T O W N O F C L I N T O N

Comprehensive Plan

TOWN OF CLINTON, DUTCHESS COUNTY, NEW YORK

JANUARY 11, 2012 DRAFT

A COMPREHENSIVE PLAN FOR THE
TOWN OF CLINTON

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INTRODUCTION

Location and Regional Perspective

The Town of Clinton is a rural, primarily residential community, located in the northern portion of Dutchess County. Approximately 4,010 residents (2000 Census) live in a total area of almost 25,000 acres for a population density of 104 persons per square mile, well below the 150 persons per square mile threshold for a "rural" town as designated by the New York State Legislative Commission on Rural Resources. Community identity is organized around seven relatively small historic hamlets, leaving Clinton without a single town center. There are only a few commercial or industrial enterprises in the town and no large residential projects that would compare to current development in adjacent areas to the south and west. A large percentage of the land in Clinton remains in agricultural use or is undeveloped, often because of environmental constraints such as shallow soils, steep slopes, or wetlands.

Clinton is on the northern edge of the advancing suburban development that is enveloping the city of Poughkeepsie, approximately ten miles to the south. Suburban growth to the south is part of a larger regional trend of expansion in the southern Hudson Valley related to the spreading out of growth from the New York Metropolitan area. Clinton's neighbors to the south and west, Pleasant Valley and Hyde Park, and Rhinebeck to the northwest, are under intense development pressure from larger residential and commercial proposals. More like Milan, Stanford and Washington, the towns to the north and east, development in Clinton has generally involved scattered subdivisions of large parcels for single-family homes.

From the 1950s until the mid-2000s, the Town of Clinton and Dutchess County as a whole experienced a sustained period of rapid growth. Migration into the county was fueled by a strong economy, relatively low unemployment levels and proximity to the New York metropolitan area. Substantially higher housing and land prices in and around New York City and Westchester County were forcing families north into Dutchess County. Growth in the last several years slowed substantially in both the county and in Clinton, due to the recession which began in 2007, and associated county, state and national economic conditions. The Hudson River rail line and major north-south highways connect commuters to major employment centers to the south. More people are now telecommuting as well. At this time it is unclear as to when, if, or to what degree growth will resume.

The regional housing market will likely continue to stimulate growth in the northern parts of the county. With access to the Taconic State Parkway, the scenic beauty of Clinton's undeveloped land is attractive to new homeowners or city dwellers searching for a second home in the country. The rural environment that makes Clinton a desirable place to live is

increasingly vulnerable to change under these circumstances. The current pause in growth makes this an appropriate time to update Clinton's comprehensive Plan.

Importance of a Comprehensive Plan

In the past, communities were established without comprehensive plans, review boards, or strict regulatory controls. The historic hamlets, farm complexes, and rural roads that remain from this unregulated era of initial development are now admired for their unique, yet harmonious visual qualities.

Traditional patterns of construction evolved slowly. Technical improvements or stylistic changes were phased in over decades. The continuity created by extended family ties and local builders generally ensured that structures would be culturally defined according to accepted community standards. As a result, the variety produced by individual efforts was balanced by the underlying unity generated by a more stable community. Why then are comprehensive plans necessary?

Modern development involves rapid changes in technology and building materials. Population mobility has been greatly enhanced. Out-of-state developers and architects with imported ideas are common. Moreover, large new development proposals are often out-of-scale with existing communities. One major housing project can dramatically increase a town's population, creating significant impacts on traffic, schools, and other local services. Community standards, which were once passed down through generations among a smaller network of families and moderated by the slower pace of change, must now be defined and protected by the democratically elected local government.

A comprehensive plan is a public review process that defines what is important to the community. By carefully examining current conditions and problems in the context of broad citizen involvement, rationally justifiable recommendations for future action can be established. Its purpose is to guide change to be consistent with community objectives. Those objectives will be expressed in the form of policy statements that represent the general desires of town residents. The plan considers major public policy issues in such critical areas as land use, transportation, community facilities and housing. Above all, the plan identifies important elements of the town's natural and built environment and provides policies intended to preserve that environment, while allowing growth that is compatible with community standards.

A Comprehensive Plan (previously known as a Master Plan) for the town of Clinton was first developed in 1968 as the initial step toward zoning. That plan was amended in 1991. The town's previous Comprehensive Plans were statements of policy based on assumptions and

conditions that existed at that time. Changes have occurred in Clinton and Dutchess County in the past twenty years. Furthermore, societal changes affecting family size, household composition, the cost of housing, work habits and development patterns all have land use implications that need to be addressed by Clinton residents.

The Comprehensive Plan is a critical document in the Town's land use regulatory framework. According to New York State Town Law § 272-a, all land use regulations must be in accordance with the comprehensive plan, thus creating a direct connection between the plan and the regulations that will implement the plan. Additionally § 272-a includes a provision which requires other agencies that undertake a capital improvement project within the town to consider the plan. This is a critical piece of information for the Town to have at its disposal when faced with actions such as a roadway expansion by a county, state or federal agency.

The Planning Process

A committee of Clinton residents, including members from the Town Board, Planning Board, Zoning Board of Appeals, and Conservation Advisory Committee was appointed by the Town Board to develop this document. The Town Board hired local professionals for engineering and planning consultations to assist the Comprehensive Planning Committee. An important beginning step was the distribution of a Community Values Survey to solicit opinions from residents on a variety of current topics. From the results of the survey, preliminary goals and objectives for the planning process were outlined and then tested against the facts that emerged in the preparation of the background chapters. The Community Values Survey influenced the vision statement.

> *"Among the most important powers and duties granted by the legislature to a town government is the authority and responsibility to undertake town comprehensive planning and to regulate land use for the purpose of protecting the health, safety and general welfare of its citizens."*
> New York State Town Law § 272-a

Decisions on the wording in the texts, plan recommendations, and maps were achieved by consensus to ensure the broadest possible agreement among the committee members present. After more than three years of regular meetings, the Comprehensive Plan Committee forwarded the completed plan to the Town Board for adoption. The process, findings of the background chapters, plan recommendations, and implementation methods are summarized in Chapter Nine.

The Vision

Planning succeeds when residents reach consensus on their desires for the future conservation and development of their community. A vision statement is the formal expression of that community consensus. The vision statement sets the overall policy direction for the Comprehensive Plan. It answers the question "What do we want Clinton to be?" and in so doing, sets the stage for defining how we get there. The town of Clinton's vision statement was developed by the Comprehensive Plan Committee based on the goals that town residents outlined in the Community Values Survey.

VISION STATEMENT

The Town of Clinton desires to maintain its rural character, consisting of natural landscapes, native ecosystems, working farms, small hamlet-scale development and historic structures, while preserving its scenic quality, and to do so in a manner that continues to promote its small town atmosphere and quality of life.

The Town of Clinton in Dutchess County has been blessed not only with a long and varied history dating back to its initial settlement in the early 1700s and formal establishment in 1786, but also with an abundance of natural resources of exceptional quality, including lakes, several creek basins, extensive wetlands, and a variety of soil types, sloping terrain and other geological features. A wide variety of animal life, flora and fauna, several of which are on endangered or protected species lists, are also found throughout the town. Although the Town has grown over the years, it still maintains its historic settlement pattern of small hamlets surrounded by rural countryside. The vision statement reflects residents' appreciation of, and desire to protect, Clinton's rural character, natural resources, and rich historical legacy.

Clinton Then and Now

Early settlers followed waterways for the obvious benefit to their agricultural enterprises. They also established mills with waterwheels on many of the larger creeks and tributaries. The origin of Clinton's seven hamlets (Bulls Head[1], Clinton Corners, Clinton Hollow, Frost Mills, Hibernia, Pleasant Plains and Schultzville) is tied to a number of these mills, which served to make the hamlets more self-sufficient.

Town population peaked at 2,130 people in 1830, a figure that was not to be surpassed until the 1970 Census. Access to more distant commercial centers such as Poughkeepsie was eased with the coming of the railroad to Clinton Corners in 1870. This was followed by telephone and telegraph lines, the automobile and finally by electric power in the 1930s.

[1] Historically the name of this hamlet has also appeared as "Bull's Head."

With the development of the industrial centers and the accompanying job opportunities to the south, population began to decline after 1830, reaching a low of just over 1,000 residents by both the 1930 and 1940 Census counts. Access to Clinton from Poughkeepsie and more distant areas, in particular New York City, improved during the 1950s and 1960s when roads were widened and resurfaced. Principal roads like the newly constructed Taconic Parkway and the asphalt surfaced Salt Point Turnpike, Hollow Road and State Route 9G encouraged population growth. The trend that began in the 1930s and 1940s of individuals, often from the New York City area, purchasing property in the town, frequently farms, for weekend retreats accelerated.

Agriculture formed the economic basis for the town from its founding on into the mid- to late-1970s. The focus on the products produced continued to change to meet the conditions and demands of the times. During most of the 1800s some 80 percent of Clinton's landscape was cultivated, in pastures or in meadow. By 2009, less than 10 percent of the town's acreage was coded by the Assessor's Office as agricultural, with 14 horse farms the predominant use. In addition, some lands not coded as agricultural do have secondary agricultural uses. The vast majority of residents that work now do so outside the town. The number of people working from their homes, at least part-time, is accelerating due to the availability of electronic communication means. There is increasing support for doing and buying more locally. In general the population is also aging, with a significant increase in retirees.

Much of Clinton's architectural legacy, spanning the variations of over 200 years of its history, is concentrated in the seven hamlet areas. However there are many historical intact farm houses and barns along its rural roads. Protection of the town's historic heritage and scenic rural qualities has continued to receive high levels of support from a large majority of the respondents to the surveys associated with the comprehensive planning process.

The 2000 Census showed a town population of 4,010, nearly twice the number there were in 1830, but almost four times the number from 1940. Yet the growth did not reverse the decline in the number of schools in town, nor the number of post offices. Centralized school districts, a trend which began in the 1940s, finally closed all eleven of Clinton's one-room schools. Now Clinton's children leave town every school day to attend public schools in the neighboring towns of Hyde Park, Millbrook, Pine Plains and Rhinebeck. There are no post offices named just "Clinton". The one post office that remains in town, Clinton Corners, compared to the eleven which were present in 1940, attests to the continuing trend in consolidation of services. Most parts of the town are served by post offices in Millbrook, Rhinebeck, Salt Point, Staatsburg and Stanfordville. This means a large percentage of the residents don't have a mailing address with the word "Clinton" in it. Fire protection and

ambulance services are divided between two different fire districts, East Clinton and West Clinton. Police protection is provided by the Dutchess County Sheriff's Department, which maintains a small substation in the Town Garage in Schultzville, and by the New York State Police.

There are no central water or sewer systems. All residents are totally dependent on private wells for potable water and on individual septic systems for sewage disposal.

