complex are located in the “R” District which represents the lowest density district in the Town. This lower density, coupled with the institution of conservation subdivision design

requirements, will assist in protecting large contiguous areas of the Town as open space thereby also protecting sensitive ecological habitat.

Adoption of the Zoning Law and Map is not anticipated to have a significant adverse impact on ecology. No mitigation measures are proposed.

1.3.4 Transportation

Site-specific development that occurs within the Town consistent with the draft Zoning Law will result in increases in traffic. However, the overall level of traffic trips that would be generated at buildout is significantly less than what would result in accordance with the existing regulations. During the peak AM weekday traffic hour period², when most trips are generated by single family residential dwellings, the total trips that would be generated by development buildout under current zoning regulations would be 14,891 to 22,076 total trips. Adoption of the draft Zoning Law would result in a residential buildout that would generate 1,773 to 2,571 AM weekday peak hour trips. The order of magnitude of vehicular trips that could be generated is significantly reduced, resulting in substantially less potential traffic impacts than under current regulations.

- The draft Zoning Law concentrates development within the hamlet areas to encourage and promote use of other modes of transportation, including walking and cycling. The hamlet areas are also accessible to public transportation.
- The NND, which would allow the introduction of a new neighborhood adjacent to the Pine Plains hamlet, requires that opportunities be created to expand pedestrian access to the hamlet. The NND would also require its own internal pedestrian circulation system to encourage walkability within any new neighborhood. In addition, 50 percent of all dwelling units must be situated within a 1/2-mile radius to create a core residential area that can be served by sidewalks or trails.
- Conservation subdivision design (see Section 100-31 of the draft Zoning Law) encourages creation of compact rural clusters, rural hamlets and traditional neighborhood hamlets which would introduce trails and sidewalks to new smaller neighborhoods. In addition, these compact neighborhoods should result in a reduction in street lengths, reducing the maintenance responsibilities of the Town highway department.

The draft Zoning Law and Map are not anticipated to have a significant adverse impact on the transportation network. No mitigation measures are proposed.

1.3.5 Community Services and Facilities

Development that occurs in accordance with the draft Zoning Law will place demand on community services and facilities. Table 3.5-3 of the DGEIS provides a comparative assessment of community service demands with and without adoption of the Zoning Law. The demand on community services would be substantially less with adoption of the law.

- Section 100-18 of the draft Zoning Law addresses emergency access, and requires that every building be provided access to a public road, or access to an approved private road, and all structures must be located on lots as to provide safe and convenient access for emergency vehicles.
- The site plan regulations allow the Planning Board to obtain comments from outside agencies to determine potential impacts to same including emergency and community

² ITE Trip Generation Rate - 0.75 trips per single family dwelling in the AM peak hour.

service providers, This allows community service provider input during review of applications.

- Section 100-23, Affordable housing, includes specific provisions mandating the creation of affordable housing within the Town of Pine Plains. The regulations prioritize affordable housing for households who volunteer community service time within the community, including:
 - Volunteer Fire Department or Ambulance Corps members serving the Town of Pine Plains, with a minimum 6 months consecutive active service.
 - Paid emergency service personnel serving the Town of Pine Plains, including police, fire and emergency medical services, with a minimum of 6 months of employment.
 - Town of Pine Plains full-time municipal employees, minimum of 6 months of employment.
 - School district employees for any schools that provide education services to students who live in Pine Plains, minimum of 6 months of employment.
- The Town Board may require that individual sites be set aside for these providers to establish on-site facilities to serve the NND.

Adoption of the draft Zoning Law and Map is not anticipated to have a significant adverse impact on community service providers.

1.3.6 Utilities

Adoption of the draft Zoning Law is anticipated to have a significant positive impact on the Town's water supply.

- The Zoning Law proposes creation of a Wellhead Protection zoning district with the express purpose of protecting the well and recharge areas associated with the public water supply system that serves the hamlet of Pine Plains.
- Development density has been established in the zoning districts which recognizes existing soil conditions and protects existing groundwater and surface water resources. All development, whether conventional or through conservation design, must ensure that adequate on-site area is provided to accommodate these systems.
- The draft Zoning Law would regulate wireless communication facilities. An objective of the regulations is to discourage proliferation of these facilities in the Town, and to ensure that they are sited in a manner which is the least visually intrusive. Co-location and stealth design is encouraged.
- Electric, cable and phone service would be expanded to serve any growth in the population. At this time, it is not anticipated that gas service would be extended to the Town given the costs to run gas mains and the limited amount of development proposed in the Town.
- Public utilities are allowed throughout the various zoning districts by special use permit.

Adoption of the Zoning Law and Map is not anticipated to have a significant adverse impact on utilities. No mitigation measures are proposed.

1.3.7 Demography

The draft Zoning Law would introduce land use regulations that would reduce the density and total amount of residential development that may occur within the Town of Pine Plains. As set forth in Section 2.0 of the DGEIS, it is anticipated that under existing land use regulations, the Town of Pine Plains population, at theoretical buildout, would have a potential population ranging between 51,623 and 76,528 persons. If the draft Zoning Law is adopted, the population would range between 6,146 and 8,913 persons. The draft Zoning Law would result in a maximum population that is 12-17 percent of the population that would result under the current land use regulations.

- The draft Zoning Law would allow higher density housing in the Town's hamlets, and low density housing within the peripheral rural areas of the Town. The intent is to concentrate population in proximity to locations in the Town where community and commercial services are readily available, and where the potential exists to provide or expand centralized water and sewer services to support the population.
- The draft Zoning Law would allow a diverse range of housing types to address the needs of diverse households.
- The Town of Pine Plains population is aging in place as evidenced by the median age of Pine Plains residents. The draft Zoning Law specifically allows senior citizen housing developments and Elder Cottage (ECHO) dwellings in Pine Plains. In addition, the Town is implementing incentive zoning (Section 100-22 of the draft Zoning Law) intended to allow residential density bonuses where a residential land use application creates senior citizen housing opportunities.
- The proposed NND floating zone also encourages a range of housing opportunities. Specific objectives of the NND zone are to promote a diversity of dwellings that satisfy the needs of various household types, age groups, and income levels in Pine Plains and promote affordable housing opportunities.
- The draft Zoning Law includes a mandatory affordable housing set aside to provide for the needs of moderate income households.

In summary, the draft Zoning Law reduces the total potential population that may be introduced to the Town of Pine Plains which is in keeping with its existing rural character. However, it does allow population growth in areas that can adequately serve this population growth. The Zoning Law also allows a range of housing types which in turn will attract a diversity of households. The Zoning Law and Map will not have a significant adverse impact on demography. No mitigation measures are proposed.

1.3.8 Economic Characteristics

Adoption of the draft Zoning Law and Map would result in beneficial impacts to the community, from an economic perspective.

- As shown in Table 2-6 of the DGEIS, adoption of the Law would result in a significant decrease in the residential buildout in the community. This alone would reduce total net costs associated with residential uses that must be paid to the various community service providers.
- The draft Zoning Law promotes nonresidential uses in the various zoning districts in order to ensure opportunities to create a balanced ratable base in Pine Plains. Table 2-4 of the

DGEIS lists the uses that would be allowed. The plan encourages retail and commercial service uses within the hamlet centers. Manufacturing, research and office, warehousing, resorts, commercial recreation, would be allowed within the R district outside the hamlet areas. Development in the R district must adhere to design standards set forth in Appendix A of the draft Zoning Law.

- The draft Zoning Law encourages retention of agricultural uses in the Town. This is accomplished by creation of the AG-O zoning overlay in combination with conservation subdivision design. The intent is to protect working farms and productive agricultural lands in the community. Agricultural uses demand very little in community services and also enhance the community's tax ratable base.
- In the NND zone, a residential density bonus (10%) may be granted for applications that include an economic development component, intended to encourage nonresidential uses.
- The draft Zoning Law also establishes areas where mining and commercial forestry, i.e., natural resource extraction industries, would be permitted but strictly regulated.
- The draft Zoning Law (at Section 100-35) also incorporates general performance standards to ensure that nonresidential uses are operated and maintained in a manner that will limit impacts to surrounding properties, especially residential uses.

The draft Zoning Law is anticipated to result in a positive impact on the economic conditions of the community. No mitigation measures are proposed.

1.3.9 Housing

Under existing land use regulations, it is estimated that between 19,855-29,434 dwelling units could be constructed. If the draft Zoning Law is adopted, the residential buildout would be in a general range of 2,364 to 3,428 dwelling units. The draft Zoning Law, if adopted, would allow higher density housing in the Town's hamlets, and low density housing within the peripheral rural areas of the Town. The intent is to concentrate population in proximity to locations in the Town where community and commercial services are readily available, and where the potential exists to provide or expand centralized water and sewer services to support the proposed density of housing.

The draft Zoning Law would allow a diverse range of housing types:

- Dwellings in mixed use buildings
- Manufactured dwellings on individual lots
- Multiple family dwellings
- Senior citizen dwellings
- Single family attached dwellings
- Single family semi-detached dwellings
- Single family detached dwellings
- Two family dwellings
- Two family dwelling conversions
- Accessory dwellings
- ECHO dwelling
- Caretaker cottage dwelling

The draft Zoning Law includes a mandatory affordable housing set aside. For purposes of the Zoning Law, dwelling units that are considered affordable are those that may be inhabited by households whose annual income is within 80 percent to 120 percent of the Dutchess County

median income, with adjustments for households size, as defined and updated by the United States Department of Housing and Urban Development. Affordable housing includes rental housing, where the annual rental cost does not exceed 30 percent of said income. For homeowner housing, the annual cost of the sum of principal, interest, taxes and insurance ("PITI") and common charges, as applicable, must not exceed 30 percent of household income.

The draft Zoning Law reduces the total number of housing units that may be introduced to the Town of Pine Plains. However, it does allow a diversity of housing in areas that can adequately serve this growth in terms of infrastructure and community services and facilities. No significant impacts to housing opportunities are anticipated. No mitigation measures are proposed.

1.3.10 Cultural and Visual Resources

The proposed Zoning Law and Map are not anticipated to have a significant impact on historic and visual resources. The regulations have been drafted with the express intent of protecting historic and scenic resources.

- In the purposes section of the draft zoning law, Section 100-3 notes the following purposes of effectuating the law: *"C. To conserve the Town's rural, small town character and scenic beauty...G. To protect the Town's historic structures, features and character, including the history embodied in the Town's numerous hamlets..."*
- Section 100-4 sets forth the purposes for the various zoning districts identified on the draft Zoning Map. In establishing the Hamlet districts, it is the Town's intent to foster development in the historic settlement areas known as Pine Plains, Pulvers Corners and Bethel and to encourage new development and adaptive reuse of existing structures with a building scale, massing, layout and design that is consistent with the traditional character of each hamlet.
- Section 100-22, Incentive zoning, specifically allows the Town Board to grant density bonus incentives to land use applications that preserve cultural, archaeological, or historic facilities or other unique features.
- The NND district requires that the Town Board find that the proposed new neighborhood will: *"(12) encourages protection of scenic vistas, historical buildings and sites, sensitive archaeological areas and other important cultural resources..."*
- The Zoning Law requires that subdivisions be designed with the intent of preserving historic and scenic resources. Secondary conservation values that are to be protected when designing a conservation subdivision include: *(iv) Properties or features listed, or eligible for listing on National, state or local historic registers; and (v) Scenic and recreational resources identified in the Town's Comprehensive Plan.*
- The Planning Board, in deciding on a special use permit application, must specifically determine that the special use shall not impact historic, scenic or natural environmental features on-site or within the adjoining neighborhood.
- The Planning Board must determine the following with regard to site plan applications: *"R. When projects involve the renovation/reuse of an existing building, the Planning Board may require that the historic character and architectural elements be maintained."*

Thus, the preservation of historic and scenic resources is an important objective in the land use review and decisionmaking process. Enactment of the draft Zoning Law and Map is anticipated to result in a positive impact to these features.

1.4 Alternatives

This DGEIS considers two alternatives: the No Action alternative, and an alternative that considers adoption of a zoning law with different purposes and regulations. A description of these alternatives is provided in Section 5.0 of the DGEIS.

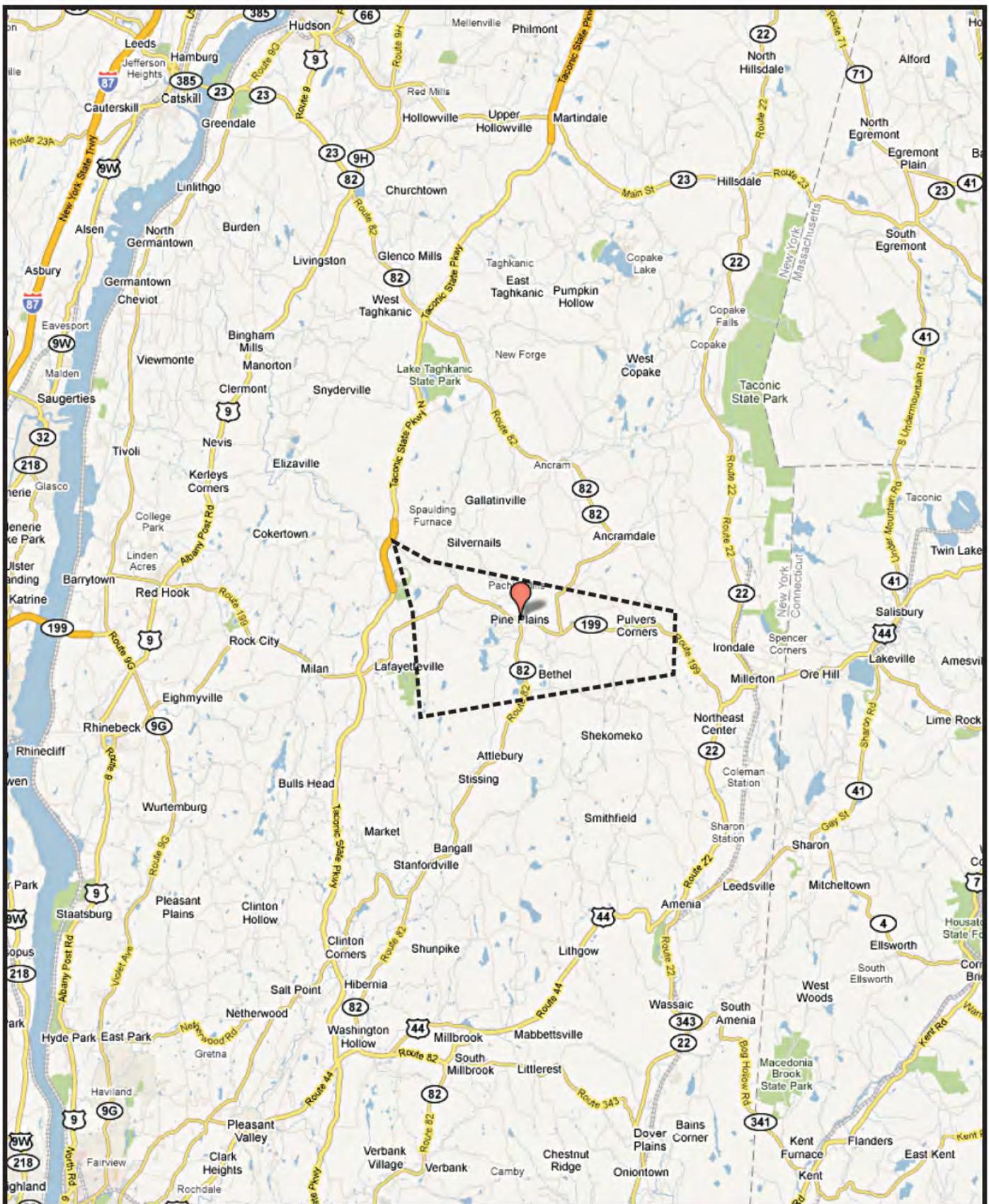


Figure 1-1: Regional Location Map
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Google Maps
 Approx. Scale: 1 inch = 4 mi

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 Introduction and Project History

2.1.1 Comprehensive Plan and Relationship to Zoning Law Adoption and SEQRA

In 2000, the Town Board of the Town of Pine Plains (“Town Board”) assigned the task of updating a 1987 Master Plan to a Town of Pine Plains Special Board. This Special Board oversaw preparation of an updated plan, and the updated Comprehensive Plan was adopted by the Town Board in April 2004. The Town Board subsequently appointed a Zoning Commission to draft land use regulations for purposes of effectuating the land use recommendations set forth in the Comprehensive Plan in order to comply with the Section 272-a of New York State Town Law. Town Law states that all town land use regulations must be in accordance with a comprehensive plan adopted pursuant to Section 272-a.

A Zoning Commission was established in 2005, and prepared a first draft of the zoning law, entitled “The Land Use Law of the Town of Pine Plains, Dutchess County, New York” in 2007. The Zoning Commission was assisted in its efforts by Community Planning & Environmental Associates (CP&EA). The Zoning Commission, in 2007, forwarded the draft zoning law to the Pine Plains Town Board for its review and consideration.

At the end of 2007, Tim Miller Associates, Inc. (TMA) was retained by the Town Board to assist it in reviewing and recommending revisions to the zoning law drafted by the Zoning Commission. A second and third draft Zoning Law and Map were prepared; this DGEIS examines the potential environmental impacts associated with the adoption of the third draft of the Zoning Law and Map, last revised February 2009.

On February 19, 2009, the Pine Plains Town Board declared itself lead agency and determined that adoption of the Zoning Law may have a significant impact on the environment. A Positive Declaration was issued by the Town Board (refer to Appendix A). To evaluate potential impacts associated with the adoption of the Zoning Law and Map, the Town Board has prepared this Draft Generic Environmental Impact Statement (“DGEIS”) in accordance with the regulations implementing SEQRA. The DGEIS relies on data in the adopted Comprehensive Plan including various baseline data related to the Town’s population and housing trends, natural resources, community facilities, land use, transportation, utilities, historic and scenic resources, contained in the appendices to the Comprehensive Plan. The appendices address the following:

- Community values
- Natural resources
- Demography
- Economy
- Demography
- Housing
- Community Facilities
- Transportation
- Cultural Resources

The data related to these elements of the Comprehensive Plan have been utilized, supplemented and updated, where applicable, to describe the existing natural and socioeconomic conditions of the Town. The potential impact of the adoption of the proposed Zoning Law and Map on these existing conditions are then evaluated under "Potential Impacts". Where potential significant impacts are identified, mitigation measures are identified in the "Mitigation Measures" section of the DGEIS.

2.1.2 SEQRA

In accordance with New York State Town Law, the Pine Plains Town Board is responsible for adopting the Zoning Law and Map. The Town Board, on February 19, 2009, assumed the role of Lead Agency and in that role is primarily responsible for ensuring that the environmental impacts associated with the proposed action are considered.

As per the regulations implementing the State Environmental Quality Review Act (SEQRA), the Lead Agency determined that initial adoption of the municipality's first comprehensive zoning law is a Type I action. The Town Board determined that adoption of the Zoning Law and Map may have a significant environmental impact on the environment and issued a Positive Declaration, requiring preparation of a draft generic environmental impact statement (DGEIS).

Section 617.10 of the regulations implementing SEQRA allows a Lead Agency to prepare a "generic" environmental impact statement (GEIS). GEISs are broader and more general than site-specific EISs. They allow a Lead Agency to evaluate the environmental impacts associated with *"an entire program or plan having wide application or restricting the range of future alternative policies and projects, including new or significant changes to existing land use plans, development plans, zoning regulations..."*

This DGEIS is intended to identify existing conditions, anticipate potential impacts from implementation of the action and propose mitigation measures, if necessary, to reduce or eliminate impacts.

2.1.3 Summary History of Actions

The following represents a history of actions related to the adoption of the proposed Zoning Law and Map:

- Pine Plains Town Board forms Zoning Commission in accordance with Section 266 of the New York State Town Law. The first Zoning Commission meeting is held on April 26, 2005.
- Zoning Commission holds public hearings regarding proposed land use concepts on April 25, 2006 and April 29, 2006.
- Pine Plains Zoning Commission completes a proposed Land Use Law, delivered to the Town Board on July 19, 2007.
- A Second Draft Zoning Law is prepared for the Pine Plains Town Board in December 2008. The Zoning Law is made available for public review.
- Based on comments raised by the Town Board and public, a Third Draft Zoning law is delivered to the Town Board in February 2009.
- The Town Board establishes itself as Lead Agency for the adoption of the Zoning Law and Map, and issues a Positive Declaration on February 19, 2009.

This DGEIS analyzes the impacts associated with the adoption of the third draft of the Zoning Law and Map.

2.2 Reviews and Approvals

Adoption of the Zoning Local Law and Map requires the following reviews and approvals:

- Pine Plains Town Board – Zoning Local Law (including zoning map) adoption
- Dutchess County Planning Department – GML 239-m review

2.3 Purpose, Needs and Benefits

2.3.1 Purpose of the Zoning Law and Map

As stated in Section 100-3 of the draft Zoning Law, the Zoning Law is being enacted to protect and promote the public health, safety, morals, comfort, convenience, economy, aesthetics, and the general welfare, and for the following additional purposes:

- A. To implement the Town of Pine Plains Comprehensive Plan adopted in 2004, as may be amended from time to time.*
- B. To implement the Greenway Compact.*
- C. To conserve the Town's rural, small town character and scenic beauty.*
- D. To protect the Town's sensitive environmental features, including but not limited to ridgelines and steeply sloping hillsides; streams, wetlands, flood plains and other surface water features; groundwater resources; and ecosystems, including protection of the Town's biodiversity.*
- E. To protect open space.*
- F. To preserve lands that are conducive to agricultural use, and to support agricultural activities and uses that are integral to the heritage of Pine Plains.*
- G. To protect the Town's historic structures, features and character, including the history embodied in the Town's numerous hamlets.*
- H. To maintain the Pine Plains hamlet as the town's center and principal location for residential and nonresidential uses.*
- I. To promote and encourage appropriate business development in the hamlets.*
- J. To encourage a range of housing types and residential densities in suitable locations.*
- K. To provide adequate transportation facilities, ensure safe and efficient traffic circulation, and encourage a circulation system that promotes facilities for pedestrians and cyclists.*
- L. To ensure that the Town's current and future need for community facilities and services, including but not limited to emergency protection, recreational resources, and educational*

facilities is considered and addressed during the review of land development applications.

- M. To protect property owners from nuisances including but not limited to noxious odors, noise, light, air and water pollution, and other unsightly, obtrusive effects of offensive land uses and activities, and to secure property owners from the perils of fire, flood and other dangers.”*

2.3.2 Public Need for the Zoning Law and Map

The critical issues confronting Pine Plains that substantiate the public need for a Zoning Law and Map are identified in Chapter 10 of the Town’s adopted Comprehensive Plan. These issues include:

- The health of the town center as a focus point and primary economic location in town is a major concern for residents. Those surveyed fear that the town center could lose its focus as a center for business and community life.
- Older buildings need repair and renovation. Adaptive reuse of these buildings is important to maintain the town center role.
- Lack of zoning for the Town was one of the most negative features in Pine Plains according to those surveyed. Most development has occurred outside of the town center, and unplanned or uncontrolled development is contributing to the loss of agricultural land and community character. Specifically, uncontrolled development and lack of proper land use control was perceived as the most significant threat to the rural character and quality of life in Pine Plains.
- There is a need for enhanced enforcement of existing local laws. Existing land use regulations and local laws regarding development do not address many of the issues important to town residents. Residents and business persons feel that existing local laws are not adequately enforced.
- There is a lack of understanding of the town’ site plan review processes on the part of the general public. Residents need to understand the local controls in place, how they work, and what the review process entails in order to make efficient decisions that are consistent with the Comprehensive Plan.
- Loss of open space and agriculture is a significant threat to quality of life. There are few existing regulatory measures in place to protect these lands from further development.
- Protection of productive and quality farmland is essential for maintaining the town’s agricultural activities. However, much of the prime agricultural land is also relatively easy to develop for residential or commercial purposes.
- Residents feel that the town’s future should be as a “residential area with strong agriculture, culture, and tourism.” However, development trends seen in Pine Plains are slowly changing these characteristics. Continued population growth and scattered development could lead to the loss of rural character and agriculture.
- There is a significant amount of vacant land available for development, as well as previously subdivided lands. This is especially true around the lakes in the hamlet. Significant use of these lands for residential growth would change both the environment and character of the area. Those surveyed stressed the need for well-planned, controlled growth, rather than uncontrolled haphazard development.
- Town aquifers do not receive sufficient protection (through land use regulations or otherwise). Inappropriate development in these areas could lead to contamination of the town’ drinking water sources. Aquifers in the town’ sand and gravel areas and those

located in areas with limestone are particularly vulnerable to contamination due to their geologic characteristics.

- Water supplies governed by the geology of the town and development patterns should reflect availability of water.
- One third of Pine Plains is covered by slopes of 15% or steeper. These lands are highly susceptible to erosion, contribute to the town's scenery and vistas, and are locations that are often expensive to develop and install septic systems. Disturbance of ridgelines and steep slope areas of the Town can also contribute to loss of wildlife habitats and travel corridors, and can cause a decrease in water quality due to erosion and sedimentation. The Town has insufficient erosion and sediment control provisions for new development, and does not have specific standards or practices designed to protect these vulnerable areas.
- A significant portion of the Town of Pine Plains has limitations to future development. Three-quarters of the town have one or more environmental features that are likely to make development difficult including wetlands, slopes, shallow soils, impermeable soils, and floodplains...Current town programs and regulations of land use do not adequately ensure protection of these resources.
- Potential sources of water contamination from residential septic systems and agricultural practices within the town's Wellhead Management Areas (WMA) exist...Public water supplies need to be adequately protected in the future.
- The population of Pine Plains grew faster than the county average during the 1990s. Continued uncontrolled growth could lead to degradation of several highly valued environmental features such as important agricultural lands, open spaces, and scenic areas.
- Following statewide trends, household sizes continue to shrink while the median age of the population continues to rise. The draw of the area as a seasonal or retirement location will have implications in terms of housing types and service needs.
- There is a desire for enhanced small business and retail growth in Pine Plains. At the same time, however, residents desire to keep Pine Plains rural. Little land use and economic planning has been done to balance these needs.
- The town's residents desire small-scale commercial development and not heavy industry, franchise or retail chain development. However, guidelines or incentives are not in place to promote small businesses or deter larger entities or undesired uses.
- There is a desire for additional commercial growth, but that is done in a manner that is consistent with the traditional and rural character of Pine Plains. Guidelines, standards, or controls need to be strengthened in order to achieve this.
- Both residents and businesses stressed the critical need to maintain the strength of the town center as a focal point for business activity.
- There is a need for affordable housing in Pine Plains. Difficulty in finding housing makes it difficult to attract and maintain young families and can lead to increased use of mobile and other types of manufactured homes. According to the town's building permit records, there has been a significant increase in the number of mobile homes constructed in Pine Plains during the last few years. This could be a response for the need for more affordable housing.

2.3.3 Benefits of the Zoning Law and Map

Adoption of the Zoning Law and Map will require that all private and public interests conduct activities in a manner that is consistent with the Town's vision of its growth, development,

and conservation. Specific benefits that will result from adoption of the Zoning Law and Map include:

- Protect Rural Character and the Environment: The Town's natural beauty and rural character will be protected. The Zoning Law establishes development standards to protect critical resources and implements a land use program that sets densities and development standards in accordance with the goals and objectives of the Comprehensive Plan.
- Protect Water Supply Systems: The Zoning Law establishes a Wellhead Protection District to protect a public water supply wellhead area.
- Promote Future Growth Consistent with Pine Plain's Character: New commercial and residential development will be consistent with the cultural and rural character of the Town. Design standards have been incorporated into the Zoning Law to protect existing community character.
- Maintain the Hamlet of Pine Plains as the Town Center: The Hamlet of Pine Plains is maintained as the Town's civic, business and residential center through creation of various zoning districts that allow and encourage these uses within the hamlet.

In addition, the Zoning Law promotes protection of other historic hamlet centers in the Town, namely, Pulvers Corners and Bethel, through the establishment of zoning districts that have their own set of use, bulk, and design standards.

- Protect Agricultural Operations: Through creation of an Agricultural Overlay district, the Zoning Law has identified lands that are to be protected for purposes of retaining or establishing productive farms as well as agriculturally-related businesses and activities. The AG-O district prioritizes the retention of agricultural uses and lands in determining areas that will remain as open space as part of a conservation subdivision. In addition, the Zoning Law establishes exemptions to bulk requirements for certain agricultural structures, and allows agricultural uses as permitted uses throughout most of the Town.
- Create Diverse Housing Opportunities: The Zoning Law allows a range of housing types in the various zoning districts based on the provision of central water and/or sewer. Higher density housing and a greater diversity of housing is encouraged in the hamlet zoning districts. The Zoning Law allows single-family detached, single-family attached (townhomes), single-family semi-detached, and multifamily dwellings. It also allows senior citizen developments, manufactured housing, accessory apartments, ECHO housing, and cottage caretaker dwellings. These uses are allowed as permitted uses or by special use permit approval.
- Create New Neighborhoods through Zoning Petition: The Zoning Law has created a NND floating zone which is intended to allow expansion of the Pine Plains hamlet through creation of new residential neighborhoods that adjoins the hamlet. Creation of a NND requires that the Town Board make a specific finding that the NND will, on balance, result in significant benefits to the community.
- Create Affordable Housing: The Zoning Law mandates the creation of affordable housing in conjunction with subdivisions and site plans that propose ten or more dwellings or

residential lots. An applicant is granted a ten percent (10%) density bonus for setting aside dwellings or lots, or providing a fee in lieu of affordable housing. Section 100-23 establishes procedures for the review of affordable housing statements and proposals, establishes income guidelines to ensure that the housing is inhabited by moderate income households, and prioritizes housing to those individuals who provide a volunteer service to the Town. In a NND zone, the mandatory affordable housing set aside is 15 percent, with a density bonus of ten percent granted to an applicant.

- Promote Sound Transportation Standards: The Zoning Law, through its design standards, encourages the creation of pedestrian access and connections, trails, and bike paths, to afford alternative modes of travel within the community. Strip pattern development, which introduces multiple curb cuts along roadways, is discouraged by limiting the majority of uses that generate higher vehicular trip generation rates to the Pine Plains hamlet center. Parking standards, including design standards, are set forth in the Zoning Law.
- Preserve Scenic and Historic Resources: The Zoning Law, in Appendices A and B, sets forth design standards intended to protect the aesthetic characteristics of the historic hamlets and the rural character of outlying areas.
- Protect Open Space: The Zoning Law, in Article VII, establishes procedures whereby conservation subdivision design is encouraged or mandated, depending on the zoning district in which a subdivision is proposed. The conservation subdivision standards require that 50 percent of the gross lot area of a parcel be set aside as protected open space.
- Protect Wetlands and Streams: The Zoning Law, in Sections 100-40 and 100-41, acknowledges the benefits of wetlands and stream protection, and establishes measures that ensure that the Planning Board considers these sensitive resources during plan review.
- Protect Environmentally Sensitive Features. In addition to requiring resource protection in the design of conservation subdivisions, Article VIII of the Zoning Law establishes various environmental controls and standards to protect the environment from undesirable impacts and disturbances. Measures to control stormwater runoff and soil erosion, control lighting levels, promote landscaping and screening, and other performance standards are set forth in this article of the Zoning Law.
- Enforce and Administer the Town Code and the Zoning Law: Article XIV of the Zoning Law includes updated provisions for the administration and enforcement of building code and land use regulations.

Numerous other provisions are included in the Zoning Law intended to achieve Town land use regulatory goals and objectives, including sign regulations, parking standards, control of certain uses through establishment of special use permits, etc. These various regulations are consistent with, and intended to effectuate, the adopted Town Comprehensive Plan.

2.4 Project Location

The Town of Pine Plains is an unincorporated area located in Dutchess County, New York. This approximately 31-square mile community is located in northern Dutchess County, and is generally bounded by Columbia County to the north, the Town of Milan (Dutchess County) to the west, the Town of Northeast (Dutchess County) to the south and east, and the Town of Stanford (Dutchess County) to the south. Figure 1-1 illustrates the regional location of the Town of Pine Plains.

2.5 Existing Land Use, Proposed Zoning, and Development Potential

In order to evaluate the potential impacts associated with the adoption of the draft Zoning Law and Map, an evaluation of the potential land use changes that would result must be described. This section describes existing land use patterns, the draft Zoning Law and Map and how it relates to existing land use, and then considers the development potential that would result from implementation of the Zoning Law compared to development potential in the absence of zoning.

2.5.1 Existing Land Use

Existing land use was documented in the Town of Pine Plains Comprehensive Plan. Figure 2-1 presents the Town's existing land use pattern. A land use inventory, quantifying existing land uses in the Town of Pine Plains by acreage, was not prepared during preparation of the Comprehensive Plan. However, CP&EA compiled land use data for purposes of this DGEIS. The land use data are presented along with New York State Department of Real Property Services data identifying the total number of tax parcels in the community by land use classification. Table 2-1 below presents the broad land use categories in the Town of Pine Plains.

As is evident from the categories noted above, the majority of parcels in the Town of Pine Plains are residential. Vacant land accounts for the second largest land use category, followed by agricultural properties. A review of the existing land use map (Figure 2-1) indicates that most of the Town's acreage is in agricultural use or vacant.

As is evident from a review of the land use map (Figure 2-1), much of the land in the western portion of the Town is vacant forest land - vacant land in this area is associated with Stissing Mountain. Agricultural uses are found within close proximity to New York Route 199; residential land uses are scattered, with several residential enclaves located along Hicks Hill Road.

Most of the residential and commercial development in the Town is concentrated in the "plains" or lowland area of the Town, centered around the intersection of Church Street with Main Street. Several residential neighborhoods are located outside of and adjacent to the hamlet center, in the vicinity of Hoffman Road, Lake Road, and Ryan Road. To the south, agricultural uses predominate.

Table 2-1 Parcels by Land Use Category: Town of Pine Plains			
Land Use Category	Description	Parcel Count	Acres
100	Agricultural Properties	102	10,281
200	Residential Properties	962	5,259
300	Vacant Land	517	2,729
400	Commercial Properties	64	118
500	Recreation and Entertainment Properties	6	216
600	Community Service Properties	22	132
700	Industrial Properties	2	5
800	Public Service Properties	19	31
900	Public Parks, Wild, Forested and Conservation Properties	11	660
Total Parcels in All Broad Use Categories		1,705	19,431
Source: NYS Real Property Services, 2009; CP&EA, 2009.			

East of the hamlet, residential uses can be found clustered in neighborhoods along NY Route 199, including Pulvers Corners. A small residential hamlet is also found in the Bethel hamlet. Residential uses are also scattered along the Town and County roads in the eastern portion of the Town. Lands between road alignments are primarily in vacant or agricultural use.

Industrial uses are extremely limited in the Town, and consist of two petroleum distribution facilities. Several sand and gravel mining operations are also found in the Town along NY Route 199 and west of NY 82.

The existing land use map does not identify commercial uses; these uses are concentrated in the Pine Plains hamlet.

Institutional and civic uses, including schools, churches, and the Town library, are situated in the hamlet. The Pine Plains Town Hall is located to the east of the hamlet, near the Hammertown residential enclave, along NY Route 199.

As noted in the Comprehensive Plan, there is a significant amount of land, both vacant and in agricultural use, available for potential development. Development potential under the existing zoning is addressed in Section 2.5.3 below.

2.5.2 Proposed Zoning Law and Map

The proposed Zoning Map for the Town of Pine Plains establishes various zoning districts intended to regulate land use activities within each district. The districts are illustrated in Figure 2-2. Table 2-2 lists the proposed districts and Table 2-3 summarizes the purpose of each district.

Table 2-2 Town of Pine Plains Zoning Law - Proposed Zoning Districts		
General Category	Symbol	Zoning District
Hamlet Districts	H-BUS	Hamlet - Business
	H-MS	Hamlet – Main Street
	H-CR	Hamlet – Center Residential
	H-R	Hamlet - Residential
	H-PC	Hamlet – Pulvers Corners
	H-B	Hamlet – Bethel
Residential Districts	R	Rural
Overlay Districts	AG-O	Agricultural Overlay
	M-O	Mining Overlay
Floating District	NND	New Neighborhood Development
Special Resource Districts	WP	Wellhead Protection
Source: Town of Pine Plains Third Draft Zoning Law, February 2009.		

Table 2-3 Town of Pine Plains Zoning Law - Purpose Statements		
Symbol	Zoning District	Purpose
H-BUS	Hamlet - Business	To allow commercial uses that are consistent with the scale, dimensions, and character of existing structures located at this crossroad location in the hamlet of Pine Plains.
H-MS	Hamlet – Main Street	To allow a mix of residential and commercial uses that are consistent with the scale, dimensions, and character of existing structures on properties with lot frontage primarily along Main Street and Church Street. Commercial uses are permitted to the extent that they are compatible with adjoining residential uses.
H-CR	Hamlet – Center Residential	To allow residential uses at the highest densities in the Town consistent with the existing residential character of the Pine Plains hamlet. Uses in this zoning district shall be interconnected to other portions of the Pine Plains hamlet through establishment of a comprehensive sidewalk system.