The reality is that there is no Clinton town center to serve as a focus of activities and commerce. As noted above, there are also no public schools that might serve as a community focus. Many, if not most non-residents, and even some residents, may not have a good idea of the town boundaries, given the plethora of mailing addresses.

Given the foregoing history, establishing a clear vision statement for the town that captures the essence of what has been happening has indeed been a challenge. However, based on community input, the vision statement included in the preceding section of this Chapter summarizes the desires of Clinton residents for the future of the Town.

CHAPTER ONE: COMMUNITY VALUES

Introduction

To be an effective guide for the future, a comprehensive plan must be a clear expression of a community's traditions as well as its hoped for expectations. Within the Town of Clinton, there is a wide variety of people and opinions, natural features, and distinctive places. Much of the Comprehensive Plan process will involve analyzing the demographics, identifying significant natural areas, or discussing the unique historic character of individual buildings or hamlets. The background chapters to follow will investigate specifics in order to understand the whole more completely. But it must be remembered that the underlying basis of the Comprehensive Plan is the shared values and goals of the community, which must be clearly evident in the adopted planning principles of the final plan.

The Comprehensive Plan Committee conducted a survey of the townspeople in early 2007 to document changes in Clinton's values. By asking residents for their opinions on the town's needs and prospects for the future, the survey was intended to aid in the revision of the Comprehensive Plan. A Comprehensive Plan that reflects the collective concerns of the community will become a document of public policy that will be supported by residents and enacted by the Town Board. Plans that are based on inaccurate assumptions or are far removed from community desires have little chance of being implemented. This chapter will analyze the survey results and summarize the common community values that emerged.

Survey Method and Response

The survey questions largely followed the 1986 survey which were in turn patterned after similar questionnaires used by other municipalities in Dutchess County. In both cases, revisions were made by the Clinton Comprehensive Plan Committee to reflect the issues most relevant to the town. The survey was distributed by mail to every identifiable voter and/or property owner in Clinton. Additionally, the survey was available at the Town Hall and on the Town website. The questionnaire could be completed online or returned postage paid. 3326 surveys were sent with 486 responses for a response rate of 14.6 percent. Generally with these types of surveys, a response rate greater than 5 percent is desirable.

For most questions, there were five choices of response: strongly agree, agree, not applicable (no opinion expressed), disagree, or strongly disagree. The Clinton Comprehensive Plan Committee compiled a very detailed computer tabulation of the survey results which is available for inspection at the Town Hall. However, for purposes of this analysis, agree and strongly agree responses and disagree and strongly disagree responses were generally combined. A copy of the questionnaire with response percentages shown for each question is

shown in Table 1.3 which appears at the end of this chapter. The percent response given in the Survey Results section is based on the total responses to each question. A response shown as (55%-20%) indicates 55 percent agreed and 20 percent disagreed; the remaining 25 percent had no opinion. The remaining percentages shown throughout this chapter will follow this method.

The survey questions were grouped into a number of categories: community atmosphere, community services, development/building, government/business, recreation/parkland/open space, solid waste, housing, growth/development, and personal information. Additional comments were encouraged throughout the survey. In the following analysis, the results will be grouped in more comprehensive categories: profile of respondents, community character, community services, and growth and development.

Profile of Respondents

Before analyzing the survey results, it is important to assess how well the survey respondents represent the town's population. The final section of the questionnaire requested information about number of years in residence, year-round residency, home ownership, family age groups, driving patterns, and area of residence within the town. Answers to these questions were used to create a profile of the survey respondents group. Table 1.1 compares this profile to town-wide characteristics identified in the 2000 and 1980 census.

TABLE 1.1: COMPARISON OF SURVEY RESPONDENTS TO TOWN POPULATION

Survey Item	Percent of Survey Respondents 2007	Percent of Town Population 2000*	Percent of Survey Respondents 1986	Percent of Town Population 1980*
Length of Residence:				
0-5 years	15	31	31	45
6-15 years	25	45	30	31
15+ years	60	24	39	24
Residency:				
Year-round	92	86	93	92
Occasional	8	11**	7	8
Home Ownership:				
Own	97	85	80	82
Rent	3	15	20	18
Age of Family Members of Respondents:***				
0-6	8	9	12	9
7-17	11	15	14	20
18-24	7	5	9	10
25-44	18	30	33	32
45-64	38	30	22	19
65+	18	11	9	10

* Source: U.S. Census, 1980 and 2000

** Census information indicates an 11% occasional residency accounting for only 97% of individuals

*** Age groupings for 2000 Census are slightly different

TABLE 1.2: AGE OF FAMILY MEMBERS OF RESPONDENTS IN 2007 SURVEY		
Age	**Totals**	**Percentage**
0-6	93	8
7-17	136	11
18-24	91	7
25-44	219	18
45-64	468	38
65+	224	18

The distribution of responses by years of residence in Table 1.1 shows an uneven distribution over 0-5 years (15%), 6-15 years (25%), and 15+ years (60%). The survey responses are more representative of the longer-term residents. Although the longer term residents are somewhat over-represented, this may lead to a more accurate assessment of Clinton's traditional community values based on longer experience with the area's history and possibilities.

Many more homeowners than renters are represented (97%-3%). The percent of year-round versus occasional residents participating in the survey is 92 percent-8 percent (see Table 1.1).

Not surprisingly, given the minimal commercial and industrial development in Clinton, more than 83 percent of the respondents indicated that they worked outside of the town. The specific locations can be found in the survey results at the end of this chapter and vary only slightly from the 1986 survey. In the following sentence, the first number is the percent from the 1986 survey; the second number is from the 2007 survey. Places of work given in the survey were Poughkeepsie (31%, 20%), New York City (11%, 11%), Westchester (3%, 4%), Kingston (9%, 1%), Rhinebeck/Red Hook (8%, 8%) and various other locations with lesser percentages. The questionnaire did not provide an option for Clinton as a place of work, but the "other" category had 12 percent. It is worth noting that about the same percentage of Clinton residents are commuting to Westchester and New York City and a smaller percentage are commuting to Poughkeepsie and Kingston.

The locations for grocery shopping shifted more significantly. Kingston (14%) and Rhinebeck (46.5%) gained at the expense of Hyde Park (11%) and Poughkeepsie (10.8%). There was also a significant shift in major shopping. Kingston more than doubled to 61 percent at the expense of all the other locations; the second highest was Poughkeepsie's (26.5%).

The destination for medical services for most people still was Rhinebeck/Red Hook (33.9%) and Poughkeepsie (33%) which has one and two hospitals respectively. A few more went to New York City (11.1%) and a few less went to Hyde Park (6.9%). Almost half of the people who went out for entertainment and recreation went to Rhinebeck/Red Hook (49.1%), an increase of nearly two and three quarter times at the expense of all the other locations.

The questionnaire also included a map of Clinton and asked residents to identify which quadrant of the town they lived in: northeast, northwest, southeast, or southwest. All areas of the survey are represented in the results: 18 percent of the respondents indicated that they lived in the southwest quadrant, 27 percent in the southeast, 28 percent in the northeast, and 27 percent in the northwest.

The final question asked whether the respondents identified their location with a particular hamlet. Over half of the returns (244) listed a hamlet, with Bulls Head 8 percent**,** Clinton Hollow 28 percent, Clinton Corners 33 percent, Hibernia 3 percent, Schultzville 15 percent, Pleasant Plains 7 percent, and Frost Mills 6 percent. For a rural community with a relatively scattered residential land use pattern, these responses indicate a fairly strong identification with the hamlet centers in Clinton.

Survey Results

Community Character

A high percentage of the survey respondents agreed that Clinton's natural beauty (98%-2%) and rural atmosphere (97%-3%) are its greatest assets. These questions received among the highest degree of strongly favorable answers on the survey and increased over the 1986 survey**.** Rural atmosphere and natural beauty were also the top two responses on a write-in question listing the three best things about Clinton, followed by friendly people and privacy, peace and quiet.

Although, most people commented on keeping the natural beauty and rural character of Clinton, not everyone agrees on how to accomplish this. According to some comments, the planning process is challenging, one that calls for multi-dimensional professional expertise and a strong community resolve. While others conclude that even though we may not welcome it, development is inevitable. What seems to be important is to expand the tax base to give tax relief to the people already here. There were a lot of eloquently written commentaries on Clinton’s assets, calling for forward thinking and planning to avoid the pitfalls of development.

Survey respondents felt that the hamlets are important to the character of Clinton (95%-2%) and the historic character of these hamlets should be protected from incompatible development (92%-4%). The town has already acted to protect its hamlets by designating the hamlets of Frost Mills, Pleasant Plains, Clinton Corners, Clinton Hollow, Schultzville, Bulls Head, and Hibernia Critical Environmental Areas under the State Environmental Quality Review Act. In 2001, eight specifications were added to the Critical Environmental Areas to give further guidance. The majority of respondents would support further protection with architectural review in the hamlets (84%-13%). The survey responses favored further protective measures through the creation of historic districts to safeguard areas with historically significant structures (87%-11%). In 2002, a Ridgeline, Scenic and Historic Protection Overlay District was created to preserve the visual beauty of the Town. Historic character was also cited among the answers on the best things about Clinton.

Receiving the most consistently positive consensus was a series of questions involving land use regulations to protect the natural environment. Those surveyed showed a strong feeling that as development occurs, regulations should protect prime agricultural soils (94%-5%), steep slopes (94%-5%), wildlife (93%-6%), wetlands (94%-5%), water resources (98%-2%), and control logging (89%-8%),

Growth and Development

Growth and development were the issues most frequently cited by respondents that Clinton will face in the next ten years. They also rated high on the write-in list of worst things about the town. When asked if Clinton needed some growth in order to stay healthy in the future, residents agreed by a margin of (57%-43%). The clear community preference was to allow limited growth without much change (66%), although a strong 27 percent would rather see no changes, keeping everything about the way it is. Only 7 percent wanted to promote growth even if it resulted in some changes to the town.

The acceptance of the need for some growth was tempered by the desire that development should not be allowed at the expense of Clinton's established character or the natural environment. For example, there was strong agreement that developers should be required to arrange homes in such a way as to maintain the town's rural character (94%-5%). The favorable sentiment toward preserving open space was reflected in the opinion that developers should be required to provide open space in every large project (94%-4%). Respondents also clearly favored the enforcements of high aesthetic standards in site designs for new businesses (89%-9%), and wanted the town to make every effort to prevent strip development along highways (92%-7%). The broad-based support for the protection of natural features and the historic character of Clinton's hamlets was previously noted.