<p align="center">Table 2-3 Town of Pine Plains Zoning Law - Purpose Statements</p>		
Symbol	Zoning District	Purpose
H-R	Hamlet - Residential	To allow residential uses at a density consistent with the more open character of this area of the hamlet of Pine Plains.
H-PC	Hamlet – Pulvers Corners	To allow a mix of residential and commercial uses in Pulvers Corners, designed in a manner that reflects this hamlet’s traditional building patterns in terms of scale, form, and architectural character, and in a manner that promotes a pedestrian-oriented streetscape
H-B	Hamlet – Bethel	To allow a mix of residential and commercial uses in Bethel, designed in a manner that reflects this hamlet’s traditional building patterns in terms of scale, form, and architectural character, and in a manner that promotes a pedestrian-oriented streetscape.
R	Rural	To allow agricultural uses and low density residential uses in a manner that is consistent with the existing rural character of the Town outside its hamlets.
AG-O	Agricultural Overlay	The purpose of this overlay district is to protect any property now or formerly in agricultural use, and any property that may not be in agricultural use, but is characterized by the presence of prime farmland soils, soils of statewide significance, or is within a County-designated agricultural district. Regulations applicable to this overlay district are set forth in Section 100-26 of this Zoning Law.
M-O	Mining Overlay	The purpose of this overlay district is to allow and regulate mining uses within the Town of Pine Plains. Regulations applicable to this overlay district are set forth in Section 100-27 of this Zoning Law.
NND	New Neighborhood Development	The New Neighborhood Development (“NND”) District is an unmapped zoning district that is established only upon an applicant’s submission of a zoning petition and approval of the petition by the Pine Plains Town Board. The purpose of the NND is to allow planning and zoning flexibility which is necessary to achieve environmentally sensitive, economically beneficial and socially desirable development, and a commonality of benefits to the public and to an Applicant than is possible under more rigid conventional zoning regulations. The NND is intended to allow creation of a new residential neighborhood adjacent to any portion of a Pine Plains hamlet zoning district as established herein.
WP	Wellhead Protection	The purpose of this district is to protect the well and recharge areas associated with the public water supply system that serves the hamlet of Pine Plains. The boundary of the district is based on an identification of these resources as set forth in the 2007 Wellhead Protection Plan prepared by the New York Rural Water Association. The WP district is also considered a residential district as that term may be used and regulated by this Zoning Law.
<p>Source: Town of Pine Plains Third Draft Zoning Law, February 2009.</p>		

The primary purpose for establishing zoning districts is to control and regulate the land uses allowed within each district. Table 2-4 outlines the proposed uses by applicable zoning district.

Table 2-4 Schedule of Use Regulations								
Use	H-BUS	H-MS	H-CR	H-R	H-B	H-PC	R	WP
RESIDENTIAL USES								
Dwelling, Mixed use building, (§100-56A)	SU	SU	SU	SU	SU	SU	X	0
Dwelling, Manufactured Home (§100-21B)	X	X	SP	SP	SP	SP	SP	SP
Dwelling, Multiple Family (§100-56B)	X	SU	SU	SU	SU	SU	SU(1)	X
Dwelling - Senior Citizen (§100-56B)	X	SU	SU	SU	SU	SU	SU	X
Dwelling, Single Family Attached (§100-56C)	X	SU	SU	SU	SU	SU	SU(1)	X
Dwelling, Single Family Detached	P	P	P	P	P	P	P	P
Dwelling, Single Family Semi-Detached (§100-56C)	X	SU	SU	SU	SU	SU	SU(1)	X
Dwelling, Two Family	X	P	P	P	P	P	P	P
Dwelling, Two Family conversion (§100-21C)	X	SP	SP	SP	SP	SP	SP	P
USES ACCESSORY TO RESIDENTIAL USES								
Customary Accessory Use	P	P	P	P	P	P	P	P
Dwelling, Accessory (§100-56D)	SU	SU	SU	SU	SU	SU	SU	SU
Dwelling, Elder Cottage (§100-56E)	SU	SU	SU	SU	SU	SU	SU	SU
Dwelling, Caretaker Cottage	X	X	X	X	X	X	SP	SP
Home Occupation, Minor	P	P	P	P	P	P	P	P
Home Occupation, Major (§100-56F)	SU	SU	SU	SU	SU	SU	SU	SU
Swimming pool (100-19F)	P	P	P	P	P	P	P	P
NONRESIDENTIAL USES								
Agricultural operations	X	X	X	X	P	P	P	P
Airstrip (§100-56G)	X	X	X	X	X	X	SU	X
Automotive repair (§100-56H)	X	SU	X	X	X	X	SU	X
Automotive sales (§100-56I)	X	SU	X	X	X	X	X	X
Automotive service station (§100-56J)	X	SU	X	X	X	X	X	X
Bank	SP	SP	X	X	SP	SP	X	X
Bank, with drive through (§100-56K)	X	SU	X	X	X	X	X	X
Bed and breakfast (§100-56L)	SU	SU	SU	SU	SU	SU	SU	SU
Camp, day (§100-56M)	X	X	X	X	X	X	SU	SU
Camp, seasonal (§100-56M)	X	X	X	X	X	X	SU	SU
Car wash (§100-56N)	X	SU	X	X	X	X	X	X
Cemetery (§100-56O)	X	X	X	X	X	X	SU	X
Commercial logging (§100-56P)	X	X	X	X	X	X	SU	SU

Table 2-4 Schedule of Use Regulations								
Use	H-BUS	H-MS	H-CR	H-R	H-B	H-PC	R	WP
Communications facility/ personal wireless service facility or tower (§100-56Q)	X	X	X	X	X	X	SU	SU
Convenience store associated with automotive service station (§100-56R)	X	SU	X	X	X	X	X	X
Craft workshop	SP	SP	SP	SP	SP	SP	SP	SP
Day care center (§100-56S)	SU	SU	X	X	SU	SU	SU	X
Educational facility (§100-56T)	SU	SU	X	X	SU	SU	SU	X
Equipment storage (§100-56U)	X	SU	X	X	X	X	SU	X
Farm market (§100-56V)	X	X	X	X	X	X	SU	SU
Farm stand	P	P	P	P	P	P	P	P
Funeral home	SP	SP	X	X	X	X	SP	X
Golf course (§100-56W)	X	X	X	X	X	X	SU	X
In-Patient health care Facility (§100-56X)	X	SU	X	X	X	X	SU	X
Kennel (§100-56Y)	X	X	X	X	X	X	SU	X
Laundromat	SP	SP	X	X	X	X	X	X
Lodging (§100-56Z)	SU	SU	X	X	SU	SU	X	X
Manufacturing (§100-56AA)	X	X	X	X	X	X	SU	X
Membership club	SP	SP	X	X	SP	SP	SP	SP
Municipal support	X	SP	X	X	X	X	SP	SP
Office (§100-56BB)	SP	SP	X	X	X	X	SU	SU
Office, medical	SP	SP	X	X	SP	SP	X	X
Petroleum Storage and Distribution Facility	X	X	X	X	X	X	SU	X
Public utilities (§100-56CC)	SU	SU	SU	SU	SU	SU	SU	SU
Recreation, commercial indoor (§100-56DD)	SU	SU	X	X	X	X	SU	X
Recreation, commercial outdoor (§100-56DD)	X	X	X	X	X	X	SU	X
Religious institution	SP	SP	SP	SP	SP	SP	SP	SP
Research/laboratory facility (§100-56EE)	X	X	X	X	X	X	SU	X
Resort (§100-56FF)	X	X	X	X	X	X	SU	X
Restaurant (§100-56GG)	SP	SP	X	X	X	X	SU	X
Retail use (§100-56GG)	SP	SP	X	X	SU	SU	X	X
Riding stable or academy (§100-56HH)	X	X	X	X	X	X	SP	SP
Self-storage facility (§100-56II)	X	SU	X	X	X	X	SU	X
Service business, with no customers at site (§100-56JJ)	SP	SP	X	X	X	X	SU	SU
Service business, with customers at site	SP	SP	X	X	SP	SP	X	X
Shooting preserve (§100-56KK)	X	X	X	X	X	X	SU	SU
Veterinary hospital (§100-56Y)	X	X	X	X	X	X	SU	SU
Warehouse (§100-56LL)	X	SU	X	X	X	X	SU	X
Zoo (§100-56MM)	X	X	X	X	X	X	SU	SU

Table 2-4 Schedule of Use Regulations								
Use	H-BUS	H-MS	H-CR	H-R	H-B	H-PC	R	WP
USES ACCESSORY TO NONRESIDENTIAL USES								
Customary accessory uses	P	P	P	P	P	P	P	P
Source: Town of Pine Plains Draft Zoning Law, 2009.								

The uses set forth in the Zoning law for the Town are those that have been deemed to be consistent with the Town's existing and desired community character.

2.5.3 Development Potential

This section of the DGEIS compares the development potential of the Town under existing land use regulations (i.e., absent a zoning law) with the development potential that may result from enactment of the draft Zoning Law. The buildout analyses were performed by Community Planning & Environmental Associates.

The buildout analyses derived development potential by determining the total number of lots, or single family detached dwellings, that may be constructed. However, we note that the draft Zoning Law would allow other types of development, including single-family attached and multifamily dwellings as well as commercial uses. Within the vast majority of the Town, zoned Rural and Wellhead Protection, the permitted density for these uses is the same as the density allowed for single family detached dwellings. A higher density of multifamily, single family attached, and single family semi-detached dwellings is permitted in the hamlet districts than is allowed for single family detached dwellings - here, the residential buildout would be greater. Given the more limited amount of developable acreage in the hamlet zoning districts, the additional residential buildout that may result from development of higher density housing in the hamlets is not considered significant for purposes of this analysis.

Existing Land Use Regulations

During preparation of the first draft of the zoning law, Community Planning & Environmental Associates prepared a buildout analysis for the Town of Pine Plains, based on current land use regulations and absent any zoning regulations. The buildout analysis is included as Appendix B of this DGEIS. As stated in Appendix B, a buildout analysis is an exercise designed to estimate the amount of development that can occur if all developable land in a town is built in accordance with the Town's land use regulations. The buildout analysis calculated residential buildout; it is noted that it does not address nonresidential buildout. The buildout analysis does not predict when the development would occur, the rate it would occur, or where it would occur - it predicts the end result. The general process followed to calculate full buildout conditions is:

- Identify areas in the town that already have residential development and therefore would not result in new development;
- Identify areas in the town with environmental constraints that would not support new residential development; and
- Calculate the amount of new residential development allowed by Pine Plains' current land use regulations in the remaining undeveloped areas of the Town.

The steps in the analysis are outlined in detail in Appendix B. For the buildout analysis, two scenarios were tested to determine the potential buildout that may result under the current land use regulations. Scenario 1 determined buildout based on a half-acre minimum lot size, without any consideration of environmental constraints which might limit development. Scenario 2 evaluated buildout using half-acre lot size, with most environmental constraints removed from development. Constraints were defined as open water, state and federal wetlands, 100-year flood zones, and slopes over 15 percent. Based on the results of the analyses, the two scenarios would result in the following buildout:

- Scenario 1: 29,434 1/2 acre lots or dwellings
- Scenario 2: 19,855 1/2 acre lots or dwellings

Proposed Zoning Map and Law

Appendix C includes a buildout analysis for the draft Zoning Law. Several revisions have been made to the third draft which nominally affect the buildout calculations that are not incorporated into the assumptions set forth below. The Zoning Law and Map would introduce variable bulk requirements in the various zoning districts - lot size and density for a conventional subdivision will range from 20,000 square feet in the Hamlet districts to 5 acres in the Rural and Wellhead Protection zoning districts. In addition, the Zoning Map and Law propose to further regulate development by subtracting environmental constraints from gross acreage when calculating residential yield. The residential buildout for various scenarios under the draft Zoning Law are as follows:

Table 2-5 Town of Pine Plains Draft Zoning Law - Residential Buildout	
Scenario Description	New Residential Lots/Dwellings
1- Buildout - No central sewer, subtract environmental constraints, deduct 15% for roads and inefficiencies of layout	2,364
2 - Buildout - With central sewer, subtract environmental constraints, deduct 15% for roads and inefficiencies of layout	2,471
3 - Buildout - Buildout 2, plus 30 percent density incentives	2,991
4 - Buildout - Buildout 3, plus 10 percent affordable housing bonus	3,238
5 - Buildout - Buildout 4, with Carvel Property Rezoned NND	3,428
Source: Community Planning & Environmental Associates, 2008; Tim Miller Associates, Inc., 2009.	

For the Carvel buildout, we note as follows:

Project Description

February 25, 2009

- According to the CP&EA calculations, the pre-existing lots are factored into the buildout calculation in 1 above. The analysis indicated that there were 190 potential new residences in the pre-existing Carvel subdivision.
- In addition, the analysis indicated that the maximum development using Townwide data, including a 30 percent incentive bonus for the Carvel property, would be 231 dwellings.
- Since the NND zone is capped at 611 dwelling units, the additional potential buildout for this property under NND zoning, not accounted for in Scenario 3, would be 190 additional dwelling units. This yield is added to Scenario 3 to derive the buildout in the Town under the draft Zoning Law, with the Carvel property rezoned NND. The increase in buildout from the NND zone results from a base residential density of one dwelling unit per 3 acres (instead of one dwelling unit per 5 acres allowed in the R district), a 10 percent increase for affordable housing, and a 10 percent increase in yield for economic development.

It is also noted that any subdivision or residential development of 10 lots or more would be required to set aside 10 percent of the lots or dwellings as affordable housing. The applicant is granted a ten percent density bonus for the set aside. The buildout with the 10 percent affordable housing bonus has not been calculated. We would expect the additional residential buildout to be less than 247 additional dwellings as the affordable housing requirement does not apply to all subdivisions. However, for purposes of this analysis, we included a scenario with an additional ten percent applied to Scenario 4.

Table 2-6 presents the total population that would result from the various buildout scenarios using a 2000 average household size of 2.6 persons for the Town of Pine Plains.

Under the current land use regulations, the Town of Pine Plains population, at theoretical buildout, would have a potential population ranging between 51,623 and 76,528 persons. If the draft Zoning Law is adopted, the population would range between 6,146 and 8,913 persons. The draft Zoning Law would result in a maximum population that is 12-17 percent of the population that would result under the current land use regulations.

Table 2-6 Town of Pine Plains - Comparison of Development Potential	
Scenario Description	Potential Population (persons)
Scenario 1 - Existing Zoning - Environmental Constraints Not Subtracted	76,528
Scenario 2 - Existing Zoning - Environmental Constraints Subtracted	51,623
1- Buildout - No central sewer, subtract environmental constraints, deduct 15% for roads and inefficiencies of layout	6,146
2 - Buildout - With central sewer, subtract environmental constraints, deduct 15% for roads and inefficiencies of layout	6,425
3 - Buildout - With central sewer, subtract environmental constraints, deduct 15% for roads and inefficiencies of layout, add 30 percent density incentives	7,777
4 - Buildout - With central sewer, subtract environmental constraints, deduct 15% for roads and inefficiencies of layout, add 30 percent density incentives, add 10 percent affordable housing bonus	8,419
5 - Buildout - With Carvel Property Rezoned NND	8,913
Source: Community Planning & Environmental Associates, 2008; Tim Miller Associates, Inc., 2009.	

Pine Plains Land Use

Legend

Roads

- NYS Routes
- County and Local Roads
- Streams
- Residential Properties

(These points represent the center of the parcel, not the location of the structure)

Land Use

- Residential
 - High density residential
 - Med density residential
 - Low density residential
 - Rural estates, 5 acres or more
 - Res strip with max of 1/3 mix commercial
- Agriculture
 - Cropland/cropland pasture
 - Permanent pasture
 - Tree farm
 - Inactive agriculture

Forest

- Forest land
- Brush
- Industrial
 - Light industrial
- Extractive
 - Gravel, sand extraction
- Water and Wetlands
 - Natural water body
 - Artificial water body
 - Bogs, shrubs wetlands
 - Wooded wetlands
- Other
 - Public or institutional
 - Outdoor recreation
 - Shoreline development

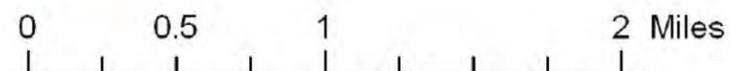
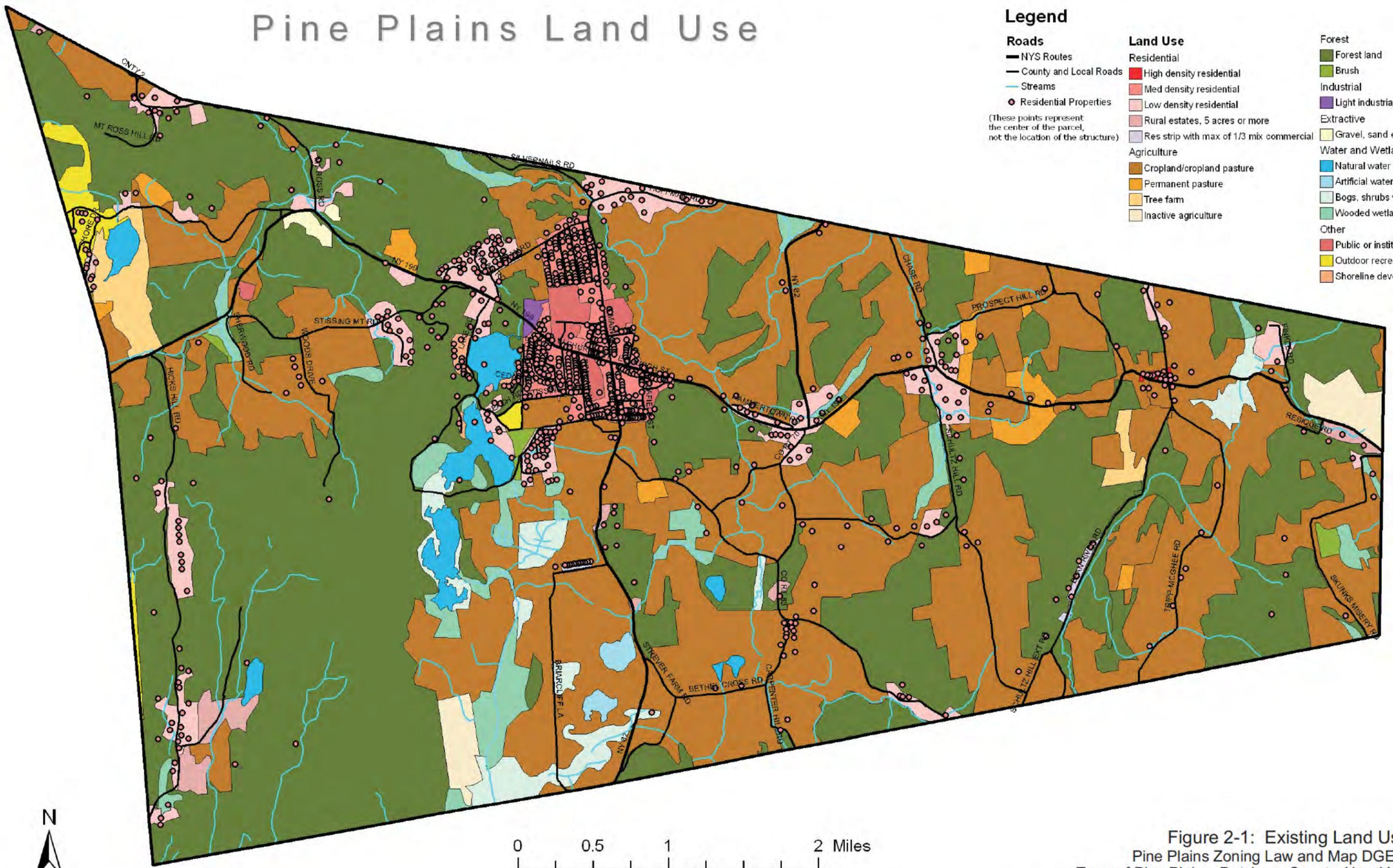


Figure 2-1: Existing Land Use
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates - Berne, NY
 Scale: As shown

Pine Plains Proposed Land Use Districts

Proposed Ag Open Space Overlay and Proposed Mining Overlay Districts

- | | |
|---|--|
| <ul style="list-style-type: none">  Town Boundary  Parcel Boundaries  Agriculture Open Space Overlay  Mining Overlay District - draft version 2 | <h3>Zoning Districts - draft version 7</h3> <ul style="list-style-type: none">  Hamlet - Business (H-Business)  Hamlet - Main Street (H-MS)  Hamlet - Center Residential (H-CR)  Hamlet - Residential (H-R)  Hamlet - Pulvers Corners (H-PC)  Hamlet - Bethel (H-B)  Rural - R  Wellhead Protection - WP |
|---|--|

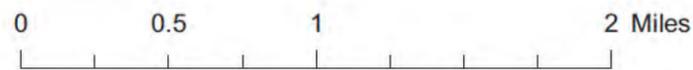
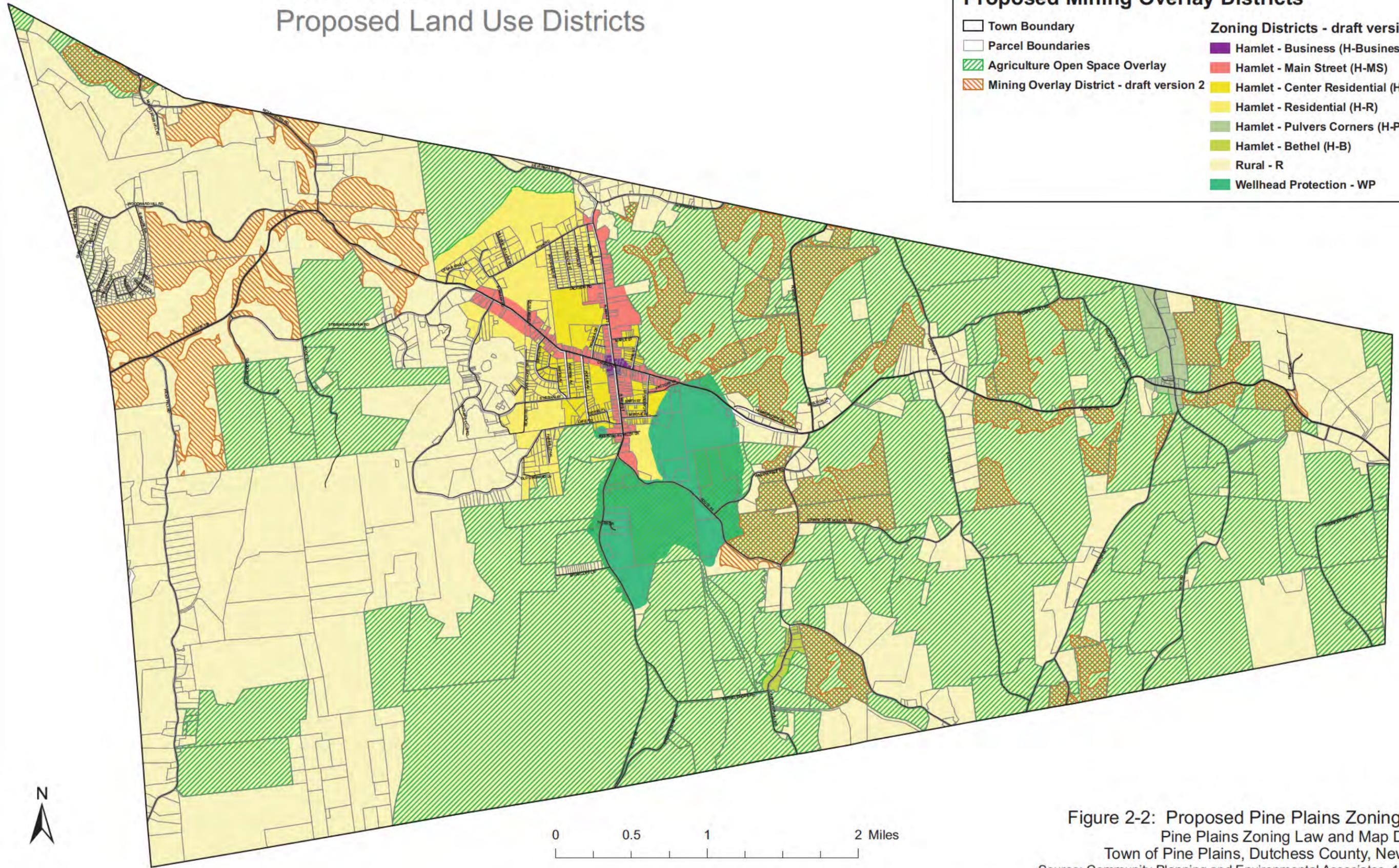


Figure 2-2: Proposed Pine Plains Zoning Map
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

3.0 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND MITIGATION

3.1 Geology, Topography and Soils

3.1.1 Existing Conditions

Geology

Bedrock

The pattern of bedrock types in Pine Plains is unique, due to the existence of an outcrop of Proterozoic gneiss (more than 1,100 million years old) and Poughquag quartzite found on Stissing Mountain (See Figure 3.1-1, Pine Plains Bedrock Geology). This bedrock is comprised of granite and other rocks which have been metamorphosed by heat, pressure, or chemically active solutions and that have been uplifted, forming mountains and hills that are extremely resistant to weathering. The Hudson Highlands are another example of this formation. Wells drilled into this kind of rock typically yield an average of 10 gallons per minute (gpm).

To the west and north of Stissing Mountain, the bedrock type is pelitic, or mostly shales and schists. These rocks have low porosity and low permeability, with an average well yield of 16 gpm of soft water.

Large expanses of limestone carbonate rocks, known as the Wappinger group, are found in the lowlands in the central and eastern parts of Pine Plains. This area is broken by narrow bands of pelitic rock in the Schultz Hill area and the highlands along the border with the Town of Northeast. The carbonate rocks include various types of limestone and dolostone. This rock is an excellent water source because it dissolves easily, and caverns and channels develop within it, holding large quantities of water. Wells in these areas typically yield an average of 22 gpm of hard water. Unfortunately, however, the potential for large caverns and cracks in carbonate rock means that water supplies contained within are extremely vulnerable to contamination. This is because there can be a direct connection between land use activities and ground water.

Surficial Deposits

Surficial deposits in Pine Plains are mostly unconsolidated materials deposited by glaciers and glacial melt waters (See Figure 3.1-2, Pine Plains Surficial Geology Map). This type covers most of the bedrock in the town as well as the county and fall into three categories, two of which are abundant in Pine Plains. Each has distinct features that affect land development.

- Lacustrine deposits consist of fine-particle silt and clay laid down by glacial lakes. These deposits have very low permeability and porosity, which makes them unsuitable sites for septic systems and poor sources of groundwater. However, there are no measurable deposits of lacustrine materials in Pine Plains.
- Till consists of a mixture of materials of a wide range of sizes ranging from microscopic silt to boulders, and therefore its permeability and porosity can vary widely. Most of the till deposits in Dutchess County have a high clay content which limits their usefulness as groundwater reservoirs and requires that septic systems be carefully designed and

separated. Reported yields from till wells range from 1 to 180 gpm with an average of 22 gpm.

- Sand and gravel consists of larger particles deposited in lowlands and river valleys. These deposits are the county's most productive groundwater sources, with reported yields of 2 to 1,400 gpm and an average of 136 gpm. These deposits are also important building and road construction materials.

Glacial till covers most of the western and eastern thirds of the town. These deposits tend to be thicker in the lowlands than in the highlands, where they are more vulnerable to erosion.

Sand and gravel deposits are found in the lowlands in the central part of town and elsewhere along stream valleys. Sand and gravel often yields enough water to support high development densities and industrial uses. However, sand and gravel layers are so porous that pollution from overcrowded septic systems, salt, waste disposal sites, chemical spills, or other sources spreads through them easily, making them highly vulnerable to contamination. This combination of productivity as water supply and susceptibility to contamination makes it doubly important that land uses above sand and gravel deposits be carefully managed.

Topography

Pine Plains has a wide range of elevations, varying from 390 feet at the lowest point of the Shekomeko Creek at the Columbia County border to 1,403 feet at the top of Stissing Mountain. The pattern of relief is directly related to the geology of the region, with a northeast-southwest orientation of hills and valleys.

The central part of Town lies in a valley that extends from the foot of Stissing Mountain to the beginning of the hills east of Route 82. The highest elevations other than Stissing Mountain are found in the eastern part of town, where several hills reach 1,250 feet.

Slope

In the Comprehensive Plan, steep slopes were characterized as areas with a 15 percent slope - this slope range covers one-third of Pine Plains. Steep slopes remain largely undeveloped because costs for erosion control, proper septic system installation, road construction, and provision of services increase as slope increases, and vacant developable land with slope ranges less than 15 percent are still abundant. Slopes between 15 and 25 percent are generally restricted to uses such as very low-density residential, limited recreation, conservation, pasture, and wildlife preserves in many locations. The costs of building on slopes greater than 25 percent are high and the potential for soil erosion is more significant.

Steep slopes are infrequently found in the lowlands but are common throughout the remainder of the town (See Figure 3.1-3, Pine Plains Steep Slope Map). In particular, steep slopes dominate Stissing Mountain and the lands to the north and west (the entire western third of the town). In the east, steep slopes are especially prevalent between Route 83, Schultz Hill Road, and Route 199 as well as just east of Tripp McGhee Road and up to the northeastern corner of the town.

Soils

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), publishes data on soils. Soil mapping units in the Town may be reviewed at the following website link: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. The following soil mapping units are prevalent in the Town.

Table 3.1-1 Town of Pine Plains - Soil Mapping Units					
Map Unit Symbol	Map Unit Name	Hydric Soils	Suitability for Septic Fields	Prime Farmland Soil	Soil of Statewide Importance
BeD	Bernardston silt loam, 15 to 25 percent slopes		S		
BeE	Bernardston silt loam, 25 to 45 percent slopes		S		
Ca	Canandaigua silt loam, neutral substratum	X	S		X
Cc	Carlisle muck	X	S		
CrE	Charlton-Chatfield complex, steep, rocky		S		
CtC	Chatfield-Hollis complex, rolling, very rocky		S		
CtD	Chatfield-Hollis complex, hilly, very rocky		S		
CuA	Copake gravelly silt loam, nearly level		S	X	X
CuB	Copake gravelly silt loam, undulating		S	X	X
CuC	Copake gravelly silt loam, rolling		S		X
CuD	Copake gravelly silt loam, hilly		S		
CwA	Copake channery silt loam, fan, 0 to 3 percent slopes		S	X	X
CwB	Copake channery silt loam, fan, 3 to 8 percent slopes		S	X	X
DuB	Dutchess silt loam, 3 to 8 percent slopes		M	X	X
DuC	Dutchess silt loam, 8 to 15 percent slopes		M		X
DuD	Dutchess silt loam, 15 to 25 percent slopes		S		
DwB	Dutchess-Cardigan complex, undulating, rocky		M,S		X
DwC	Dutchess-Cardigan complex, rolling, rocky		S		X
DwD	Dutchess-Cardigan complex, hilly, rocky		S		
FcB	Farmington-Galway complex, undulating, very rocky		S		
FcC	Farmington-Galway complex, undulating, very rocky		S		
FcD	Farmington-Galway complex, undulating, very rocky		S		
FeE	Farmington-Rock outcrop complex, steep		S		
Ff	Fluvaquents-Udifluvents complex, frequently flooded	X	S		
Fr	Fredon silt loam	X	S	X	X
GfB	Galway-Farmington complex, undulating, rocky		S		X
GfC	Galway-Farmington complex, rolling, rocky		S		X
GfD	Galway-Farmington complex, hilly		S		
GsA	Georgia silt loam, 0 to 3 percent slopes		S	X	X
GsB	Georgia silt loam, 3 to 8 percent slopes		S	X	X
GsC	Georgia silt loam, 8 to 15 percent slopes		S		X
Ha	Halsey mucky silt loam	X	S		X
HoC	Hollis-Chatfield-Rock outcrop complex, rolling		S		

Table 3.1-1 Town of Pine Plains - Soil Mapping Units					
Map Unit Symbol	Map Unit Name	Hydric Soils	Suitability for Septic Fields	Prime Farmland Soil	Soil of Statewide Importance
BeD	Bernardston silt loam, 15 to 25 percent slopes		S		
HoD	Hollis-Chatfield-Rock outcrop complex, hilly		S		
HoE	Hollis-Chatfield-Rock outcrop complex, steep		S		
HoF	Hollis-Chatfield-Rock outcrop complex, very steep		S		
HsA	Hoosic gravelly loam, nearly level		S		X
HsB	Hoosic gravelly loam, undulating		S		X
HsC	Hoosic gravelly loam, rolling		S		X
HsD	Hoosic gravelly loam, hilly		S		
HtB	Hoosic channery loam, fan, 3 to 8 percent slopes		S		X
HuA	Hoosic-Urban land complex, nearly level		S		
KrB	Knickerbocker fine sandy loam, undulating		S	X	X
Ln	Linlithgo silt loam		S	X	X
MnA	Massena silt loam, 0 to 3 percent slopes		S	X	X
MnB	Massena silt loam, 3 to 8 percent slopes		S	X	X
NwB	Nassau-Cardigan complex, undulating, very rocky		S		
NwC	Nassau-Cardigan complex, rolling, very rocky		S		
NwD	Nassau-Cardigan complex, hilly, very rocky		S		
NxE	Nassau-Rock outcrop complex, steep		S		
NxF	Nassau-Rock outcrop complex, very steep		S		
Pc	Palms muck	X	S		
Pg	Pawling silt loam		S	X	X
Ps	Pits, gravel		S		
Ra	Raynham silt loam	X	S	X	X
SkB	Stockbridge silt loam, 3 to 8 percent slopes		S	X	X
SkC	Stockbridge silt loam, 8 to 15 percent slopes		S		X
SkD	Stockbridge silt loam, 15 to 25 percent slopes		S		
SkE	Stockbridge silt loam, 25 to 45 percent slopes		S		
SmB	Stockbridge-Farmington complex, undulating, rocky		S		X
SmC	Stockbridge-Farmington complex, rolling, rocky		S		X
Su	Sun silt loam	X	S		X
Ud	Udorthents, smoothed		S		
W	Water		S		
We	Wappinger loam		S	X	X
Wy	Wayland silt loam	X	S		

Source: USDA NRSC, 2009.
M = Moderate; S = Severe

Soil Depth and Permeability

Permeability and depth to bedrock are two features of soils that directly influence their suitability for development, crops, and other land uses. Permeability rates are measures of the ease with which water flows downward through soil layers. Septic fields and other uses requiring good internal drainage may not function properly in soils with low permeability rates. This condition can make it necessary to place severe restrictions on development densities in areas without central water and sewer systems. Shallow soils also limit the

placement of septic systems, foundations and wells. Because they are often associated with steep slopes, shallow soils can be highly vulnerable to erosion and can transmit pollutants quickly.

The NRCS uses a standard permeability rate of 0.63 inches per hour in rating soils; a lower rate is considered a severe limitation on the ability of septic systems to function properly. Approximately 14% of Pine Plains is covered by soils with permeability rates below 0.63 inches per hour. These soils are scattered throughout the town but are more common in the eastern half.

Shallow soils (those with a depth to bedrock of three feet or less) cover about 45 percent of Pine Plains, generally in the upland areas. Soils are deeper and more permeable in the central lowland area and in valleys throughout the town, where deposits of sand and gravel have accumulated over long periods of time.

The adopted Comprehensive Plan includes an extensive discussion regarding the suitability of soils for septic systems in Pine Plains. As noted in the table above, most soils in Pine Plains impose severe limitations for use as septic absorption fields. Typical limitations include wet soils, slow percolation, rocky soils or steeply sloping soils. In April 2006, a Groundwater Resource Report was prepared by the Chazen Companies for the Dutchess County Water and Wastewater Authority which recommended aquifer recharge rates and sustainable septic system density. See:

<http://www.co.dutchess.ny.us/CountyGov/Departments/WaterandWaste/WRRatesDensityRe cs.pdf>.

The Town of Pine Plains is situated within two "regions" as described in that report: the northwest region, and the Wappinger Creek watershed region. Depending on soil type (A through D), the report recommended that the average dwelling unit density be limited to 1.4 to 6.2 acres in the northwest region, and 1.3 to 5.9 acres in the Wappinger Creek watershed region. The majority of soils in the Town are classified as A, B and C soils. For C soils, the report recommends that average parcel size range between 3.3 to 3.5 acres for septic systems.

Prime Farmland Soils and Soils of Statewide Importance

According to the USDA, prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, and few or no rocks. Its soils are permeable to water and air. Prime farmland is not excessively eroded or saturated with water for long periods of time, and it either does not flood frequently during the growing season or is protected from flooding. Soils of statewide importance are generally those that do not meet the criteria of prime farmland soils, yet these soils are nearly prime farmland and can economically produce high yield crops when treated and managed according to acceptable farming methods. Some may produce yields as high as prime farmland if conditions are favorable. In Pine Plains, these

soils cover approximately one-fifth of the town, mostly east of Stissing Mountain. Table 3.1-1 lists soils that are prime farmland or soils of statewide importance.

Hydric Soils

Hydric soils, indicative of wetland areas, are noted in Table 3.1-1. In performing wetland mapping, hydric soils are one indicator used to determine the extent of a wetland. Raynham and Fredon soils are both designated as hydric and prime farmland soils.

3.1.2 Potential Impacts

It is anticipated that site-specific development that is proposed in accordance with the draft Zoning Law and Map may result in impacts from clearing, grading and alteration of the landscape to accommodate buildings, uses and infrastructure. These types of impacts must be evaluated on a site-specific basis. However, the draft Zoning Law and Map include standards and regulations to reduce overall potential impacts associated with development. In addition, because the potential development buildout in the community has been reduced (see Section 2.0 of the DGEIS), it is anticipated that adoption of the Zoning Law and Map would result in an overall positive impact to soils, geology, and topography.

A number of measures and standards are incorporated into the draft Zoning Law to protect the Town's sensitive geology, topography and soils against the impacts associated with development. In determining areas to set aside as open space as part of a conservation subdivision, slopes of twenty-five percent (25%) or greater and ridge lines have been identified as primary conservation features not to be disturbed. In calculating the allowable residential density as part of any new residential site plan or subdivision application, lands constrained by slopes 25 percent and greater must be excluded from the calculation. Only 50 percent of lands with slopes between 15 and 25 percent are included in the calculation of density (see 100-16 of the draft Zoning Law).

The draft Zoning Law also requires that most major subdivisions be designed as conservation subdivisions. Conservation subdivisions require that a minimum of 50 percent of the gross area of a property be set aside as protected open space. The result is that development will be concentrated on the remainder of the property, thereby limiting overall development disturbances (see 100-31 of the draft Zoning Law).

Section 100-42 of the draft Zoning Law would result in the implementation of stormwater management and soil erosion control measures. This section introduces regulations intended, among other purposes, to address impacts associated with land development activities and associated increases in site impervious cover that can increase stormwater runoff rates and volumes in a manner that results in sediment transport and deposition. This section is intended to address impacts associated with clearing and grading during construction which may increase soil erosion and add to the loss of native vegetation necessary for terrestrial and aquatic habitat.

Landscaping standards are also proposed to address potential impacts associated with soil erosion by ensuring adequate ground cover is introduced to minimize impacts.

The AG-O overlay is intended to protect agricultural areas defined by the presence of prime farmland soils and soils of statewide importance. The purpose of the district is restrict

development from these areas, and situate development away from lands with soils that are conducive to agricultural operations.

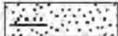
3.1.3 Mitigation Measures

Mitigation measures are not proposed.

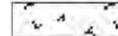
Pine Plains Bedrock Geology

Legend

Sedimentary

-  Cs-Stissing Formation
-  Ow-Copake Formation
-  Cg-Germantown Formation
-  Cw-Briarcliff Dolostone

Metamorphic

-  Cev-Everett Schist
-  Cpg-Poughquag Quartzite
-  bg-Biotite Granitic Gneiss
-  Owl-Walloomsac Formation

Other

-  OCs-Slivers/Exotic
-  h2o-Water

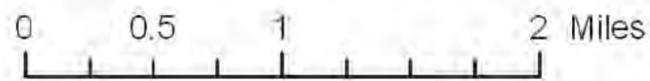
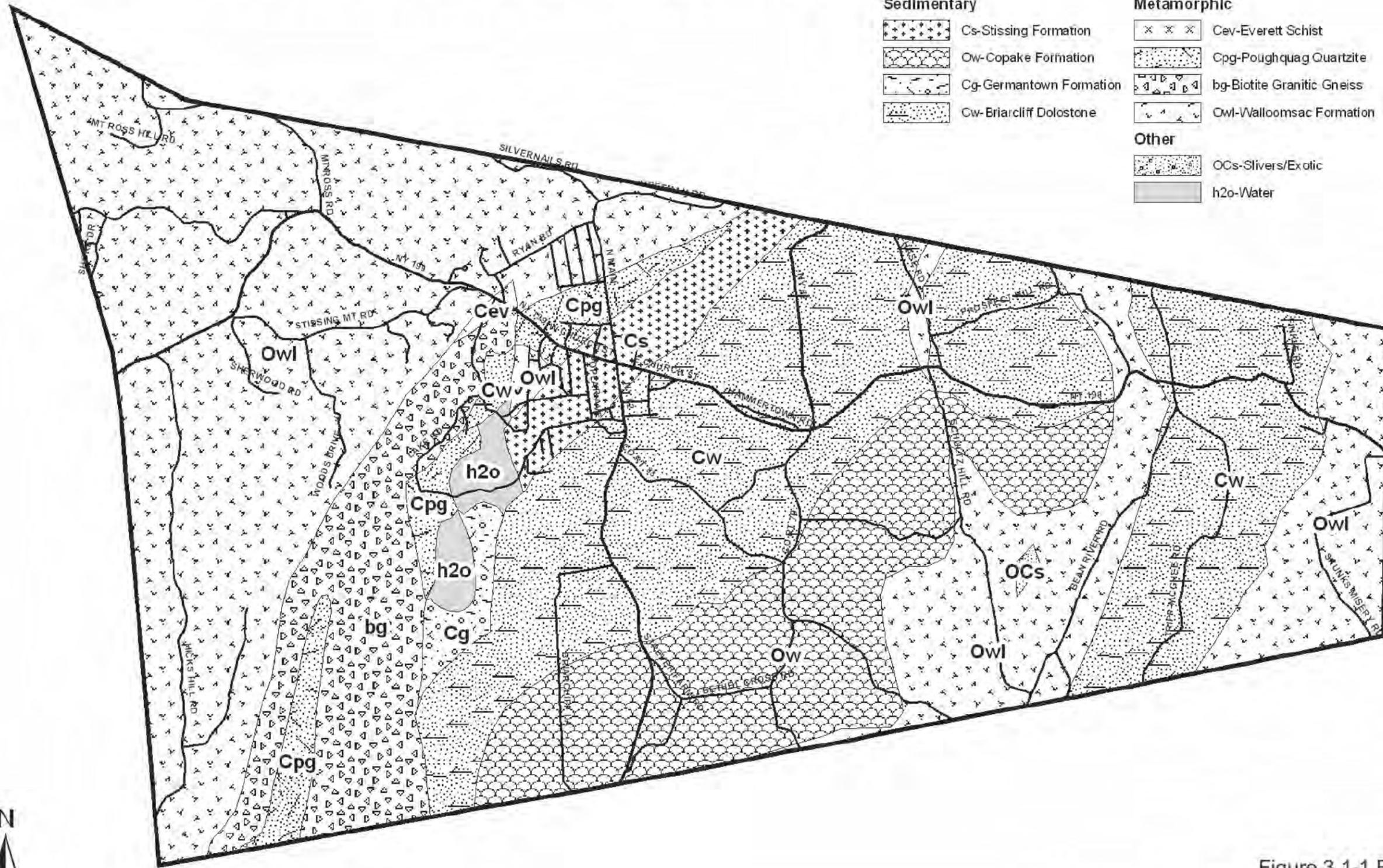
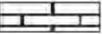
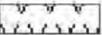


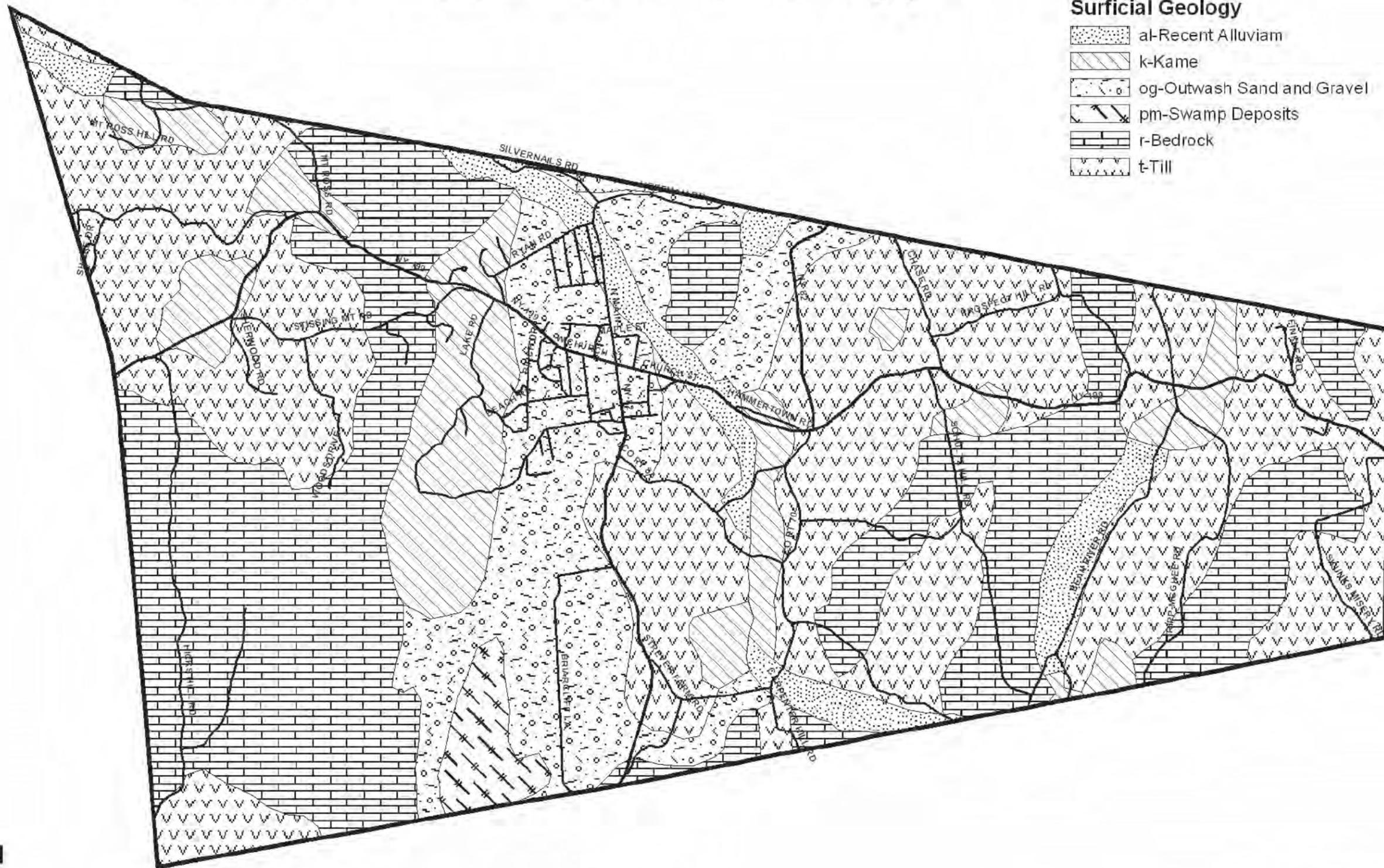
Figure 3.1-1 Bedrock Geology
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

Pine Plains Surficial Geology

Legend

Surficial Geology

-  al-Recent Alluvium
-  k-Kame
-  og-Outwash Sand and Gravel
-  pm-Swamp Deposits
-  r-Bedrock
-  t-Till



0 0.5 1 2 Miles

Figure 3.1-2 Surficial Geology
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

Pine Plains Steep Slopes

Legend

-  Water
 -  Streams
 -  Steep Slope (>15%)
- Roads**
-  NYS Routes
 -  County and Local Roads

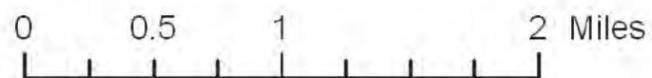
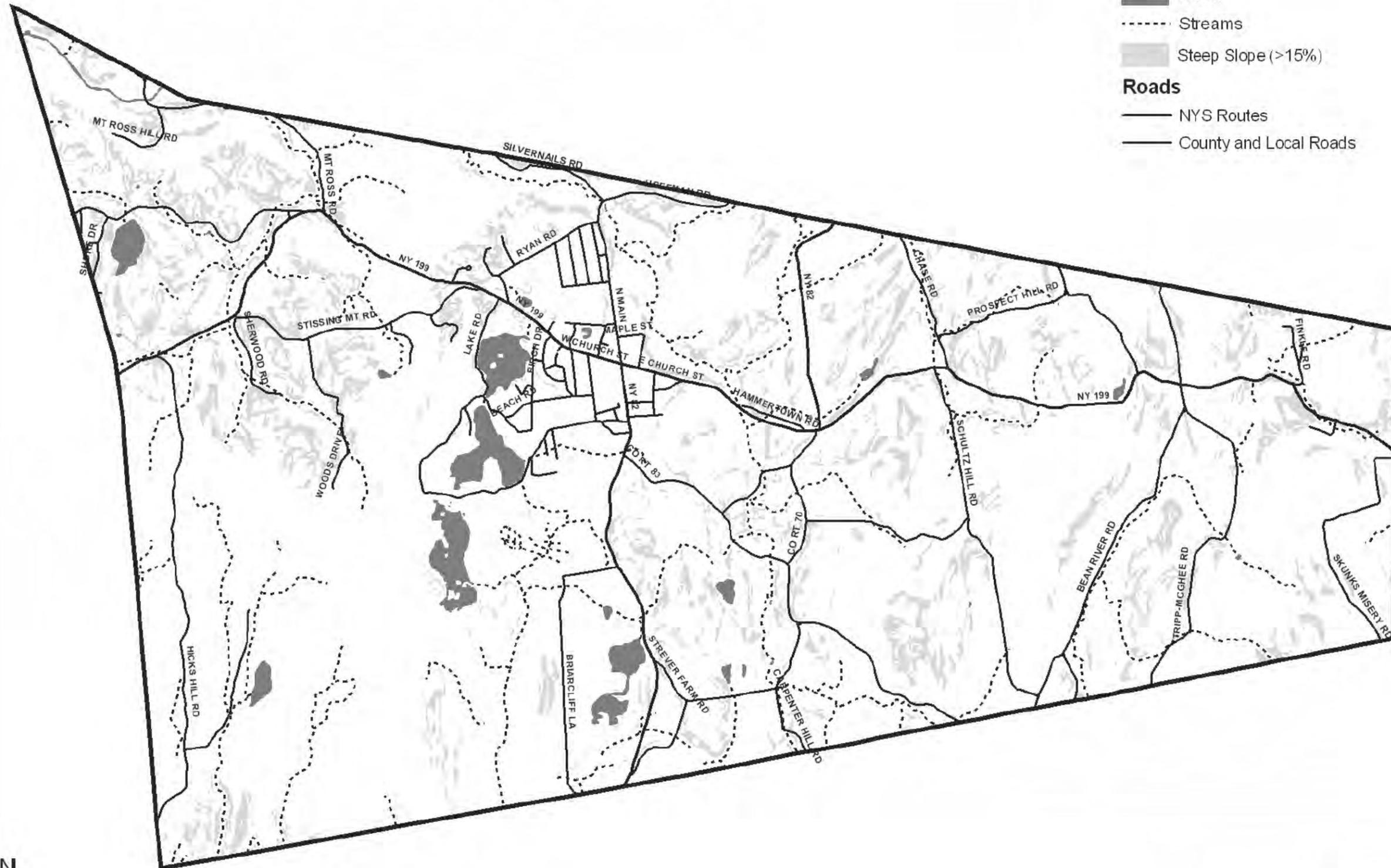


Figure 3.1-3 Steep Slopes
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

3.2 Water Resources

3.2.1 Existing Conditions

Groundwater

Aquifers

As described in the Comprehensive Plan, aquifers are natural groundwater reservoirs stored in surficial or bedrock deposits. Areas where sand and gravel overlay limestone are the most productive for water production, and are also the most vulnerable aquifers in the county. Such areas occur in the Pine Plains hamlet, south of the hamlet along the west side of Route 82, north of the center from North Main St. to Route 82 north, and small areas east of Pulvers Corners, south of Bethel and along Bean River. (See Figure 3.2-1, Pine Plains Aquifer Map).

Surface Waters

Surface waters are illustrated on the Pine Plains Water Features Map (see Figure 3.2-2). The largest stream in Pine Plains is the Roeliff Jansen Kill, which runs through a small portion of Town at Mount Ross. The Shekomeko Creek is the longest of the streams, originating in the towns of Stanford and Northeast - it flows north through and around Bethel, past Hammertown, through Patchins Mill, and into Columbia County.

Other waterbodies, including lakes, dominate the area of Pine Plains south and southwest of the hamlet. Twin Island Lake (62 acres), Stissing Lake (78 acres), and Thompson Pond (68 acres) are interconnected with each other and with other small ponds as well as a large network of wetlands. This complex serves vital functions as a storage area for floodwaters, a recharge area for a major aquifer, a wildlife habitat, and a recreation area (see also Section 3.3 of the DGEIS). Other surface waters in Pine Plains include Miller Pond (20 acres), Lake Carvel (a 40 acre man-made lake off of Woodward Hill Road), and numerous ponds scattered throughout Pine Plains.

Portions of three major drainage basins lie in the town of Pine Plains. Most of the western portion of town comprises the headwaters of the Wappinger Creek (See Figure 3.2-3, Pine Plains Watersheds Map). Twin Island Lake, Stissing Lake, Thompson Pond, and the lakes and streams east of Stissing Mountain are all part of this basin and drain south into the Town of Stanford. Most of the remainder of Pine Plains is part of the Roeliff Jansen Kill basin, which drains north into Columbia County. This includes Bean River, Shekomeko Creek, Punch Brook, Ham Brook, and all tributaries to these streams.

The drainage divide between these basins runs along hilltops east-west from Milan to the northern part of Stissing Mountain, north-south along the western side of the three lakes, and northwest-southeast from Ryan Road to Stanford, along the hills between Route 82 and Shekomeko Creek. East of Skunks Misery Road, a very small area drains eastward into the Ten Mile River basin.

Streams within Pine Plains provide a variety of benefits including: flood storage and retention, water supply, habitat for fish and wildlife, and recreation and open space. Streams and rivers also add aesthetic quality to a community and can thereby enhance property values.

The New York State Department of Environmental Conservation (NYSDEC) has classified streams in New York State according to their specified “best use”. This designation is based upon such factors as stream flow, water quality and bordering lands. Past, present and possible future uses of each lake, stream or pond, or portion thereof are also considered. The designation means that water quality standards must be protected in order to maintain the best use classification, so that surrounding land uses must be planned accordingly.

The NYSDEC stream classifications and best uses are shown below. Each class includes all uses for lower classes as well, so that a Class A stream is considered suitable for drinking, swimming and fishing. In addition, a designation of (t) following any letter indicates that the stream is suitable for trout habitat, while (ts) would indicate suitability for trout spawning.

<u>Class</u>	<u>Best Water Use</u>
AA and A	Drinking and All Other Uses
B	Swimming
C	Fish Propagation
D	Fishing

The NYSDEC Environmental Resource Mapper can be viewed to determine water quality classifications of streams in the Town of Pine Plains. The website link is <http://www.dec.ny.gov/imsmaps/ERM/viewer.htm>.

Most streams in Pine Plains have a classification of “C” or better. The Roeliff Jansen Kill has a designation of “C(ts)”. The stream flowing at the outflow of Lake Carvel has a designation of “C”. The main stem of the Ham Brook which drains into the Roeliff Jansen Kill is designated “C(ts)”. Tributaries to the stream are designated “C”. The streams feeding Thompson Pond and Stissing Pond are designated “C”. The stream that crosses Route 82 in the vicinity of Strever Farm Road is designated “C(t)”. The Shekomeko Creek and Bean River are designated “C(ts)”. Punch Brook in the northeast corner of the Town is also “C(ts)”. Most major streams in the Town are designated “C” or higher.

The most important element of stream protection is to preserve the natural character and vegetation of the stream, to decrease runoff velocities, reduce erosion, and protect water quality. Any activity that disturbs the bed or banks of a stream classified “C(t)” or better requires a permit from the NYSDEC. The NYSDEC generally regulates activities within 50 feet of the stream. NYSDEC does not regulate or protect streams that are designated “D”.

Floodplains

Floodplains are low-lying areas that are inundated in times of heavy rain or snowmelt. They act as shock absorbers in a drainage system by providing space for excess runoff. They can also serve as recharge areas for groundwater supplies.

The 100-year floodplain is that area that has a one percent chance of being completely inundated at any time, with an average occurrence of once every one hundred years. These areas have been mapped throughout Dutchess County as a part of the Flood Emergency Management Agency (FEMA) National Flood Insurance Program. A review of the FEMA maps show extensive flood prone areas in the lake and wetland complex southwest of the hamlet of Pine Plains. Other floodplains are located along the Shekomeko Creek from Willowvale Road to Columbia County and along the Jansen Kill. According to the

Comprehensive Plan, the flood prone areas in Pine Plains total 785 acres, or 4 percent of the town.

The National Flood Insurance Program allows property owners to purchase subsidized, federally backed flood insurance within communities that participate in the program. In return for this insurance protection, participating communities implement floodplain management procedures to reduce flood risks to new development. Through this mechanism, FEMA and participating communities are able to reduce future flood losses.

FEMA prepares a Flood Insurance Rate Map (FIRM) for each municipality, which illustrates the Special Flood Hazard Areas, i.e., areas subject to inundation by a flood having a one percent or greater probability of being equaled or exceeded during any given year. FEMA refers to this flood as the 100-year flood or base flood, and the area of inundation as the 100-year floodplain.

According to FEMA, floodplain management techniques should include regulation within the 100-year floodplain of all development, including commercial or residential buildings, roadways, infrastructure and excavation. Development in areas adjacent to floodplains should be designed to prevent any increase in stormwater discharge, and preserve existing drainage systems. Existing structures within the floodplain should be elevated, anchored, moved or otherwise flood-proofed.

FEMA maps may be viewed at FEMA's map service center website at:

<http://www.msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>

Wetlands

Wetlands play an important role in regulating and purifying groundwater supplies and surface waters. They slow floodwaters and often act as natural retention basins. Wetlands also provide valuable wildlife habitat and open space and combine with stream channels and ponds to form natural open space corridors in Pine Plains.

Freshwater wetlands occur where the water table is at or near the land surface for most of the year. Wetlands cover approximately 10 percent of Pine Plains. Under the New York State Freshwater Wetlands Act of 1975, the NYSDEC maps and regulates those wetlands covering at least 12.4 acres and smaller wetlands judged to be of unusual local importance. The law requires a permit for any nonagricultural activity that disturbs a wetland. The federal government, through the Clean Water Act and the U.S. Army Corps of Engineers (ACOE) regulates all other wetlands. The NYSDEC and the ACOE have a joint review program for those wetlands that are 12.4 acres and larger. Many activities that may impact smaller wetlands are covered under a General Permit by the ACOE.

State-regulated wetlands cover approximately 1,207 acres in Pine Plains (See Water Features Map). Another 326 acres contain smaller wetlands. The largest area of State-regulated wetlands is that associated with the headwaters of the Wappinger Creek, southwest of the hamlet. This complex is one of the most sensitive environmental areas in the town in terms of wildlife, water supply, recreation, and scenic value. It covers approximately 1,300 acres and stretches from the town border to the Pine Plains hamlet between Stissing Mountain and Route 82. Another large wetland area is found along Bean

River Road and Punch Brook to the north. Smaller wetlands are scattered throughout the town, often associated with streams or lakes.

NYSDEC Regulated Wetlands

The NYSDEC has identified 18 state-regulated wetlands in the Town - these are available for review at the NYSDEC Environmental Resource Mapper website. These wetlands are classified based on function and benefits to the environment. Wetland PP-8 is a Class I wetland. PP-8 is the complex that includes Thompson Pond and wetlands to the south along Wappinger Creek. This class is designated as providing the most critical of the State's wetland benefits, reduction of which is acceptable only in the most unusual circumstances. A permit application is required to alter any classified wetland and compensatory mitigation is often required for significant impact to wetlands. However, certain activities are specifically exempt from regulation and do not require a permit:

- Normal agricultural practices (except filling and clear cutting);
- Recreational activities;
- Routine maintenance of existing structures, existing lawns and similar facilities; and
- Selectively cutting trees and harvesting fuel wood.

Other activities are regulated; these are outlined in the Freshwater Wetlands Permit Regulations, 6 NYCRR Part 663.

The remaining regulated wetlands in the Town are Class II or Class III wetlands. Regulations for these classes are also found in Part 663.

Functions and benefits of freshwater wetlands include flood and stormwater control, groundwater discharge or recharge sites, erosion control, pollution treatment and nutrient cycling, fish and wildlife habitat and public enjoyment.

3.2.2 Potential Impacts

It is anticipated that site-specific development that is proposed in accordance with the draft Zoning Law and Map could potentially impact water resources and wetlands as a result of proposed clearing and grading activities and alterations to the landscape to accommodate buildings, uses and infrastructure. These impacts must be evaluated on a site-specific basis. However, adoption of the draft Zoning Law and Map is anticipated to result in an overall reduction in potential impacts that results from the decrease in development buildout described in Section 2.0 of this DGEIS.

The draft Zoning Law incorporates a specific purpose in Section 100-3 related to water resource and wetland protection:

*“D. To protect the Town’s sensitive environmental features, including but not limited to ridgelines and steeply sloping hillsides; **streams, wetlands, flood plains and other surface water features; groundwater resources;** and ecosystems, including protection of the Town’s biodiversity.”*

Section 100-16 of the draft Zoning Law also requires that areas constrained by the 100-year floodplain and wetlands be subtracted from a parcel’s gross area when determining the residential yield of a residential subdivision application or a residential site plan application. This is intended to limit the overall density of a development where wetlands and water resources to further protect these resources.

In designing conservation subdivisions, surface water resources, including but not limited to wetlands, watercourses, water bodies and the 100-year flood plain, are considered primary conservation features which are to be protected to the maximum extent within the protected open space associated with a conservation subdivision.

Sections 100-40 and 100-41 of the draft Zoning Law establish regulations to protect freshwater wetlands and local streams, respectively. Section 100-40 requires that a permit be issued from the NYSDEC or the ACOE before a building permit may be issued for any activity that would impact a freshwater wetland. This gives the Town the authority to enforce protection of freshwater wetlands as appropriate. Wetland boundaries must be shown on any site or subdivision plan.

Section 100-41 requires Planning Board approval of any activity requiring special use permit, site plan or subdivision approval, proposed within 100 feet of a stream or its banks. The Planning Board must ensure that activities are conducted in a manner that minimize potential environmental impacts to the stream. Where the applicant must obtain a stream disturbance or discharge permit from the NYSDEC, Planning Board approval is conditioned on the agency’s approval.

Approval of special use permits require that the Planning Board find that the special use is suitable to its site upon consideration of its scale and intensity in relation to environmentally sensitive features, including but not limited to wetlands and watercourses.

Lastly, the draft Zoning Law incorporates regulations that establish standards for stormwater management. The purpose of Section 100-42 is to establish minimum stormwater management practices to protect and safeguard the general health, safety, and welfare of the public residing within Pine Plains, to protect water quality, maintain habitat, and prevent stream bank and lake shore erosion. Section 100-42:

- requires land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP #0-08-001 or as amended or revised;
- minimizes increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;
- minimizes increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;

- minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- reduces stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

Based on the foregoing, it is anticipated that the draft Zoning Law and Map will not have a significant impact on the environment.

3.2.3 Mitigation Measures

No mitigation measures are proposed.

Pine Plains Aquifers

Legend

Roads

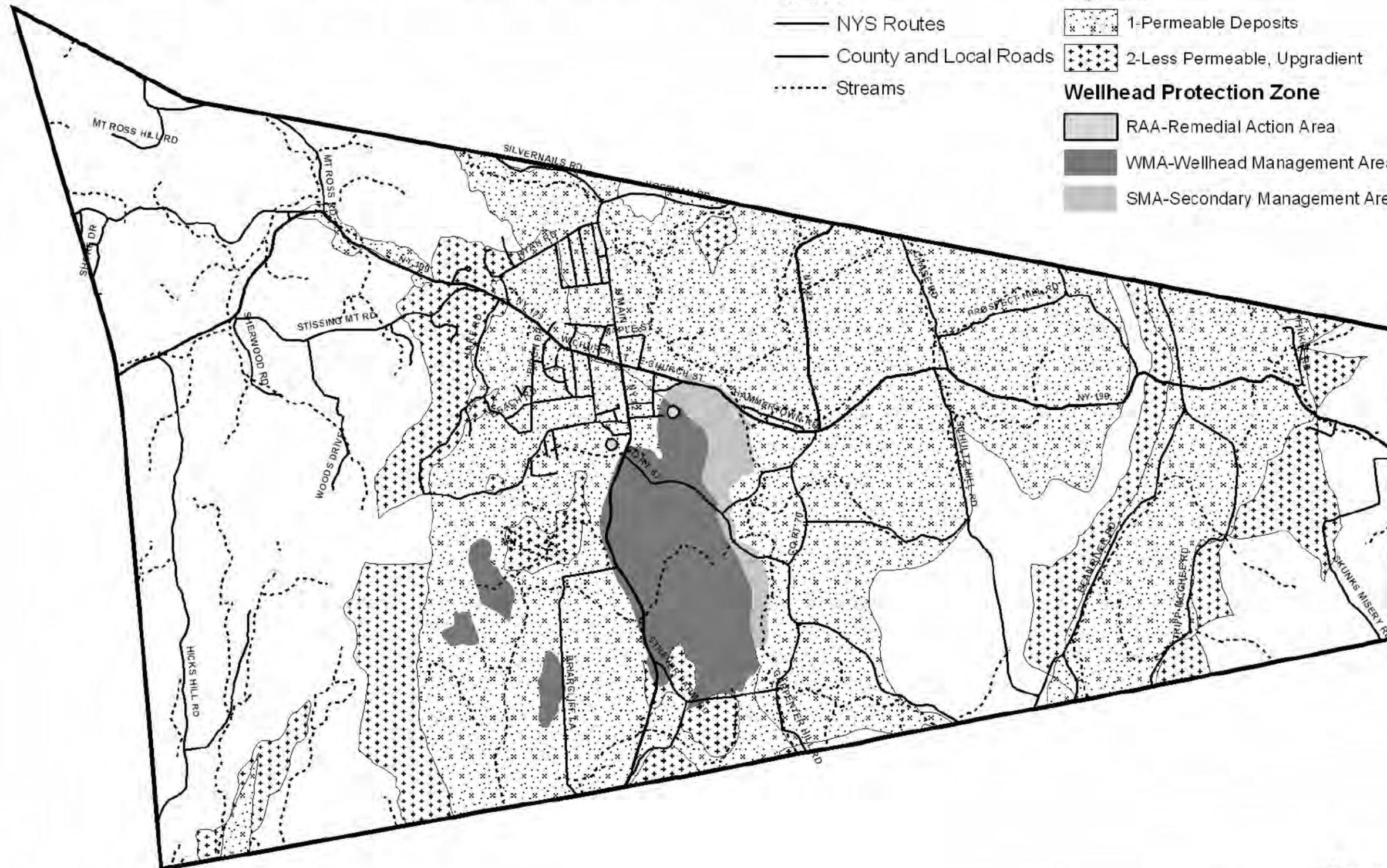
- NYS Routes
- County and Local Roads
- Streams

Aquifers

-  1-Permeable Deposits
-  2-Less Permeable, Upgradient

Wellhead Protection Zone

-  RAA-Remedial Action Area
-  WMA-Wellhead Management Area
-  SMA-Secondary Management Area



0 0.5 1 2 Miles

Figure 3.2-1: Aquifers
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

Pine Plains Water Features

Legend

Roads

-  NYS Routes
-  County and Local Roads
-  Water
-  NYS Wetland
-  Federal Wetland
-  Streams
-  100 Year Floodplain

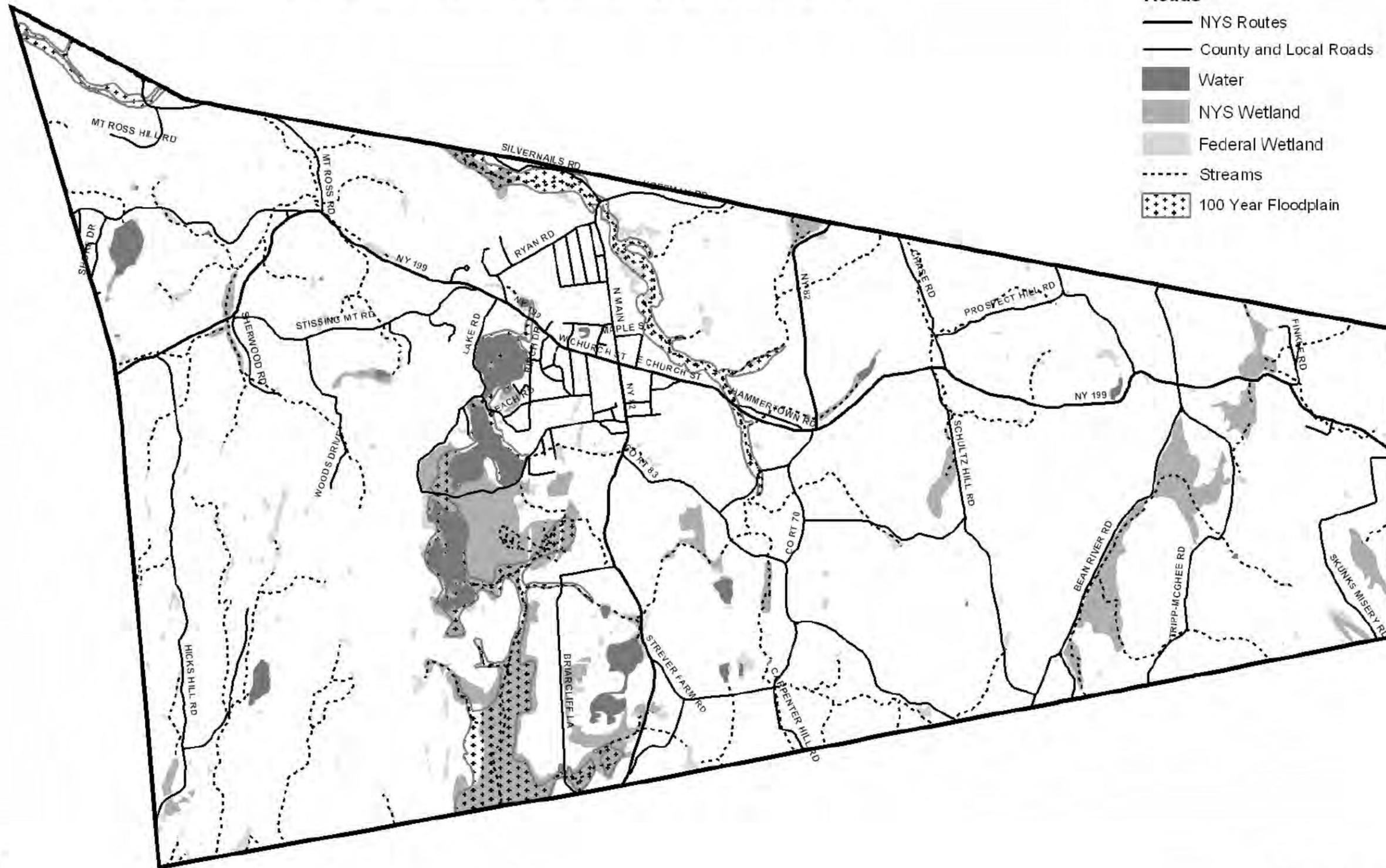


Figure 3.2-2: Water Features
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

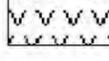
Pine Plains Watersheds

Legend

Roads

- NYS Routes
- County and Local Roads
- Water
- - - Streams

Watersheds

-  Roeliff-Jansen Kill
-  Tenmile River
-  Wappingers

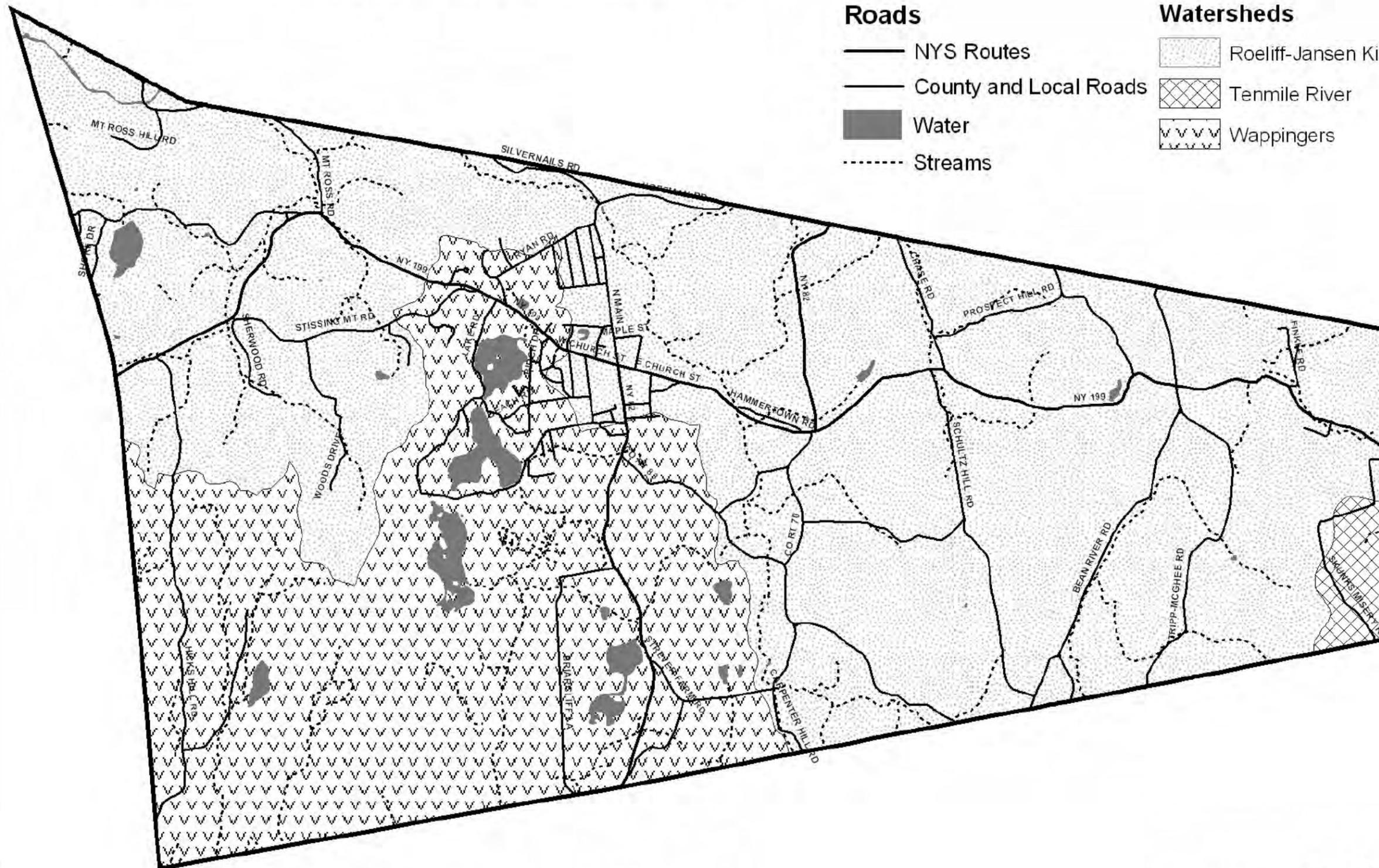


Figure 3.2-3: Watersheds
 Pine Plains Zoning Law and Map DGEIS
 Town of Pine Plains, Dutchess County, New York
 Source: Community Planning and Environmental Associates, 11/14/08
 Scale: As shown

3.3 Ecology

3.3.1 Existing Conditions

The Comprehensive Plan for Pine Plains included limited data regarding ecological habitats in the Town of Pine Plains. In the absence of any Townwide ecological survey, this section of the DEIS describes the Town's ecology based on publications, reports and studies prepared by various regional, state and county agencies. Data for the Town of Pine Plains are provided by source below.

The Town of Pine Plains Town Board commissioned Hudsonia Ltd, a non-profit environmental research organization, to prepare a habitat map and report for the Town of Pine Plains. The target date for completion of a draft report and mapping is early 2009 - the inventory has not yet been released to the public.

US Fish and Wildlife Service

The U.S. Fish and Wildlife Service's Southern New England - New York Bight Coastal Ecosystems Program published ***Significant Habitats and Habitat Complexes of the New York Bight Watershed in 1997***. The report describes significant habitats within the region, including Stissing Mountain and the Thompson Pond wetland complex. The following description is excerpted from that publication.