However, some forms of growth were considered acceptable. A majority of responses agreed that limited commercial development should be allowed in the hamlet centers (74%-25%). Small home businesses were generally favored (86%-12%). When asked to check off types of businesses that should be encouraged in Clinton, of the 486 responses, agriculture led the list with (98.2% -1.3%) positive votes, country stores (96.9%-2.3%), bed and breakfasts (96.2%-3.8%), restaurants (89.7%-9.1%), inns (90.6%-9.0%), professional services (85.9%-12.6%), and campgrounds (81.1%-17.2%) all receiving over 100 checks. Considered less acceptable on the list of given options were drug stores **(**47.2%-50.9%**),** light industry (49.1%-48.2%), 24-hour convenience stores (36.3%-63.7%), offices (57.5%-40.8%), motels (27.9%-72.1%), and department stores (19%-81%). The raw numbers also indicate that many of the less acceptable categories have high disapproval rates.

Respondents did not favor development aimed at making Clinton more attractive to tourists (34%-63%), although limited accommodations that would be compatible with hamlets, such as bed and breakfasts or inns, were more acceptable than campgrounds and motels. Major shopping needs are currently filled in Poughkeepsie (26.5%) and Kingston (61%), as well as Rhinebeck/Red Hook (5.4%) and Hyde Park (0.9%). There appears to be little interest in having such shopping opportunities available locally. Country stores might be acceptable, but there was much less enthusiasm for convenience or department stores.

Since commercial and industrial development received little support, Clinton's growth would be expected to be primarily residential. However, the survey responses continued to express a guarded attitude toward any major form of development. Opinions were strongly against the need for more apartments (15%-82%), while sentiments against the need for more condominiums and townhouses were even more unfavorable (10%-88%). Similar opposition surfaced against encouraging well-planned mobile home development (10%-89%). The resistance to all these forms of housing also explains the negative response to the question asking if concentrated residential growth was preferred to scattered development (40%-53%). But in spite of this, even the idea of more detached single-family houses, Clinton's predominant housing type, failed to win a favorable response (12%-71%).

The most acceptable approach to fill additional housing needs is to use existing structures. Allowing conversions of existing buildings (such as abandoned farm buildings) for residential use was popular (82%-15%). The ability to create an accessory apartment in an existing home was also favored (64%-30%). There was nearly an even split regarding the need for a graduated care facility (42%-45%).

Community Facilities and Services

The survey respondents expressed modestly positive agreement that Clinton's government was responsive to the desires and interests of the residents (61% positive, 10% no opinion, and 30% negative). On the important issue of growth, for example, many thought development was not sufficiently controlled in Clinton (56%-37%). Building permit procedures were considered easy to understand (57%-20%)**.** A slight majority of the respondents indicated that the Town does adequately enforce town regulations (52%-42%).

As for community facilities, only a small percentage of responses expressed a need to expand the town hall (22%-71%) and a majority considered the existing library to be adequate (80%-14%). No strong desire for a centrally located post office in Clinton emerged (39%-54%). Most agreed that the town's outdoor recreation facilities were sufficient (77%-20%) and did not support financing a new town swimming pool (24%-61%). On a topic related to community recreation, respondents favored increased public access to lakes and streams (55%-39%). On the topic of open space a majority favored financing conservation easements (77%-21%).

Overall, the level of important community services was considered acceptable. Most respondents felt that Clinton has adequate emergency ambulance service (77%-15%) and fire protection (91%-6%). There was also general agreement that Clinton needs the existing two separate fire districts (51%-35%). A greater margin felt that Clinton had adequate police protection (71%-21%).

When asked to comment on the maintenance of Clinton's roads, most town residents expressed general satisfaction. Respondents considered the town (89%-10%), county (91%-8%), and state (90%-7%) roads to be well-maintained. On the other hand, road conditions, speeding, and traffic were among the most frequently cited worst things about Clinton and were also high on the list of problems to be faced in the next ten years. A question asking for specific roads that need improvement brought forth a long list of suggestions from all over the town. Respondents did not favor the prospect of reserving land to build a bypass road around Clinton Corners (29%-56%) or Frost Mills (35%-47%).

Regarding communications, respondents seemed to think Cable TV service was adequate (65%-22%). Fewer people thought cell phone service was adequate than not (42%-53%).

Summary

The overall picture that emerges from the questionnaire is a town that is more interested in conservation than change. Residents generally like Clinton the way it is. They accept the

inevitability and need for limited growth, but the emphasis is clearly on limits.

The survey respondents expressed a very positive attitude to their environment. Statements praising Clinton's natural beauty and rural character received among the highest levels of agreement. The desire to maintain the perceived high quality of life in Clinton resulted in the willingness to advocate firm land control measures. Requirements for developers to provide high aesthetic standards and open space systems to protect the town's rural character were strongly endorsed. Regulations to protect agricultural soils, water resources, steep slopes, wetlands, wildlife**,** and to control logging were extremely popular.

Businesses to be encouraged were limited to types compatible to a rural residential area focused around scattered hamlets, such as farms, home businesses, and country stores. There was very little support for any commercial or industrial development. Indeed, encouraging substantially more of anything, mobile homes, condominiums, apartments, or even traditional single-family houses, provoked negative responses. Only conversions of existing buildings for housing were widely acceptable. The majority seems to accept growth almost reluctantly, but they do not favor promoting it.

This pattern of resistance to change extends to community services as well. Emergency services, fire, and to a lesser extent, police protection were deemed adequate. There was no strong support for expanded town facilities or recreation areas with the exception to a small majority desiring increased access to the lakes. Although there were a number of negative comments on specific roads and traffic, the overall maintenance of the state, county, and local road system received good marks. Perhaps concerns about more taxes, which were high on the list of the worst things about Clinton, helped temper any demand for new services.

In general, the survey respondents tend to be longer in residence and older than the general population, support only limited changes to their community. Preservation of the town's historic character and natural elements was the strongest sentiment, and while townspeople do not see the need for more government services, they do appear to favor an active approach to land use control and planning.

COMMUNTY ATMOSPHERE

1. One of Clinton's Best Assets Is Its Natural Beauty

Agree	98.5%	469
Not Applica	0.0%	0
Disagree	1.5%	7
	100.0%	476

2. Clinton's Rural Character Is One Of Its Greatest Strengths

Agree	97.0%	456
Not Applica	0.4%	2
Disagree	2.6%	12
	100.0%	470

COMMUNITY SERVICES

3. Clinton Has An Adequate Library

Agree	80.0%	372
Not Applica	6.2%	29
Disagree	13.8%	64
	100.0%	465

4. Clinton Has Adequate Police Protection

Agree	71.4%	324
Not Applica	7.9%	36
Disagree	20.7%	94
	100.0%	454

5. Clinton Has Adequate Fire Protection

Agree	91.1%	420
Not Applica	3.0%	14
Disagree	5.9%	27
	100.0%	461

6. Clinton Has Adequate Emergency Ambulance Service

Agree	76.7%	342
Not Applica	8.5%	38
Disagree	14.8%	66
	100.0%	446

7. Clinton Has Adequate Cabelvision Service

Agree	64.9%	299
Not Applica	13.0%	60
Disagree	22.1%	102
	100.0%	461

8. Clinton Has Adequate Cell Phone Service

Agree	41.9%	195
Not Applica	5.4%	25
Disagree	52.7%	245
	100.0%	465

9. Clinton's Town Road System Is Well Maintained

Agree	89.2%	423
Not Applica	0.6%	3
Disagree	10.1%	48
	100.0%	474

10. Clinton's County Road System Is Well Maintained

Agree	91.5%	429
Not Applica	0.6%	3
Disagree	7.9%	37
	100.0%	469

11. Clinton's State Road System Is Well Maintained

Agree	89.8%	403
Not Applica	2.7%	12
Disagree	7.6%	34
	100.0%	449

12. Land Should be Resvered For A Bypass- Frost Mills

Agree	35.0%	140
Not Applica	18.3%	73
Disagree	46.8%	187
	100.0%	400

13. Land Should be Reserved For A Bypass- Clinton Corners

Agree	29.4%	114
Not Applica	14.7%	57
Disagree	55.9%	217
	100.0%	388

14. Improvements to the following roads are needed: Not Suitable For Charting

15. Development Is Not Sufficiently Controlled In Clinton

Agree	56.0%	244
Not Applica	6.7%	29
Disagree	37.4%	163
	100.0%	436

16. Adequate Enforcement of the town regulations is provided

Agree	51.7%	223
Not Applica	6.7%	29
Disagree	41.5%	179
	100.0%	431

17. Developers Should be required to arrange homes in such a way as to maintain the rural character of Clinton

Agree	93.6%	440
Not Applica	1.1%	5
Disagree	5.3%	25
	100.0%	470

18. The town should have architectural review of hamlets, historic buildings & commercial development

Agree	84.2%	383
Not Applica	2.4%	11
Disagree	13.4%	61
	100.0%	455

19 Building Permit Procedures Are easy to understand

Agree	56.9%	235
Not Applica	22.8%	94
Disagree	20.3%	84
	100.0%	413

GOVERNMENT/BUSINESS

20. Clinton's Government is responsive to the desires and Interests of the residents

Agree	60.8%	257
Not Applica	9.7%	41
Disagree	29.6%	125
	100.0%	423

21. The Town Should Encourage Business

Agree	53.9%	228
Not Applica	3.5%	15
Disagree	42.6%	180
	100.0%	423

22: Businesses To Encourage

	Agree	N/A	Disagree	Total
Agricultural Operations	98.2%	0.5%	1.3%	385
Country Stores	96.9%	0.8%	2.3%	353
Bed & Breakfasts	96.2%	0.0%	3.8%	342
Inns	90.6%	0.4%	9.0%	223
Restaurants	89.7%	1.3%	9.1%	232
Professional Services	85.9%	1.5%	12.6%	199
Campgrounds	81.1%	1.7%	17.2%	180
Offices	57.5%	1.7%	40.8%	120
Light Industry	49.1%	2.6%	48.2%	114
Drug Stores	47.2%	1.9%	50.9%	106
24-Hr. Convenience Store	36.3%	0.0%	63.7%	102
Motels	27.9%	0.0%	72.1%	86
Department Stores	19.0%	0.0%	81.0%	79