Stissing Mountain and Little Stissing Mountain comprise a 5-mile long, forested, "floating" block of Precambrian gneiss underlain by younger rock. The east side of Stissing and the southeast side of Little Stissing are very steep; slopes are somewhat less steep to the west and south. Elevations range from about 450 feet in the lowlands to 1,400 feet at the summit of Stissing. The low elevation areas are underlain by slate on the west of the mountain, and on the east side by carbonates. Much of the land east of the mountain is farmland, wetland, and lake, with localized outcrops of carbonate rock (dolostone and limestone). There are small areas of quartzite on Stissing Mountain near the southwest corner of Thompson Pond and on the southwest flank of the mountain at Cold Spring. The lowlands east of Stissing comprise an outwash plain drained by the upper end of Wappinger Creek.

The uplands of gneiss and quartzite (Stissing Mountain and Little Stissing Mountain) are forested with plant communities that are generally characteristic of the southern Taconic Mountains or the New York - New Jersey Highlands east of the Hudson River. Red and chestnut oak (*Quercus rubra* and *Q. prinus*) are abundant among a variety of other woody species. There is a great amount of exposed rock in ledges, slabs, and talus in some areas, notably on the eastern slopes of Stissing. This area has very extensive, relatively stabilized, gneiss talus that is thinly forested. Areas on and near the summit of Stissing have gentle topography, with numerous intermittent woodland pools and small swamps dominated by deciduous trees and shrubs. A small grass and shrub meadow is located on the north end of Stissing at an elevation of about 1,350 feet; this lies north of the fire tower. Extensive slab rock characterizes the quartzite areas. Thompson Pond, Stissing Lake, and Twin Island Lake are circumneutral bog lakes with peripheral floating mats dominated by cattail, and in some areas by alder (*Alnus* spp.) and peat moss (*Sphagnum* spp.). A small, floating, black spruce (*Picea mariana*) bog lies 1,200 feet east of the northern part of Thompson Pond. South of Thompson Pond, wetlands include a variety of hardwood swamps, cattail marshes, and other calcareous wetland types. Halcyon Lake (Buttermilk Pond) is a marl lake that was damaged by mining and is now largely dominated by the invasive common reed (*Phragmites australis*). The southwestern corner of the site is a complex of farms and former farms containing a

number of small to medium-size wetlands (wet meadows, intermittent woodland pools, limestone pools, shrub pools, and wooded swamps). This area is partly underlain by carbonate bedrock.

The Dutchess county wetland complex, of which the Thompson Pond wetland area is a part, support 36 species of special emphasis, including the following federally and state-listed species (designations have been updated to 2009).

Federal threatened

Bog turtle (*Clemmys muhlenbergii*)

State threatened

Blanding's turtle (*Emydoidea blandingii*)

State endangered

Golden eagle (*Aquila chrysaetos*)

Northern cricket frog (*Acris c. crepitans*)

State species of special concern

Blue-spotted salamander (*Ambystoma laterale*)

Spotted turtle (*Clemmys guttata*)

Wood turtle (*Clemmys insculpta*)

American bittern (*Botaurus lentiginosus*)

Red-shouldered hawk (*Buteo lineatus*)

State-listed rare plants

Bicknell's sedge (*Carex bicknellii*)

Bush's sedge (*Carex bushii*)

Weak stellate sedge (*Carex seorsa*)

Willdenow's sedge (*Carex willdenowii*)

Red-rooted flatsedge (*Cyperus erythrorhizos*)

Smartweed dodder (*Cuscuta polygonorum*)

Swamp agrimony (*Agrimonia parviflora*)

This complex of wetlands in Dutchess County is the only known location for Blanding's turtle in the New York Bight study area, and one of the few sites in the Northeast. There are about ten known, extant, local populations at these five sites, though the count of ten is somewhat arbitrary, depending on how the population boundaries are drawn. The known populations appear to be small, probably on the order of 8 to 50 adults each.

Blanding's turtles in Dutchess County are associated with several different bedrock formations, including carbonates, graywacke with shale, and slate. Nine of the ten sites are associated with Hoosic gravelly loam, an acidic, well-drained soil derived from glacial outwash. The principal wetlands (vernal pools) inhabited by the turtles have organic surface sediments, and often occur in glacial kettles. These pools, which occur in clusters at Blanding's turtle sites, vary in size from 0.7 to 17.8 acres. The pools tend to have a well-developed fringe of trees but little or no tree shade in the interior, and substantial cover by tall shrubs, most often buttonbush, low cover by graminoids, and a variety of living and dead plant material on the water surface. Pool water is deep in spring (1 to 4 feet) and may either be permanent or may dry up in summer or early fall. Inlet and outlet streams are absent or tiny, i.e., there is little through flow. The turtle's seasonal requirements (warmth in spring and cool refuges in summer) are satisfied by the vernal pools. In addition to vernal pools, Blanding's turtle sites have drought refuges, usually a spring-fed pond, lake, or wetland pool less than 3.3 feet deep and upland nesting areas on well-drained, sparsely

vegetated soil with good sun exposure. Overwintering evidently occurs in vernal pools or drought refuge ponds. Hatchling and juvenile habitats are essentially unknown. Blanding's turtles have been found not only in a variety of open ponds, but also in intermittent woodland pools (typical mole salamander breeding pools), acidic shrub bogs, cattail-dominated deep marsh, and flooded red maple swamp near shrubby pools. The nesting habitat may be as far as 3,281 feet or more from the vernal pools. Nesting occurs in habitats modified by human activities such as residential subdivisions, house yards and gardens, utility transmission rights-of-way, and other disturbed areas such as soil pockets on rock outcrops, in addition to natural habitats.

The Stissing Mountain site has forested, rocky uplands and talus and extensive calcareous wetlands and ponds/lakes with many habitats that are unusual or scarce in the region. The only documented consistent wintering by golden eagle in the New York Bight study area occurs on Stissing Mountain. Although golden eagles built nests here one year, there has been no documented breeding yet at this site. A small great blue heron (*Ardea herodias*) heronry has occurred at a swamp at the Stissing Mountain site. A good example of a calcareous cliff community, with an occurrence of Bush's sedge, is located at the Attlebury Marshes at the eastern edge of the Stissing site. Several other rare sedge species occur in the woods and openings on Little Stissing and Stissing Mountain, including hay sedge (*Carex argyrantha*), Rocky Mountain sedge, Bicknell's sedge, Bush's sedge, weak stellate sedge, and Willdenow's sedge. This is the only known extant occurrence of the Rocky Mountain sedge in the New York Bight study area. Many other regionally rare species are also present, including red-bellied snake (*Storeria occipitomaculata*), eastern ribbon snake (*Thamnophis s. sauritus*), and prairie sedge (*Carex prairea*). Thompson Pond contains one of the region's largest softstem bulrush-hardstem bulrush (*Scirpus tabernaemontani* and *S. acutus*) communities. The state-listed rare smartweed dodder occurs in the cattail marsh at Thompson Pond.

Development around Stissing Pond and Twin Island Lake is impinging on wetlands, through wetland fill and probable sewage inputs, and a large residential subdivision is proposed in the southwestern corner of the site. Clearing of trees around some of the wetlands and lakeshores may eventually cause deterioration of habitat for Blanding's turtle. Invasion by exotic species, especially purple loosestrife (*Lythrum salicaria*), is a problem in many Dutchess County wetlands.

The Study recommended that further study of the distribution, population status, habitat use, and movement patterns of the bog and Blanding's turtles, and other species, be conducted. Protection of wetlands and their buffer zones, as well as of the movement corridors and road crossings connecting wetlands, is a high priority. Predator guards should be placed over nests where appropriate. Posted speed limits and Wildlife Crossing or Turtle Crossing signs are needed locally. Development and agriculture around lakes needs be regulated to protect wetlands and water quality; this might be accomplished through some form of local cooperation rather than external regulation. Halcyon Lake should be studied for the potential to restore native plant communities, as marl lakes are extremely rare in the region. Trails on Stissing Mountain need maintenance to curb erosion. Impacts of hikers on the reproductive success of golden eagle on Stissing Mountain need to be investigated.

New York State Natural Heritage Program

In February and March 2008, inquiries were made to the New York State Natural Heritage Program requesting information on rare species and ecological communities that may be present within the Town of Pine Plains. To protect these sensitive species, the locations where they have been observed are not disclosed to the general public. In its response, the Heritage Program noted the following species may be present:

Birds

- Indiana bat (*Myotis sodalis*); state endangered, federal endangered
- Bog turtle (*Glyptemys muhlenbergii*); state endangered, federal threatened
- Golden eagle (*Aquila chrysaetos*); state endangered
- Great Blue Heron (*Ardea herodias*); state protected
- Bald Eagle (*Haliaeetus leucocephalus*); state threatened, federal threatened
- Pied-billed Grebe (*Podilymbus podiceps*); state threatened

Mammals

- New England Cottontail (*Sylvilagus transitionalis*); state species of special concern

Vascular plants

- Back's sedge (*Carex backii*); state threatened

Communities

- Deep emergent marsh - high ecological and conservation value
- Red cedar rocky summit - high ecological and conservation value
- Chestnut oak forest - high ecological and conservation value
- Appalachian oak-hickory forest - high ecological and conservation value
- Acidic talus slope woodland - high ecological and conservation value

New York State Breeding Bird Atlas

As described at the NYSDEC website, the Breeding Bird Atlas ("BBA") is a comprehensive, statewide survey designed to reveal the distribution of breeding birds in New York. Data presented are from surveys conducted from 2000-2005 which have resulted in the Atlas publication and associated database. The New York State Ornithological Association and the Department of Environmental Conservation sponsored the survey in cooperation with New York Cooperative Fish and Wildlife Research Unit at Cornell University, Cornell University Department of Natural Resources, and the Cornell Lab of Ornithology. Data from surveys are compiled geographically according to BBA Survey Blocks. The following survey blocks encompass portions of the Town of Pine Plains: 6065C, 6064A, 6064B, 6064C, 6064D, 6164A, 6164C. Table 3.3-1 lists the bird species found in the Town of Pine Plains.

Table 3.3-1 Breeding Bird Atlas Data for the Town of Pine Plains				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Pied-billed Grebe	<i>Podilymbus podiceps</i>	S2	7/15/2005	Threatened
Green Heron	<i>Butorides virescens</i>	NE	5/22/2002	Protected
Great Blue Heron	<i>Ardea herodias</i>	X1	7/14/2000	Protected
Turkey Vulture	<i>Cathartes aura</i>	X1	7/2/2003	Protected
Canada Goose	<i>Branta canadensis</i>	FL	5/17/2000	Game Species
Mute Swan	<i>Cygnus olor</i>	FL	5/17/2000	Protected
Wood Duck	<i>Aix sponsa</i>	FL	5/26/2004	Game Species
American Black Duck	<i>Anas rubripes</i>	X1	4/19/2003	Game Species
Mallard	<i>Anas platyrhynchos</i>	FL	6/19/2001	Game Species
Common Merganser	<i>Mergus merganser</i>	X1	7/13/2005	Game Species
Sharp-shinned Hawk	<i>Accipiter striatus</i>	X1	6//2004	Protected-Special Concern
Cooper's Hawk	<i>Accipiter cooperii</i>	NE	5/26/2004	Protected-Special Concern
Red-shouldered Hawk	<i>Buteo lineatus</i>	X1	6/18/2004	Protected-Special Concern
Broad-winged Hawk	<i>Buteo platypterus</i>	UN	6/7/2001	Protected
Red-tailed Hawk	<i>Buteo jamaicensis</i>	X1	6/19/2001	Protected
American Kestrel	<i>Falco sparverius</i>	X1	7/14/2000	Protected
Ring-necked Pheasant	<i>Phasianus colchicus</i>	X1	6/3/2001	Game Species
Ruffed Grouse	<i>Bonasa umbellus</i>	T2	6//2004	Game Species
Wild Turkey	<i>Meleagris gallopavo</i>	FL	8/16/2001	Game Species
Virginia Rail	<i>Rallus limicola</i>	FL	7//2003	Game Species
Sora	<i>Porzana carolina</i>	X1	7/15/2005	Game Species
Killdeer	<i>Charadrius vociferus</i>	X1	6/19/2001	Protected
American Woodcock	<i>Scolopax minor</i>	X1	6/30/2001	Game Species
Rock Pigeon	<i>Columba livia</i>	P2	5//2004	Unprotected
Mourning Dove	<i>Zenaida macroura</i>	FL	//2003	Protected
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	FY	8/3/2001	Protected
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	X1	//2004	Protected
Eastern Screech-Owl	<i>Megascops asio</i>	X1	7/21/2005	Protected
Great Horned Owl	<i>Bubo virginianus</i>	X1	7/19/2005	Protected
Barred Owl	<i>Strix varia</i>	S2	//2004	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	X1	6/16/2005	Protected
Chimney Swift	<i>Chaetura pelagica</i>	N2	5/27/2001	Protected
Belted Kingfisher	<i>Megaceryle alcyon</i>	S2	//2004	Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	P2	6//2004	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	P2	7/2/2003	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	FY	7/2/2003	Protected
Northern Flicker	<i>Colaptes auratus</i>	FL	8/3/2001	Protected
Pileated Woodpecker	<i>Dryocopus pileatus</i>	T2	//2004	Protected

Table 3.3-1 Breeding Bird Atlas Data for the Town of Pine Plains				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Eastern Wood-Pewee	<i>Contopus virens</i>	NE	7/2/2003	Protected
Acadian Flycatcher	<i>Empidonax virescens</i>	P2	7/1/2004	Protected
Willow Flycatcher	<i>Empidonax traillii</i>	X1	7/2/2003	Protected
Least Flycatcher	<i>Empidonax minimus</i>	S2	6/1/2004	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	S2	5/27/2001	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	S2	6/1/2004	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	T2	6/1/2004	Protected
White-eyed Vireo	<i>Vireo griseus</i>	FS	7/14/2001	Protected
Yellow-throated Vireo	<i>Vireo flavifrons</i>	FL	8/26/2004	Protected
Blue-headed Vireo	<i>Vireo solitarius</i>	X1	6/16/2005	Protected
Warbling Vireo	<i>Vireo gilvus</i>	X1	6/19/2001	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	NE	5/26/2004	Protected
Blue Jay	<i>Cyanocitta cristata</i>	T2	6/1/2004	Protected
American Crow	<i>Corvus brachyrhynchos</i>	FL	7/2/2003	Game Species
Common Raven	<i>Corvus corax</i>	NY	4/19/2003	Protected
Tree Swallow	<i>Tachycineta bicolor</i>	X1	6/19/2001	Protected
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	ON	6/1/2004	Protected
Bank Swallow	<i>Riparia riparia</i>	ON	6/1/2004	Protected
Barn Swallow	<i>Hirundo rustica</i>	P2	6/1/2004	Protected
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	X1	5/12/2001	Protected
Swamp Sparrow	<i>Melospiza georgiana</i>	D2	6/7/2001	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	B2	5/17/2000	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	FL	8/3/2001	Protected
Red-breasted Nuthatch	<i>Sitta canadensis</i>	X1	6/23/2005	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>	FL	7/2/2003	Protected
Brown Creeper	<i>Certhia americana</i>	NE	1/2004	Protected
Carolina Wren	<i>Thryothorus ludovicianus</i>	X1	7/14/2005	Protected
House Wren	<i>Troglodytes aedon</i>	S2	7/1/2004	Protected
Winter Wren	<i>Troglodytes troglodytes</i>	S2	7/1/2004	Protected
Marsh Wren	<i>Cistothorus palustris</i>	S2	6/1/2003	Protected
Blue-gray Gnatcatcher	<i>Poliptila caerulea</i>	FY	7/2/2003	Protected
Eastern Bluebird	<i>Sialia sialis</i>	X1	7/2/2003	Protected
Veery	<i>Catharus fuscescens</i>	FY	7/2/2003	Protected
Hermit Thrush	<i>Catharus guttatus</i>	FL	8/3/2001	Protected
Wood Thrush	<i>Hylocichla mustelina</i>	FY	8/3/2001	Protected

Table 3.3-1 Breeding Bird Atlas Data for the Town of Pine Plains				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
American Robin	<i>Turdus migratorius</i>	FL	6//2004	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	FL	7/2/2003	Protected
Northern Mockingbird	<i>Mimus polyglottos</i>	S2	6//2004	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	S2	6//2004	Protected
European Starling	<i>Sturnus vulgaris</i>	FL	//2003	Unprotected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	FY	8/3/2001	Protected
Blue-winged Warbler	<i>Vermivora pinus</i>	X1	6/16/2005	Protected
Yellow Warbler	<i>Dendroica petechia</i>	FY	7/2/2003	Protected
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	FL	8/3/2001	Protected
Black-throated Green Warbler	<i>Dendroica virens</i>	X1	6/9/2001	Protected
Yellow-rumped Warbler	<i>Dendroica coronata</i>	X1	6/23/2005	Protected
Blackburnian Warbler	<i>Dendroica fusca</i>	S2	//2004	Protected
Prairie Warbler	<i>Dendroica discolor</i>	T2	6/16/2005	Protected
Pine Warbler	<i>Dendroica pinus</i>	T2	7/17/2004	Protected
Black-and-white Warbler	<i>Mniotilta varia</i>	FY	7/2/2003	Protected
American Redstart	<i>Setophaga ruticilla</i>	FL	8/3/2001	Protected
Worm-eating Warbler	<i>Helmitheros vermivorum</i>	FL	7/2/2003	Protected
Ovenbird	<i>Seiurus aurocapilla</i>	FY	//2004	Protected
Louisiana Waterthrush	<i>Seiurus motacilla</i>	X1	6//2004	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	FY	7/2/2003	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	S2	//2004	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	X1	6/19/2001	Protected
Chipping Sparrow	<i>Spizella passerina</i>	FL	8/3/2001	Protected
Field Sparrow	<i>Spizella pusilla</i>	P2	6//2004	Protected
Savannah Sparrow	<i>Passerculus sandwichensis</i>	FL	8/3/2001	Protected
Song Sparrow	<i>Melospiza melodia</i>	FL	7/2/2003	Protected
Swamp Sparrow	<i>Melospiza georgiana</i>	S2	6//2004	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	FL	8/3/2001	Protected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	S2	6//2004	Protected
Indigo Bunting	<i>Passerina cyanea</i>	T2	7//2004	Protected
Bobolink	<i>Dolichonyx oryzivorus</i>	P2	6//2004	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	FY	7/2/2003	Protected
Eastern Meadowlark	<i>Sturnella magna</i>	S2	7/2/2001	Protected
Common Grackle	<i>Quiscalus quiscula</i>	FY	7/2/2003	Protected

Table 3.3-1 Breeding Bird Atlas Data for the Town of Pine Plains				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Brown-headed Cowbird	<i>Molothrus ater</i>	FL	7/2/2003	Protected
Orchard Oriole	<i>Icterus spurius</i>	X1	5/18/2002	Protected
Baltimore Oriole	<i>Icterus galbula</i>	FY	7/2/2003	Protected
Purple Finch	<i>Carpodacus purpureus</i>	D2	5/18/2002	Protected
House Finch	<i>Carpodacus mexicanus</i>	X1	7/2/2001	Protected
American Goldfinch	<i>Carduelis tristis</i>	P2	7/2/2003	Protected
House Sparrow	<i>Passer domesticus</i>	ON	7/2/2003	Unprotected
Codes: See Table 3.4-2.				
Source: NYSDEC, Breeding Bird Atlas, 2009.				

An explanation of the behavior code identified in Table 3.3-1 is presented in Table 3.3-2.

Table 3.3-2 Breeding Bird Atlas Behavior Code	
Possible Breeding (PO)	
X	Species observed in possible nesting habitat, but no other indication of breeding noted; singing male(s) present (or breeding calls heard) in breeding season.
Probable Breeding (PR)	
S	Singing male present (or breeding calls heard).
P	Pair observed in suitable habitat in breeding season.
T	Bird (or pair) apparently holding territory. In addition to territorial singing, chasing of other individuals of same species often marks a territory.
D	Courtship and display, agitated behavior or anxiety calls from adults suggesting probable presence nearby of a nest or young; well-developed brood-patch or cloacal protuberance on trapped adult. Includes copulation.
N	Visiting probable nest site. Nest building by wrens and woodpeckers. Wrens may build many nests. Woodpeckers, although they usually drill only one nest cavity, also drill holes just for roosting.
B	Nest building or excavation of a nest hole.
Confirmed Breeding (CO)	
DD	Distraction display or injury-feigning. Agitated behavior and/or anxiety calls are Probable-D.
UN	Used nest found. Caution: These must be carefully identified if they are to be counted as evidence. Some nests (e.g. Baltimore Oriole) are persistent and very characteristic. Most are difficult to identify correctly.
FE	Female with egg in the oviduct (by bird bander).

Table 3.3-2 Breeding Bird Atlas Behavior Code	
FL	Recently fledged young (including downy young of precocious species - waterfowl, shorebirds). This code should be used with caution for species such as blackbirds and swallows, which may move some distance soon after fledging. Recently fledged passerines are still dependent on their parents and are fed by them.
ON	Adult(s) entering or leaving nest site in circumstances indicating occupied nest. NOT generally used for open nesting birds. It should be used for hole nesters only when a bird enters a hole and remains inside, makes a change-over at a hole, or leaves a hole after having been inside for some time. If you simply see a bird fly into or out of a bush or tree, and do not find a nest, the correct code would be Probable-N.
FS	Adult carrying fecal sac.
FY	Adult(s) with food for young. Some birds (gulls, terns, and raptors) continue to feed their young long after they are fledged, and even after they have moved considerable distances. Also, some birds (e.g. terns) may carry food over long distances to their young in a neighboring block. Be especially careful on the edge of a block. Care should be taken to avoid confusion with courtship feeding (Probable-D).
NE	Identifiable nest and eggs, bird setting on nest or egg, identifiable eggshells found beneath nest, or identifiable dead nestling(s). If you find a cowbird egg in a nest, it is NE for Cowbird, and NE for the identified nest's owner.
NY	Nest with young. If you find a young cowbird with other young, it is NY for cowbird and NY for identified nest owner.
Source: NYSDEC Breeding Bird Atlas Program, 2009.	

Ralph T. Waterman Bird Club

The Ralph T. Waterman Bird club was founded in 1958 as a club and is a resource for 400 members, offering educational information and activities to beginner and expert birders. Five birding sites are located immediately adjacent to or in the Town of Pine Plains. According to the Club's website, species present at these five locations include:

- Lafayetteville MUA - Species observed include pheasants, grouse, owls, thrushes, wrens, warblers, sparrows, flycatchers, ducks;
- Stissing Mountain MUA - Species include warblers, vireos, nuthatches, kinglets, thrushes, flycatchers, hawks, owls, pheasant, Ruffed Grouse, Wild Turkey;
- Thompson Pond Preserve - 162 species of birds recorded, including warblers, ducks, Turkey Vulture, rails, Winter Wren, Swamp Sparrow, woodpeckers, Golden Eagle. Common Ravens nest on the slope visible from the Lake Road causeway;
- Wilcox Memorial Park - Species observed include hawks, owls, Woodcock, Common Snipe, warblers, kinglets, nuthatches, finches;
- Skunk's Misery Road (roadside birding) - Varied habitat including marsh, pond, farmland, and deciduous woodland. Species include common Moorhen, Great Blue Heron, Swamp Sparrow, Willow Flycatcher, American Kestrel, Indigo Bunting, grouse, warblers.

A DEIS has been prepared for the Carvel Development Project - development is proposed in the Towns of Pine Plains and Milan. Included in that document is Appendix 8.7 documenting bird club records for the Towns of Milan and Pine Plains:

(see http://www.carvelpropertydevelopment.com/pdf/Appendix%208.7_Jan-11-2008.pdf).

The following additional species are listed in the club's records that are not identified in the BBA Atlas:

- *Bald eagle, Stissing Mountain area*
- *Golden eagle*
- *Dark eyed junco*
- *Northern harrier*
- *Pine siskin*
- *Hermit thrush*
- *Black vulture*
- *Northern waterthrush*
- *Northern bobwhite*
- *Gold-crowned kinglet*
- *Merlin*
- *Osprey*
- *Horned lark*
- *Long-eared owl*
- *Northern saw-whet owl*
- *Canada warbler*
- *Cerulean warbler*
- *Golden-winged warbler*
- *Nashville warbler*
- *Magnolia warbler*
- *Tennessee warbler*
- *Great egret*
- *Cattle egret*
- *Common loon*
- *Alder flycatcher*
- *Common snipe*
- *Swainson's thrush*
- *Common nighthawk*
- *Common moorhen*
- *Northern goshawk*
- *Whip-poor-will*
- *Least bittern*
- *American bittern*
- *Grasshopper sparrow*

Dutchess County Environmental Management Council Resources

In 1985, the Dutchess County Environmental Management Council published a Natural Resource Inventory Data Book which includes narrative and maps of various environmental resources in the region. The document includes a general vegetation map - a review of the map indicates forest lands, brushland, agricultural and developed land, wooded wetlands

and marshes and bogs are present in Pine Plains. The report also identifies “significant areas” in Dutchess County. In Pine Plains, the Stissing Mountain, Thompson Pond, Stockbriar wetlands and Buttercup Preserve are identified as significant areas.

Eric Kiviat of Hudsonia compiled a list of species present in Dutchess County as an element of the EMC Data Book. However, the list is not specific to towns in the County. It is available for review at: <http://www.dutchessemc.org/BOOK/C8Wildlife.pdf>. The Dutchess County EMC is in the process of preparing a new Natural Resource Inventory for Dutchess County.

Hudsonia Ltd.

As mentioned previously, Hudsonia Ltd. is in the process of preparing a habitat inventory map and report for the Town of Pine Plains. It is expected the map will be released in early 2009. In review of various internet references, it is noted that the Hudsonia Ltd. reported that the southern red-backed vole (*Clethrionomys gapperi*) was found in the talus slopes of Stissing Mountain by Eric Kiviat in the 1970s.

Hudsonia has mapped and prepared reports of significant habitats in the adjoining towns of Northeast and Stanford. As these towns share borders with the Town of Pine Plains, the Hudsonia habitat maps for these two towns were reviewed to identify likely habitats present in the Town of Pine Plains. The reports and maps are available for review at the Hudsonia website at http://hudsonia.org/?page_id=43.

Based on a review of the adjoining community habitat maps, the following habitats are expected to be present in the Town of Pine Plains, in addition to those already identified in this DGEIS section:

<u>Upland Habitats</u>	<u>Wetland Habitats</u>
Upland hardwood forest	Hardwood shrub and swamp
Upland mixed forest	Marsh
Upland conifer forest	Wet meadow
Upland shrubland	Fen
Upland meadow	Open water
Crest, ledge and talus (overlay)	Constructed ponds
Calcareous crest, ledge and talus (overlay)	

For a description of flora and fauna associated with these habitat types, the reader is referred to the Hudsonia website and the Stanford and Northeast reports. It is anticipated that additional habitats will be noted in the Hudsonia report to be submitted to the Town of Pine Plains, given the unique habitats associated with Stissing Mountain and the Thompson Pond wetland complex.

Nature Conservancy

According to the Nature Conservancy website, Thompson Pond, which lies at the base of Stissing Mountain, is an ancient basin which formed nearly 15,000 years ago when a melting ice chunk created a depression, or kettle. Over time, the kettle divided into three interconnected water bodies, including Thompson Pond, which forms the headwaters of a major tributary to the Hudson River, Wappingers Creek.

The Nature Conservancy preserve is open for passive recreational and educational uses, such as cross-country skiing, hiking and bird study. There are several trails around the pond. A trail leads to a historic fire tower on the top of Stissing Mountain.

According to the website, more than 245 species of land plants and 142 wetland plant species have been identified at the preserve. Around the wetlands, you can find pipewort, round-leaved sundew, marsh St. Johnswort, a cattail community, and ferns and wildflowers that grow in calcareous and acidic soils. Woodlands feature oaks, sugar maples, ash, hemlock and hickory.

Birds, including ducks and warblers, migrate through the valley - water birds such as rails may be observed here. Red-tailed hawks nest in the area and golden eagles soar over open fields and near the peak of Stissing Mountain.

Thompson Pond was designated a National Natural Landmark by the U.S. Department of the Interior in 1973. It is considered an excellent example of a calcareous (or limy) wetland that abounds with a variety of wildlife.

Carvel Property Development

The Carvel property development DEIS includes data on flora and fauna observed on this project site. The reader is referred to http://www.carvelpropertydevelopment.com/draft_environmental.html for data related to ecology.

3.3.2 Potential Impacts

As mentioned in previous sections of the DGEIS, site-specific development that is proposed in accordance with the draft Zoning Law will result in disturbances and will impact ecological communities and associated flora and fauna. However, adoption of the draft Zoning Law and Map will result in a reduction in the potential development buildout of the Town.

As mentioned in the water resources section of the DGEIS (Section 3.2), the draft Zoning Law proposes enactment of regulations intended to protect freshwater wetlands and natural streams in the community. This will have the resulting effect of providing some protection to species associated with wetland communities.

A purpose of the draft Zoning Law is to protect the Town's ecosystems, including protection of the Town's biodiversity (see Section 100-3.D).

In formulating open space areas associated with conservation subdivisions, habitats identified by the NYSDEC Natural Heritage Program as critical habitat associated with any species identified on the New York State or Federal listings of rare, threatened, endangered or special concern species are designated primary conservation features (Section 100-31.J). These areas are prioritized for open space protection.

The overall pattern for land development in the Town of Pine Plains will be to concentrate development within the hamlet areas and limit development in the outlying low density rural areas. Sensitive ecological habitat, including Stissing Mountain and the Thompson Pond complex are located in the "R" District which represents the lowest density district in the Town. This lower density, coupled with the implementation of conservation design

subdivision requirements, will assist in protecting large contiguous areas of the Town as open space thereby also protecting sensitive ecological habitat.

At the time the draft Zoning Law and DGEIS were prepared, the Hudsonia ecological habitat map and report were not complete. Once this report is finalized, it can be used as a tool during the site plan and subdivision review process to identify potential sensitive species that may be present within a project's vicinity.

3.3.3 Mitigation Measures

Adoption of the draft Zoning Law and Map are not anticipated to have a significant adverse impact on the Town's ecology. No mitigation measures are proposed.

3.4 Transportation

3.4.1 Existing Conditions

Road and Highway Network

The primary mode of transportation in Pine Plains is the private vehicle. In 2000, approximately 85.2 percent of all persons employed in the labor force drove alone or carpooled by car, truck or van. This represents a decrease - in 1990, approximately 88 percent of the town's labor force drove to work alone or in a carpool. In 2000, 3.3 percent of all employees traveled by public transit. Approximately 6.5 percent of all employees walked to work. The mean travel time to work was 33.2 minutes.

Road Jurisdiction

Table 3.4-1 shows the number of miles in Pine Plains by each jurisdiction.

Table 3.4-1 Road Jurisdiction in Pine Plains		
<i>Jurisdiction</i>	<i>Miles</i>	<i>Percent of Total</i>
New York State	14.4	23%
Dutchess County	9.8	15.5%
Pine Plains	38.8	61.5%
Total	63.0	100.0%
Source: Town of Pine Plains Comprehensive Plan, 2004.		

The town is served by two state highways which operate as arterial roads. NYS Route 199 is an east-west road that connects the Town of Pine Plains and northern Dutchess County to the City of Kingston via the Rhinecliff Bridge. It terminates at Route 9W in the City of Kingston - from Kingston, travelers have access to the New York State Thruway. East of Pine Plains, NYS 199 connects to State Route 44/New York State Route 22 just southwest of Millerton. These routes provide access to western Connecticut.

Roads may be identified by their functional classifications. The functional classification of a road ranges from a local road that accesses a few small residential properties to a primary arterial which may travel the entire length of the nation. Roads provide an important function in the movement of persons and/or goods.

According to the New York State Department of Transportation, Route 199 is classified a minor arterial. This type of roadway provides more access to adjoining land uses, and has a higher frequency of access points and intersections with collectors and the local street system.

NYS Route 82 is an arterial that travels generally north-south through Dutchess County, starting in Fishkill, traveling through Pine Plains, and extending north into Columbia County and terminating at U.S. Route 9. It connects with numerous state routes that serve southern and eastern Dutchess County: Routes 44, 343, 55, 376, and 52.

NYS Routes 82 and 199 are used frequently to provide access to the Taconic State Parkway which travels south to U.S. Interstate 84 and the New York City metropolitan region and north to U.S. Interstate 90.

Five county roads traverse Pine Plains, comprising about 15.5 percent of total road miles in the Town. The County roads serve as collectors, linking smaller local town roads with the state highways. Three of the county roads, Routes 50 (Mt. Ross Road), 83A (North Main Street), and 59 (Bean River Road) connect NYS Route 199 with Columbia County. Routes 70 (Righters Corners Road), 83 (Amenia Road), and 59 lead south to the Town of Northeast. Pine Plains is not connected to Milan or Stanford via any County road. In general, access to Milan and Stanford is constrained by the natural barrier created by Stissing Mountain, the two state forests, and the county park. However, a limited number of town roads and the two state highways connect Pine Plains with these towns.

There are approximately 40 miles of town road in Pine Plains comprising approximately 61.5 percent of total road miles in the community. These are "local" roads although roads such as Stissing Mountain and Schultz Hill also serve to collect traffic from local roads to the state highways.

Traffic Volumes and Patterns

The New York State Department of Transportation collects and publishes traffic volume information for state highways (see Table 3.4-2). The counts shown are the 24-hour average daily traffic volumes for the given year.

According to the 2004 Comprehensive Plan, traffic patterns in 2000 resemble levels comparable to those identified in the 1986 Master Plan. The highest traffic volumes were along the segment of NYS Route 82 between its intersection with County Road 83 and the traffic light at Church Street. Between 1992 and 2000, traffic volume on this segment had the highest rate of increase of all roads in Pine Plains, almost 10 percent per year. The section east of the town center has higher traffic volumes, with a higher rate of increase per year than the western section.

Overall, Table 3.4-2 details the increases in traffic volumes on various road segments in the Town. The highest volume increases were on Route 82, between Myrtle Avenue and the intersection at Route 199 (9.9% increase). Two sections along Route 199 showed decreases in traffic volume between 1995 and 2000. This is somewhat misleading, however, in that the traffic volumes increased about 100% on Route 199 since the 1970's.

Table 3.4-2 Traffic Counts, State and County Roads, 1971 – 2000											
	Map Key	Count AADT						% Change Total %	Average Annual Change		
		1970s	1980s	1990s			2000		1970s-2000	1970s-1980s	1990-2000
NYS Rte 82	12			2189 (97)							
	1	1200	1350	1900	1650	2200	2000	67	2.5	1.4	0.6
	2	1400	2250	2650	3900	3950	4750	239	8.3	8.7	9.9
	3	1500	1800	2500	2550	2450	2500	67	2.5	2.2	0
	4	700	400	720	760	740	900	29	1.2	-5.4	3.6
	13			3944				NA*	NA	NA	NA
NYS Route 199											
	5	880	960	2200	1700	1700	1700	93	3.5	0.8	-4.5
	14			2977				NA	NA	NA	NA
	6	2050	1750	2450	3200	3000	3250	59	2.3	-1.6	3.6
	7	920	1500	2000	1800	1900	1900	107	3.9	5.7	-0.7

Source: NYS DOT, Pine Plains Comprehensive Plan, 2004.

For 2009, traffic data for state routes can be obtained from the NYSDOT website: www.nysdot.gov/tdv. The following represents the most recent one-way AADT data for NYS Routes 199 and 82, as well as several county road segments in the Town of Pine Plains:

Segment:	Year	One-Way AADT
NYS 199, from Taconic Pkwy to Mt Ross Road (CR50)	2005	1,121
NYS 199, from CR50 to Route 82 overlap*	2006	1,900
NYS 199, start of 82 overlap to end of 82 overlap	2005	715
NYS 199, end of 82 overlap to Winchell Mtn Rd (CR 60)	2005	1,245
NYS 82 - CR 83 to CR 65 Hunns Lake Rd	2006	1,411
NYS 82 - CR 83 to start of 199 overlap	2006	2,908
NYS 82 - end of 199 overlap to Columbia County Line	2006	475
CR83A - North Main St, between 199 and Jackson Rd	2005	900
CR70 - Johnny Cake Hollow Rd to Route 199	2005	138
Bean River Road (CR 59) - CR 83 and NYS199	2005	77

*The CR 82/199 overlap is the segment of road between the North Main Street/Church Street intersection and the Righters Corners Road/Route 82 intersection.

The following are two-way 2006 AADT data for NYS 199 and NYS 82:

<u>Segment:</u>	Two-Way AADT
NYS 199, from Taconic Pkwy to Mt Ross Road (CR50)	2,261
NYS 199, from CR50 to Route 82 Overlap	3,855
NYS 199, start of overlap to end of overlap	1,424
NYS 199, end of 82 overlap to Winchell Mtn Rd (CR 60)	2,323
NYS 82 - CR 83 to start of 199 Overlap	5,707
NYS 82 - CR 83 to CR 65 Hunns Lake Rd	2,803
NYS 82 - Route 199 Overlay to Columbia County Line	959

The highest traffic volumes in the Town continue to be experienced along NYS Route 82, between County Road 83 and the Church Street/Main Street intersection - AADT was 5,707 in 2006, compared to 4,750 in 2000.

Traffic Accidents

According to the 2004 Comprehensive Plan, the Dutchess County Traffic Safety Board compiles information concerning accidents. Accident data were examined for the period 1995 to 1999, during which there was an annual average of 45 accidents in Pine Plains. Almost 59 percent of the accidents involved only property damage, while 41 percent caused one or more injuries. There were two fatalities due to traffic accidents during the 5-year period. The previous Comprehensive Plan (1987) analyzed accident statistics between 1982 and 1984. Table 3.4-3 shows that the annual average number of accidents is somewhat higher in the more recent calculation (1995 to 1999). Compared to the earlier analysis, there has been almost no change in the percentage of accidents involving only property damage and those involving injury

Table 3.4-3 Accident Comparisons 1982-1984 and 1995-1999		
Annual Average Accidents	1982-1984	1995-1999
Annual average accidents	37	45.2
Percent of accidents involving injury	40%	41%
Percent of accidents involving property damage only	60%	59%
Source: Dutchess County Traffic Safety Board, 2000.		

Most accidents (approximately 58 percent) occurred on state roads, and were the result of animal encounters, slippery pavement or unsafe vehicle operating speeds. Several roads appear to experience a relatively high number of accidents. These include: Route 199 near Stissing Mountain Road, Bean River Road, Chase Road, Schultz Hill Road, and Finkle Road; Route 82 and Amenia Pine Plains Road, Strever Farm Road, and Briarcliff Lane; and Amenia Pine Plains Road.

The Dutchess County Traffic Safety Data Report (2008) is available for review at <http://www.co.dutchess.ny.us/CountyGov/Departments/TrafficSafety/TSdata2008.pdf>. The report indicates that 54 fatal and personal injury crashes occurred in Pine Plains between 2004 and 2006. In 2006, the crash rate per road mile in Pine Plains was 0.2 - along with Milan and Northeast, this represented the lowest crash rate for all towns in Dutchess County.

Road Conditions and Parking

State roads in the town are maintained by the New York State Department of Transportation.

According to the Dutchess County Department of Public Works (DPW), there are no major road update projects scheduled on county roads in the Town of Pine Plains.

The Pine Plains highway department maintains 62 percent of the roads in Pine Plains. According to the Comprehensive Plan, the maintenance program involves the sealing of every road at three to four year intervals. This program involves about 10 miles of road maintenance per year. New road construction adheres to the Town of Pine Plains Highway Specifications, last revised April 2005. The Highway Superintendent prioritizes major improvements with consideration given to traffic volumes, safety, and road surface and subsurface condition.

Public Downtown Parking

In April 2002, a comprehensive parking inventory was conducted in the Pine Plains hamlet downtown area. On-street parking is available along both sides of Church Street and Main Street. There are approximately 60-70 on-street spaces available within the downtown area. In addition, a municipal lot provides 57 marked parking spaces.

Public Transportation

Bus Transportation

At the time the Comprehensive Plan was written, Pine Plains was served by a county bus system providing transportation to and from the Pine Plains hamlet via Route 82. In 2009, bus transportation to the Town was suspended.

Railroad

Metro-North Commuter Railroad provides passenger service on two major rail lines connecting Grand Central Station in New York City and Dutchess County. The Harlem Valley line extends from New York City to Wassaic and the Hudson River Line serves Beacon, New Hamburg, and Poughkeepsie. In addition, Amtrak trains travel along the river, making stops at Poughkeepsie and Rhinecliff. Pine Plains residents can travel to the Wassaic station by means of NYS Routes 199 and 22, the Rhinecliff station by means of Routes NYS 199 and 308, and the Poughkeepsie station by means of Routes 82 and 44. These stations are 20 to 50 minutes from Pine Plains.

Airports

Dutchess County Airport in the Town of Wappinger provides general aviation and corporate flight service. Commuter routes were essentially eliminated with the expansion of service at Stewart International Airport. Other airports in the county include Stormville Airport in East Fishkill, Sky Acres Airport in Union Vale, Sky Park Airport and the Old Rhinebeck Aerodrome in Red Hook. Sky Park is the closest of these private airports, located off Route 199 about 20 minutes from Pine Plains. The closest major airports with commercial airline service are Albany, Stewart International, La Guardia and Hartford.

Pedestrian and Bikeway System

Sidewalks are provided on a limited number of streets within the hamlet of Pine Plains. Many of these sidewalks are in need of repair and replacement. There are no dedicated bicycle trails in the Town.

Scenic Roads and Locations

According to the Comprehensive Plan, there are no state or county designated scenic roads or byways in Pine Plains. A residential survey conducted during preparation of the comprehensive plan asked each person to identify scenic locations within town. A list of 61 locations was identified (See Map of Important Places). More than 10 respondents consistently identified nineteen locations as scenic. The roads identified as scenic include:

Winchell Mountain Road
Bethel Cross Road
Stissing Mountain Road
Schultz Hill Road – south of Johnny Cake Hollow
Johnny Cake Hollow Road
Stissing Lake Road
Route 83 south of Bethel
Silvernails/Hoffman Roads
Route 199 at Winchell Mountain Road
Route 82, south of intersection with Route 83.

3.4.2 Potential Impacts

Site-specific development that occurs within the Town consistent with the draft Zoning Law will result in increases in traffic. However, the overall level of traffic trips that would be generated at buildout is significantly less than what would result in accordance with the existing regulations.

As described in Section 2.0 of the DGEIS, the current regulations could result in a buildout ranging between 19,855 dwellings and 29,434 dwellings. During the peak AM weekday traffic hour period¹, when the most trips are generated by single family residential dwellings, the total trips that would be created by this level of development would be 14, 891 to 22,076 total trips. Adoption of the draft Zoning Law would result in a residential buildout that would generate 1,773 to 2,571 AM weekday peak hour trips. The order of magnitude of vehicular

¹ ITE Trip Generation Rate - 0.75 trips per single family dwelling in the AM peak hour.

trips that could be generated is significantly reduced, resulting in substantially less potential traffic impacts than under current regulations.

The draft Zoning Law concentrates development within the hamlet areas, to encourage and promote use of other modes of transportation, including walking and cycling. The hamlet areas are also potentially accessible to public transportation. In addition, the NND, which would allow the introduction of a new neighborhood adjacent to the Pine Plains hamlet, requires that opportunities be created to expand pedestrian access to the hamlet. The NND would also require its own internal pedestrian circulation system to encourage walkability within any new neighborhood. In addition, 50 percent of all dwelling units must be situated within a 1/2-mile radius to create a core residential area that can be served by sidewalks or trails.

Conservation subdivision design (see Section 100-31 of the draft Zoning Law) encourages creation of compact rural clusters, rural hamlets and traditional neighborhood hamlets which would introduce trails and sidewalks to new smaller neighborhoods. In addition, these compact neighborhoods should result in a reduction in street lengths, reducing the maintenance responsibilities of the Highway department.

In summary, adoption of the draft Zoning Law and Map would result in a reduction in the number of trips that would result from the current regulations, and encourages or requires incorporation of alternate forms of transportation into project design.

3.4.3 Mitigation Measures

Adoption of the proposed Zoning Law and Map is not anticipated to have a significant adverse impact on transportation facilities. No mitigation measures are proposed.

3.5 Community Services

3.5.1 Existing Conditions

Police Protection

According to the Comprehensive Plan, the Town of Pine Plains provides police protection in the form of a part time police force, with its office in the Town Hall. Six officers, including the Officer in Charge, have use of two patrol cars.

The Dutchess County Sheriff's Office keeps one patrol car at the Town Highway Garage, and provides two patrol shifts of coverage per day from this location. Coverage includes but is not limited to the Town of Pine Plains.

The New York State Police operate a small satellite office in the Town Hall, and provide two patrol shifts per day. As with the Sheriff's Deputies, coverage includes but is not limited to the Town of Pine Plains.

Fire and Rescue Operations

The Pine Plains Fire District is served by a fire station located at the intersection of Route 82 and Lake Road. The fire district is a member of the Dutchess County Mutual Aid Program whereby the towns of Pine Plains and Northeast and the Village of Millerton assist one another. The district also cooperates with fire companies in the towns of Ancram and Gallatin in Columbia County.

The station houses three fire engines, one tanker, a brush truck, and two ambulances. A rescue truck is also housed which is equipped with jaws-of-life, compressor, generator, air masks and quartz lights. The oldest vehicle is the brush truck. There are forty active fire fighters and rescue members in the district and many more official volunteers.

Town Hall and Offices

The Town operates out of the former Farm Credit branch office and its five acres of land on Route 199 east of the hamlet of Pine Plains. This is the first Town-owned office building. It houses offices of the Supervisor, Town Clerk, Planning Board, Building Inspector, Tax Collector and Assessors, as well as a meeting room on the main floor. The Justice Court, State Police, and Town Police are located in the basement.

Highway Department

The Town owns 5 acres of land at the west end of the Pine Plains hamlet on Route 199 and it is used by the Highway Department. An 80' x 112' fully enclosed and heated building provides office space, a repair facility and machine storage. It also houses the Town's police cars while no duty shift is running. A 60' x 80' building specifically designed and constructed for sand and salt storage provides environmentally sound storage for road treatments. Sufficient area is owned at this site to provide ample storage for all materials and supplies the department requires. The department's rolling stock includes three six-wheel dump trucks with combination dump bodies and plows, one six-wheel truck plow, dump body and slide in sander, one three-quarter ton pickup with plow, a compact pickup, wheel loader, two

farm-type tractors, one with boom mower, a water truck, roller, chipper and other miscellaneous equipment.

Post Office

The Town's post office is located on South Main Street. The new structure is more appropriate for mail operations than the previous location due to its ample off-street parking, handicap access, and loading platforms and the site is easily accessible by foot or auto. Some of the major changes and issues related to the post office include increases in mail and parcel volume, new security measures, rate changes and customer confusion regarding 911 addresses.

Library

The Pine Plains Free Library is conveniently located on South Main Street. The library is a member of the Mid-Hudson Library System, which provides for inter-library loans as well as other services. An expanded new library is currently under construction.

Schools

The Pine Plains School District encompasses 140 square miles of Dutchess and Columbia Counties and serves students from the Towns of Pine Plains, most of Stanford, and parts of Northeast, Clinton, Milan, Clermont, Ancram, and Gallatin. Four schools – two elementary, one middle, and one high school - served approximately 1,200 students in 2008 (Source: Feasibility Study: Closing an Elementary School, Pine Plains Central School District, December 2008). According to discussions with the District Superintendent in preparing the Town's Comprehensive Plan, additions had been completed that expanded classroom, cafeteria, and gymnasium space in the secondary school. The new space should allow for continued small class sizes and a low student to teacher ratio.

A historic school, the Attlebury Old Schoolhouse is located in the Town of Stanford south of Pine Plains. It is a one-room schoolhouse and is maintained for historical purposes. The school district's bus garage, located behind the Seymour Smith Elementary School in town, maintains a fleet of 17 twenty-passenger buses and 20 seventy-passenger buses.

Table 3.5-1 School Enrollment Figures				
	1998-1999	1999-2000	2000-2001	2006-2007
Cold Spring Elementary (grades K-5)				
Total Enrollment	287	265	262	183
Average Class Size	21	21	21	18
Annual Attendance Rate	95.5%	96.0%	93.9%	94%
Teachers	np	+ 6.0%	21	15
Other Professional Staff	np	np	3	1

Table 3.5-1 School Enrollment Figures				
	1998-1999	1999-2000	2000-2001	2006-2007
Seymour Smith Elementary (grades K-5)				
Total Enrollment	550	542	513	334
Average Class Size	21	19	21	18
Annual Attendance Rate	95.5%	96.0%	95.0%	95%
Teachers	np	np	36	27
Other Professional Staff	np	np	3	1
Stissing Mountain Middle School (grades 6-8)				
Total Enrollment	np	np	np	314
Average Class Size	np	np	np	19
Annual Attendance Rate	np	np	np	94%
Teachers	np	np	np	18
Other Professional Staff	np	np	np	1
Stissing Mountain Senior High (grades 9-12)				
Total Enrollment	676	702	716	449
Average Class Size	19	19	20	12-23
Annual Attendance Rate	93.6%	96.0%	96.0%	92%
Teachers	np	np	54	24
Other Professional Staff	np	np	5	0
Graduates Earning Regents Diplomas	49%	47%	57%	86%
Source: Pine Plains Comprehensive Plan, 2004. Data on Stissing Mountain Middle School not provided in Comprehensive Plan - data for both schools presented under Stissing Mountain Senior High data. Source for 2007 Data: NYS Report Card, 2006-2007, NYS Education Department. np = not provided.				

Enrollment in the two elementary schools is declining. The school district recently prepared a feasibility study assessing the implications of closing one of the two elementary schools as a result of declining enrollment which is projected to continue through the 2015 school year.

Parks and Recreation

Parks, open space, and recreation facilities are abundant in Pine Plains as shown in Table 3.6-2. A total of 1,023.8 acres is available for outdoor recreational use. This includes 360 acres of state-owned property in the western part of town, 43.3 acres owned by Friends of Stissing Landmarks (FOSL) and 507 acres owned by the Nature Conservancy property at the Thompson Pond Nature Preserve. Thompson Pond is the headwaters of the Wappinger Creek, includes much of Stissing Mountain, and has been designated as a National Natural

Landmark. Preserve lands consist of forest, abandoned fields, and wetlands and are available for hiking, cross-country skiing, and birding.

Recreational facilities are available at Stissing Lake, on school grounds, and on the property of St. Anthony's Church. The Town of Pine Plains owns approximately 28 acres at Stissing Lake (donated by the Lion's Club), with swimming, boating, picnicking facilities, and several baseball diamonds. Basketball courts were recently added, constructed by volunteer labor and materials. The high school and elementary school also provide recreation facilities; together they offer a playground, playing fields, lighted football field and track, and tennis and basketball courts. Twenty acres of open space owned by St. Anthony's Church is located in the center of town and is used for church functions, snowmobiling, dirt biking, dog shows, and visiting circuses.

Town residents presently enjoy informal access to Stissing Mountain and the fire tower on the mountain. The tower allows hikers to take in a spectacular views of the Hudson Valley. Lands in five states are visible from the tower. The tower and 43.3 acres of land adjacent to the Nature Conservancy was recently acquired by FOSL (Friends of Stissing Landmarks), a not-for-profit corporation that also maintains three hiking trails leading up the mountain. In addition to the recreation facilities within the town, the 600-acre Wilcox Park in Milan is available for use to Pine Plains residents.

Table 3.5-2 Recreation Facilities and Open Space			
Facility	Acreeage	Ownership	Description
Stissing Mountain State Multi-Use Area	260	Public	Open space - conservation/recreation
State Forest	100	Public	Open space
Town Beach	28	Public	Swimming, boating facilities, play fields
Stissing Mountain High School	52	Public	Playing fields an courts, open space
Seymour Smith Elementary School	13.5	Public	Playground, playing fields and courts
St. Anthony's Church Property	20	Semi-Public	Open space
Thompson Pond Preserve	507	Semi-Public	Conservation, open space
Friends of Stissing Landmarks (FOSL)	43.3	Semi-public	Open space
Stissing Mountain State Multi-Use Area	260	Public	Open space - conservation/recreation

Source: 2004 Pine Plains Comprehensive Plan.

Pine Plains presently has sufficient open space for outdoor recreational activities such as hiking, cross-country skiing, fishing, birding, and camping and sufficient facilities for organized outdoor sports. The town also has the benefit of a beach and boat launches. However, little is available in the way of bike paths and walking trails. There are also no

playground facilities for very young children. The St. Anthony's Church property in the center of town appears to have potential for such types of recreation, with its primary advantage being its location. The town beach and adjoining property also provide an opportunity to develop other recreational facilities to serve a broad range of age groups and uses.

3.5.2 Potential Impacts

Development that occurs in accordance with the draft Zoning Law will place demand on community services and facilities. As per Section 2.0 of the DGEIS, the Town of Pine Plains population would have a potential population ranging between 51,623 and 76,528 persons under the current land use regulations. If the draft Zoning Law is adopted, the population would range between 6,146 and 8,913 persons. Using the higher population number for both buildout scenarios, Table 3.5-3 provides a demand assessment for community services.

Table 3.5-3 Community Service Demand			
Service Provider	Standard	Current Regulations	Draft Zoning Law
Population (persons)		76,528	8,913
Recreation	Mini-Park: 0.5 acres per 1,000 population	38 ac	4.5 ac
	Neighborhood Park: 2 acres per 1,000 population	153 ac	17.8 ac
	Town Park: 8 per 1,000 population	612 ac	71.3
Emergency Medical Service	1 Vehicle per 30,000 population	3 vehicles	1 vehicle
	4.1 full time personnel per 30,000 population	10 personnel	4 personnel
Police	2 personnel per 1,000 population	153 personnel	18 personnel
	0.6 vehicles per 1,000 population	46 vehicles	5 vehicles
Fire	200 square feet facility space per 1,000 population	15,305 sf	1,782 sf
	1.65 personnel per 1,000 population	126 personnel	15 personnel
	0.2 vehicles per 1,000 population	15 vehicles	2 vehicles
	250 square feet facility space per 1,000 population	19,132 sf	2,228 sf
General Government	10.9 per 10,000 population less than 50,000; 10.3 for 50-99,999 population	10 personnel	11 personnel
Library Space	0.8 square feet per person for less than 10,000; 0.6 sf per person for population 35-100,000	45,917 sf	7,130 sf

Source: Development Impact Assessment Handbook, Urban Land Institute, 1994.

As is evident, the community service demands that would be placed on the community from a larger population would be greater. These standards are intended to provide an order of magnitude analysis of the potential demand that the representative population would create - site-specific analyses must be conducted for individual applications.

Section 100-18 of the draft Zoning Law addresses emergency access and requires that every building be provided access to a public road, or access to an approved private road, and all structures must be located on lots as to provide safe and convenient access for emergency vehicles.

The site plan regulations allow the Planning Board to obtain comments from outside agencies to determine potential impacts to same. Specifically, the law states that the "Planning Board may require additional copies of the site plan application to forward to the Conservation Advisory Council, the Town Highway Superintendent, Town Engineer or other department, official or agency of the Town or by outside experts, emergency and community service providers, the County Highway Department, the New York State Department of Transportation, the New York Department of Environmental Conservation, the U.S. Army Corps of Engineers and/or any other agency prior to determining that the application is complete". This allows community service provider input during review of applications.

Section 100-23, Affordable housing, includes specific provisions mandating the creation of affordable housing within the Town of Pine Plains. The regulations prioritize affordable housing for households who volunteer community service time within the community. Categories of persons who would be prioritized include but are not limited to:

- Volunteer Fire Department or Ambulance Corps members serving the Town of Pine Plains, with a minimum 6 months consecutive active service.
- Paid emergency service personnel serving the Town of Pine Plains, including police, fire and emergency medical services, with a minimum of 6 months of employment.
- Town of Pine Plains full-time municipal employees, minimum of 6 months of employment.
- School district employees for any schools that provide education services to students who live in Pine Plains, minimum of 6 months of employment.

As set forth in the draft Zoning Law, the creation of a NND, due to its potential size and the resulting population that will be introduced to the Town, will place demand on various municipal service providers. These providers include, but are not limited to: applicable school district, fire district, library, town governmental services, and emergency service providers. The Town Board may require that individual sites be set aside for these providers to establish on-site facilities to serve the NND, based on the Town's review of the community service. Alternatively, the applicant may be required to mitigate community service impacts through funding the construction and expansion of existing facilities to handle the additional demand. The draft Zoning Law ensures that large residential developments such as the NND provide the necessary services and sites to handle the anticipated community service demands that will be placed on the community.

3.5.3 Mitigation Measures

Adoption of the proposed draft Zoning Law and Map is not anticipated to have a significant adverse impact on community facilities and services. No mitigation measures are proposed.

3.6 Utilities

3.6.1 Existing Conditions

Public Water Supply Systems

According to the Town Comprehensive Plan, two public water supply (PWS) systems exist in the Town of Pine Plains. The Pine Plains Water Improvement Area #1 serves approximately 860 people within the Hamlet of Pine Plains. The Hamlet of Bethel has one well that serves 12 homes and 2 horse farms. The remaining residents who are not connected with a PWS have individual wells.

According to the Water Protection Plan for Dutchess County, NY, October 1992, (Horsley, Witten Hegemann, Inc.), the well field which serves the Pine Plains hamlet consists of one bedrock primary well located west of Route 82 and an auxiliary bedrock well on Myrtle Avenue. At the time this report was being published, the well on Myrtle Avenue was abandoned and filled with concrete due to high iron concentrations, according to Town Supervisor, Mr. Gregg Pulver.

Primary and secondary wells are located at the Pine Plains Water Improvement Area facility on Railroad Street. The primary well is an 8-inch diameter, 114 feet deep bedrock well that taps a carbonate bedrock aquifer. Horsley, Witten Hegemann, Inc. reviewed production records for the Pine Plains wells in the early 1990s. According to those records, the average pumping rate at the primary well was 100 gallons per minute (gpm) for 15-17 hours per day. Water consumption in the Pine Plains Water Improvement Area averages approximately 80,000 gallons per day. The well yield of the primary well ranges from 90,000 to 102,000 gallons per day. The secondary well is a 6-inch well 230 feet deep. It supplies about 120 gpm and its yield is also limited by pump capacity. It appears that the daily well yield of the primary well is a sufficient supply for the hamlet's daily water consumption needs.

Pumped water from the well is disinfected in a 10,000-gallon chlorine contact tank and is either pumped directly into the water main system or to a water storage tower. A water storage tower was installed in the late 1990s. This 212,904-gallon tank receives water from the well after being disinfected with chlorine if demand is low. A fire hydrant system was connected to the water main system in the late 1990s.

Recent water quality data (2007) for the Pine Plains Water Improvement Area #1 is available for review at:

www.pineplains-ny.gov/content/Departments/View/3:field=documents;/content/Documents/File/382.pdf.

According to the data, there were no exceedances of any of the contaminants tested.

Mr. Scott Chase, former Town Supervisor and Bethel resident, supplied information concerning the PWS well in the Hamlet of Bethel. One well serves 12 homes and 2 horse farms. This well originally served a 6,000-acre farm in the early 1900s and is connected to a small central water main system. Well depth is 75 feet and the well draws water from sand and gravel deposits - yield capacity is estimated at 35 gpm. The well water is chlorinated and is inspected annually by the County DOH. There is no water district and no formal agreements among the neighbors who utilize the well.

Records Review : New York State Department of Environmental Conservation

The New York State Department of Environmental Conservation (NYSDEC) Region 3 office provided the following lists in response to an information request made by the Town with regards to spills and hazardous waste sites located in the Town.

- Solid Waste (SW)
- Spills (see <http://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=2>)
- Petroleum Bulk Storage (PBS)
- Mined Land Reclamation (MLR)
- Hazardous Waste Generators (HWG)
- Hazardous Waste Remediation (HWR)
- S.A.R.A. Title III, Section 313 (SARA)

A review of these lists provided the following information:

- There were no facilities in the Town, which were listed on the Dutchess County Hazardous Waste Generator List (July 2000).
- There are two locations in Pine Plains on the MLR list.
- There are no sites listed in the Town on the NYS Registry of Inactive Hazardous Waste Sites.
- For the Toxic Registry Inventory Facilities (SARA), sites are listed by name and not town. After reviewing a DOH list of regulated establishments, it was determined that none of the listed facilities are located in Pine Plains.
- A total of 34 spills have been filed with the NYSDEC Division of Environmental Remediation between 1986-2001. Information sheets on individual spills are available for review. In 2008, there were two documented spills: one involved a hydraulic oil spill - the case has been closed. The other involved the dumping on unknown materials into a stream from a location on Johnny Cake Hollow Road.
- In 2009, there were 18 sites listed on the Petroleum Bulk Storage List (see <http://www.dec.ny.gov/cfmx/extapps/derexternal/abs/results.cfm?pageid=4>)

Dutchess County Department of Health

The Dutchess County Department of Health (DOH) provided the following information:

- Sample results for water samples from the PWS in Pine Plains for various compounds; dates range from 1991-2001.
- Coliform Sampling for Regulated Establishments from 1/1/95 to 10/12/2001.
- Commercial SDS (Sewage Disposal System), Community Public Water, Solid Waste Facilities, Spills for the Town of Pine Plains. Dates range from 1932 -present.
- Registered Residential Sewage Disposal Systems (1996-2001).
- Complaints relating to Water or Sewer for the Town of Pine Plains.
- Facilities operating under permit.

A review of these documents and lists provided the following information:

- Copper levels from sampling sites range from 0.09 -0.18 mg/L (Drinking Water Standard is 1.3 mg/L) for dates 8/93-8/99.
- Sodium, Iron, Magnesium, and Chlorine levels exceed the Minimum Detection Limit (MDL) for Well 2 (auxiliary) for 11/16/92 sample.
- Lead levels from sampling sites range from 0.003-0.01mg/L (Drinking Water Standard is 15 ug/l or 0.015 mg/L) for dates 8/93-8/99.
- Nitrate level for well range from 0.3 –1.6 mg/L in 9/93 (Drinking Water Standard is 10 mg/L as nitrogen) for samples 9/93-6/01.
- Toluene, MTBE, Xylene-M, P detected in Well 1 for 10/8/98 sample (Drinking Water Standards for Principal Organic Contaminants is 0.005 mg/L).

- Repeat samples detect MTBE in Wells 1 and Well 2 for 11/19/98 sample. Well 1 = 0.0012 mg/L, Well 2 = 0.0007 mg/L
- For entry point sample taken 3/26/2001, radiological sampling detects Gross Beta radiation level of 4.4 pCi/L (Standard 50 pCi/L).
- E. Coliform count tested positive at Stewart's on 1/20/2000 and 5/27/97.
- There are 73 individual wells listed with the DOH, these are residential, irrigation and farm wells.
- 6 complaints relating to sewer or water are registered with DOH.
- 31 Residential Sewage Disposal Systems are on file with DOH.

Well Head Management Areas

The firm of Horsley Witten Hegemann, Inc. (HWH) prepared a Water Supply Protection Plan for Dutchess County in 1992 for the Dutchess County Water and Wastewater Authority. The Public Water System serving the Pine Plains hamlet was included in the study.

The Water Supply Protection Plan depicts the areas that were determined by HWH to be Wellhead Management Areas (WMAs) and Secondary Management Areas (SMA) for the two PWS wells. These areas were determined by mapping recharge areas of the dolostone bedrock aquifer. Recharge in Pine Plains occurs in areas where bedrock is exposed or in areas where permeable sand deposits are in direct contact with the bedrock. The SMA is adjacent to the largest WMA and consists of carbonate bedrock. The bulk of recharge to the aquifer that supports the well comes from the hills east and south of Pine Plains. Because of the fracture patterns in the bedrock, it was determined that precipitation falling in this area could recharge the aquifer tapped by the well in Pine Plains, even though it is in a different watershed. For this reason, the primary wellhead protection area was recommended to include a 300-foot wide zone in the sand plain at the margins of these hilly bedrock areas.

The PPWIA's supply wells tap an aquifer lying below a silt and clay layer more than 80 feet thick. This layer acts as an aquitard, or barrier, to groundwater and contaminant movement. Because of the aquitard, a large protection area immediately around the wellhead area for Well 1 is unnecessary. A 200-foot protective radius Remedial Action Area (RAA) around each well was designated based on the NYSDEC 1990 Wellhead Protection Program guidelines. Due to the geologic conditions of the area, the County Water Supply Protection Plan recommends a Primary Management Area that includes a larger area and buffer at key zones on the eastern side of the valley (see map). No WMAs have been designated for the community well in Bethel.

During preparation of the draft Zoning Law, Steve Winkley of the New York Rural Water Association prepared a Wellhead Protection Plan for the Town of Pine Plains. The New York Rural Water Association is a non profit organization founded in 1979 and funded through federal and state funding to promote ground water and wellhead protection. The plan identifies the wellhead protection areas associated with the Town's public water supply wells. Mr. Winkley stated to the Zoning Commission that the most widely used approach to protect a source is to use a Wellhead Protection Overlay District which he explained is an additional layer of regulations above whatever the zoning will be. Winkley further stated that the idea is to prevent groundwater contamination and depletion in the area that supplies recharge to the water supply wells.

Land Use and Wellhead Management Areas

An analysis of land use categories within the WMA was conducted to help identify compatibility and potential for contamination to the water supply aquifer through recharge pathways. The largest WMA, located east of Pine Plains (see Attachment 1 of the report) consists of Forest Land, Cropland or Cropland Pasture, Wooded Wetlands and Rural Estates with lot sizes greater than 5 acres. The Secondary Management Area, adjacent to the WMA, consists of Forest Land and Cropland or Cropland Pasture. The WMA east of Thompson Pond consists of Forest Land, Wooded Wetland and Cropland or Cropland Pasture. The WMA south of Thompson Lake consists of Wooded Wetland, Natural Water Body and Cropland or Cropland Pasture. The two WMAs located west of Halcyon Lake consist of Wetlands, Forest and Croplands.

The shallow sand layer in Pine Plains forms a water-table aquifer that is highly susceptible to water quality impacts of land uses and practices within the vicinity of a well. In the 1992 County Water Supply Protection Plan, several potential contaminant threats were identified within a one-mile radius of the drinking water supply wells. Of particular concern are septic system discharges, agricultural chemicals, highway deicing salts, industrial chemical discharges, leaking fuel storage tanks, and accidental spills. Geologic conditions in Pine Plains suggest that the most important areas to protect in a wellhead management area are actually outside of the Remedial Action Area. Precipitation falling on the bedrock will produce direct recharge while surface runoff from the highland areas will enter the sands and gravels and move quickly towards the bedrock aquifer. From the Land Use analysis, potential sources for contamination within the WMA are most likely from residential septic systems and agricultural practices. Both potential sources are managed by the individual landowner and are not directly regulated unless a complaint is filed with a State agency or a State agency otherwise detects a violation. Many waste products that are disposed into the septic system and many agricultural practices are exempt from State and local regulations, unless they cause a violation.

In the 1992 County Water Supply Protection Plan, the potential nitrate loading for the Pine Plains water supply was also done. This analysis showed that at full build-out under current conditions (no zoning or other land use control), nitrate concentrations could raise to 12 mg/l, which is more than two times the planning goal of the County and in excess of the drinking water standards.

Safe Yield Analysis

The Water Supply Plan for Dutchess County included a safe yield analysis. Safe yield is the rate at which water can be withdrawn without depleting the supply to such an extent that it is

harmful from economic, water quality or ecological perspectives. According to the study, the base flow in streams in Dutchess County supports an important ecological habitat and is significant to the wetlands that border these streams throughout the County. Streams that go dry are indicative of significant ecological and wetland impacts. The Wappinger system experiences reduced streamflow under current and future projections, but it is not at a critical level.

General Aquifer Characteristics Outside Wellhead Management Areas

A thin deltaic sand layer that overlies silt and clay over bedrock overlies the valley floor south of the Pine Plains hamlet. This unit is generally not suitable for water supply due to its susceptibility to contamination from land use activities, its general lack of thickness and the limited volume of recharge. A glacial moraine located along the west side of the valley near Stissing Mountain has potential to serve as a public water supply aquifer, according to a study done by Connally and Serkin in 1976. This deposit of sand over sand and gravel has potential for higher groundwater yields, though concern was expressed for the affect on water levels for Thompson, Stissing and Twin Island ponds.

A review of records kept by the Dutchess County Department of Health was done. These records show well depth and well yield for residential and farm and irrigation wells that are registered with the DOH in the Town of Pine Plains. Depths of wells ranged from 30-680 feet, with the most of the wells being over 100 feet deep. It is assumed that the majority of the residential wells tap the limestone bedrock aquifer. Well yields varied greatly, from 0 to 100 gallons per minute.

New York State Department of Health (NYSDOH) Source Water Assessment Program (SWAP)

Under 1996 Amendments to the Safe Water Drinking Act (SWDA), States are required to implement a Source Water Assessment Program (SWAP). The purpose of the SWAP is to provide a basis for decision-making associated with source areas and aspects of public water supply management. The availability of future funding for source water protection is conditioned on having an approved assessment program.

The New York State Department of Health Bureau of Public Water Supply Protection is responsible for ensuring that source water assessments are completed for all New York's public water systems. For more information concerning the SWAP see the website: <http://www.health.state.ny.us/environmental/water/drinking/upstate.htm>

Dutchess County Agencies

The Dutchess County Water and Wastewater Authority was created in 1992 by the State Legislature for the purpose of assisting the County and its municipalities in providing adequate supplies of clear, reasonably priced drinking water and the proper treatment of wastewater. The Authority has been involved in water resource studies in the County, including the 1992 Water Protection Plan for Dutchess County.

Solid Waste Facilities

Dutchess County Solid Waste Management Plan

The Final Solid Waste Management Plan for Dutchess County was prepared by the Dutchess County Resource Recovery Agency in February 1992. The County was projected to generate about 249,860 tons of solid waste in 1990. At the time of the report, the Town of Pine Plains was operating a landfill and a recycling center, which was located north of the Pine Plains hamlet. The recycling center, which has since been discontinued, collected newspaper, magazines, glass, plastic, and bulky waste including scrap metal. Residents and some permitted carriers could use the center on a fee per bag basis.

2000 Census and Expected Generation Rates

The 2000 United States Census reported that the population of the Town of Pine Plains is 2,569 persons. Using the statewide average of 4 pounds of residential and commercial waste per person per day (Source: Verbal communication from Mr. Michael McTague, Division of Solid & Hazardous Materials, New York State Department of Environmental Conservation), the Town of Pine Plains generated about 1,876 tons per year of municipal solid waste. This would be about 36 tons per week of municipal solid waste and recyclables requiring management.

Interviews:

Mr. Gregg Pulver, Town Supervisor, Town of Pine Plains

Supervisor Pulver stated that the Town's landfill has been closed with a final cover for about three to four years. Private haulers serve the solid waste and recycling needs of the Town's residents. Town residents may take some materials to collection and transfer stations in surrounding towns.

The Town collects white metals (appliances) for Town residents.

Ms. Zoie Riel, Recycling Coordinator, Dutchess County

Ms. Zoie Riel, Recycling Coordinate for Dutchess County, indicated in preparation of the Comprehensive Plan that private haulers that collect solid waste from the Town of Pine Plain bring waste to the Dutchess County Resource Recovery Facility in Poughkeepsie, New York.

Recyclables are either brought by private haulers to the Dutchess County Materials Recycling Facility, also in Poughkeepsie, or are brought to transfer stations in adjacent towns, which also send their recyclables to the Dutchess County Materials Recycling Facility.

Wastewater Systems

Disposal of wastewater in the Town of Pine Plains occurs through individual septic systems for all residences, businesses and farms. There is no wastewater treatment facility located in the Town of Pine Plains.

The total estimated volume of wastewater generated on a daily basis for the Town of Pine Plains is estimated to be 256,900 gallons per day. This number was generated by multiplying the 2000 U.S. Census population of Pine Plains of 2,569 people times the

average wastewater generation rate of 100 gallons per day, as per Mr. Angus Eaton, NYSDEC Division of Water.

Installation of a new residential septic system (<1,000 gallons) requires approval by the Dutchess County Department of Health (DOH); this requirement has been in effect since the 1970s. Repairs to an existing system must also be approved by the DOH; this requirement has been in effect since 1999. The installation of a new commercial septic system requires a design review by the DOH Engineering Department.

The performance of on-site wastewater treatment systems is dependent on the type of soils in which the septic tank absorption fields are located. The Comprehensive Plan includes an extension discussion of soil suitability in the Town for operation of septic systems.

According to the Comprehensive Plan, the largest concentration of suitable soils for septic absorption fields in the Town of Pine Plains is mostly developed and is the location of the Pine Plains hamlet. Since soils located outside of the Hamlet are less suitable for siting a septic system, development that occurs in the balance of the Town of Pine Plains may be difficult or more expensive.

Electric, Gas, Telephone, Cable, Cellular Telephone

Central Hudson Gas and Electric currently supplies electricity to the Town of Pine Plains. Gas service is not available within the Town.

Fairpoint Communications, formerly Taconic Telephone Corporation, provides phone service in the Town of Pine Plains. The company offers phone and internet service to users.

Cable service in Pine Plains is provided by Cablevision Systems Corporation. Cablevision provides its OptimumTV cable service to residents on a monthly fee basis. Also available to residents is Optimum Online, a high-speed cable Internet service, and Optimum Voice phone service

There is currently one cellular telephone facility within the Town.

3.6.2 Potential Impacts

As identified in Section 2.0, under the current land use regulations, the Town of Pine Plains population, at theoretical buildout, would have a potential population ranging between 51,623 and 76,528 persons. If the draft Zoning Law is adopted, the population would range between 6,146 and 8,913 persons. As mentioned in this section, the average person consume approximately 100 gallons per day and generates approximately the same in wastewater effluent. Under the current land use regulations, the water supply demand/wastewater generation would total between 516,230-765,280 gallons. With adoption of the draft Zoning Law, the range is between 61,460 and 89,130 gallons, a significant reduction. This is anticipated to have a significant positive impact on the environment.

Adoption of the draft Zoning Law is anticipated to have a significant positive impact on the Town's water supply. The Zoning Law proposes creation of a Wellhead Protection zoning district with the express purpose of protecting the well and recharge areas associated with the public water supply system that serves the hamlet of Pine Plains. The boundary of the district is based on an identification of these resources as set forth in the 2007 Wellhead

Protection Plan prepared by the New York Rural Water Association. Uses in this district are limited to those which are less likely to generate byproducts that would impact the wellhead protection area. The WP district is guided by specific standards and regulations (see Section 100-25 of the draft Zoning Law). The WP district prohibits specific activities that would impact the wellhead area. Maximum impervious coverage is limited, and all major subdivisions must be designed as conservation subdivisions.

Except within the hamlet districts, it is anticipated that most development will continue to be served by individual well and septic systems. Development density has been established in the zoning districts which recognizes existing soil conditions and protects existing groundwater and surface water resources. All development, whether conventional or through conservation design, must ensure that adequate on-site area is provided to accommodate these systems.

The draft Zoning Law now includes standards to regulate wireless communication facilities. An objective of the regulations is to discourage proliferation of these facilities in the Town, and to ensure that they are sited in a manner which is the least visually intrusive. Co-location and stealth design is encouraged.

Electric, cable and phone service would be expanded to serve any growth in the Town's population. At this time, it is not anticipated that gas service would be extended to the Town given the costs to run gas mains and the limited amount of development proposed in the Town.

Public utilities are allowed throughout the various zoning districts by special use permit.

3.6.3 Mitigation Measures

Adoption of the draft Zoning Law and Map are not anticipated to have a significant impact on utilities. No mitigation measures are proposed.

3.7 Demography

3.7.1 Existing Conditions

Population Trends

Table 3.7-1 describes the growth trends in population from 1900 to 2000. Historically, the Town of Pine Plains increased in population during the first decade of the twentieth century, while the following twenty years showed a population decline. From 1930 to 1950, the population grew slowly and then increased more rapidly during the period 1950 to 1980. During the 1980s the town grew slightly, increasing population by 4 % and adding only 88 persons to the overall population. However, during the last decade the town's population grew by 12.3 percent, adding 282 persons to its population base.

Table 3.7-1 Population by Decade 1900-2000				
	Pine Plains		Dutchess County	
Year	Population	Percent Change	Population	Percent Change
1900	1,263	-	81,670	-
1910	1,430	12.4	87,661	7.3
1920	1,252	-11.8	91,747	4.7
1930	1,209	-3.4	105,462	14.9
1940	1,301	7.6	120,542	14.3
1950	1,360	4.5	136,781	13.5
1960	1,608	18.2	176,008	28.7
1970	1,792	11.4	222,295	26.3
1980	2,199	22.7	245,055	10.2
1990	2,287	4	259,462	5.9
2000	2,569	12.3	280,150	7.9

Source: U.S. Census Bureau, 2000.