23. Businesses that should be avoided in Clinton are: Not suitable for charting

24. Clinton Needs An Expanded Town Hall

Agree	21.4%	98
Not Applica	7.9%	36
Disagree	70.7%	323
	100.0%	457

25. Clinton Should Have Its Own Post Office, Preferably in a Central Location

Agree	38.6%	177
Not Applica	7.4%	34
Disagree	53.9%	247
	100.0%	458

RECREATION/PARKLAND/OPEN SPACE

26. Outdoor Recreation Facilities are adequate in Clinton

Agree	76.7%	348
Not Applica	3.7%	17
Disagree	19.6%	89
	100.0%	454

27. Clinton Should Finance A New Town Swimming Pool

Agree	24.3%	112
Not Applica	4.8%	22
Disagree	70.9%	327
	100.0%	461

28. Clinton Should Have Increased Public Access to Lakes and Streams

Agree	55.2%	253
Not Applica	5.9%	27
Disagree	38.9%	178
	100.0%	458

29. Clinton Should Finance Conservation Easements To Maintain Open Spaces

Agree	77.2%	338
Not Applica	2.1%	9
Disagree	20.8%	91
	100.0%	438

SOLID WASTE

30. The current transfer station meets my needs

Agree	72.2%	332
Disagree	15.2%	70
Not Applica	12.6%	58
Total	100.0%	460

31. The Town should provide pickup of solid waste and recycling materials for all town residents

Agree	27.0%	120
Disagree	68.9%	306
Not Applica	4.1%	18
Total	100.0%	444

HOUSING

32. Well-planned mobile home developments should be encouraged as alternative housing

Agree	9.8%	46
Disagree	88.5%	415
Not Applica	1.7%	8
Total	100.0%	469

33. Clinton needs more apartments

Agree	14.8%	69
Disagree	82.2%	382
Not Applica	3.0%	14
Total	100.0%	465

34. Clinton needs more detached single-family houses

Agree	23.3%	105
Disagree	71.4%	322
Not Applica	5.3%	24
Total	100.0%	451

35. Clinton needs more condominiums and townhouses

Agree	9.7%	45
Disagree	88.1%	408
Not Applica	2.2%	10
Total	100.0%	463

36. Clinton should allow conversions of existing buildings (such as abandoned farm buildings) for residential use

Agree	82.3%	381
Disagree	15.3%	71
Not Applica	2.4%	11
Total	100.0%	463

37. Clinton should allow one accessory apartment in existing homes

Agree	64.6%	296
Disagree	30.3%	139
Not Applica	5.0%	23
Total	100.0%	458

38. Clinton should have a graduated care facility (that can offer a continuum of assisted living arrangements through to a skilled nursing home)

Agree	45.4%	204
Disagree	48.3%	217
Not Applica	6.2%	28
Total	100.0%	449

GROWTH AND DEVELOPMENT

39. Clinton needs some growth in order to stay healthy in the future

Agree	56.2%	257
Disagree	41.8%	191
Not Applica	2.0%	9
Total	100.0%	457

40. Development should be aimed at making Clinton more attractive to tourists

Agree	34.4%	158
Disagree	62.7%	288
Not Applica	2.8%	13
Total	100.0%	459

41. Clinton should emphasize and enforce high aesthetic standards in site designs for new businesses.

Agree	89.2%	420
Disagree	8.7%	41
Not Applica	2.1%	10
Total	100.0%	471

42. Clinton should make every effort to prevent strip development along highways.

Agree	92.1%	440
Disagree	7.1%	34
Not Applica	0.8%	4
Total	100.0%	478

43. Limited commerical development should be allowed in the hamlet centers.

Agree	74.1%	349
Disagree	25.1%	118
Not Applica	0.8%	4
Total	100.0%	471

44. Clinton should allow small home businesses

Agree	85.9%	403
Disagree	11.7%	55
Not Applica	2.3%	11
Total	100.0%	469

45. Clinton should require developers to provide open space in every large-scale project

Agree	94.0%	441
Disagree	3.8%	18
Not Applica	2.1%	10
Total	100.0%	469

46. Clinton s land use regulations should protect prime argicultural land

Agree	93.7%	443
Disagree	5.1%	24
Not Applica	1.3%	6
Total	100.0%	473

47. Clinton s land use regulations should protect steep slopes

Agree	93.5%	434
Disagree	4.5%	21
Not Applica	1.9%	9
Total	100.0%	464

48. Clinton s land use regulations should control logging operations

Agree	89.2%	420
Disagree	7.6%	36
Not Applica	3.2%	15
Total	100.0%	471

49. Clinton s land use regulations should protect wildlife

Agree	93.2%	442
Disagree	5.3%	25
Not Applica	1.5%	7
Total	100.0%	474

50. Clinton s land use regulations should protect wetlands

Agree	93.7%	446
Disagree	5.0%	24
Not Applica	1.3%	6
Total	100.0%	476

51. Clinton s land use regulations should protect water resources

Agree	97.7%	466
Disagree	1.9%	9
Not Applica	0.4%	2
Total	100.0%	477

52. Hamlets in Clinton are important to the character of the town

Agree	95.5%	445
Disagree	2.4%	11
Not Applica	2.1%	10
Total	100.0%	466

53. The historic character of existing hamlets in Clinton should be protected from incompatible development

Agree	94.9%	449
Disagree	4.2%	20
Not Applica	0.8%	4
Total	100.0%	473

54. Clinton should create historic districts to help protect areas with historically significant structures

Agree	87.3%	399
Disagree	10.9%	50
Not Applica	1.8%	8
Total	100.0%	457

55. Clinton should institute a town wide speed limit of 40 MPH

Agree	51.9%	237
Disagree	44.0%	201
Not Applica	4.2%	19
Total	100.0%	457

56. Clinton needs to have two separate fire districts (VII. Growth & Development:)

Agree	51.2%	212
Disagree	36.5%	151
Not Applica	12.3%	51
Total	100.0%	414

57. Clinton needs paid emergency response personnel

Agree	35.9%	148
Disagree	51.5%	212
Not Applica	12.6%	52
Total	100.0%	412

58. Concentrated residential growth is preferred to scattered residential development

Agree	40.4%	170
Disagree	52.5%	221
Not Applica	7.1%	30
Total	100.0%	421

59. Clinton should have a town center which would include a central post office.

Agree	38.1%	169
Disagree	56.2%	249
Not Applica	5.6%	25
Total	100.0%	443

60. If you could choose according to your own preferences what sort of growth would you like to see?

Allow Limited Growth without much change	65.9%	307
Promote Growth even if we have to make some changes	7.3%	34
No Change -- Keep everything the way it is	26.8%	125
	100.0%	466

61. The three best things about Clinton are: Not suitable for charting

62. The three worst things about Clinton are: Not suitable for charting

63. The three most important issues Clinton will face in the next ten years will probably be:
Not suitable for charting

PERSONAL INFORMATION

64. How long have you lived in Clinton?

"0-5 Years"	15.1%	72
"6-15 Years"	24.7%	118
"More than 15 Years"	60.2%	287
	100.0%	477

65. Are you a year-round resident

Yes	89.1%	433
No	7.6%	37
No Ans	3.3%	16
	100.0%	486

66. Do you rent or own your home?

Own	92.6%	450
Rent	3.1%	15
No Ans	4.3%	21
	100.0%	486

67. List the ages in your household

0 - 6	8%	93
7-17	11%	136
18-24	7%	91
25-44	18%	219
45-64	38%	468
65-84	17%	210
85 and over	1%	14
	100.0%	1231

68-1: Where Do You go most frequently to Work:

Millbrook	4.3%	21
East Fishkill	3.5%	17
Poughkeepsie	20.0%	97
Connecticut	0.6%	3
Pleasant Valley	1.7%	8
Rhinebeck/Red Hook	7.6%	37
Kingston	1.2%	6
New York City	11.0%	53
Hyde Park	4.5%	22
Westchester County	3.9%	19
Other	11.8%	57
No Answer	29.8%	144
	100.0%	484

68-2: Where Do You go most frequently for Groceries:

Millbrook	2
East Fishkill	2
Poughkeepsie	50
Connecticut	1
Pleasant Valley	71
Rhinebeck/Red Hook	216
Kingston	65
New York City	2
Hyde Park	51
Westchester County	2
Other	3
No Answer	21
	486

68-3: Where Do You go most frequently for Major Shopping Needs:

Millbrook	0
East Fishkill	3
Poughkeepsie	123
Connecticut	1
Pleasant Valley	3
Rhinebeck/Red Hook	25

Kingston	283
New York City	11
Hyde Park	4
Westchester County	7
Other	4
No Answer	22
	486

68-4: Where Do You go most frequently for Medical Services:

Millbrook	8
East Fishkill	8
Poughkeepsie	152
Connecticut	3
Pleasant Valley	7
Rhinebeck/Red Hook	156
Kingston	9
New York City	51
Hyde Park	50
Westchester County	8
Other	7
No Answer	26
	485

68-5: Where Do You go most frequently for Entertainment & Recreation:

Millbrook	16
East Fishkill	4
Poughkeepsie	60
Connecticut	5
Pleasant Valley	8
Rhinebeck/Red Hook	207
Kingston	35
New York City	37
Hyde Park	29
Westchester County	1
Other	20
No Answer	64
	486

69. Please indicate in which section of the Town of Clinton you live:

NE	28.2%	111
NW	27.2%	107
SW	17.8%	70
SE	26.9%	106
	100.0%	394

69a. Select the appropriate hamlet if applicable
(Hamlet: The Town of Clinton has areas designated as Hamlets.)

Clinton Hollow	27.7%	62
Clinton Corners	33.5%	75
Bullshead	8.5%	19
Schultzville	14.7%	33
Hibernia	2.7%	6
Pleasant Plains	6.7%	15
Frost Mills	6.3%	14
		224
No answer		262
	100.0%	

Total Respondents: 486

CHAPTER TWO: HISTORIC PRESERVATION

History of Clinton

Named for George Clinton, the first and longest serving governor of New York State, the town of Clinton was established in 1786. Included within its boundaries at that time were the present towns of Hyde Park and Pleasant Valley. However, the information below refers only to those events which occurred within the present boundaries of the town.

Colonial Period

When 27-year old Arie Buys and his young family left Rhinebeck in 1744 to follow a trail through the wilderness to a clearing near the present hamlet of Schultzville, he knew he was not alone. Four miles southwest, near the present hamlets of Frost Mills and Pleasant Plains, the Van Dyck and Williams families had settled five years earlier. He knew them; his family and theirs attended religious services at the Dutch Reformed church in Rhinebeck. But he didn't know the Presbyterian Englishman, Joseph Hicks, who had brought his family from New York to settle near the present hamlet of Clinton Corners.

These four families had dealt directly with the Nine Partners Company, the owners of a 145,000 acre tract of land which had been awarded to nine residents of New York City in 1697. Roughly rectangular, the land reached from the Hudson River to the Connecticut line. Only a small portion of the tract along the Hudson River was divided for settlement in 1699. Further interest in the remainder of this tract, called the Nine Partners Patent, was not evident until 1734. At that time the partnership divided the tract for settlement.