In comparison, Dutchess County has witnessed a continuous pattern of growth during the 20th century. The county's population increased each decade over the past 10 censuses with the most substantial percentage increases occurring during the 1950s and 1960s. The rate of growth slowed significantly after 1970, with a 7.9 percent increase during the 1990s during which time Pine Plains grew at a faster rate.

During most of the 20th century, Pine Plains grew at a slower rate compared to other towns in Dutchess County. However, over the past decade Pine Plains added population at a higher rate. Table 3.7-2 provides population estimates for neighboring towns in Dutchess County and Table 3.7-3 provides the estimated rate of change.

Table 3.7-2 Population Change Pine Plains & Neighboring Towns, 1930 – 2000								
	1930	1940	1950	1960	1970	1980	1990	2000
Pine Plains	1,209	1,301	1,360	1,608	1,792	2,199	2,287	2,569
Milan	622	695	806	944	1,322	1,668	1,895	2,239
Northeast	2,119	2,201	2,308	2,489	2,730	2,877	2,918	3,002
Stanford	1,269	1,386	1,473	1,614	2,479	3,319	3,495	3,544
Rhinebeck	2,968	3,264	3,746	4,612	5,658	7,062	7,558	7,762
Source: U.S. Census Bureau, 2000.								

Table 3.7-3 Population Rate of Change Pine Plains & Neighboring Towns, 1930 – 2000								
	1920- 1930	1930- 1940	1940- 1950	1950- 1960	1960- 1970	1970- 1980	1980- 1990	1990- 2000
Pine Plains	-3.4	7.6	4.5	18.2	11.4	22.7	4.0	12.3
Milan	-11.6	11.7	16.0	17.1	40.0	26.2	13.6	18.0
Northeast	10.2	3.9	4.9	7.8	9.7	5.4	1.4	2.9
Stanford	-7.2	9.2	6.3	9.6	53.6	33.9	5.3	1.4
Rhinebeck	7.1	10.0	14.8	23.1	22.7	24.8	7.0	2.7
Dutchess County	14.9	14.3	13.5	28.7	26.3	10.2	5.9	7.9
Source: U.S. Census Bureau, 2000.								

Household Size

Since completion of the Town's 1987 Master Plan, the trend to smaller household sizes has continued. As Table 3.7-4 indicates, this trend is mirrored at the Dutchess County level and is not unique to Pine Plains. The same trend is exhibited nationwide as smaller household and family sizes are becoming the norm. In 1990, the total number of single householders was 180 or about 21.4 percent of all households in the Town, up from 163 in 1980. In Dutchess County, 22.1 percent of the households consisted of a single householder, compared to 21 percent in 1980.

Table 3.7-4 Average Household Size 1960 – 2000		
	Pine Plains	Dutchess County
1960	3.24	3.23
1970	3.18	3.21
1980	2.76	2.84
1990	2.71	2.89
2000	2.6	2.63
Source: U.S Census Bureau, 2000.		

Population Composition – Age Distribution

Table 3.7-5 shows the distribution of the population by the major age group category in Pine Plains and Dutchess County. While the number of school age children has declined, this age group still constitutes a substantial portion of the Town’s overall population (23.3% in 2000). As of 2000, the “reproductive age group” (those between the ages of 20 and 44) was the largest group, accounting for 31.3 percent of the population. Since 1960, there have been steady increases in the population of 20 to 44 year olds until the 1990s when there was a reduction of 61 persons. The Pine Plains population is older than Dutchess County. In 2000, the median age of the Town’s residents was 39.9 years, compared to 36.7 years for the County. In 2000, persons over 45 years of age in Pine Plains accounted for 15 percent of the town’s population, up from 14.1 percent in 1990.

Table 3.7-5 Population Composition Town of Pine Plains 1960 – 2000																
Age Group	Pine Plains						Dutchess Co.									
	1960	Pop.	%	1970	Pop.	%	1980	Pop.	%	1990	Pop.	%	2000	Pop.	%	
Pre-school (0 - 4)	155	9.6		169	6.3		139	6.3		157	6.9		124	4.6	17,463	6.2
School Age (5 - 19)	419	26.1		500	22.8		502	22.8		506	22.1		599	23.3	61,867	22.1
Reproductive Age (20 - 44)	441	27.4		513	33.5		736	33.5		865	37.8		804	31.3	102,132	36.5
Middle Age (45 - 64)	354	22.0		363	19.9		428	19.9		436	19.0		658	25.6	64,998	23.2
Retirement Age (65 - 74)	143	8.9		153	10.7		235	10.7		172	7.5		213	8.3	18,327	6.5
Elderly (75+)	96	6.0		94	6.8		149	6.8		151	6.6		171	6.7	15,363	5.5
Total	1,608	100		1,792	100.0		2,197	100.		2,287	100.0		2,569	100.0	280,150	100.0
Source: US Census Bureau, 2000., Pine Plains Comprehensive Plan, 2004.																
Note: The percent of the population constituting the elderly in Dutchess County was corrected for this DGEIS.																

Factors Affecting Population Change

Natural Change and Migration

According to the Comprehensive Plan, population change in a community is the result of two factors, net migration and natural increase. Migration is the movement of people into or out of a community. Natural change is the difference between births and deaths in a community.

According to the Comprehensive Plan, during the period 1930 – 1939, deaths significantly outnumbered births, but the level of in-migration was sufficient to increase the population. During 1940 – 1949 the opposite occurred, with more out-migration than in-migration and more births than deaths.

In the 1950s births and in-migration were both very high, resulting in an increase in population of 18.2 percent. In-migration declined in the 1960s, causing a drop in the growth rate, but was nearly six times higher in the 1970s, bringing the growth rate to an unprecedented high. During the past sixty years, natural increase has remained relatively steady while net migration has fluctuated widely. More recently, natural change accounted for an increase of 91 persons in the 1990s, while net migration resulted in 323 additional persons.

Residential Mobility

Table 3.7-6 provides data regarding residential mobility. In 1990, 60% of the Town's population lived in the same house for at least five years (down from 71.5 percent in 1980) and in 2000, 66% lived in the same house for at least five years. According to the 1990 census, 11.3 percent of the Town's population migrated to Pine Plains from outside Dutchess County, compared to 22.2 percent for the county overall. In 2000, 7.9% of the population came to Pine Plains from outside the County. These figures demonstrate that newcomers to the county are less likely to settle in Pine Plains than in other areas of the County. Those who moved to a residence in Pine Plains from within Dutchess County between 1995 and 2000 was 25.5 percent, up substantially from 17.6 percent reported in the 1980 US Census. This indicates that Pine Plains is attracting more people from within Dutchess County.

Table 3.7-6 Residential Mobility Town of Pine Plains and Dutchess County 1975-1980 (residents age 5 and over)				
Place of Residence in 1975 compared to 1980	Pine Plains		Dutchess County	
	Number	Percent	Number	Percent
Same house	1,454	71.5	135,383	58.9
Different house/same county	359	17.6	49,132	21.4
Different county/ same state	140	6.9	13,075	12.9
Different state	74	3.6	2,412	5.7
Different country	8	.4	229,687	1.1
Total	2,035	100.0	229,687	100.0
Place of Residence in 1985 compared to 1990	Pine Plains		Dutchess County	
	Number	Percent	Number	Percent
Same house	1,288	60.5	137,822	57.3
Different house/same county	601	28.2	49,203	20.5
Different county/ same state	198	9.3	33,389	13.9
Different state	43	2	17,181	7.1
Different country	0	0	2,877	1.2
Total	2,130	100	240,472	100
Place of Residence in 1995 compared to 2000	Pine Plains		Dutchess County	
	Number	Percent	Number	Percent
Same house	1,611	66	156,409	59.5
Different house/same county	623	25.5	54,322	20.7
Different county/ same state	150	6.1	32,202	12.2
Different state	43	1.8	15,121	5.7
Different country	13	0.5	4,983	1.9
Total	2,440	100	263,037	100
Source: U.S. Census Bureau, 2000.				

Population Projections

According to the adopted Comprehensive Plan, the 1987 Master Plan presented three population projections through 2010 using alternate sources/methods (Table 3.7-7). The most accurate population projection for 2000 came from the New York State Department of Environmental Conservation, which estimated a population of 2,450 persons - the actual figure was 2,569 (a difference of 119 persons). Other projections were much less conservative and showed much higher population gains through 2000 and 2010. The highest projection presented a scenario where the Town would continue its growth rate of the 1970s of 22.7 percent. However, during the 1980s and 1990s the Town grew at 4 percent and 12.3 percent respectively, significantly slower than the 1970s. Consequently, using such a high rate of growth dramatically overestimates the population figures. The projection provided by the Dutchess County MPO, using growth rates of 16.9 percent and 14.2 percent during the 1980s and 1990s, respectively, also overestimated the population increase in Pine Plains through 2000.

Another projection, from the 1969 Master Plan for Pine Plains, estimated that the Town's population in 1975 and 1980 would be 2,100 and 2,250, respectively. However, both of these estimates exceeded actual population figures. The population in 1990 was only 2,287 persons, just slightly ahead of the figure estimated ten years earlier.

Table 3.7-7 Population Projections Town of Pine Plains 1990 – 2010 (from 1987 Comprehensive Plan)			
Source/Method	1990	2000	2010
New York State Department of Environmental Conservation Projection	2,300	2,450	2,550
Constant percent of county base (0.9%) Dutchess County Metropolitan Planning Organization	2,570	2,934	3,298
Continuation of 1970 - 1980 growth rate (22.7% per decade)	2,698	3,310	4,061
Source: New York State Department of Environmental Conservation and Dutchess County Department of Planning.			

Projections through 2020

Table 3.7-8 shows population projections from Dutchess County based on and continuing those made in the 1969 Comprehensive Plan. The table projects that the town's population will grow slowly through 2020 to a population of 2,793, an increase of only 224 persons from 2000.

Table 3.7-8 Population Projections: Dutchess County Planning Town of Pine Plains 1965 – 2020		
	Projected Population	Actual Population
1965	1749	--
1975	2100	1792
1980	2250	2199
1985	2450	--
1990	--	2287
2000	--	2569
2005	2419	
2010	2451	
2015	2602	
2020	2793	
Source: Pine Plains Comprehensive Plan, 2004.		

Estimated Share of County Growth to 2020

The Pine Plains share of the County's population growth is expected to be 0.78 percent of total County growth with 16 people added per year between 1995 and 2020. This rate of growth is much slower than other adjacent towns in Dutchess County.

Table 3.7-9 Share of County Growth 1995 to 2020	
Town	Share of County Growth (%)
Pine Plains	0.78%
Milan	0.96%
Northeast	2.46%
Rhinebeck	3.69%
Stanford	0.97%
Source: Dutchess County Planning and Development Department and Poughkeepsie-Dutchess County Transportation Council.	

Population Projection Using the Migration Pattern Method

The 2004 Comprehensive Plan provides an estimate of the Town's population based on migration and natural increase trends as follows:

Net Change	Natural Change	Natural Change	Net Migration
1970-1979	407	79	328 (81% migration)
1990-1999	282	91	191 (68% migration)

Using the migration trends from 1990 – 1999 the population is projected to be:

2010	2885 people	215 migration and 101 births
2020	3240 people	241 migration and 114 births

In 20 years, there would be 456 persons migrating into Pine Plains. Based on the 2000 Census average household size of 2.6 people per household, this change in population would create demand for 175 new dwellings.

3.7.2 Potential Impacts

The draft Zoning Law would introduce land use regulations that would reduce the density and total amount of residential development that may occur within the Town of Pine Plains. As set forth in Section 2.0 of the DGEIS, it is anticipated that under existing land use regulations, the Town of Pine Plains population, at theoretical buildout, would have a potential population ranging between 51,623 and 76,528 persons. If the draft Zoning Law is adopted, the population would range between 6,146 and 8,913 persons. The draft Zoning Law would result in a maximum population that is 12-17 percent of the population that would result under the current land use regulations.

The draft Zoning Law, if adopted, would allow higher density housing in the Town's hamlets, and low density housing within the peripheral rural areas of the Town. The intent is to concentrate population in proximity to locations in the Town where community and commercial services are readily available, and where the potential exists to provide or expand centralized water and sewer services to support the population.

The draft Zoning Law is not anticipated to significantly impact the type of households that reside in Pine Plains, as a diverse range of housing types will be allowed in the various zoning districts that will comprise the Town. The draft Zoning Law would allow the following range of housing types:

- Dwellings in mixed use buildings
- Manufactured dwellings on individual lots
- Multiple family dwellings
- Senior citizen dwellings
- Single family attached dwellings
- Single family semi-detached dwellings
- Single family detached dwellings
- Two family dwellings
- Two family dwelling conversions
- Accessory dwellings
- ECHO dwelling
- Caretaker cottage dwelling

As mentioned previously, the Town of Pine Plains population is aging in place as evidenced by the median age of Pine Plains residents. The total number of persons defined as senior

citizens has increased. The draft Zoning Law specifically allows senior citizen housing developments and Elder Cottage (ECHO) dwellings in Pine Plains. In addition, the Town is implementing incentive zoning (Section 100-22 of the draft Zoning Law) intended to allow residential density bonuses where a residential land use application creates senior citizen housing opportunities. For properties located in the H-MS, H-CR, H-R, H-PC, H-B, and R districts, a residential density bonus may be granted for the provision of senior housing. The residential density bonus shall equal thirty percent (30%) of the senior citizen housing units being created. The density bonus may be applied to the construction of senior or non-senior dwelling units.

The proposed NND floating zone also encourages a range of housing opportunities. Specific objectives of the NND zone are to promote a diversity of dwellings that satisfy the needs of various household types, age groups, and income levels in Pine Plains and promote affordable housing opportunities. The NND includes standards to ensure there is dwelling unit diversity in the mix of housing proposed as part of a NND comparable to the current dwelling unit diversity in the Pine Plains hamlet. Seventy percent (70%) of all dwelling units must consist of single-family detached dwellings. Thirty percent (30%) of all dwellings units must be single-family attached, two-family, and/or multifamily dwellings. Multifamily dwellings must not exceed five percent (5%) of all dwelling units. The Town Board may impose conditions and limitations, or vary the mix of dwelling units based on a consideration of the potential fiscal impact of the NND on the community and consideration of the community's housing needs.

Lastly, the draft Zoning Law includes a mandatory affordable housing set aside. For purposes of the Zoning Law, dwelling units that are considered affordable are those that may be inhabited by households whose annual income is within 80 percent to 120 percent of the Dutchess County median income, with adjustments for household size, as defined and updated by the United States Department of Housing and Urban Development. Affordable housing includes rental housing, where the annual rental cost does not exceed 30 percent of said income., For homeowner housing, the annual cost of the sum of principal, interest, taxes and insurance ("PITI") and common charges, as applicable, must not exceed 30 percent of household income.

In summary, the draft Zoning Law reduces the total potential population that may be introduced to the Town of Pine Plains which is in keeping with its existing rural character. However, it does allow population growth in areas that can adequately serve this population growth. The Zoning Law also allows a range of housing types which in turn will attract a diversity of households.

3.7.3 Mitigation Measures

Adoption of the draft Zoning Law is not anticipated to have a significant negative impact on the Town's demography. No mitigation measures are proposed.

3.8 Economic and Fiscal Characteristics

3.8.1 Existing Conditions

The 2004 Town Comprehensive Plan included an appendix which addressed the Town's economy. This section considered the employment characteristics of Town of Pine Plains residents, however, it did not identify businesses or jobs available in the Town of Pine Plains. Since preparation of the Comprehensive Plan, the U.S. Census Bureau established the Local Employment Dynamics Partnership (LED). New time series data created under the LED provide details about jobs, workers, and local economies and communities. LED integrates existing data from state-supplied administrative records on workers and employers with existing censuses, surveys, and other administrative records. Methods to protect the confidentiality of the original respondents allow LED to release data for local areas beyond traditional boundaries for public use.

New York participates in the partnership and LED produces data on jobs to assist in workforce and economic development, emergency preparedness and response, and transportation planning.

The Quarterly Workforce Indicators (QWI), a LED product, provides information about trends in employment, hiring, job creation and destruction, and earnings, with details of geography, age, gender, and industry. This section of the DGEIS includes information from a workforce report prepared for the Town of Pine Plains.

History

According to the Comprehensive Plan, agriculture provided the base of Dutchess County's early economy. As wheat farmers settled in the area, the agricultural economy grew and prospered. However, the opening of the Erie Canal in 1825 introduced competition from upstate and beyond, and many Dutchess farmers were forced to switch production to dairy. The region's economy flourished once again as the coming of the railroads made the New York City market accessible to Dutchess County's dairy products. At the peak, 18 daily trains passed through four Pine Plains train stations, many of them transporting products from the town's dairy farms.

Non-farm industrial development paralleled the growth of the dairy industry. Textile mills were located along creeks and streams in most settlements in Dutchess County. In the early 19th century, Pine Plains was the location of several industries: a tannery, a scythe works, and a mill. But after the civil war, textile production moved to the southern states, and factories in Dutchess shut down, causing migration out of the county. Then, during the Second World War, manufacturing industries developed again in southwestern Dutchess. Although the railroads were discontinued, improved highway transportation to all parts of the county spread out the population as well as the economic benefits.

Major manufacturing activities have not expanded into northern Dutchess and agriculture has remained an economic activity there. However, the nature of agricultural production has changed. As the means of production are mechanized, smaller farmers have been unable to compete effectively, and many have chosen to sell their land to larger farmers or to developers. The remaining farms have been consolidated.

Current Pine Plains Economy

Economic statistics for the Town of Pine Plains were gathered using the U.S. Census Bureau “On the Map” webtool. Data were gathered for the 2002 and 2006 time periods - 2006 represents the most recent data available at the Town level. In 2006, businesses employed 752 jobs in the Town, which represented an increase of 11 jobs since 2002.

In 2006, there were 75 private sector employers in the Town. Employment in the private sector totaled 401 jobs. The average monthly income for jobs in the private sector was \$2,639 in 2006.

Of this total, 431 jobs, or 57.3%, were employed by persons between the ages of 31 and 54. Approximately 22.9 percent, or 172 jobs were employed by workers 55 years of age and older. Approximately 19.8 percent of all jobs in Pine Plains employed persons age 30 or younger. Since 2002, there has been an increase in the number of workers who are 30 years of age and older, and a drop in the number of jobs employing persons 55 and older.

Jobs by earnings paid are as follows:

Table 3.8-1 Jobs by Earnings Paid				
	2006		2002	
	# of Jobs	Percent of Total	# of Jobs	Percent of Total
\$1,200 per month or less	251	33.4%	268	36.2%
\$1,201 to \$3,400 per month	278	37%	308	41.6%
More than \$3,400 per month	223	29.7%	165	22.3%
Total	752		741	
Source: U.S. Census Bureau, LED, 2009. Errors due to rounding.				

Jobs in the Town by industry type are as indicated in Table 3.8-2.

In 2006, the majority of jobs in the Town of Pine Plains were in the educational services category: the Pine Plains Central School District is the largest employer in the Town. A large number of jobs in the Town (154 jobs) are also in the retail trade category. The construction industry is another sizable sector in the Pine Plains economy. Jobs available in the agricultural industry account for 7.6 percent of all jobs. This represents an increase in employment in this category since 2002. It is noted that the Town experienced a relatively large drop in jobs associated with the health care and social assistance category during the 2002-2006 time period.

Table 3.8-2 Jobs by Industry Type (2-digit NAICS)				
	2006		2002	
	# of Jobs	Percent of Total	# of Jobs	Percent of Total
Agriculture, Forestry, Fishing and Hunting	57	7.6%	28	3.8%
Mining, Quarrying, and Oil and Gas Extraction	0	0%	0	0%
Utilities	0	0%	0	0%
Construction	65	8.6%	56	7.6%
Manufacturing	21	2.9%	26	3.5%
Wholesale Trade	27	3.6%	32	4.3%
Retail Trade	154	20.5%	127	17.1%
Transportation and Warehousing	1	0.1%	2	0.3%
Information	9	1.2%	13	1.8%
Finance and Insurance	25	3.3%	25	3.4%
Real Estate and Rental and leasing	0	0%	3	0.4%
Professional, Scientific, and Technical Services	21	4.1%	23	3.1%
Management of Companies and Enterprises	0	0	0	0%
Administration & Support, Waste Management and Remediation	17	2.3%	18	2.4%
Educational Services	238	31.6%	212	28.6%
Health Care and Social Assistance	12	1.6%	48	6.5%
Arts, Entertainment and Recreation	0	0	15	2.0%
Accommodation and Food Services	32	4.3%	56	7.6%
Other Services (exc. Public Administration)	19	2.5%	14	1.9%
Public Administration	44	5.9%	43	5.8%

Source: U.S. Census Bureau, LED, 2009. Errors due to rounding.

Approximately 95.3 percent of all persons that were employed in the Town of Pine Plains in 2006 resided in New York (see Table 3.8-3). A small number of employees also resided in Connecticut, Massachusetts, and New Jersey. In 2006, 35% of all jobs were employed by persons who reside in the Town of Pine Plains.

Table 3.8-3 Jobs by Employee Place of Residence		
	# of Jobs	Percent of Total
Total Primary Jobs	686	100%
Pine Plains	240	35%
Gallatin	51	7.4%
Red Hook	46	6.7%
Ancram	29	4.2%
Stanford	28	4.1%
Taghkanic	19	2.8%
Brooklyn	19	2.8%
Copake	17	2.5%
Hyde Park	15	2.2%
Amenia	15	2.2%
All other Locations	207	30.2%

Source: U.S. Census Bureau, LED, 2009. Errors due to rounding.

Land Use and Property Assessments

Table 3.8-4 presents data on the total assessed value and total municipal taxable assessed value of properties by property class within the Town of Pine Plains. On average, industrial parcels in the Town are the most “valuable” per parcel. Recreation and entertainment properties, e.g., golf courses, have the second highest average value per parcel. Community service properties, e.g., school district parcels, are generally not taxed and thus have a low average taxable value per parcel. Vacant land maintains the lowest average taxable value per property. The mix of land use in the Town has implications for the Town’s ratable base.

Land uses, in addition to generating property tax revenues, generate varying costs depending on the demand they place on municipal service providers. Numerous cost of community service studies have assessed the net revenue/cost of various land uses in a community. The American Farmland Trust has compiled a list of the various studies prepared throughout the United States. The fact sheet is available for review at http://www.farmlandinfo.org/documents/27757/COCS_09-2007.pdf. Eleven of the studies were conducted in New York; of these, five were performed for communities in Dutchess County. According to the fact sheet, the following is the median cost per dollar of revenue raised to provide for public services for different land uses:

	Revenue	Cost
Residential Uses	1.00	1.19
Working and Open Land	1.00	0.37
Commercial and Industrial Uses	1.00	0.29

Table 3.8-4 Tax Valuation Data: Town of Pine Plains					
Land Use Category	Description	Parcel Count	Total Assessed Value	Municipal Taxable Assessed Value	Taxable Assessed Value/Parcel
100	Agricultural Properties	102	\$21,235,576	\$12,618,769	\$123,713
200	Residential Properties	962	\$102,795,764	\$96,368,309	\$100,174
300	Vacant Land	517	\$7,006,832	\$6,666,979	\$12,895
400	Commercial Properties	64	\$9,699,435	\$9,621,577	\$150,337
500	Recreation and Entertainment Properties	6	\$1,161,600	\$949,100	\$158,183
600	Community Service Properties	22	\$10,748,600	\$507,600	\$23,072
700	Industrial Properties	2	\$516,900	\$516,900	\$258,450
800	Public Service Properties	19	\$3,273,472	\$2,584,409	\$136,021
900	Public Parks, Wild, Forested and Conservation Properties	11	\$811,500	\$385,700	\$35,063
Total Parcels in All Broad Use Categories		1,705	\$157,249,679	\$130,219,343	\$76,374
Note: Land use categories are those established by the NYS Division of Real Property Services. Source: NYS Real Property Services, 2009.					

The value of industrial (and public utility) and commercial properties are not only higher in comparison to other land uses and thus generate higher property tax revenues per parcel, these uses also place less demand on community services, resulting in higher net property tax revenues to the community. Likewise, agricultural properties generate net property tax revenues, and have higher average taxable values than residential uses, which have a lower average taxable value, and generate a net cost to communities. Residential uses generate more in property tax costs than revenues - this is a result of the additional costs to educate schoolchildren, a cost not generated by nonresidential uses.

3.8.2 Potential Impacts

Adoption of the draft Zoning Law and Map would result in two primary beneficial impacts to the community, from an economic perspective. First, as shown in Table 2-6 of the DGEIS, adoption of the Law would result in a significant decrease in the residential buildout in the community. This alone would reduce total net costs associated with residential uses that must be paid to the various community service providers.

Secondly, the draft Zoning Law promotes nonresidential uses in various zoning districts in order to ensure opportunities to create a balanced ratable base in Pine Plains. Table 2-4 of the DGEIS lists the uses that would be allowed. In certain instances, the nonresidential uses are allowed by special use permit so that the use is designed in a manner that does not have a detrimental effect on adjoining uses. The plan encourages retail and commercial service uses within the hamlet centers. Manufacturing, research and office, warehousing, resorts, commercial recreation, would be allowed within the R district outside the hamlet areas. Development in the R district must adhere to design standards set forth in Appendix A of the draft Zoning Law.

In addition, to protect the Town's existing rural character, the sizes of nonresidential structures, in terms of building footprint and maximum gross floor area, have been limited as per 100-17.C of the draft Zoning Law.

The draft Zoning Law encourages retention of agricultural uses in the Town. This is accomplished by creation of the AG-O zoning overlay in combination with conservation subdivision design. The intent is to protect working farms and productive agricultural lands in the community. Agricultural uses demand very little in community services and also enhance the community's tax ratable base. To further encourage agricultural uses, farm stands, farm markets, horse riding academies and stables, and other agriculturally-related uses would be allowed.

In the NND zone, a residential density bonus (10%) may be granted for applications that include an economic development component, intended to encourage nonresidential uses. However, uses must complement, and not compete with, uses that would locate within the hamlets.

The draft Zoning Law also establishes areas where mining and commercial forestry, i.e., natural resource extraction industries, would be permitted but strictly regulated.

The draft Zoning Law (at Section 100-35) also incorporates general performance standards to ensure that nonresidential uses are operated and maintained in a manner that will limit impacts to surrounding properties, especially residential uses.

The draft Zoning Law is anticipated to result in a positive impact on the economic conditions of the community.

3.8.3 Mitigation Measures

Adoption of the Zoning Law and Map are not intended to have a significant impact the on economic characteristics of Pine Plains. No mitigation measures are proposed.

3.9 Housing Characteristics

3.9.1 Existing Conditions

Between 1960 and 2000, the number of housing units in Pine Plains increased by 488 housing units, or 72.5%. The largest increases in housing units occurred during the 1950s and 1970s. More recently, growth in housing has been at or below 10% (6.4% during the 1980s and 10.6% during the 1990s). Between 1960 and 2000, Dutchess County's housing stock grew by almost 98%, an increase of 52,511 units while Pine Plains added housing units at a slightly lower rate (72.5%). However, during the last decade, Pine Plains saw a 10.6% increase in housing units compared to 8.7% in the Dutchess County. Table 3.9-1 shows housing trends by decade between 1960 and 2000.

Table 3.9-1 Housing Units 1960-2000										
	1960	1950-1960	1970	1960-1970	1980	1970-1980	1990	1980-1990	2000	1990-2000
	Units	% Change	Units	% Change						
<i>Pine Plains</i>	673	38.5	725	7.7	987	36.1	1,050	6.4	1,161	10.6
<i>Milan</i>	635	25.0	714	12.4	837	17.2	974	16.4	1,090	11.9
<i>Northeast</i>	912	11.2	1,018	11.6	1,159	13.9	1,367	17.9	1,366	0
<i>Stanford</i>	764	18.8	1,058	38.5	1,314	24.2	1,564	19.0	1,712	9.5
<i>Rhinebeck</i>	1,787	35.7	2,050	14.7	2,581	25.9	3,047	18.1	3,255	6.8
<i>Dutchess Co.</i>	53,592	39.8	69,126	29.0	86,852	25.6	97,632	12.4	106,103	8.7

Source: U.S Census Bureau, 2000.

Housing Diversity

Table 3.9-2 presents information on the Town's housing supply based on 2000 US Census estimates. The Pine Plains CDP encompasses the Pine Plains hamlet. The housing data for the Pine Plains CDP is a subset of, and included within the housing data for Pine Plains.

In 2000, the majority of the Town's housing stock consisted of single-family detached housing units. In addition, a sizable portion of the housing stock also consisted of mobile homes - approximately half of all mobile home units are located in the Pine Plains hamlet. Land use data for the Town indicate there are no mobile home parks in the Town of Pine Plains, thus the mobile homes noted above are mostly located on individual lots. Approximately 6.3 percent of the Town's housing stock consists of housing units in buildings with 3 or 4 units. The majority of these unit types are found in the Pine Plains hamlet. Likewise, 65 percent of all two family dwellings were situated in the Pine Plains hamlet.

Table 3.9-2 Total Housing Units: Pine Plains and Pine Plains CDP				
Units in Structure	Pine Plains		Pine Plains CDP	
	Number	Percent	Number	Percent
Total Units	1,161	100.0	622	100.0
1-unit, detached	919	79.2	470	75.6
1-unit, attached	15	1.3	13	2.1
2 units	61	5.3	40	6.4
3 or 4 units	73	6.3	55	8.9
5 to 9 units	4	0.3	4	0.6
10 to 19 units	0	0.0	0	0.0
20 or more units	4	0.3	0	0.0
Mobile home	85	7.3	40	6.4
Boat, RV, van, etc.	0	0.0	0	0.0

Source: US Census Bureau, 2000.

Housing Occupancy

Table 3.9-3 shows the distribution of year-round housing by type of occupancy from 1980 to 2000. According to the 2000 census, almost 60% of the Town's housing units were owner-occupied, slightly lower than the 64.7% for Dutchess County overall. Approximately 25 percent were rented while the remaining 14.9 percent were vacant. In 2000, ninety-five of the vacant units in Pine Plains were seasonal residences.

Table 3.9-3 Types of Occupancy						
	Owner-Occupied		Renter-Occupied		Vacant	
	# Units	Percent	# Units	Percent	# Units	Percent
1990						
<i>Pine Plains</i>	607	57.8	227	21.6	216	20.6
<i>Milan</i>	558	57.3	163	16.7	253	30.0
<i>Northeast</i>	757	55.3	367	26.8	243	17.8
<i>Stanford</i>	943	60.3	319	20.4	302	19.3
<i>Rhinebeck</i>	1916	62.9	883	30.0	248	8.2
<i>Dutchess Co.</i>	61899	63.4	27668	28.3	8065	8.3
2000						
<i>Pine Plains</i>	694	59.7	294	25.3	173	14.9
<i>Milan</i>	697	63.9	185	17.0	208	19.1
<i>Northeast</i>	784	57.4	362	26.5	220	16.1
<i>Stanford</i>	1006	58.8	392	22.9	314	18.3
<i>Rhinebeck</i>	2018	62	983	30.2	254	7.8
<i>Dutchess Co.</i>	68,636	64.7	30,900	29.1	6,567	6.2

Source: U.S Census Bureau, 2000.

Housing Characteristics

February 25, 2009

Townwide, owner-occupied housing units represented 70.2 percent of the town's occupied housing stock. Renter-occupied housing units represented 29.8 percent of all occupied housing units. By comparison, the Pine Plains CDP had a lower percentage of owner-occupied units – 67.6 percent of the total. Renter-occupied housing units totaled 32.4 percent of the housing units in the CDP. Townwide, vacant housing units totaled 14.9 percent of the total housing stock. Approximately 9.2 percent of the total housing stock was used for seasonal, recreation, and occasional use (and included in the vacant housing unit category).

Household Characteristics

According to the Comprehensive Plan, household characteristics point out a trend towards smaller families, with many people living alone. A single person represented approximately 21.4 percent of households in Pine Plains in 1990 (compared to 20 percent in 1980). The average number of persons per household in 2000 was 2.6 persons, down from 2.76 persons in 1980. These demographic factors will influence housing demand.

Housing Costs

Table 3.9-4 illustrates the rise in rental costs and the value of owner-occupied dwellings. In Pine Plains, gross rent increased 45% between 1990 and 2000. Rates of increase were comparable between Pine Plains and other Dutchess County towns. Housing values remained steady over the past decade: the median value of owner-occupied dwellings decreased slightly in the past decade in Pine Plains.

Table 3.9-4 Housing Costs 1980-2000						
	Renter-Occupied Dwellings Monthly Gross Rent in Dollars			Owner-Occupied Dwellings Value in Dollars		
	1980	1990	2000	1980	1990	2000
	<i>Mean</i>	<i>Median</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>	<i>Median</i>
<i>Pine Plains</i>	\$188	\$439	\$635,439	\$44,830	\$118,300	\$116,000
<i>Milan</i>	\$231	\$481	\$675	\$44,531	\$134,500	\$138,000
<i>Northeast</i>	\$206	\$460	\$677	\$42,202	\$124,400	\$127,900
<i>Stanford</i>	\$216	\$491	\$691	\$53,676	\$154,400	\$164,900
<i>Rhinebeck</i>	\$240	\$542	\$714	\$52,783	\$155,100	\$168,300

Source: U.S. Census Bureau, 2000.

Building Permits

According to Table 3.9-5, there has been steady, but limited residential development in Pine Plains during the past decade. Between 1990 and 2000, the Town approved an average of 31 building permits per year, six for new dwellings, two for commercial structures, and seven for additions to residential structures. Between 1990 and 1998, only five building permits were issued for mobile homes. More recently, the number of permits issued increased for mobile homes - the Town issued five permits in 1999, two in 2000 and two more in 2001.

Housing Characteristics

February 25, 2009

Between 1990 and 1992, 29 permits were issued. Between 1993 and 2000, the number of permits decreased to about 5-6 a year. However, the number of permits issued for new dwellings doubled in 2001 to 12 dwellings. The 2002 year saw the greatest level of new home building in the town when 21 permits were issued.

Table 3.9-5 Town of Pine Plains Building Permits 1990-2001											
Type	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
New dwelling	11	8	10	5	5	5	4	1	6	6	5
New commercial	1	2	3	3	4	1	1	0	0	2	4
Addition to residential	11	10	8	9	10	8	4	6	3	5	4
Addition to commercial	4	0	1	1	3	0	1	2	0	0	0
Garage (residential)	7	5	3	4	6	1	5	4	6	4	6
Residential renovations	22	8	2	0	3	3	0	0	1	0	1
Mobile homes	0	2	0	1	2	0	0	0	0	5	2
Farm storage	4	0	1	0	0	2	1	1	0	2	0
Shed or (residential) storage bldg.	0	0	5	2	2	1	0	1	3	0	4
Deck	2	4	0	1	5	1	0	2	1	2	3
In-ground pool	0	3	2	1	0	0	0	2	0	1	2
Boat house	0	0	0	0	0	0	0	0	0	1	0
Totals	62	42	35	27	40	22	16	19	20	28	31

Source: 2004 Pine Plains Comprehensive Plan.

Comprehensive Plan Affordable Housing Analysis

As stated in the Comprehensive Plan, there are several methods of determining if housing values are generally affordable in a community. One method is to determine the "rental index". This index shows the maximum gross rent a household can afford. Affordable rental housing is generally considered to be no more than 30% of a household's monthly income. With a median household income of \$43,125 in 2000, the average household could afford \$1078.00 per month in rent. With a median gross rent of \$635.00, the average household in Pine Plains would find rentals to be affordable. At the time the Comprehensive Plan was prepared, rental dwellings were affordable in Pine Plains.

Purchase Price Multiplier

As per the Comprehensive Plan, the purchase price multiplier also gives an indication of affordability. This looks at the amount that a lender would be willing to lend a potential homebuyer. The purchase price multiplier is about 2.25 times annual household income.

This is the amount of money that would be able to be afforded for a mortgage by the median household.

$$\begin{aligned} \$2.25 \times \$43,125 &= \$97,031.25 \text{ (amount a lender willing to loan)} \\ \$97,031.25 + 10\% \text{ down} &= \$106,734.25 \text{ (sales price of a dwelling)} \end{aligned}$$

Thus, a household earning the median household income in Pine Plains in 2000 would be able to afford a home values at \$106,734. The median value of a house in the area is \$115,000, close to what a household could afford. Since \$115,000 is the median housing value in Pine Plains, housing values are above and below this median affordable to households that earn above and below the median.

Median Income Data

2000 Median Income Levels

The U.S. Department of Housing and Urban Development (HUD) is required by law to set income limits that determine the eligibility of applicants for HUD's assisted housing programs. The major active assisted housing programs are the Public Housing program, the Section 8 Housing Assistance Payments Program, Section 202 housing for the elderly, and Section 811 for persons with disabilities.

Key elements relevant to income limits include but are not limited to:

- Very low income families are defined as families whose incomes do not exceed 50 percent of the median family income for the area.
- Low income families are defined as families whose incomes do not exceed 80 percent of the median family income for the area.
- The 1998 Housing Act amendments establish a 30 percent of median family income targeting standard.
- Income limits are adjusted for family size.
- Income limits are adjusted for areas with unusually high or low family income or housing cost to income relationships.

The income limits are developed for counties throughout the United States and updated on an annual basis. The median household income in Dutchess County in 2000 was \$59,600 - the limits established for the above described households are based on this income level. Tables 3.9-6 and 3.9-7 below provide the 2000 and 2008 income limit levels for Dutchess County, respectively.

Table 3.9-6 2000 Median Family Income Levels: Dutchess County									
		Members in Family							
		1	2	3	4	5	6	7	8
Dutchess County	Extremely Low Income Limits (30%)	\$12,500	\$14,300	\$16,100	\$17,900	\$19,300	\$20,750	\$22,150	\$23,600
	Very Low Income Limits (50%)	\$20,850	\$23,850	\$26,800	\$29,800	\$32,200	\$34,550	\$36,950	\$39,350
	Low (80%) Income Limits	\$33,400	\$38,150	\$42,900	\$47,700	\$51,500	\$55,300	\$59,100	\$62,950

Source: U.S. Department of Housing and Urban Development, 2008.

In 2000, the Dutchess County median family household income level was \$59,600. By comparison, the Town of Pine Plains had a median income level of \$46,900, or 78 percent of the County median family income.

2008 Median Income Levels

From 2000 to 2008, the County median family income level increased by 32.3 percent, to \$78,900. Extremely low and very low income limits increased by 32.3 percent for all family sizes. However, for the low income levels, the increase was 28.9 percent for all family sizes. Extrapolating for Pine Plains, the median family income level for Pine Plains would be \$62,049, still less the median family income Countywide.

Table 3.9-7 2008 Median Family Income Levels: Dutchess County									
		Members in Family							
		1	2	3	4	5	6	7	8
Dutchess County	Extremely Low Income Limits (30%)	\$16,500	\$18,900	\$21,300	\$23,650	\$25,550	\$27,450	\$29,350	\$31,200
	Very Low Income Limits (50%)	\$27,600	\$31,550	\$35,500	\$39,450	\$42,600	\$45,750	\$48,900	\$52,050
	Low (80%) Income Limits	\$43,050	\$49,200	\$55,350	\$61,500	\$66,400	\$71,350	\$76,250	\$81,200

Source: U.S. Department of Housing and Urban Development, 2008.

In 2000, HUD also published CHAS (Comprehensive Affordable Housing Strategy) data for the Town and County. The data provide household information by type, income and housing problem. Important definitions include:

- Any housing problems: cost burden greater than 30 percent of income and/or overcrowding and/or without complete kitchen or plumbing facilities.
- Elderly households: 1 or 2 person household, either person 62 years old or older.
- Renter. Data do not include renters living on boats, RVs or vans.
- Cost burden. Cost burden is the fraction of a household's total gross income spent on housing costs.

The CHAS data are used for planning purposes. Specifically, it can be used to develop housing programs intended to address housing problems for specific categories of householders in the Town, e.g., renters versus owners, elderly versus all other households. Table 3.9-8 summarizes the CHAS data.

**Table 3.9-8
Housing Problems Output for All Households**

Household by Type, Income, & Housing Problem	Renters					Owners					Total HH
	Elderly 1 & 2 Member HH	Small Related (2 to 4)	Large Related (5 or more)	All Other HH	Total Renters	Elderly 1 & 2 member HH	Small Related (2 to 4)	Large Related (5 or more)	All Other HH	All Owners	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	
1. Household Income <=50% MFI	26	33	18	50	127	68	30	19	18	135	262
2. Household Income <=30% MFI	18	14	10	35	77	36	8	0	8	52	129
3. % with any housing problems	77.8	71.4	100	71.4	76.6	88.9	50	N/A	100	84.6	79.8
4. % Cost Burden >30%	77.8	71.4	100	71.4	76.6	88.9	50	N/A	100	84.6	79.8
5. % Cost Burden >50%	22.2	71.4	100	71.4	63.6	50	0	N/A	100	50	58.1
6. Household Income >30% to <=50% MFI	8	19	8	15	50	32	22	19	10	83	133
7. % with any housing problems	50	78.9	100	100	84	37.5	63.6	78.9	0	49.4	62.4
8. % Cost Burden >30%	50	78.9	50	100	76	37.5	63.6	78.9	0	49.4	59.4
9. % Cost Burden >50%	0	0	0	0	0	12.5	0	0	0	4.8	3
10. Household Income >50 to <=80% MFI	4	33	4	18	59	68	59	8	18	153	212
11. % with any housing problems	0	12.1	0	44.4	20.3	20.6	23.7	50	55.6	27.5	25.5
12. % Cost Burden >30%	0	12.1	0	22.2	13.6	20.6	23.7	50	55.6	27.5	23.6
13. % Cost Burden >50%	0	12.1	0	0	6.8	5.9	0	0	0	2.6	3.8
14. Household Income >80% MFI	8	55	4	35	102	95	223	40	50	408	510
15. % with any housing problems	0	0	0	0	0	0	10.3	0	20	8.1	6.5
16. % Cost Burden >30%	0	0	0	0	0	0	8.5	0	20	7.1	5.7
17. % Cost Burden >50%	0	0	0	0	0	0	1.8	0	0	1	0.8
18. Total Households	38	121	26	103	288	231	312	67	86	696	984
19. % with any housing problems	47.4	24	69.2	46.6	39.2	25.1	17.6	28.4	32.6	23	27.7
20. % Cost Burden >30	47.4	24	53.8	42.7	36.5	25.1	16.3	28.4	32.6	22.4	26.5
21. % Cost Burden >50	10.5	11.6	38.5	24.3	18.4	11.3	1.3	0	9.3	5.5	9.2

Source: CHAS Data for Pine Plains, 2000.

Among homeowners, the elderly were cost burdened according to the CHAS data. Also, among renters, most household types earning less than 50 percent of the median family income were cost burdened.

Current Housing Values

TMA obtained Multiple Listing Sales transactions for Dutchess County communities for the time period 2002-2007. Data for Pine Plains and County is presented in Table 3.9-9.

Table 3.9-9 Single Family Detached Dwelling Sales Prices					
	Pine Plains Average Sales Price	Pine Plains Average Sales Rank among Communities	Pine Plains Median Sales Price	Pine Plains Median Sales Rank among Communities	Dutchess County Average Sales Price
2002	\$256,822	14	\$186,500	8	\$260,911
2003	\$292,977	17	\$190,000	3	\$291,223
2004	\$303,205	7	\$200,000	1	\$338,812
2005	\$374,708	15	\$315,000	14	\$384,558
2006	\$478,013	21	\$332,500	13	\$396,881
2007	\$638,700	30	\$300,000	11	\$387,222

Rank = From lowest to highest sales price, i.e., "1" is the lowest sales price, and "31" is the highest. There are 31 municipal entities for which sales prices are provided.
Source: Mid Hudson Board of Realtors, 2008.

In considering the data presented in Table 3.9-9, it is important to note the difference between median sales value and average sales value for Pine Plains since these numbers are disparate. The average sales value is derived by dividing the total sale value in a year by the total number of sales. The median sales value is the midpoint of the sales values in any given year. In Pine Plains, where the total number of sales on an annual basis is low, a few high priced sales can skew the average sales price significantly upward. For example, a single family dwelling attached to a large land holding with significant acreage can skew the average sales values significantly. This is most evident in 2007, where the average sales value was \$638,700, but the median sales value was less than ½ that amount.

In terms of rank, the Town of Pine Plains had the second highest average sales price in the County, second only to the Town of Washington with an average sales value of \$1,032,530 in 2007. However, in the same year, Pine Plains median sales price was \$300,000 and Pine Plains was ranked 11th among lowest median sales value Countywide.

Median sales value in Pine Plains have been ranked among the 50 percent of communities with the lowest median sales values.

According to the 2000 US Census, the median value of a single family owner-occupied home in Pine Plains was \$116,000. Thus, the ratio of the median housing value to the median family income (\$59,600) was 1.94. This ratio is used to compare with the median sales value/median family income for 2008 to determine if the value to income gap has widened.

In 2008, if the median family income for Pine Plains increased proportionately to the median income for the County, the Town's median income would be \$62,049. The median sales price in 2007 (annual estimate) is \$300,000. Thus, the sales value to median income ratio is 4.83. It is clear that sales prices may have outpaced income increases within the Town. It should be noted that families purchasing homes in Pine Plains at the median sales price are likely earning significantly higher incomes than the median in Pine Plains. However, the number of new homeowners moving to the Town is not significant (based on the number of house sales per year) to substantially affect the median family income for the Town.

It is also noted that as a result of the recent national economic conditions, housing values have dropped and it somewhat difficult in this recession to assess housing affordability, although the housing price decline would generally result in an increase in affordability.

3.9.2 Potential Impacts

As discussed in Section 3.7, Demography, the draft Zoning Law would introduce land use regulations that would reduce the density and total amount of housing that may be constructed within Pine Plains. Under existing land use regulations, it is estimated that between 19,855-29,434 dwelling units could be constructed. If the draft Zoning Law is adopted, the residential buildout would be in a general range of 2,364 to 3,428 dwelling units.

The draft Zoning Law, if adopted, would allow higher density housing in the Town's hamlets, and low density housing within the peripheral rural areas of the Town. The intent is to concentrate population in proximity to locations in the Town where community and commercial services are readily available, and where the potential exists to provide or expand centralized water and sewer services to support the proposed density of housing.

The draft Zoning Law would allow a diverse range of housing types:

- Dwellings in mixed use buildings
- Manufactured dwellings on individual lots
- Multiple family dwellings
- Senior citizen dwellings
- Single family attached dwellings
- Single family semi-detached dwellings
- Single family detached dwellings
- Two family dwellings
- Two family dwelling conversions
- Accessory dwellings
- ECHO dwelling
- Caretaker cottage dwelling

As mentioned previously, the Town of Pine Plains population is aging in place as evidenced by the median age of Pine Plains residents. The total number of persons defined as senior citizens has increased. The draft Zoning Law specifically allows senior citizen housing developments

and Elder Cottage (ECHO) dwellings in Pine Plains. In addition, the Town is implementing incentive zoning (Section 100-22 of the draft Zoning Law) intended to allow residential density bonuses where a residential land use application creates senior citizen housing opportunities.

For properties located in the H-MS, H-CR, H-R, H-PC, H-B, and R districts, a residential density bonus may be granted for the provision of senior housing. The residential density bonus shall equal thirty percent (30%) of the senior citizen housing units being created. The density bonus may be applied to the construction of senior or non-senior dwelling units.

As identified in Section 3.7, the proposed NND floating zone also encourages a range of housing opportunities. Specific objectives of the NND zone are to promote a diversity of dwellings that satisfy the needs of various household types, age groups, and income levels in Pine Plains and promote affordable housing opportunities. The NND includes standards to ensure there is dwelling unit diversity in the mix of housing proposed as part of a NND comparable to the current dwelling unit diversity in the Pine Plains hamlet.

Lastly, the draft Zoning Law includes a mandatory affordable housing set aside. For purposes of the Zoning Law, dwelling units that are considered affordable are those that may be inhabited by households whose annual income is within 80 percent to 120 percent of the Dutchess County median income, with adjustments for household size, as defined and updated by the United States Department of Housing and Urban Development. Affordable housing includes rental housing, where the annual rental cost does not exceed 30 percent of said income., For homeowner housing, the annual cost of the sum of principal, interest, taxes and insurance ("PITI") and common charges, as applicable, must not exceed 30 percent of household income.

In summary, the draft Zoning Law reduces the total number of housing units that may be introduced to the Town of Pine Plains. However, it does allow a diversity of housing in areas that can adequately serve this growth in terms of infrastructure and community services and facilities.

3.9.3 Mitigation Measures

Adoption of the draft Zoning Law is not anticipated to have a significant adverse impact on the Town's housing supply. No mitigation measures are proposed.

3.10 Historic and Scenic Resources

3.10.1 Existing Conditions

History of Pine Plains

The following history is summarized from the writings of Ms. Helen Netter, Pine Plains historian:

“Pine Plains holds an important position in the history of the United States for it has the distinction of being the scene of the first Moravian congregation of Protestant Indian converts in America.

In 1735, Moravian missionaries came from Germany to the colony of Georgia to Christianize the Indians. One of the missionaries, Christian Henry Rausch, was sent to New York. There he learned of a delegation of Mahican Indians, three chiefs, who were in the city on business with the colonial government.

They agreed to Rausch’s coming to teach them. They led him to their village, which was called Shekomeko, two miles south of Pine Plains. In 1742, the first regular congregation of believing Indians, composed of 10 persons, was established in North America.

For a time, the work flourished, but trouble arose with white settlers opposed to any efforts to Christianize the Indians. The missionaries were branded as papists and traitors, and Rausch, with many of the Indians, moved to Connecticut.

The majority of the early white settlers of this region came from Palatinate, a German state on the Rhine. There are indications of a thriving community in existence well before the town was organized. In 1796, a tannery was built near the Shekomeko Creek and about the same time, buildings of the Harris Scythe Works were erected nearby, giving the area its name of Hammertown. Records show that by 1798, there was a hotel, a blacksmith shop at least two stores, and over a dozen dwellings, among these the log blockhouse built by Lewis Graham (1767) and the stone house of his brother, Morris Graham (1773), both of which are still standing.

Another ancient institution is the Union Library, the first public library in Dutchess County. On January 9, 1798, a meeting was held in the public house of Ebenezer Baldwin (later the Stissing House) at which a public library was incorporated with 47 subscribers listed.

The year 1800 saw the beginning of an industrial boom in Pine Plains, and in 1813, Articles of Association were drawn up for construction of a Union Meeting House of all Christian denominations, which later became the property of the Presbyterian Society. Henry and Matthias Hoffman purchased their mill property (later Patchin’s Mill) in 1801. In 1814, Stephen Eno built his law office, the small building know to this day as the Eno Law Office.

The North East Precinct, then a part of the Little Nine Partners Patent, included Milan, North East, and Pine Plains. Geographical conditions made separation necessary, and in 1823, the first town election of Pine Plains was held.

During the 19th Century, railroads contributed greatly to the well being of the town with, at the peak, 18 daily trains in and out of Pine Plains' four stations. The rails were finally abandoned in the 1930s, thus marking the end of an era.

In the latter part of the 19th Century, one of the best-known Pine Plains institutions was the Seymour Smith Academy. By a bequest of Seymour Smith's will, his entire property was turned over to the town for establishing a school for promotion of science and useful knowledge. In 1933, the Pine Plains Central School was established, the old academy building was torn down, and a new building housing both elementary and secondary grades, was erected. In 1970, with completion of the Stissing Mountain Junior and Senior High School, this building became the elementary school, again bearing the illustrious name of Seymour Smith.

Historical material devoted to the towns that make up Dutchess County is limited and fortunate indeed is the community such as Pine Plains that has had a local historian of the caliber of Isaac Hunting, author in 1897 of "History of Little Nine Partners....and Pine Plains, New York."

The Planning Commission compiled the list of historic resources below, with help from historian Helen Netter. It includes recognized historic buildings as well as informally valued special features.

Historic Structures

According to the New York State Office of Parks, Recreation and Historic Preservation website, the following locations are listed on the National and State Registers of Historic places:

- The Pines, Maple Street (90NR00310)
- Graham-Brush Log House (99NR01492)

The Comprehensive Plan identifies the following local resources as historic:

1. *Harris-Husted House*. A small "salt box" house located off Route 199 in Hammertown. This house was build between 1770 and 1800 and was occupied by the Harris and Husted families, who operated a nearby scythe and tannery operation. During the 1800s the Harris Scythe Works produced 18,000 scythes annually, and the noise of the trip hammers caused the surrounding are to be called Hammertown. The Little Nine Partners Historical Society is now in the process of restoring the house.

2. *Peter Husted House*. Located off Route 199 in Hammertown, this house was built around 1790. It represents a colonial style home with hand-fluted woodwork. The barn is currently being operated as a shop for antiques, yarn and gifts.

3. *Schultz House*. An early colonial farmhouse on the Schultz Hill Farm.

4. *The Pines*. A 23-room Victorian mansion built in 1878 by William S. Eno. The Eno family is renowned for its respected involvement in the legal profession. William Eno's sister-in-law, Rachel, took over the house in 1895, and it became a fashionable boarding house. In 1983, the Pines was listed on the National Register of Historic Places for its exceptional architectural value.

5. *Morris Graham House*. A stone house located off Route 82 and built by Morris Graham in 1772. The structure has a “Flemish” or gambrel roof on stone gables.
6. *Brush House*. Located on Church Street behind the Deli and Municipal Parking lot. This house was built by Lewis Graham in 1773 of oak logs. According to the NYSOPRHP, this structure is listed on the National Register of Historic Places.
7. *Eno Law Office*. Located in the hamlet of Pine Plains on Route 82. This small clapboard structure, built in 1814, represents one of the few examples in New York State of an early building built for professional use. It has been used for over 150 years as a law office.
8. *Patchin’s Mill*. Henry and Matthias Hoffman purchased the property in 1801, and it was sold to the Patchins in 1840. However, the existing mill is a more recent structure.
9. *Pine Plains Memorial Clock Tower*. The clock was erected in 1920, dedicated to the memory of Dr. Henry Clay Wilber, a well respected doctor who practiced in Pine Plains for 52 years.
10. *Seymour Smith Academy*. By a bequest of Seymour Smith’s will, his entire property was turned over to the town to establish a school. In 1933, the Pine Plains Central School, having been established, the old academy building was torn down and a new building was erected.
11. *Stissing House*. Peter Husted, who succeeded Ebenezer Baldwin as landlord, built the present building in 1801. There was formerly a tavern on the site, built before 1782.
12. *Stissing National Bank*. The Stissing National Bank is a successor to the Pine Plains Bank, established in 1839. The central part of the current building was built in 1858; there are newer additions on both sides.
13. *Pine Plains Grange*. The Grange was originally the Baptist Church, built in 1838.
14. *Episcopal Church*. Built in 1861.
16. *Presbyterian Church*. The present stone structure was build in 1925 after an earlier church was destroyed by fire.
17. *United Methodist Church*. Built in 1837, the church was repaired and enlarged in 1871.
18. *Saint Anthony’s Roman Catholic Church*. Built in 1912.
19. *The Pine-Mall*. Originally called Memorial Hall, this structure was given to the town by Mrs. Alexander Saunders for use as a community center. It was built in 1914. It is currently privately owned.
20. *The Millius-Bently House*. Located in Mt. Ross, this example of Dutch vernacular architecture is listed on the National Register of Historic Places. Part of the building dates to the early eighteenth century and may be one of the oldest structures in the county.
21. *Jim Ryan’s House*, corner of Pine and Maple.

22. *Moravian Monument*, corner of Strever Farm Road and Bethel Road.

23. *Evergreen Cemetery*.

24. *Fire Tower on Stissing Mountain*.

25. *Lake House* .

Scenic Resources

The Comprehensive Plan notes that Town residents identified the following places as scenic locations (in order of frequency of responses): Stissing Mountain State Forest, Stissing Lake, the Stissing Mountain fire tower, Thompson Pond, Twin Island Lake, Halcyon Lake and wetlands to the southwest, Skunks Misery Road, Bethel Cross Road, Stissing Mountain Road, Schultz Hill Road - south of Johnny Cake Hollow, Johnny Cake Hollow Road, Stissing Lake Road, Route 83 south of Bethel, Silvernails/Hoffman Roads (stream), Bean River area, Route 199 at Winchell Mountain Road (Mtn.), Shekomeko stream, north of Route 199, Stissing Mountain Drive, and east of Bethel.

The Dutchess County Environmental Management Council Natural Resource Inventory Data Book (1985) identifies the following roads in Pine Plains as having scenic vantage points: Johnny Cake Hollow Road, Prospect Hill Road, and Shultz Hill Road.

3.10.2 Potential Impacts

The proposed Zoning Law and Map are not anticipated to have a significant impact on historic and scenic resources. The regulations have been drafted with the express intent of protecting historic and scenic resources. Provisions of the zoning law that would achieve this objective are described below.

In the purposes section of the draft zoning law, Section 100-3 notes the following purposes of effectuating the law:

“C. To conserve the Town’s rural, small town character and scenic beauty...

G. To protect the Town’s historic structures, features and character, including the history embodied in the Town’s numerous hamlets....”

Section 100-4 sets forth the purposes for the various zoning districts identified on the draft Zoning Map. In establishing the Hamlet districts, it is the Town’s intent to foster development in the historic settlement areas known as Pine Plains, Pulvers Corners and Bethel and to encourage new development and adaptive reuse of existing structures with a building scale, massing, layout and design that is consistent with the traditional character of each hamlet.

Section 100-22, Incentive zoning, specifically allows the Town Board to grant density bonus incentives to land use applications that preserve cultural, archaeological, or historic facilities or other unique features and deed same to a municipality or qualified not-for-profit agencies.

For properties located in the H-MS, H-CR, H-R, H-PC, H-B, and R districts, a residential density bonus not to exceed fifteen percent (15%) may be approved.

The NND district requires that the Town Board find that the proposed new neighborhood will:

“(12) encourages protection of scenic vistas, historical buildings and sites, sensitive archaeological areas and other important cultural resources...”

The NND would also allow limited nonresidential development where it results in the adaptive reuse of historic structures.

The zoning law requires that subdivisions be designed with the intent of preserving historic and scenic structures. Secondary conservation values that are to be protected when designing a conservation subdivision include:

(iv) Properties or features listed, or eligible for listing on National, state or local historic registers.

(v) Scenic and recreational resources identified in the Town’s Comprehensive Plan.

The Planning Board, in deciding on a special use permit application, must specifically determine that:

“(11) The special use shall not impact historic, scenic or natural environmental features on-site or within the adjoining neighborhood.”

Also, in the Planning Board’s decisionmaking, the board must determine the following with regard to site plan applications:

“R. When projects involve the renovation/reuse of an existing building, the Planning Board may require that the historic character and architectural elements be maintained.”

Thus, the preservation of historic and scenic resources is an important objective in the land use review and decisionmaking process. Enactment of the draft Zoning Law and Map is anticipated to result in a positive impact to these features.

3.10.3 Mitigation Measures

The DGEIS does not anticipate that historic or scenic resources will be impacted. No mitigation measures are proposed.

4.0 ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Adverse environmental impacts are not anticipated to result from adoption of the draft Zoning Law and Map.

5.0 Alternatives

5.1 No Action Alternative

Under the No Action Alternative, land use and development patterns would continue in accordance with current land use regulations. The current land use regulations allow development inconsistent with the goals, objectives and strategies set forth in the adopted Comprehensive Plan and would not reflect the preferences of the Town's residents as expressed in a 2000 public opinion survey.

The public purposes and needs identified in Section 2.0 of this DGEIS will remain unserved and the public benefits will not be realized. Throughout the various sections of the DGEIS, the discussion of potential impacts compares the potential impacts that would result from adoption of the draft Zoning Law and Map and the impacts associated with buildout under the current regulations. As the development buildout under the current regulations is substantially larger than under the draft Zoning Law, the No Action alternative would result in greater impacts to natural resources and would place substantially greater demand on community services and facilities.

5.2 Adoption of a Zoning Law With Different Purposes and Regulations

The purposes, standards and regulations embodied in the draft Zoning Law and Map represent Town preferences as expressed by the boards, residents, business owners, land owners and other interested parties who were afforded opportunity for input throughout the comprehensive planning process and zoning process. Adoption of a Zoning Law with different purposes and regulations would be inconsistent with the Comprehensive Plan that was adopted for the Town.

The Town Board also reviewed a first zoning law drafted in 2007, which proposed:

- Different density regulations for active agricultural land (10 acre minimum density);
- Environmental control formula that varies from the third draft of the Zoning Law;
- A wellhead protection zone that was an overlay district rather than a base zoning district;
- A limited transfer of development rights program (transfer must be between land in same ownership);
- Special use permit standards for some, but not all, proposed special uses.
- Rural district zoning outside the hamlet zoning districts with no NND floating zone.

The Town Board, upon review of the 2007 draft, determined the following:

- Different density regulations for active agricultural land (10 acre minimum density) - The Town Board favors a Rural District with a 5 acre minimum density. Agricultural land will be protected through the AG-O zoning overlay district, which promotes development outside areas characterized by prime farmland soils, soils of statewide importance, and

active agricultural operations. Protection of agricultural lands remains a primary purpose of the Zoning Law;

- Environmental control formula that varies from the first draft of the Zoning Law - The draft Zoning Law requires that land constrained by wetlands, flood plains and steep slopes be excluded from calculations of residential density - in addition, only 50% of the land area constrained by slopes 15-25 percent may be counted toward density calculations. Reduction of density for parcels with environmental constraints remains a regulation in the Zoning Law;
- A wellhead protection zone that was an overlay district rather than a base zoning district - The WP zoning district remains essentially the same, but is no longer an overlay zone. The district is regulated by its own bulk standards and use regulations;
- A limited transfer of development rights program (transfer must be between land in same ownership) - This provision was eliminated due to the complexity to administer such a program at this time;
- Special use permit standards for some, but not all, proposed special uses - The updated special use permit regulations provide additional performance and bulk standards to ensure that special uses are consistent with their surrounds.
- Rural district zoning outside the hamlet zoning districts with no NND floating zone - The Town Board finds that the NND floating zone provides an opportunity for the Town to allow additional residential growth in a controlled manner, subject to specific and stringent design standards. The Town Board must find that the NND, on balance:
 - creates a distinct neighborhood settlement area integrated with protected open space which may be used for agricultural, silvicultural, recreational, limited nonresidential and environmental protection purposes;
 - in its design, maximizes opportunities to provide a continuous system of open space which may be linked to open space areas on adjoining property;
 - creates opportunities and/or the potential to physically link the existing Pine Plains hamlet to the NND by creation of pedestrian and bicycle corridors and accessways;
 - promotes architecture and building design consistent with that existing in traditional and historic Hudson River valley communities including the Pine Plains hamlet;
 - promotes green building techniques, like LEEDS;
 - includes a diversity of dwellings that satisfy the needs of various household types, age groups, and income levels in Pine Plains, and promotes affordable housing opportunities;
 - promotes traditional building and site development patterns with an interconnected and generally grid-like pattern of streets and blocks, except where topography and other unique environmental characteristics limit said pattern;

Alternatives

February 25, 2009

- promotes use of neighborhood greens, landscaped streets, and “single-loaded” streets woven into street and block patterns in order to provide neighborhood identity and space for social activity, parks, and visual enjoyment, except where topography and other unique environmental characteristics limit said pattern;
- meets the community service demands generated by an increased population associated with a NND;
- will be designed in accordance with the design standards set forth in the NND legislation
- encourages preservation and protection of the Town's natural environmental resources, including groundwater quality and quantity, the diversity of plant and animal communities and significant habitat for rare, endangered, threatened and special concern species;
- encourages protection of scenic vistas, historical buildings and sites, sensitive archaeological areas and other important cultural resources;
- encourages the conservation, and enhancement, of the visual quality and rural character of undeveloped areas of the Town by protecting visible open space, farmland and streams, and encourages the creation and/or preservation of vegetative buffers along highways and between potentially conflicting land uses and by the careful siting, design and buffering of building development;
- minimizes flooding and erosion by protecting the functions of wetlands, water bodies, water courses, flood plains, areas of high water table, steep slopes, erosion hazard areas and natural vegetative cover;
- minimizes stormwater runoff and maximizes the quality and quantity of groundwater recharge by reducing land disturbance, using natural drainage systems wherever possible, filtering runoff from impervious surfaces and maximizing on-site recharge;
- provides special community benefits such as public access to park land, hiking trails, biking trails and recreational resources;
- provides for the construction or improvement of public facilities, services or utilities;
- allows limited opportunity for nonresidential development through adaptive reuse of historic structures, or by providing uses that will not otherwise compete with retail, personal service or other commercial uses intended to be accommodated in the Pine Plains hamlet.

6.0 Irreversible and Irretrievable Commitment of Resources

Future development that is pursued in accordance with the Zoning Law and Map will commit land to a variety of residential and nonresidential uses. Once committed to these uses, this land would be unavailable for other uses into the foreseeable future.

Any development can result in the loss of agricultural resources, including prime farmland soils and soils of statewide importance, and woodland. However, the Zoning Law intends to limit these types of impacts to the maximum extent practicable by creating an AG-O overlay zone to protect agricultural land, mandate conservation subdivision design which will limit disturbance to woodland and agricultural properties, and implement various design standards with the purpose of protecting these resources.

The finite resources that are typically irretrievably committed by land development that would be constructed in accordance with the Zoning Law and Map include the building materials and energy required for construction, operation and maintenance of the development once completed. Construction involves the commitment of a variety of materials, including but not limited to: fill, concrete, asphalt, steel, lumber, paint products, and other building materials. The operation of construction equipment results in consumption of fossil fuels and other energy resources.

When completed, new residences and nonresidential space consume fossil fuels and electricity to meet heating, cooling, lighting and other energy needs.

7.0 Growth Inducing Aspects

Adoption of the draft Zoning Law would result in a significant decrease in the Town's residential "build-out" when compared to buildout under the current land use regulations.

In the long-term, any new resident population will introduce some consumer demand for retail and service establishments within areas that permit these types of commercial uses, namely the hamlet. Approximately 30 percent of household income is spent on retail goods and services. A substantial portion of these expenditures are made at supermarkets, local convenience stores, apparel stores, restaurants and service businesses such as gas stations and hair salons. According to the Census of Retail Trade (1997), the following categories of retail businesses would be expected to benefit in proportion to the amount of sales expended in each category:

Table 7-1 New York State: Percent Sales by Retail Category	
Category	Percent
Motor Vehicles	20.9
Furniture/Home Furnishings	3.1
Electronic and appliance stores	3
Building Materials	7.8
Food and beverage	18.3
Health and personal care	7.4
Gasoline service stations	5.7
Clothing	9.5
Sporting goods and hobbies	3.4
General merchandise (warehouse clubs, department stores)	11.4
Miscellaneous (florist, office supplies)	3.9
Non-store retailers (electronic shopping, fuel distributors)	5.5
Source: U.S. Census Bureau, 1997 Economic Census: Retail Trade New York.	

To the extent these uses are permitted by the draft Zoning Law and there is sufficient market demand, the above listed establishments may be expected to benefit from, or be introduced into the community as a result of household expenditures made by future Pine Plains residents.

8.0 Effects on the Use and Conservation of Energy Resources

The draft Zoning Law, in implementing the strategies of the Comprehensive Plan, would result in increased conservation of energy resources. The land use pattern, focusing development within the hamlet and within subdivisions exhibiting a tighter settlement pattern created through conservation design, will promote pedestrian activity by encouraging trail and sidewalk use, and generally reduce vehicular trips in the Town thereby reducing the consumption of fossil fuels. The reduction in potential buildout will likewise reduce development and the concomitant increase in vehicular trips.

Residential and commercial building designs submitted for construction permits on or after the effective date of July 3, 2002 must comply with the Energy Conservation Construction Code of New York State ("Energy Code"). The Energy Code addresses the design of energy-efficient building envelopes and the installation of energy-efficient mechanical, lighting and power systems through requirements emphasizing performance.

For residential uses, requirements apply to heating and cooling systems, the hot water system, electrical system, material and equipment specifications and sealing the building envelope. For nonresidential uses, the NYS Energy Code requires that:

- insulation R-values and glazing and door U-factors be certified by the National Fenestration Rating Council (NFRC) or by using default values found in tables published in the Code.
- vapor retarders be installed in nonvented framed ceiling, wall, and floor areas.
- insulation levels for walls, roofs, and below-grade walls and glazing areas, and U-factors for windows and skylights meet or exceed minimum efficiency levels.
- air leakage be limited through the building envelope.

The NYS Energy Code also requires that water and air cooling and heating mechanical systems and equipment comply with code, and compliance is dependent on the type of mechanicals proposed. In terms of lighting standards, the NYS Energy Code requires:

- manual or automatic controls or switches that allow occupants to dim lights and turn them on or off when appropriate. The Code identifies control, switching, and wiring requirements that apply to all buildings.
- total connected loads for indoor lighting systems that do not exceed power allowances for a building. The Code demonstrates how to comply with interior-lighting power limits.
- energy-efficient exterior lighting. The Code specifies criteria for complying with exterior-lighting requirements.

Lastly, if a NND zone is approved, 25 percent of the dwellings within the NND would be required to meet Leadership in Energy and Environmental Design ("LEED") standards, requiring the integration of green building standards into home design, and reducing energy consumption in comparison to average residential construction.

Adherence to the NYS Energy Code will result in energy savings.

APPENDIX A
SEQRA Documentation

**TOWN BOARD OF THE TOWN OF PINE PLAINS
RESOLUTION COMMENCING REVIEW OF PROPOSED ZONING LAW**

WHEREAS, the Town Board of the Town of Pine Plains adopted an updated Comprehensive Plan in November of 2003; and

WHEREAS, in 2005, the Town Board, by resolution, created a Zoning Commission to recommend to the Town the boundaries of the various original zoning districts for the Town, and appropriate land use regulations to be enforced therein; and

WHEREAS, the Zoning Commission, after the conduct of public hearings and meetings, issued its final report to the Town Board on July 19, 2007 in the form of a Proposed Draft Zoning Law; and

WHEREAS, the Town Board, thereafter, utilized the services of its planning, engineering and legal consultants to, where necessary and appropriate, review, edit, modify, amend and supplement the Proposed Draft Zoning Law as reported to the Town Board by the Zoning Commission; and

WHEREAS, the Town Board's consultants presented to the Town Board, on February 19, 2009, an Amended Final Draft Zoning Law which has been edited, modified, amended and supplemented in accordance with the directives of the Town Board; and

WHEREAS, the Town Board has determined that the Amended Final Draft Zoning Law is now ready for public review and commencement of the Local Law adoption process:

NOW, THEREFORE, BE IT RESOLVED:

1. That the Town Board hereby commences the process for the review and adoption of the Town of Pine Plains Zoning Law.
2. That the proposed adoption of the Zoning Law constitutes an “action” subject to SEQRA.
3. That the proposed adoption of the Zoning Law constitutes a Type I Action pursuant to §617.4(b)(1) of SEQRA.
4. That the Town Board is the only involved agency in this action, and the Town Board is hereby designated as Lead Agency with regard to the SEQRA Review of the Zoning Law.
5. That the Town Board hereby adopts the Positive SEQRA Declaration, a copy of which is annexed hereto, in which it has determined that the proposed adoption of the Zoning Law is a Type I Action under SEQRA and may include the potential for at least one significant environmental impact and that “Scoping” shall not be conducted in the SEQRA Review of the Zoning Law.
6. That the Town Board hereby waives the requirement for preparation of a Full Environmental Assessment Form pursuant to §617.6(a)(4) (“EAF”) in conjunction with the SEQRA Review of this action.
7. That the Town Board will be preparing a Draft Generic Environmental Impact Statement (“DGEIS”) in conjunction with its SEQRA Review of the Zoning Law.
8. That the Town’s consultants are hereby directed to prepare a DGEIS and submit the same to the Town Board for its review for purposes of determining if the DGEIS is complete for purposes of commencing public review of the same.

9. That upon acceptance of the DGEIS by the Town Board, the Town Board shall schedule a joint public hearing on the adoption of the Zoning Law and on the DGEIS.

10. That the proposed Zoning Law and the Positive Declaration shall be posted on the Town's official web site, and copies of these documents shall also be made available for public review and inspection at the Pine Plains Free Library at 7806 S. Main Street, Pine Plains, NY 12567, and at the Town Hall, 3284 Route 199, Pine Plains, NY 12567 during regular business hours.

11. That the proposed Zoning Law is hereby referred to the Town of Pine Plains Planning Board for its review and comment.

12. That the Town Board shall refer the proposed Zoning Law to Dutchess County Department of Planning and Development, together with a copy of the Positive Declaration and, after the DGEIS is accepted by the Town Board as complete and ready for public review, the DGEIS shall also be referred to the Dutchess County Department of Planning and Development, all in satisfaction of the referral requirements of §239-m of the General Municipal Law.

13. That the Town Clerk is hereby directed to forward the Positive Declaration to all interested agencies, as listed on the Positive Declaration, and to the Environmental Notice Bulletin.

The above resolution was offered by *Doreen Gardner* and seconded by *George Keeler* and was duly put to a vote on roll call which resulted as follows:

Supervisor Pulver Voted ____Aye____
Councilperson Gardener Voted ____Aye____
Councilperson Butler Voted ____Aye____
Councilperson Couse Voted ____Aye____
Councilperson Keeler Voted ____Aye____

THE RESOLUTION WAS THEREUPON DECLARED DULY ADOPTED ON
FEBRUARY 19, 2009.

_____/ S /_____
JUDY S. HARPP, TOWN CLERK

State Environmental Quality Review Act (SEQRA)

POSITIVE DECLARATION

Notice of Intent to Prepare a Draft Generic Environmental Impact Statement
Determination of Significance

Date: February 19, 2009

This Notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Town of Pine Plains Town Board, as lead agency, has determined that the proposed action described below may have a significant effect on the environment and that a Draft Generic Environmental Impact Statement will be prepared.

Name of Action: Initial Adoption of Town of Pine Plains Zoning Law and Zoning Map

SEQRA Status: Type I Action – The initial adoption of a municipality’s comprehensive zoning regulations is a Type I action as per §617.4(b)(1) of the regulations implementing SEQRA.

Description of Action: The Town seeks to adopt a comprehensive zoning law that would regulate land uses and the density/intensity of same throughout the Town.

Location: The Town of Pine Plains is located in northern Dutchess County. It adjoins the Towns of Northeast, Milan and Stanford in Dutchess County, and the Towns of Ancram and Gallatin in Columbia County. Regionally, the Town is located generally east of the Taconic Parkway, and west of the New York/Massachusetts/Connecticut tri-state border.

Reasons Supporting This Determination: As per §617.10 of the SEQRA regulations, the Draft Generic Environmental Impact Statement is to be used to assess the environmental impacts of the new zoning regulations that will have wide application and regulate and restrict the range of future alternative land use policies. The proposed action may:

- a. Establish land use regulations that will cause a change in the density and pattern of land use and set an important precedent for future actions;
- b. Establish land use regulations that will alter existing patterns of growth and character of the community;
- c. Allow uses that may ultimately affect agricultural uses and activities within the Town;

d. Establish land use regulations that would allow development that may have a future impact on natural resources, including, but not limited to, geology, soils, topography, water resources and ecological habitats;

e. Establish land use regulations that may result in development that will have a future impact on aesthetic and historic resources;

f. Establish land use regulations that may result in development that will alter existing and potential future traffic patterns; and

g. Establish land use regulations that may result in development that will alter existing patterns of open space or create recreation demand.

Scoping: The Town Board has determined that Scoping shall not be conducted.