The four earliest families struck different deals with the Nine Partners Company. The Van Dyck and Williams families purchased 1,000 acres to divide between themselves and their growing families. Joseph Hicks purchased a farm of about 360 acres. But Arie Buys, whose family were tenant farmers, leased his land from its owner, David Johnson, grandson of one of the original patentees. Although unintended, these land transactions were the model for the early settlement pattern in Clinton. Dutch families like the Van Dycks, Williams, and Buys, joined immediately by German Palatines, would settle the western and northern sections of the town, while the English would settle the southern and eastern sections of the town. While some land would be acquired in large units for subdivision by a few investors, most would be purchased by individuals in one to two hundred acre parcels--enough for a single family to farm. A small number of families would, like Arie Buys, lease land.

Among those who leased land, were farmers from the Palatine German immigration. An estimated 4000 Palatines landed in New York starting in 1709. Some of the earliest families moved to settlements in Germantown, and from there to Rhinebeck, and then into northwestern Clinton. Hard-working people who were looking for peace from the warfare and famine of Europe, they worked as tenant farmers. After St. Paul's Lutheran Church was built on Wurtemburg Road in Rhinebeck in 1759, the census and church records show that many families from northwestern Clinton attended this church. Church records show the names of Traver, Crapser, Eckert, Cookingham, Schultz, Sleight, Rickert and many others from the Palatine community. Records show that before 1759, settlers worshipped in a small church or private home on Primrose Hill Road in Rhinebeck, near the boundary with Clinton. The 1867 map shows that many landowners in northwestern Clinton were of Palatine heritage. For example, this map shows that Mountain View and Stone House Roads have nine families named Traver. Recent research reveals that these settlers were people of determination whose survival in difficult circumstances showed fortitude. Tribute to their perseverance and hard work endures in old Clinton homes built of stone, hand-hewn timbers and mud, some of which may date to the middle 1700s. There are currently four "Dutch" barns, which may have been constructed by Palatine settlers in northwestern Clinton. These structures are tributes to the enduring craftsmanship of the Palatine community.

Access to Clinton until 1750 was limited to a wagon road near the present Route 9G from Rhinebeck to the present hamlet of Frost Mills, and another which crossed diagonally from Rhinebeck to Clinton Corners and beyond. Because of this limited access, the 50 or so families who came to settle in Clinton by the late 1750s clustered near these roads. Services such as churches, grist and saw mills, a general store, and even the "town" meeting place were all located beyond Clinton's boundaries. The southern portion of town, then as now, was oriented toward the emerging commercial settlement of Pleasant Valley; settlers more northerly continued to services located in Rhinebeck.

In 1662 Adrian Gerritson Van Vliet, with his wife and five children, emigrated from Holland and purchased land in what is now Kingston. In 1740 grandsons of Adrian, Aurie and Gerritje Van Vliet purchased 760 acres from the Nine Partners patent holders and developed farms in what would become Pleasant Plains. Richard Van Vliet, a descendent of Adrian continued farming on that land until the 1980s. His sister, Helena Van Vliet, became a missionary nurse in China and worked at Vassar hospital until her retirement in 1963.

Early settlers followed waterways for the obvious benefit to their agricultural enterprises. They also established mills with waterwheels on many larger creeks and small tributaries. In the mid-1750s, the first known commercial enterprise, a fulling mill for the production of

cloth, was constructed on the Wappingers Creek near the present hamlet of Hibernia. Evidence exists for the presence of 17 mills in Clinton, established to grind grain, saw wood, process wool and produce cider. In Frost Mills, there were two mills on a tributary of the Crum Elbow Creek, and in Pleasant Plains the 1867 map indicates a shingle mill. Schultzville and Clinton Hollow each had two mills on the Little Wappinger Creek. Mills were established wherever a flow of water and change in elevation allowed for water pressure, even if only on a seasonal basis. Enterprising settlers used mills close to their farms to accomplish necessary processing of agriculture products and milling timber for the construction of their homes and barns.

At about the same time, the first road into interior Clinton from Frost Mills to the present hamlet of Clinton Hollow was constructed to provide access to a large tract owned by Petrus Edmundus Elmendorf, a land speculator. The following two decades brought many changes to Clinton.

Newly opened roads into Clinton's interior provided access to its fertile land to families from over-populated New England searching for farms on which they could support their young families. Among these were a significant number of Quaker families who clustered near Clinton Corners. Roads were also conduits for commercial traffic. Agricultural production, principally wheat, was brought to Clinton's new grist mills at Clinton Hollow and Hibernia, after which it travelled to Rhinebeck and Poughkeepsie to be loaded onto sloops for its trip down the Hudson River. Despite the emerging number of mills and a few craftsmen who provided services, such as blacksmithing, cooperage, shoemaking, and house building, Clinton residents attended church outside of town and purchased goods in Pleasant Valley and Rhinebeck until the American Revolution.

Yet, services needed within the town were not overlooked. A bridge spanning the Little Wappingers Creek near Arie Buys was constructed in the mid-1760s, and another was constructed over the Wappingers Creek near Hibernia. The dead were buried in "Yous Gerrison's" and "Vanfleats Buring Yard" near Pleasant Plains after 1765. Before 1770, children attended the "School House by Yose Garisons Corner" (near the present Pleasant Plains Presbyterian Church). Children in the southeastern portion of town walked to Salt Point to attend school. Also, laws to protect property were implemented. An eight shilling penalty was imposed on farmers who permitted their "Rambs" to run "at large" after 1766. By 1775, approximately 125 families made Clinton their home. The colonial period ended with Clinton affirming on April 7, 1775 its allegiance to British rule by voting against (250 to 35) a proposal which in essence supported the formation of a confederation of colonies separate from Great Britain.

1776 - 1830

The influence of popular mill owner and former "town" supervisor Cornelius Humphrey was not enough to influence people in Clinton to be disloyal in 1775. The threat of armed conflict by Tories gathered at Washington Hollow in July 1776 stimulated the residents to action. When it became known that supervisor James Smith, Esq. and others in the local government supported the Tory action, every incumbent was voted out of office in the 1777 election. A new slate, led by Ezra Thompson, who publicly favored separating from Britain, was elected.

The war which followed the Declaration of Independence had its casualties on the battlefield and at home. Lt. Jonah Wickes was killed in 1782. The new store keeper in Clinton Corners, Abel Peters, was arrested. Richbell Williams, descendant of the earliest settler, and Timothy Doughty, both from the Frost Mills-Pleasant Plains area, were imprisoned for their blatant support of the British. And Henry Sleight was arrested in July 1778 for "unlawfully, Maliciously and Wickedly" harboring one Johannis Waltemeyer, a Dutchess County resident who was recruiting for the British army. Quakers were arrested because their conscientious objection to war resulted in their refusal to serve in the militia. Grain, cows, wagons, and horses were taken by the patriots from farmers to support the American army.

In 1777, Quakers began to build in Clinton Corners the first church constructed in town. A new schoolhouse was built between Clinton Corners and Salt Point before 1783. And Presbyterians and members of the Dutch Reformed Church who lived near Pleasant Plains began to build their church the following year in 1784. That year, friends mourned the death of an early resident, Arie Buys, a successful farmer who had lived in Schultzville forty years.

In the land division of 1762, Clinton had been placed in the precinct of Charlotte**.** By 1786, Charlotte's population had increased significantly. As a result, it was divided into the towns of Clinton (consisting of Clinton, Hyde Park and Pleasant Valley) and Washington (consisting of Washington and Stanford**)** to bring the services of local government closer to the people. By 1790, two hundred and fifty families lived in the present town of Clinton. Walking through the town in that year one would have seen prosperity. Mills, old and new ones, and the general stores were prosperous again following the period of inflation during the war and the depression after it. The increase in the number of school age children required several additional schoolhouses. Clinton's people were young; in 1800, the average age of its residents was under 16 years. Town supervisor, John De Witt, the mill owner from Frost Mills who was a delegate to the Constitutional Convention held in Poughkeepsie twelve years earlier, had 7 children under 16 years. And crowded into the household of

Cornelius Van Vliet were 13 people, 9 of whom were children. But the proverbial family of 12 children was a myth; the typical family had seven members.

But Clinton residents were on the move. In 1800, ten years after the first census, fewer than half the residents had remained in town. A few had died, but many young families were moving west. By 1801 only about 60 percent of the town residents owned farms, 10 percent were merchants or craftsman, and the remaining 30 percent were tenants employed as farm help or were adult children with families living on their parents' farm. Thirty years later, Clinton's population had risen to an all time high, 2,130 residents--a number it would not see again until more than half of the 20th century had passed! It had become large enough by 1821 for Hyde Park and Pleasant Valley to be separated from it. By 1830, Clinton had become a fully settled and mature town. Very few new roads had been added after 1795, and land had been completely divided until the median size farm was 120 acres. Little acreage was available for offspring of residents to begin a new farm. This, together with an oversupply of labor compared to the amount of work available, required many to leave the town.

Manufacturing, which had never developed into large mills or industrial sites, increased a little during the last decade of the 18th century and the first decade of the nineteenth century. North of Clinton Corners, two small manufacturers were active before 1800. Edward Underhill made nails which he exported to Poughkeepsie and New York City, and Zodack Southwick operated a tanning business. Several small carding mills for the manufacture of cloth had opened by the 1820s, the largest one near Bulls Head, to complement the several existing fulling mills. These establishments employed a few residents, but there still wasn't enough work for all. The decline in Clinton's population which began after 1830 became even more apparent in the years to follow. But this decline was not all the result of out-migration; family planning played an equally important role.

<u>1830 - 1900</u>

Gradually, but especially after 1821, Clinton moved from the simple agricultural community it had been since its inception to a town which had a more diversified economy, though on a small scale. By 1835, Dorman Olivet became the full-time blacksmith at Clinton Corners. Other craftsmen settled around the mills already well established in Clinton Hollow, Frost Mills, Hibernia and Schultzville. Before 1830, Russel Abbey, a carpenter who may also have manufactured coffins, had established his full-time business in Clinton Hollow. Not far away, James Thorn had opened the first post office in 1822. These service centers, most with

a mill, general store, blacksmith shop and a variety of other craftsmen, became the seven hamlets which still exist.

Growth of the service sector of the economy accounts in part for the striking increase in the number of families in town during the 19th century, despite the sharp decline in population. The number of residents in Clinton declined from 2130 people in 1830 to 1691 in 1875, but the number of taxpayers actually increased from 236 to 389. Also, the number of families who lived on parcels of land under 25 acres increased sharply, as did the number of families who lived on small house lots. The open rural character of the Clinton landscape steadily changed. By the end of the 19th century, pockets of more densely developed areas around the hamlets were more in evidence. Yet, the number of people continued to decline; by 1900, only 1400 residents remained.