For Further Information:

Contact Person: Honorable A. Gregg Pulver, Supervisor
Pine Plains Town Board
C/o Pine Plains Town Hall
3284 Route 199
P.O. Box 955
Pine Plains, NY 12567

Contact Phone No: 518-398-7155

A Copy of this Notice and the draft Scope Sent to:

Environmental Notice Bulletin
625 Broadway
Albany, NY 12233-1750

Involved Agencies:

Town of Pine Plains Town Board
c/o Pine Plains Town Hall
3284 Route 199
P.O. Box 955
Pine Plains, NY 12567

Interested Agencies:

NYS Dept. of Environmental Conservation
Division of Regulatory Affairs, Region 3
21 South Putt Corners Road, New Paltz, NY 12561

NYS Office of Parks, Recreation and Historic Preservation
Pebbles Island Resource Center
P.O. Box 189, Waterford, NY 12188-0189

NYS Department of Transportation, Region 8
Eleanor Roosevelt State Office Building
4 Burnett Boulevard
Poughkeepsie, NY 12603

Dutchess County Department of Planning and Development
C/o Commissioner
27 High Street
Poughkeepsie, NY 12601

Dutchess County Health Department
C/o Commissioner
387 Main Street
Poughkeepsie, NY 12601

Dutchess County Public Works
C/o Commissioner
22 Market Street
Poughkeepsie, NY 12601

Dutchess County Water and Wastewater Authority
C/o Director
27 High Street
Poughkeepsie, NY 12601

Pine Plains Central School District
C/o Superintendent of Schools
2829 Church Street
Pine Plains, NY 12567

Town of Northeast
C/o Town Clerk
Northeast Town Hall
P.O. Box 516
Millerton, NY 12546

Town of Milan
C/o Town Clerk
Wilcox Memorial Town Hall
20 Wilcox Circle
Milan, NY 12571

Town of Stanford
C/o Town Clerk
Stanford Town Hall

PO Box 436
Stanfordville, NY 12581
Town of Ancram
C/o Town Clerk
Ancram Town Hall
1416 County Route 7
Ancram, NY 12502

Town of Gallatin
C/o Town Clerk
Gallatin Town Hall
P.O. Box 67
Ancram, NY 12502

Columbia County
401 State Street
Hudson, NY 12534

Columbia County Department of Planning/Economic Development
401 State Street
Hudson, NY 12534

Town of Pine Plains Planning Board
c/o Pine Plains Town Hall
3284 Route 199
P.O. Box 955
Pine Plains, NY 12567

Town of Pine Plains Conservation Advisory Council
c/o Pine Plains Town Hall
3284 Route 199
P.O. Box 955
Pine Plains, NY 12567

APPENDIX B

Buildout Analysis - Current Land Use
Regulations

Buildout Analysis Exercise for Pine Plains

A buildout analysis is an exercise designed to estimate the amount of development that can possibly occur if all developable land in a town is built according to the Town's current land use regulations. This buildout analysis applies current Pine Plains land use regulations and calculates the total residential density allowed at full buildout of the town. It does not predict when this would occur, at what rate it would occur, or where it would occur first. It only predicts the end result. The general process followed to calculate full buildout conditions is:

- a) Identify areas in the town that already have residential development and therefore would not allow new development
- b) Identify areas in the town having environmental constraints that would not support new residential development
- c) Calculate the amount of new residential development allowed by Pine Plains' current land use regulations in the remaining undeveloped areas of the Town.

These steps are outlined in greater detail on the following pages.

A geographic information system (GIS) software program was used to conduct the analysis. In essence, the analysis calculates the total land base of the town, subtracts all lands having environmental constraints and already built areas, and then applies the various development rules to calculate the number of allowable new residences. For purposes of this analysis, the buildout assumed that all new development would be single-family homes.

In addition to analyzing the current regulations, this buildout exercise evaluates alternative scenarios in order to examine the impacts on potential development if current regulations are changed in various ways.

Please note that the results of all of the calculations in all of the various versions and scenarios in this document are only estimates. The GIS layers used are not exact replicas of what is actually found in the real world, only representations of what is there. The processing of the data also introduces a certain amount of error, and can increase the inaccuracy of the data layers. The only way to get an accurate count of allowed residential uses on a particular property is to do an on-site survey of existing conditions.

This document is a compilation of all of the versions and scenarios requested by the commission to date. There have been draft documents distributed prior to this report which may contain different text, numbers, and results. The contents of this document reflect the changes, comments, and other corrections requested by the commission, and considered necessary by the consultant.

Pine Plains Buildout Exercise - Version 1

As a way to ensure that future growth in Pine Plains is consistent with the town's rural character, the Comprehensive Plan specifically recommends providing for "...densities that are compatible with the lands' ability to support development." The plan further outlines the use of an "...environmental control formula to establish site-specific densities that are consistent with local conditions. With an environmental control scheme, a site's density is modified based on the specific environmental conditions found on that site. The premise of this technique is that the capacity of the parcel is based on the environmental characteristics of the site. The overall development intensity should be set by the community but also factor in environmental constraints."

The first version of the buildout exercise compares the town's existing development regulations to a series of environmental control formulas. The purpose here is to evaluate the various densities that might be produced under current conditions and control formula options.

Environmental Constraints layers used:

- Water Bodies
- 20 foot buffer of streams
- DEC and NWI wetlands
- Slopes over 15%
- Shallow Soils
- 100 year Flood Hazard Zone

(note that this version of the buildout uses a small scale shallow soils layer that will be substituted with a larger scale layer in future versions)

Basic steps used to produce the various buildout calculations:

- 1- Separated the parcel layer into two zones. The Proposed Hamlet District, and those areas outside the proposed Hamlet District.
- 2- Identified parcels that would not allow any further development
 - a) Road, utility, and ROW corridors
 - b) Parcels that are fully built with residential, commercial, or government uses.
 - c) Parcels preserved through a conservation easement
- 3- Did not remove residential parcels with existing homes that could accommodate an additional dwelling.
- 4- Identified environmentally constrained areas: (layers used to produce the conservation district in the Comprehensive Plan)
 - a) Open water
 - b) Streams with a 20 foot buffer (Comp Plan used 100 foot buffer)
 - c) DEC and NWI wetlands
 - d) 100 year flood hazards
 - e) Slopes over 15%
 - f) Shallow soils/exposed bedrock
- 5- Calculated the potential new residential units for each remaining parcel using various scenarios.

Scenarios using minimum lot size (current regulations):

(All numbers are **estimates** of what could potentially be built using the various formulas)

1- Half-acre minimum lot size, without any consideration for environmental constraints.

(NewDU_Full)

Hamlet-1, Pine Plains	928
Hamlet-2, Pulver's Corners	176
Hamlet-3, Bethel	24
Non-Hamlet	28,306
Total	29,434

2- Half-acre minimum lot size, with most environmental constraints removed from development.
(Constraints removed include open water, state and federal wetlands, 100 year flood zones, and slopes over 15%)

(NewDU_NoCo)

Hamlet-1, Pine Plains	732
Hamlet-2, Pulver's Corners	148
Hamlet-3, Bethel	26
Non-Hamlet	18,949
Total	19,855

Scenarios using the Environmental Control Formula (example for possible new regulations):

Site Characteristic	Multiplication Factor
Unconstrained Area	1.0
Open Water	0.0
Wetlands, State and Federal	0.05
100 Year Flood Hazard	0.2
Steep Slope	0.2
Shallow Soils	0.2

3- Environmental Formula using 1/2 acre base density
(without using the Shallow Soils multiplication factor)

(EnvForm05S)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	22,080
Total	23,116

4- Environmental Formula using 1/2 acre base density
(including using the Shallow Soils multiplication factor)

(EnvForm05A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	14,908
Total	15,944

(all of the following calculations include the shallow soils multiplication factor in the formula)

5- Environmental Formula using 1-acre base density

(EnvForm1A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	7,370
Total	8,406

6- Environmental Formula using 2-acre base density

(EnvForm2A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	3,689
Total	4,725

7- Environmental Formula using 3-acre base density

(EnvForm3A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	2,495
Total	3,531

8- Environmental Formula using 5-acre base density

(EnvForm5A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	1,585
Total	2,621

9- Environmental Formula using 10-acre base density

(EnvForm10A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	940
Total	1,976

10-Environmental Formula using 20-acre base density

(EnvForm20A)

Hamlet-1, Pine Plains	841
Hamlet-2, Pulver's Corners	169
Hamlet-3, Bethel	26
Non-Hamlet	653
Total	1,689

Parcel Specific Buildout Results

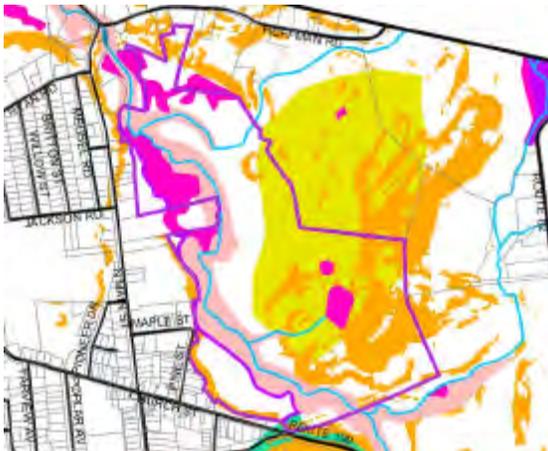
The committee identified three specific parcels to evaluate the buildout calculations in greater detail. The specific results of the calculations for the parcels are outlined in the table below. These formula used is the same one used for the five acre base density environmental formula calculation on the previous page. It did not use the farmland soils layer as a factor in the equation. A series of graphics for the Sunny Meadows parcel helps explain the process on the next page

Name	Sunny Meadows Farm	Sunny Meadows Farm	Schultz Hill Farm	Fulton Rockwell Farm
District	Hamlet 1	Non Hamlet	Non Hamlet	Non Hamlet
Calculated Acres	29.9	296.1	205.0	405.2
Assessed Acres	326.15	326.15	207.80	405.93
Calculated Sq. Ft. (GIS)	1,302,593	12,899,598	8,930,547	17,650,461
Non-constrained Sq. Ft.	1,038,172	3,568,436	1,987,825	5,886,123
Water Sq. Ft.	-	442,190	73,786	51,901
Wetland Sq. Ft.	-	1,181,568	1,079,392	133,431
Shallow Soils Sq. Ft.	-	3,674,764	3,221,742	8,815,148
Steep Slope Sq.Ft.	264,421	1,588,729	2,567,805	2,763,866
Flood Hazard Sq. Ft.	-	2,443,912	-	-
Aquifer Sq. Ft.	-	65,248	-	-
Number of Current Residences	0	0	0	0
Buildout Results				
New DU's at Full Buildout	55	548	379	750
New DU's_Considering Constraints	44	307	221	624
Buildout Results				
EnvForm 0.5 Acre	50	237	146	376
EnvForm 1 Acre		118	73	188
EnvForm 2 Acre		59	36	94
EnvForm 3 Acre		39	24	62
EnvForm 5 Acre		23	14	37
EnvForm 10 Acre		11	7	18
EnvForm 20 Acre		5	3	9

Sunny Meadows Farm



Aerial Photo of the Property



All of the environmental constraints on the property



Environmental Constraints Layer, showing all constraints merged, including shallow soils

Legend

- Town Boundary
- Roads
 - NYS Routes
 - County and Local Roads
- Parcel Boundaries
- 1 dot = 1 residential use (not number of units)
- 1 Dot = 2
- Buildout Calcs-Test Parcels
- EnvironmentalConstraintsAll
- Water Bodies
- Streams - 20 ft Buffer
- Wetlands DEC
- Wetlands NWI
- Flood Hazard - 100 Year
- Slope Over 15 Percent
- Shallow Soils
- Aquifer Recharge



Results of the calculation at three-acre base density



Results of the calculation at five-acre base density



Results of the calculation at ten-acre base density

Pine Plains Buildout Exercise - Version 2

The shallow soils layer used in the previous calculations was found to be derived from a layer produced at a very small scale. A more accurate shallow soils layer was extracted from the Dutchess County soil survey layer, and is used for all of the calculations from this point forward.

The second version of the buildout adds prime farmland soils and soils of statewide importance to the environmental control formula. The shallow soils layer is given a higher multiplication factor, which lowers the effect it has on the allowed density. A more accurate shallow soils layer is also used, derived from the county soil survey. The equation used to do the buildout calculations is described in greater detail in this version.

Environmental Constraints layers used:

- Water Bodies
- 20 foot buffer of streams
- DEC and NWI wetlands
- Slopes over 15%
- Shallow Soils (from soil survey)
- 100 year Flood Hazard Zone
- Prime farmland and soils of statewide significance

Basic steps used to produce the various buildout calculations:

- 1- Separated the parcel layer into two zones. The Proposed Hamlet District, and those areas outside the proposed Hamlet District.
- 2- Identified parcels that would not allow any further development
 - a) Road, utility, and ROW corridors
 - b) Parcels that are fully built with residential, commercial, or government uses.
 - c) Parcels preserved through a conservation easement
- 3- Did not remove residential parcels with existing homes that could accommodate an additional dwelling.
- 4- Identified environmentally constrained areas:
 - a) Open water
 - b) Streams with a 20 foot buffer (Comp Plan used 100 foot buffer)
 - c) DEC and NWI wetlands
 - d) 100 year flood hazards
 - e) Slopes over 15%
 - f) Shallow soils/exposed bedrock
 - g) Prime Farmland and Soils of Statewide Importance
- 5- Calculated the potential new residential units for each remaining parcel using various scenarios.

The Formula Used:

- Area of non-constrained land x 1
- Plus Area of Water x 0
- Plus Area of Wetland x 0.05
- Plus Area of Flood Hazard x 0.2
- Plus Area of Steep Slope x 0.2
- Plus Area of Shallow Soils x 0.2
- Plus Area of Farm Soils (Prime and State Imp.) x 0.2
- Divided by the allowed base density
- Minus any existing residences
- Rounded **down** to the nearest whole number

Note:

1 acre = 43,560 square feet
 3 acres = 130,680 square feet
 5 acres = 217,800 square feet
 10 acres = 435,600 square feet

The formula as used in the GIS database:

$$\text{Int} ((([\text{NoConsSqFt}] + ([\text{WetlndSqFt}] * 0.05) + ([\text{FloodSqFt}] * 0.2) + ([\text{SteepSqFt}] * 0.2) + ([\text{ShallwSqFt}] * 0.2) + ([\text{FarmSoil}] * 0.2) * 0.000007652) - [\text{CurntResid}])$$

Scenarios using the Environmental Control Formula:

Site Characteristic	Multiplication Factor
Unconstrained Area	1.0
Open Water	0.0
Wetlands, State and Federal	0.05
100 Year Flood Hazard	0.2
Steep Slope	0.2
Prime and State Imp. Soils	0.2
Shallow Soils	0.6

Scenario 1

Non-Hamlet Districts using the environmental formula at 5 acre base density, without including adjustment for Farm Soils

Total Non-Hamlet 1,311 (any parcel over 5,000 square feet allowed at least one unit)

Scenario 2

Non-Hamlet Districts using the environmental formula at 5 acre base density, including adjustment for Farm Soils

Total Non-Hamlet 959 (any parcel over 5,000 square feet allowed at least one unit)

Pine Plains Buildout Exercise - Version 3

To further evaluate and refine the environmental control formula, the third buildout exercise separates prime farmland soils and soils of statewide significance into two different categories. These two factors then received two different weights in the equation. The Aquifer recharge area is also included in the formula, as outlined in the Comprehensive Plan.

The two scenarios here, compare the effect of including and excluding the shallow soils factor in the final equation.

Two scenarios were generated using the Environmental Control Formula:

Scenario #1 includes the shallow soils layer at a multiplication factor of 0.6

Scenario #2 does not use the shallow soils layer in the calculation

The Formula:

The formula expressed as text:

(Area of non-constrained land x 1) + (Area of Water x 0) + (Area of Wetland x 0.05) + (Area of Flood Hazard x 0.2) + (Area of Aquifer Recharge x 0.2) + (Area of Steep Slope x 0.3) + (Area of Prime Farmland Soils x 0.4) + (Area of Soils of Statewide Importance x 0.5) + (Area of Shallow Soils x 0.6)
Divided by the allowed base density, Minus any existing residences, Rounded down to the nearest whole number

The actual formula used in the GIS database:

Int ((([NoConsSqFt] + ([WaterSqFt]*0) + ([WetIndSqFt] *0.05) + ([FloodSqFt]*0.2) + ([AquiferSqFt]*0.2) + ([SteepSqFt]*0.3) + ([PrimeSqFt] *0.4) + ([StateSqFt] *0.5) + ([ShallowSqFt]*0.6)) *0.0000045913)- [CurmtResid])

Scenario #1 (using shallow soils)

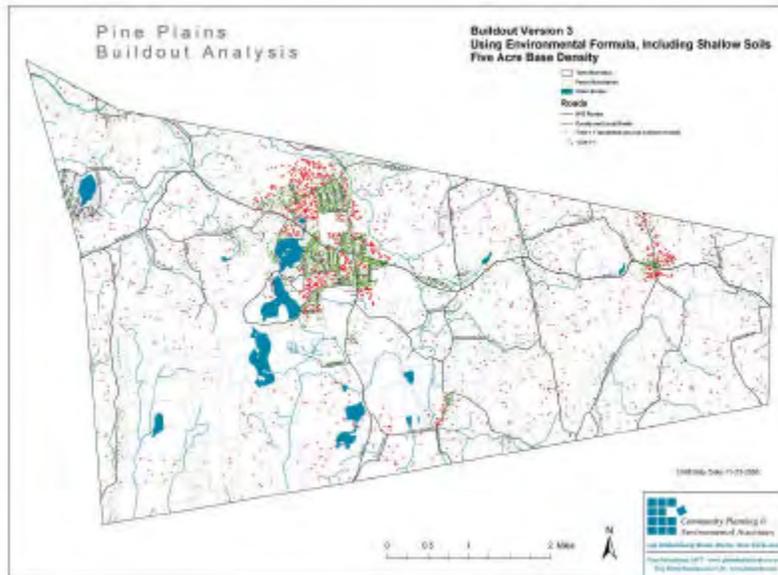
Site Characteristic	Multiplication Factor
Unconstrained Area	1.0
Open Water	0.0
Wetlands, State and Federal	0.05
100 Year Flood Hazard	0.2
Aquifer Recharge Area	0.2
Steep Slope	0.3
Prime farmland soils	0.4
Soils of Statewide Importance	0.5
Shallow Soils	0.6

Results:

Non-Hamlet District using the environmental formula at 5 acre base density

Estimated Non-Hamlet 1,304 (all existing parcels allowed at least one unit)
 (includes 200 new uses in the Carvel Area)

Total for the entire town 2,355 potential new residences



Scenario #2 (without using shallow soils)

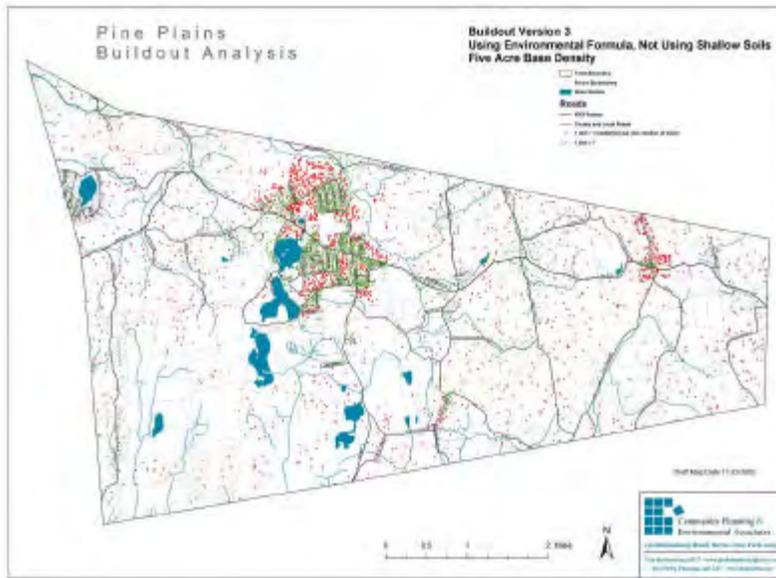
Site Characteristic	Multiplication Factor	
Unconstrained Area	1.0	
Open Water	0.0	
Wetlands, State and Federal	0.05	
100 Year Flood Hazard	0.2	
Aquifer Recharge Area	0.2	
Steep Slope	0.3	
Prime farmland soils	0.4	
Soils of Statewide Importance	0.5	
Shallow Soils	1.0	(no change in the allowed base density)

Results:

Non-Hamlet Districts using the environmental formula at 5 acre base density

Estimated Non-Hamlet 1,469 (all existing parcels allowed at least one unit)
(includes 200 new uses in the Carvel Area)

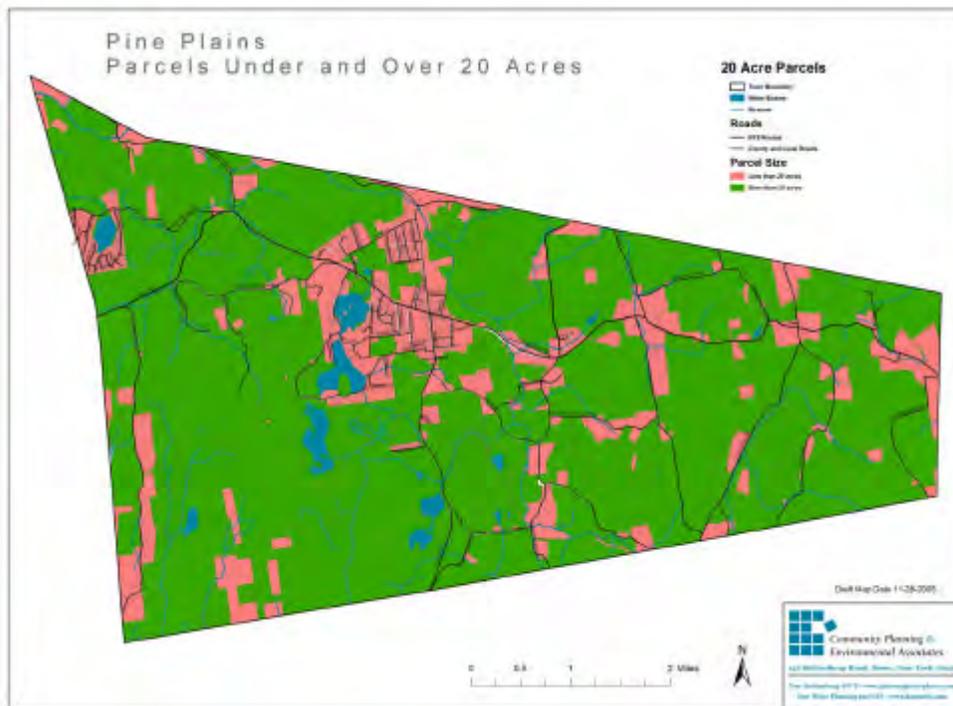
Total for the entire town 2,520 potential new residences



Some answers to questions regarding specific parcels

How many parcels are there in the town less than 20 acres in size?

- 1,450 parcels are under 20 acres
- 889 buildable parcels are under 20 acres
- 664 potential new residences on buildable parcels under 20 acres
(using the latest 5 acre environmental formula, without considering shallow soils)
- 169 parcels over 20 acres
- 137 buildable parcels over 20 acres
- 1,445 potential new residences on buildable parcels over 20 acres
(using the latest 5 acre environmental formula, without considering shallow soils)



What is the impact on the buildout if the Mashomack property is placed under a conservation easement, preventing all residential development?

- Using the latest 5 acre environmental formula without considering shallow soils, 75 new residential uses would be allowed on this property
- Under the existing land use regulations, the property could potentially be developed with 1,235 new residential uses (using a 20,000 square foot minimum lot size, and removing all major environmental constraints from the buildable area)

APPENDIX C

Buildout Analysis - Draft Zoning Law
and Map

Pine Plains Buildout Analysis

Second Draft Zoning Law, June 2008 Draft Zoning Map Version 7, November 28, 2008

In order to evaluate recent changes to the proposed zoning law and maps, a zoning buildout exercise was performed for the entire town using the Second Draft Zoning Law - dated June 2008, and the Draft Zoning Map version 7 - dated Nov. 28, 2008.

A build-out analysis is an exercise designed to estimate the amount of development that can possibly occur if all developable land in a Town, Village, or County is built according to the municipality's current or proposed land use regulations. The buildout analysis applies the land use regulations and calculates the total residential density allowed at full buildout of the municipality. It does not predict when this would occur, at what rate it would occur, or where it would occur first. It only predicts the possible end result. The general process followed to calculate full buildout conditions is:

1. Identify areas that already have residential development and therefore would not allow new development
2. Identify properties already preserved or owned by government entities not likely to allow new development
3. Consider areas in the town having environmental constraints that would not support new residential development
4. Calculate the amount of new residential development allowed by the land use regulations in the remaining undeveloped areas of the Town.

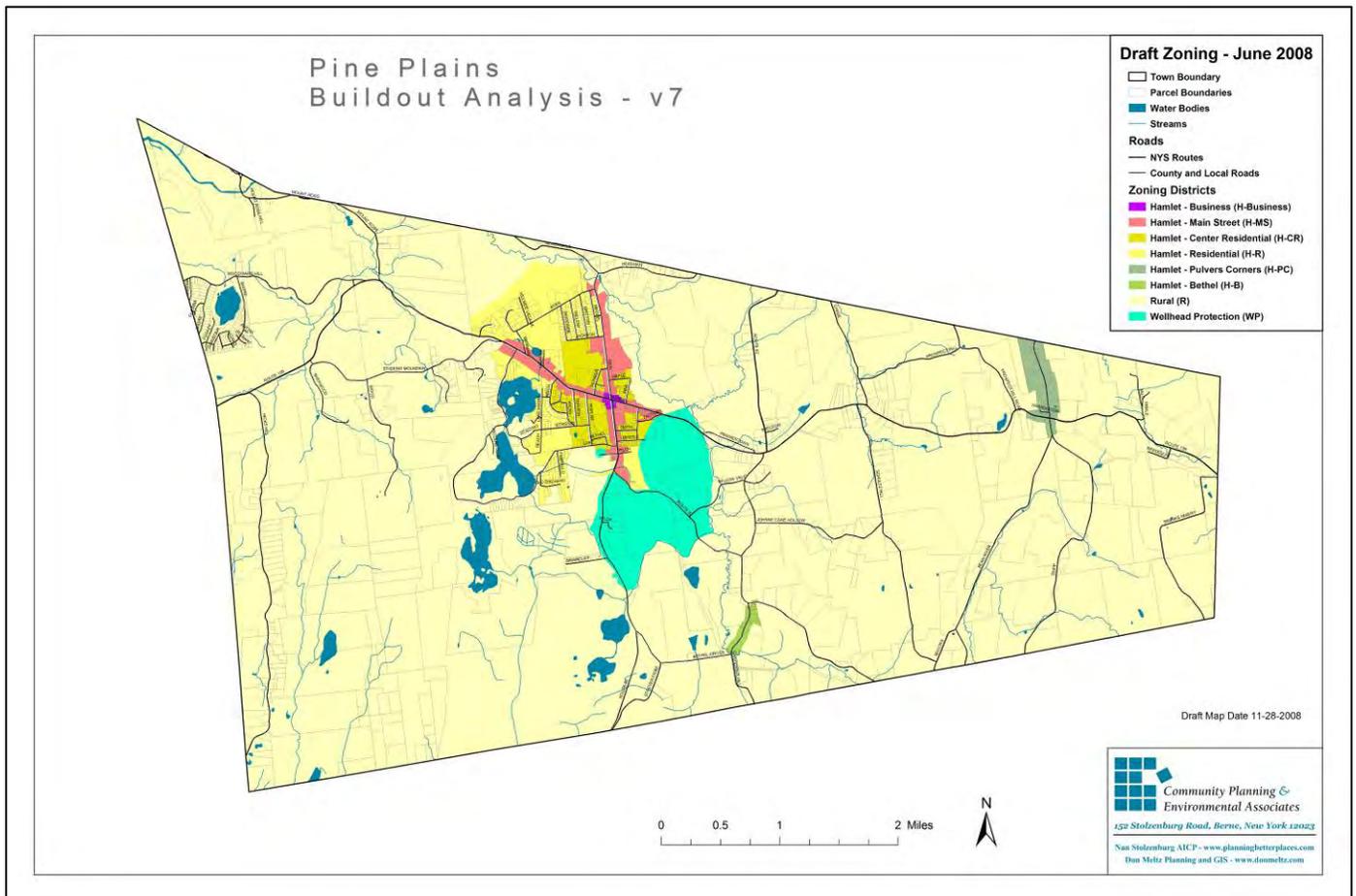
A geographic information system (GIS) software program is used to conduct the analysis. In essence, the analysis calculates the total land base of the town, subtracts all completely built areas, and then applies the various development rules to calculate the number of allowable new residences.

For purposes of this analysis, the buildout assumes all new development will be single-family homes. Note that the results of all of these calculations are only estimates. The GIS layers used are not exact replicas of what is actually found in the real world, only representations of what is there. The processing of the data also introduces a certain amount of error, and can increase the inaccuracy of the data layers. The only way to get an accurate count of allowed residential uses on a particular property is to do an on-site survey of existing conditions.

The first step is to identify the existing uses for each parcel. Existing residential uses are identified by using the Property Class code found in the table accompanying the GIS parcel layer. Generally, any property with a property class code in the 200 range is a residential use. Some commercial uses, such as mobile home parks and apartment buildings are also essentially residential uses, and considered as such for purposes of the buildout calculations. These are shown on the Existing Residential Use map using a small green dot randomly placed on the parcel. The dot does not indicate the exact location of the building on the property; it only indicates there is a residential building on it.

In the Town of Pine Plains, the Draft Zoning Law and Draft Zoning Map were used to determine the allowed density for every parcel in each proposed district. Fully built parcels were identified by using the Property Class code found in the table accompanying the GIS parcel layer, calculating the total area of the parcel, and comparing it with the minimum lot area required in the district where the parcel is located. For example, an existing residence on a 9-acre parcel in a district with a 5-acre minimum lot size is designated as fully built because it cannot be subdivided into two new conforming lots. Further inspection using the Aerial Photographs helped to identify more parcels that are developed in a way that would not allow further subdivision. Houses placed in the middle of a large lot would be one example. Some intensively developed non-residential uses were also removed. State owned lands, properties with conservation easements, cemeteries, and churches were also removed after inspection of the aerial photos. What is left after subtracting the fully built parcels is a layer showing the buildable parcels in the municipality; those that can potentially be further subdivided and/or built upon.

The proposed districts and densities are outlined in the following map and table



Proposed Densities:

Hamlet – Business.....	See note below
Hamlet – Main Street.....	20,000 square feet/dwelling unit
Hamlet – Center Residential.....	20,000 square feet/dwelling unit
Hamlet – Residential.....	30,000 square feet/dwelling unit
Hamlet – Pulver’s Corners.....	1 acre/dwelling unit
Hamlet – Bethel.....	30,000 square feet/dwelling unit
Rural.....	5 acres/dwelling unit
Wellhead Protection.....	5 acres/dwelling unit

Note: While the draft zoning law Table A, Schedule of Use Regulations lists single-family homes as a permitted use in the Hamlet-Business district, Schedule B, Table of Bulk Regulations does not include a minimum lot area for that use. There are only 2 vacant lots in that district that could accommodate a new single-family home. Therefore, this discrepancy does not significantly alter the buildout results.

The Formula

All of the proposed districts have minimum lot areas based on the net acreage after specific environmental constraints are removed from the building lot’s gross acreage. The net acreage is the area of the lot after subtracting:

- The area of the 100 year flood plain
- Any wetlands regulated by NYS DEC or the U. S. Army Corps of Engineers
- Lands covered by any natural or constructed water body
- Land with a slope of more than 25%
- Half the area of any land with a slope between 15 and 25%

In addition to the minimum lot area requirements, a conservation subdivision design is allowed in all districts, and required under certain circumstances. The calculation used to determine the number of allowed building lots in such s development includes a deduction for the area required for new roads. The current draft zoning law stipulates a 25% reduction in the net area. However, it was requested that this buildout analysis use a 15% reduction in its calculations.

The formula expressed as text-

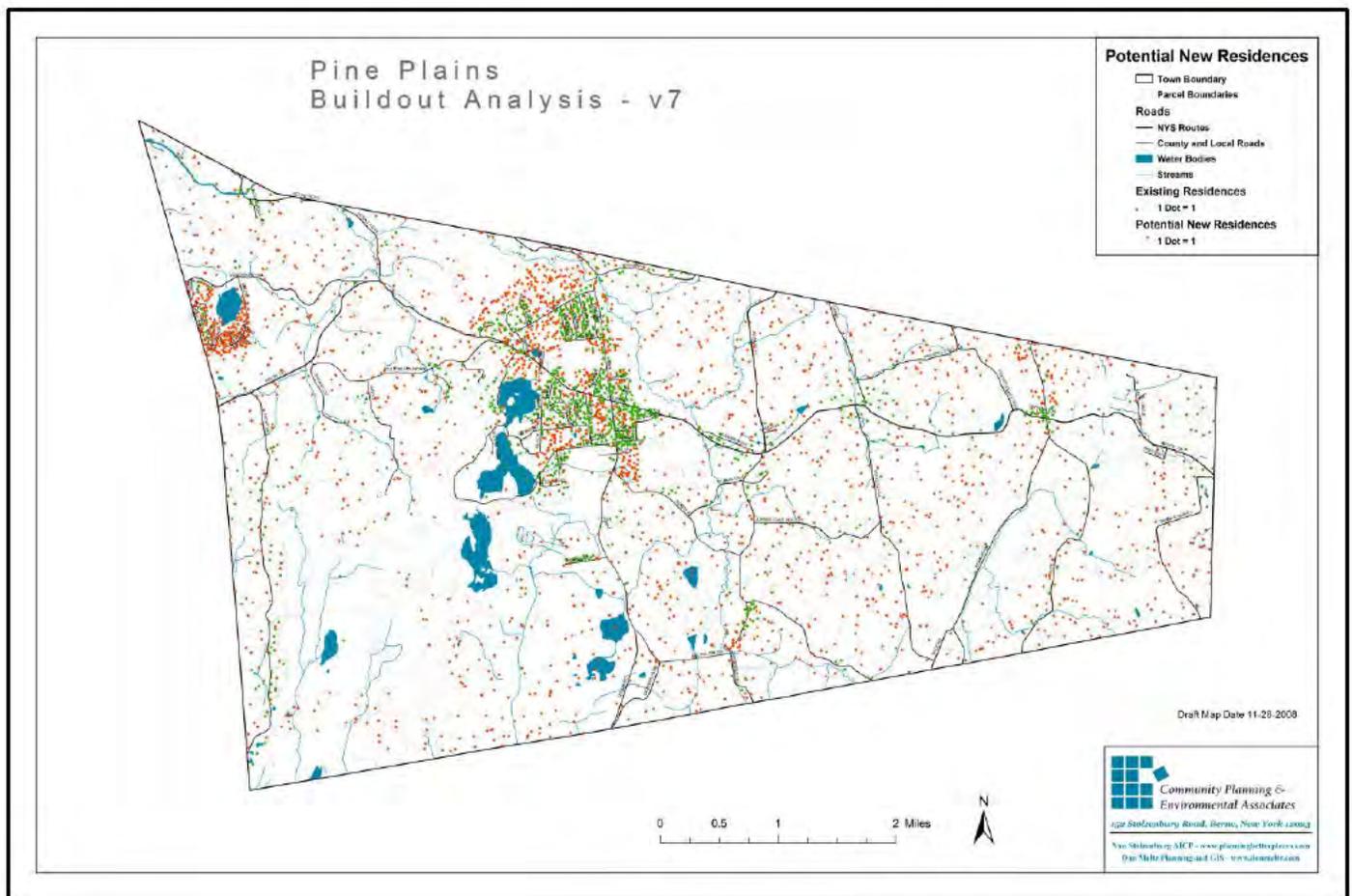
The number of new building lots allowed in a new subdivision equals:
 The net area of the parcel after all listed constraints are removed,
 Minus 15% of the net area for placement of roadways,
 Divided by the minimum lot size
 Minus any existing residences

Buildout Results:

(All existing vacant parcels were allowed at least one unit)

(The Rural District buildout number includes 190 potential new residences in the pre-existing Carvel subdivision)

Non-Hamlet Districts	
Rural	1,660
Wellhead Protection	61
All Non-Hamlet Districts:	1,721
Hamlet Districts	
Hamlet - Bethel	17
Hamlet - Pulver's Corners	42
Hamlet - Business	(if residential uses are allowed) 2
Hamlet - Main Street	108
Hamlet - Center Residential	106
Hamlet - Residential	368
All Hamlet Districts:	643
Total for the entire town:	2,364 potential new residences



Other Considerations

Central Sewer

The draft zoning law allows an increase in density if central sewer is supplied to new lots created in the Hamlet Main Street, and Hamlet Center Residential districts. In these districts, the minimum lot area decreases from 20,000 to 15,000 square feet per residential lot. Using this alternative minimum lot area, the Hamlet Main Street district allows for 157 additional residences, and the Hamlet Center Residential district allows for 164 additional residences.

Incentives

The draft zoning law also allows an increase in density as an incentive for providing certain community benefits and amenities. These incentives can be applied in all zoning districts except for the Hamlet Business and Wellhead Protection districts. It is possible for a developer to gain a maximum bonus of a 30% increase in density over the base density if multiple benefits are supplied. If every parcel were to be allowed the maximum bonus under the proposed zoning law, the total buildout for the town would be 2,991 additional residences.

Carvel properties

This buildout uses data supplied primarily through state agencies, such as DEC, DOT, and Dutchess County Real Property. A buildout analysis was previously performed for the Carvel properties using data supplied by the developer. The developer-supplied data was generated by doing on-site surveys of the property. The developer-supplied data is more accurate and detailed than the data used for this town-wide buildout. This town-wide buildout also used the pre-existing subdivision as it is currently down in the Counties real property database. This was done in order to make it comparable to the past buildouts done for the Town's Comprehensive Plan.

For a comparison of how these two datasets affect the potential buildout of the Carvel property, the following tables include the results from the October 16, 2008 buildout, and the results from the buildout using the town-wide data. These numbers represent calculations performed on a "Master Parcel" as was done in the October 16 buildout.

<u>Carvel Properties in Pine Plains</u>	Using Site Specific data	Using Town-Wide data
Total Carvel Acres	1,800	1,805
Total Acres in the Previous Subdivision	157	122
Total Acres outside of the Previous Subdivision	1,643	1,683

<u>Constraints in Pine Plains</u>	Using Site Specific data	Using Town-Wide data
Wetlands (includes water bodies and streams)	171.2	67
Slopes over 25%	305.07	251
Slopes 15 to 25%	552.76	612
Total Constraints	1,029.06	930
Total Constraints with 15 to 25% slope adjustment	752.68	624
Total Net Buildable Area	1,046.90	1181

Buildout of the entire Carvel property - assuming the original ~200 lot subdivision is redesigned, and incorporated into the new development	Buildout Potential Using Site Specific data	Buildout Potential Using Town-Wide data
Total Carvel Buildout	157	178
Total Carvel Buildout with 30% Incentive Bonus	204	231