During the first half of the 19th century, Clinton became more self-sufficient; more and more services were provided within the town. But the locus of economic transactions, at one time the storekeeper or large mill owner, began to change by the third quarter of the century. Access to more distant commercial centers such as Poughkeepsie was easier with the coming of the railroad in 1870 to Clinton Corners. For some merchants the railroad provided an additional opportunity for commercial growth. Flour and grist mills owned by the Frost family in Frost Mills, the Schultz family in Schultzville, and the Marquart family and its successors in Clinton Hollow prospered, but the mill at Hibernia, once among the largest in Dutchess County, continued to struggle even after the railroad's arrival. But by 1880, only the mill at Frost Mills, having kept up with the change in technology, continued to prosper. The advances in technology during the 19th century which benefited the Frost family brought decline to many businesses. Fulling mills and carding mills had closed their doors by the middle of the century. Their work was done cheaper and more quickly in the growing industrial centers. Even the smallest industries in town succumbed to the advances in urbanized industrial centers. Smith Doughty, the shoemaker in Hibernia for twenty-five years, had to give up his trade in 1865. As he approached his 60th birthday in 1880, he again identified himself as a shoemaker. However, this time he was not making shoes but repairing them; ready-made shoes from Poughkeepsie and other industrialized urban areas had been available for almost a quarter century.

Other changes can be seen in the architecture of the homes constructed throughout the period. While most of the architecture was vernacular, the influences of the higher styles imported from urban areas was evident. Homes reflected the Federal and Greek Revival styles in the early period, and as the century aged, homes took on the Victorian rooflines and

gingerbread trim, whether renovated or newly built. Yet, few homes were built in the grand style. Instead, residents embellished simpler homes with high style elements.

Perhaps the most significant change was in the primary enterprise, agriculture. While the size of farms remained essentially the same, the number of acres cultivated gradually grew from the average of 10-15 acres to about 20-30 acres. In part, this was the result of steady clearing of forest land, but the increased interest in commercial farming also contributed to the change. Two-bay and three-bay Dutch and English barns used for threshing grains were constructed during early settlement years. Additionally, the high prices for agricultural products in the 1820s and 1830s encouraged production. Also during this period, the kind of crops which were planted changed. Wheat, a mainstay crop during the early years, declined, and finally all but disappeared. Pestilence and disease endemic to the wheat crop had taken its toll by 1845. A gradual shift to dairy farming and raising pigs and cattle stimulated an increase in crops such as corn, hay, rye and other grains. Beef and pork became important cash products. But the dairy product was butter for much of this period; milk production for sale as fluid milk developed in the last quarter of the century. During this time, large dairy barns were constructed, reflecting the changed agricultural economy. Wool from 6,400 sheep made a small contribution to the family income, until it too declined by mid-century. During most of the 19th century, 80 percent of Clinton's landscape was cultivated, in pasture or in meadow, reflecting its agrarian economy.

1900 - present

The final decades of the 19th century had brought many changes to Clinton. Telegraph and telephone lines had been constructed. Mass produced items including canned foods appeared at the country store. Also, technological changes made planting and harvesting equipment more available, though the source of power continued to be the horse. Electricity and other advances, long available in urban areas, reached Clinton in the 1930s. The automobile soon followed.

But one need not see the transition into the new century as particularly dramatic or abrupt. For example, during the early decades, refrigeration was still provided by ice harvested from local ponds or the Hudson River. Vegetables, mostly home grown, were still kept in a root cellar. And heat was still produced from wood from the "wood lot," though coal was found more frequently in some homes. Certainly, some of the labor intensive work on the farm had been relieved by new inventions, but the power supply was still the human arm. Many of these tools, such as corn shellers, could be purchased in the local store. A consumer-oriented

economy had arrived. Items, such as clothespins, spectacles, watch keys, cigar holders, canary seed, chocolate, and even invisible ink could be purchased in the hamlets.

But Clinton, despite all these changes, retained its parochial character. The wildcat shot by Herman Lane near Clinton Corners and the public admonishment of those who attended a party on Christmas Eve was local news printed in Poughkeepsie newspapers. The decline in population, which began after 1830, continued well into the 20th century. By 1925, fewer than 1,200 people lived in Clinton and by World War II, Clinton hit its modern low, 1,100 residents. Curiously, the number of residents was half what it had been a century earlier, but by the 1930s there was twice the number of families. Obviously, the number of children in the average family had declined sharply, even before the depression of the 1930s imposed limits on the size of families. And the number of families who lived on small lots had almost doubled from 62 in 1850 to 115 in 1915.

An increasing number of families supported themselves in non-farm occupations. New occupations such as barber, insurance agent, cigar maker, railroad stationkeeper and trackworker appeared. Craftsmen all but disappeared. Only three blacksmiths served the town in 1925, when there had been fifteen in 1900. By 1930, Ella Smith, the "chief telephone operator" in Clinton Corners, relayed the news that the last physician to practice in town, Dr. Edwin Hoyt, had passed away. More and more breadwinners found employment outside of town. At first the railroad, which had taken some of them out of town to high school, carried them to their occupations. Later, the automobile served that purpose.

Agriculture, still the economic base of the town, continued to change. The average 100-acre farm gradually moved to producing fluid milk for distant markets. By the 1940s and 1950s, milk became almost the sole source of farm income. The tractor, which appeared in the 1930s, together with refrigeration on the farm and in transport trucks and railroads, made it possible to increase the amount of milk produced. Yet, the number of farms continued to decline. Many individuals, often residents of New York City, began in the 1930s and 1940s to purchase farms for weekend retreats. A few continued farming through a farm manager. The decline continued into the 1950s and beyond. But the principal reason for the decline of the family farm was the rising value of land and the associated increase in property taxes. In an enterprise which provided only a marginal income, the increase in costs and the prospect of income from the sale of land were, for many farmers, conditions too realistic to ignore. Land values increased as the numbers of people enticed to Dutchess County by growing industry, particularly I.B.M., increased. Farmland was needed to provide housing for the growing population.

At the end of the 20th century and into the 21st century, pasture land has been increasingly used to farm horses, cattle and sheep, with horse farms making up the predominant agricultural land use. Clinton horse farms produce winners at the thoroughbred race track and winners in the dressage show ring. Breeding, raising and training horses, and growing hay to feed the horses has kept many farms in active agricultural production. Several cattle farms sell grass-fed beef, and one farm markets grass-fed lamb to the Culinary Institute of America in Hyde Park. One farm sells free range chicken meat in New York City farmer's market. Three local greenhouse businesses sell plants to local markets and to the farmer's market in New York City. With energy costs increasing, more residents are seeking locally-grown food, in preference to food grown and shipped from a distance.

Access to Clinton from Poughkeepsie and even more distant urban areas improved during the 1950s and 1960s when the roads were widened and resurfaced with oil and stone. Principal roads like the newly constructed Taconic Parkway and the asphalt-surfaced Salt Point Turnpike, Hollow Road and Route 9G encouraged population growth. At present, there are almost four times as many residents living in Clinton as had been the case in 1940. Yet this growth did not reverse the decline in the number of schools in town, nor in the number of post offices. Centralized school districts, a trend which began in the 1940s, finally closed all eleven of Clinton's one-room schools. Now Clinton's children leave town every day to attend schools located in neighboring towns. The one post office which remains, compared to the eleven which were present in 1900, attests to the continuing trend toward consolidation of services. Despite this trend, Clinton has not yet witnessed the building of a shopping mall, water is still provided by the well on each homeowner's property, and septic fields continue to dispose waste. In the face of all the changes, the rural character of the town persists.

Recent economic downturns, with the IBM plant in Kingston closing in 1995 causing the loss of 7500 jobs, has affected the economy of Clinton to some extent. More recently, in 2008 the national recession has affected the ability of local families to find employment. However, electronic innovation has allowed many Clinton residents to work from home using computers, and others commute to more urban areas to the south. For more information please see details in Chapter 4.

Historic Preservation

Why is preservation of historic buildings and other cultural features so important to Clinton's future? Throughout this century, there has been a growing recognition that examples of America's historical heritage and the lessons to be learned from history should not be isolated in museums or limited to textbook pages. History must be tangible if it is to be understood in

the context of everyday life. Nor should history be represented only by places associated with major national figures or events. Local historic landmarks often have great importance for individual families and communities.

Since architecture is perhaps the most public of art forms and the most visible expression of local history, preservation of buildings that are architecturally or historically significant often generates a renewed sense of community pride and a focus for neighborhood improvement efforts. Older buildings provide amenities, such as architectural detailing, high ceilings, exceptional woodwork, and quality craftsmanship that are rare in new construction. Restoration projects can also be a catalyst for economic revitalization. There are numerous examples of villages and hamlets that have enhanced their appearance and commercial viability through facade improvement programs. Restored districts convey a sense of place and community identity that is impossible to replace or recreate once the architectural history is lost. Finally, the escalation of overall property values is almost always a by-product of historical recognition and rehabilitation.

The 1968 Clinton Comprehensive Plan included only brief descriptions of three historic sites--the Creek Meeting House in Clinton Corners, the Pleasant Plains Presbyterian Church, and the DeWitt House in Frost Mills. The 1991 Comprehensive Plan recognized the need and desirability to substantially expand this limited view and contains updates through 1988. This has now been expanded to include new material through 2008.

In the past, preservation efforts usually focused on a few prominent buildings, such as the oldest surviving structures in town, mansions, or high-style architectural achievements. This philosophy reflected the long-term influence of the federal government's historic sites act of 1935, which concentrated on individual examples of exceptional national significance, like Washington's Headquarters in Newburgh or the FDR National Historic Site in Hyde Park.

After passage of the more comprehensive National Historic Preservation Act of 1966, public support for preservation has now broadened to include historic resources of state and local interest as well. Moreover, the types of sites considered worthy of protection now include vernacular buildings (more indigenous architecture not designed by architects), early twentieth century structures, monuments, cemeteries, farm complexes and industrial buildings.

The emphasis has also shifted towards recognition of the contextual relationships surrounding buildings. Intact commercial streetscapes and clusters of older buildings can be designated historic districts. Scenic or culturally important features like stone walls,

outbuildings, dams and mill ponds, mature stands of trees and historic landscapes, especially if these elements form a continuous pattern, can be incorporated into districts or designated scenic road corridors. Historic preservation also means the sensitive design of new or rehabilitated buildings in areas of historical or architectural significance.

Protection Measures

Clinton has a rich historical past spanning over 200 years since European settlement. Much of Clinton's unique architectural legacy is concentrated in the seven hamlet areas, but there are many intact farm houses and barns along the rural road network. Protection of the town's historic heritage and scenic rural qualities received high levels of support in the Community Values Survey. Specifically, in the 1988 survey**,** 88 percent of responding residents felt that the historic character of existing hamlets should be protected from incompatible development and 80 percent favored the creation of historic districts. In the 2008 survey, the percentages had increased to 92 percent and 87 percent, respectively.

To date, however, Clinton's historic sites have very little formal protection. Even though many buildings in the town are clearly eligible, five are listed on the National Register of Historic Places. The Creek Meeting House and cemetery, as well as the Hicksite Friends Church across the road in Clinton Corners were listed under a Quaker meeting house theme. Windswept Farm on Sunset Trail, The Willows in Clinton Corners and the Masonic Hall in Schultzville have been listed on the State and National Registers. Nomination to the National Register primarily provides honorary recognition, but it can also perceptually change attitudes toward significant buildings and districts, and give credibility to preservation efforts. Register listing does not restrict the rights of property owners to alter designated historic structures, but it does offer an extra level of protection from state or federally-funded actions, such as road widenings or public utility corridors. Significant tax credits are also available for substantial rehabilitation of commercial or rental properties on the National Register.

There are many other historic preservation techniques, ranging from the power of persuasion through educational campaigns to the outright purchase of critically important historic sites by not-for-profit groups. Such purchased property can be adapted for public use or restored and resold with protective deed restrictions through a revolving preservation fund.

The most comprehensive protection measures are regulatory in nature. These can only be implemented by local governments, on a discretionary basis during site plan review by the Planning Board, or often through the creation of a landmark provision or overlay zone in the

town zoning law. Specific ordinance language must be based on a thorough field survey and designation process. Fortunately, the documentation of Clinton's historic resources occurred at both the town and county level from 1986 to 1988.

Local Landmark Designations

As part of the town's 200th anniversary in 1986, the Clinton Historical Society organized a Landmarks Designation Committee to identify buildings whose age, architecture, importance to Clinton's history, and state of preservation made them historically significant. In the 1988 nominations, the committee targeted buildings in each of the town's seven hamlets. Since 1986, the 36 buildings designated local landmarks by the Clinton Historical Society are:

1986 Landmark Designation

1. ***Farm House, 173 Pumpkin Lane.*** Located east of the Taconic State Parkway on Pumpkin Lane.

1987 Landmark Designations

2. ***Masonic Hall, 1144 Centre Road, Schultzville, 1865.*** The Warren Lodge #32 is located on Centre Road in the hamlet of Schultzville. Theodore A. Schultz provided the land and funds to erect the building in his will.

3. ***Creek Meeting House, 2433 Salt Point Turnpike, Clinton Corners, 1777, National Register.*** The former Quaker Meeting House is located in the northern portion of the hamlet of Clinton Corners. The land was purchased from Abel Peters and construction of the stone structure was begun in 1777, but it was not completed until 1782. The Upton Lake Grange became the owner in the 1930s. Presently the building is owned by the Clinton Historical Society.

4. ***Presbyterian Church, 2 Fiddler's Bridge Road, Pleasant Plains, 1837.*** Located on the site of a former Dutch church and school house, the church is the central building in the hamlet. The present Greek Revival church with Doric columns was built in 1837 and enlarged in 1859.

5. ***Hicksite Friends Church, 2438 Salt Point Turnpike, 1828, National Register***. Currently a private residence, this church has been restored and beautifully maintained**.**

1988 Landmark Designations

6. ***House at Hibernia Mills, 441 Hibernia Road, c.1840.*** Located at the northeast corner of the bridge in the hamlet, the wood-frame house was built after the division of the mill property. The Hibernia Mills, started by David Arnold in the 1770s, contained homes and shops in addition to the mills. Most of the division into individual properties was the action of William Hazard in the 1830s.

7. ***Traver House, 68 Fiddler's Bridge Road, Pleasant Plains, c.1786.*** Located slightly north of Pleasant Plains on Fiddlers Bridge Road, this wood-frame house was probably built by Peter Traver in 1786. Peter Traver had a large farm just to the north in 1754, and may have purchased this parcel to build a retirement home as he turned the farm over to his sons.

8. ***Clapp House, 234 Hollow Road, Pleasant Plains, c.1794.*** Probably built by John Clapp as a farmhouse in 1794, this wood-frame house is located at the southwest corner of the intersection, across from the Presbyterian Church. The property was at a four-corners intersection with the north end of Quaker Lane until Quaker Lane was changed to its present exit on Hollow Road about 1870.

9. ***Leroy House and Store, 27 Hollow Road, Frost Mills, c.1840.*** Located at the northeast corner of Hollow Road and Creek Road, the wood-frame house was built by John LeRoy, mill owner, as a home with an attached store. The mill, started by the DeWitts in 1766, remained unchanged until the Leroy family operation created more housing and expanded enterprise. The building was also the site of the Frost Mills and Pleasant Plains post office.

10. ***Daniel Schultz House, 820 Fiddler's Bridge Road, Schultzville, c.1854.*** The house is located on the southwest corner of the intersection at Schultzville. Built by Daniel Schultz, owner of the store, this wood-frame building was the home of his third wife, Louisa, for many years. Schultzville, named for the Schultz family, was the site of mills, a store, and several homes, all for the Schultz family.

11. ***Peters House, 2462 Salt Point Turnpike, Clinton Corners, 1792.*** Located in the northwest section of the hamlet, this brick house with wood-frame addition was built by Abel Peters, an early merchant in Clinton Corners. He had a store and a hotel, in addition to mills on Schultzville Road. The property was completely divided and many homes were built in the hamlet with the coming of the railroad in 1870.

12. ***Tillou House, 835 Hollow Road, Clinton Hollow, c.1817.*** Located at the northeast corner of the intersection of Meadowbrook Lane and Hollow Road in the hamlet, this wood-frame house was probably built by Carlisle Tillou around 1817. Originally part of the mill property, division of the land occurred in 1800. The "gingerbread" look of the house probably came later in the 1830s and 1840s through the handiwork of Russell Abby, carpenter, woodworker, and casket-maker.

13. ***Teller House, 68 Milan Hollow Road, Bulls Head, c.1764.*** This stone house is located on Milan Hollow Road, just outside Bulls Head. It was built by John Teller, miller, and is one of the oldest houses in the Town of Clinton. The Teller family intermarried with the family of Stoutenburgh, and the Teller's several hundred acres were part of the holdings of Jacobus Stoutenburgh of Hyde Park.

14. ***Frederick Schultz House, 995 Pumpkin Lane, c.1840.*** Located at the intersection of Old Bulls Head Road and Pumpkin Lane, this wood-frame house was built by Frederick Schultz. It served as a general store and home for the proprietor, in addition to his farming operation. The store was operated by Pedro Sweet, and then his wife Ella, through 1916.

<u>1989 Landmark Designations</u>

15. ***Rickert House, 27 Shadblow Lane, 1868.*** This clapboard house was built by descendents of Palatine Germans who immigrated to Germantown in 1710. George Rubin Rickert was a prosperous farmer with many landholdings, and was an auctioneer dealing in cattle. He was a justice of the peace and was active in the church in Schultzville.

16. ***Cookingham House, 213 East Meadowbrook Lane, 1864.*** This farmhouse with wide plank floors has many outbuildings, as well as slate and stone terraces.

17. ***Swartwout House, 194 Old Bulls Head, c. 1740.*** Originally, this home was constructed of stone and added to as time and materials allowed. Owned by a consortium, including Charles Crooke, records of this home are among the oldest in Clinton.

18. ***Lester House, 1561 Hollow Road, c. 1748.*** Built with beautiful architectural detail, this farmhouse was the center of a productive farm for many years.

1990 Landmark Designations

19. ***Nathaniel Brown House, 207 Brown's Pond Road, c. late 1700s.*** Post and beam construction identifies this home as early. The earliest record of land sale identifies Nathaniel Brown purchasing 100 acres in 1792. Records show that Nathaniel Brown serving on the board of the Pleasant Plains school and as a highway overseer in the early 1800's. It may be that a mill existed on the creek in front of the house.

20. ***Traver House, 140 Deer Ridge Drive, middle 1700s.*** Constructed by Palatine Germans of wood, stone and mud found on the site, this old farmhouse has an original brick fireplace with a cast iron crane and bread oven. The farmhouse was originally on 140 acres, which the census shows produced dairy and meat products, as well as supporting families from the middle 1700s to the 1930s.

21. ***Pleasant Plains Manse, 238 Hollow Road, 1863.*** This home was donated to the Pleasant Plains Presbyterian Church by the Van Vliet family for use as a parsonage and was lived in by ministers of the church for 100 years. This home has significance as part of the hamlet and the historical context of the area.

22. ***Webster Farm, Schultzville Road and Salt Point Turnpike, Clinton Corners, c. 1794.*** Large and beautifully maintained farmhouse with large barns on corner of Schultville Road and Salt Point Turnpike has a prominent place in the Clinton Corners landscape. This home may have been a stop on the underground railroad during the Civil War.

23. ***John Dewitt House, 18 Hollow Road, Frost Mills, c. 1772, National Register***. Constructed by Captain Dewitt who participated in the Revolutionary War and was a signatory to the United States constitution, this home has been part of the historical significance of Pleasant Plains, with its collection of homes and former places of business.

24. ***Schultz House, 99 Old Bulls Head Road, c. 1790.*** This Georgian style house with fine architectural details is similar to one in Rhinebeck. The construction is post and beam with no ridge pole. The home is cited in references to New York State architecture.

1991 Landmark Designations

25. ***Dr. Barnes Home, 218 Hollow Road, Pleasant Plains, c. 1878.*** Located on Hollow Road next to the old Providence Cemetery, this wood-frame house was the office and

home of Dr. Edward Barnes, who practiced in Pleasant Plains until his retirement. He died in 1935 and is buried in the Pleasant Plains Cemetery.

26. ***Schoolhouse and Home, 81 Old Bulls Head Road, c. 1787.*** This home, which may have been built by the Schultz family, was attached to the Bulls Head schoolhouse in 1992. The old house has an original fireplace with Dutch oven. The ceilings are low and floors constructed of wide pine planks.

27. ***Schoolhouse, 2486 Salt Point Turnpike, Clinton Corners, c. 1850.*** This privately owned schoolhouse is in excellent condition and is leased to the United States Post Office.

28. ***Simmons House, 13 Mountain View Road, 1772.*** This south-facing farmhouse with hand-hewn beams, original Dutch doors and random-width floors was, most likely, of Palatine origin. There is an old stone shed west of the house.

29. ***Primrose Hill Farm, 203 Fiddler's Bridge Road, c. 1854.*** This farmhouse was the second home of the Cookingham family who have owned and farmed this land since land ownership records exist. The Dutch barns behind the house may date to 1800, and are in excellent condition.

1992 Landmark Designations

30. ***Clinton Alliance Church, 1190-1192 Centre Road Schultzville, 1865.*** The Clinton Alliance Church is shown on the 1867 map with its parsonage and cemetery. The church is clapboard, with interesting decorative detail.

1993 Landmark Designations

31 ***Pleasant Plains Schoolhouse, 2 Fiddler's Bridge Road, 1852.*** Schoolhouse used for 100 years by local children. Owned by the Pleasant Plains Presbyterian Church, was moved and attached to the church.

1994 Landmark Designations

32. ***Allen House, 38 Allen Road, c. 1800.*** This simple farmhouse with saltbox style has been a rural feature of Allen Road for more than 200 years.

33. ***The Willows, 2497-2499 Salt Point Turnpike. c. 1914, National Register.*** Benjamin Tousey built this early twentieth century home in Arts and Crafts design. The finely crafted details make this home an outstanding example of the Craftsman style.

34. ***Deyo Home, 1245 Hollow Road, c. late 1700s.*** South-facing farmhouse with outbuildings was the home of Dr. Amanda Deyo, peace activist, from 1868 to 1886.

1995 Landmark Designation

35. ***Cherry Cottage, 278 Clinton Hollow Road, 1820.*** Farmhouse with exposed beams is typical of construction of the early 19th century.

2004 Landmark Designation

36. ***Cookingham House, 20 Fiddler's Bridge Road, early 1800s.*** Home north of the Pleasant Plains Church occupied by members of the Cookingham,Van Vliet and Frost families, as well as Dr. Merritt.

Designation of Critical Environmental Areas

Under the State Environmental Quality Review Act (SEQRA), local governments can designate areas having exceptional social, cultural, historic, archeological, recreational, or educational value as Critical Environmental Areas (CEA). A CEA designation requires more comprehensive background information and an extra level of scrutiny in the environmental review process.

All unlisted activities in a CEA become Type I actions, requiring the preparation of a Full Environmental Assessment Form and coordinated review among involved agencies. More minor Type II, excluded, or exempt activities, such as maintenance and repair or construction of accessory structures, are not affected.

In 1987, responding to the threat of road widening through Frost Mills, the Clinton Historical Society and local residents sponsored a resolution to designate the historic hamlet a CEA. The response was so positive that a volunteer coordinator in each of the other hamlets in Clinton began to document local history and establish boundary lines. As a result, all seven hamlets in the town--Frost Mills, Pleasant Plains, Clinton Hollow, Hibernia, Clinton Corners, Schultzville, and Old Bulls Head were designated. Critical Environmental Area status does not guarantee protection against incompatible changes, but it does recognize and justify the

unique qualities of the surviving hamlets and provide for special consideration during discretionary permit decisions.

Designation Under Town of Clinton Zoning

In 1988 the Town of Clinton Zoning Law created six hamlet zones, including hamlets (H) and residential hamlets (RH). This designation indicates the value of the architectural character of the historic hamlets. The permitted uses were intended to reinforce Clinton's hamlets by allowing residential and certain non-residential growth in and immediately around existing hamlets.

Designation of Historic Roads

Reflecting continued concerns that road improvements based on modern standards would diminish the scenic and historic character of Clinton's rural road network, the Town Board in 1988 passed a resolution declaring all currently existing roads which appear on the 1867 town map as "Historic Roads of the Town of Clinton." Forty-nine separate roads were so designated. The Town Board also appointed the Clinton Scenic and Historic Road Committee, comprised of the Highway Superintendent and six interested residents, to recommend policies and practices that will maintain the historic, rustic, and rural nature of the town's road system. Such roadside features as stone walls, trees and shrubbery, and historic structures are to be given special consideration in decisions to widen and straighten roads or repair bridges and culverts. Each road is to be inventoried to note elements which should be preserved and problem areas to be addressed. The implications of the historic roads resolution on transportation planning is discussed in Chapter 7.

Dutchess County Historic Survey

In 1986, using Community Development Block Grant funds, the Dutchess County Department of Planning commissioned the Dutchess County Historical Society to conduct a countywide historic survey. The primary purpose of Phase I of the project, which was completed in 1988, is to identify and document all areas of the county that had not been comprehensively surveyed, using New York State Historic Preservation Office (SHPO) inventory forms, photographs, and maps.

The guidelines for the countywide survey used standards provided by SHPO for nomination to the National Register of Historic Places, although intact structures or sites of specifically local historic interest were also considered to meet the inventory criteria. Historic resources

such as buildings, stone walls, bridges, cemeteries, historic landscapes, scenic views, and potential archeological sites were coded and mapped. All principal structures over 50 years old were color-coded according to architectural integrity and significance. Those that were deemed sufficiently intact and distinctive in terms of architectural style or known historical importance to the community were documented with inventory forms and photographs. These red-coded structures are not necessarily eligible for the National Register, but warrant further historic research to determine if they merit nomination.

The town of Clinton's preliminary survey was completed and field-checked by the SHPO representative for Dutchess County in early 1988. One hundred and sixty-three (163) individual sites were identified as potentially significant and worthy of serious consideration during the planning process. Concentrations of relatively intact historic structures in Frost Mills, Pleasant Plains, Schultzville, Hibernia, and Clinton Corners made these hamlets likely candidates for historic districts. Eight former mill sites were also identified for future archeological research. Expansion of this list to 297 sites, including 11 mill sites, includes structures which have local significance to Clinton, such as the Clinton Town Hall built in 1920. Criteria involved the presence of the structure on the Beers Atlas map of 1867 and/or the school district map of 1876, or the presence of other historic or local significance. The maps (Figure 2.1: *Parcels with Historic Sites* and Figure 2.2: *Hamlet Parcels with Historic Sites*), which appear at the end of this Chapter with the accompanying Table 2.1, were developed for this plan and will assist with the education of residents and preservation of valued historic structures and sites.

Summary and Implications for Planning

The history of Clinton is extremely well documented and the historic character of the town is appreciated by a high percentage of residents. The process of systematically identifying all Clinton's historic resources has begun through the countywide historic survey. Local efforts to recognize the importance of Clinton's heritage include the designation of 36 local landmarks by the Clinton Historical Society, the granting of Critical Environmental Area status to the seven historic hamlets, designation in Clinton’s Zoning Law of six hamlet zones, and the designation of 49 historic roads by the Town Board. It is recommended that the historic hamlet of Bulls Head be included in the Residential Hamlet Zoning District.

These activities confirm that preservation cannot be a passive affair. Unless the town enacts protection measures, the development pressures so evident in Clinton and the surrounding communities threaten to irreparably alter the historic and scenic character that is so valued by residents. Specific steps that can be taken include the continuation of the historic survey

process, resulting in the nomination of eligible buildings to the National Register of Historic Places. Especially important is the designation of districts in the hamlet centers that are so crucial to Clinton's identity.

Since the register nomination process can take years and offers only limited protection from State and federal actions, the town should continue to recognize local landmarks. These landmarks can form the basis for increased attention on compatibility issues in the site plan review process, as well as a potential local landmarks protection provision in the zoning ordinance. Historic markers, honorary awards, model restoration projects and other educational efforts are vital components of an effective preservation program, but only consistently applied regulatory measures will ensure the town's historic legacy.

It is recommended that architectural guidelines be developed for the preservation and protection of key historic elements in the town's seven historic hamlets.

It is recommended that the town apply for grant funds through the Documentary Heritage Program (DHP) to develop a full archive of materials in the Creek Meeting House, which is owned and managed by the Clinton Historical Society. This program is administered by New York State Archives, a unit of the New York State Education Department and would help to ensure that collections and historical records were properly identified, surveyed and stored and made available to the town and members of the public.

Table 2.1: Parcels with Historic Sites

Map #	Address	Current owner	Property ID	DC #	Recognition	Owner in 1867	Owner in 1876	Information of interest
1	231 Zipfeldburg Road	Meer	116439	1		Not on map	Not on map	Farmhouse late 1700's
2	479 Slate Quarry Road	Lowenstein	705705	2		T. N. Traver	J. M. Traver	Residence
3	54 Stonehouse Road	Baker	540286	3		Miss A. Traver	Miss A. Traver	Farmhouse late 1700's
4	Stonehouse Road	Knight	674442			E. J. Traverse	Miss A. Traver	Farmhouse
5	52 Kansas Road	Allen	929962			P. A. Burger	P. A. Burger	Farmhouse 1797
6	425 Mountain View Road	Dealy	406630			E. J. Traverse	E. J. Travers	Farmhouse and barns
7	255 Mountain View Road	Dutchess County LLC	272192			William C. Traver	William C. Traver	Farmhouse late 1700's
8	166 Mountain View Road	Goldman	294997			School	School #2	Rebuilt schoolhouse
9	164 Mountain View Road	Goldman	378052			E. G. Traver	E. G. Traver	Farmhouse and barns
10	138 Mountain View Road	Valle	248951			Empire - W. Sh. & E. S. Sh.	W. C. Traver	Farmhouse
11	99 Mountain View Road	Montralto	183872			J. E. Eckert	T. Ackert	Farmhouse
12	431-439 Schultz Hill Road	Gille	818359	4		G. Schultz	G. Schultz	Farmhouse and barns late 1700's
13	362-438 Schultz Hill Road	Hirsch	915826	5		M. Schultz	M. Schultz	Farmhouse and barns late 1700's
14	324-328 Schultz Hill Road	Pearl & Vim	915826	6		G.H.Schultz and D. Cookingham	G.H.Schultz and D. Cookingham	Mill and archeology site, late 1700's
15	188 Schultz Hill Road	Hart	285540			J. and Z. Frost	Z. Frost	Residence middle 1800's
16	79 Schultz Hill Road	Stark	402310			J. G. Hendricks	J. G. Hendricks	Farmhhouse middle 1800's
17	13 Mountain View Road	Garland	070730	7	Clinton Landmark	M. Traver	A. Simmons	Farmhouse late 1700's
18	140 Deer Ridge Drive	Coller	271305	8	Clinton Landmark	P. Bierbauer	P. Bierbauer	Farmhouse middle 1700's
19	227 Deer Ridge Drive	Sanderson	086490			Not on map	W. Poulding	Farmhouse 1870's
20	68 Naylor Road	Kahn	591367	9		E. S. Uhl	J. Uhl	Farmhouse and barns middle 1700's
21	289-395 Lake Drive	Wachs	042135	10		J.E. Elmendorf	P. Decker	Farmhouse and barns early 1800's
22	123-165 Lake Drive	Omega	938723	11		J. Patal	J. Patal	Omega Institute
23	41-51 Lake Drive	Melhado	829549			M. Traver	J. Cotler	Farmhouse and barns
24	485 Fiddler's Bridge Road	Myers	574238			J. L. Kipp	J. L. Kipp	Farmhouse early 1800's
25	469 Fiddler's Bridge Road	Marsden	520185			D. S. Jones	J. L. Cookingham	Mill
26	297 Fiddler's Bridge Road	Auspitz	117965			A. S. Lent - Orchard Hill	A. S. Lent	Farmhouse middle 1800's
27	203 Fiddler's Bridge Road	Schoch	158739		Clinton Landmark	M. Cookingham - Primrose Hill	M. Cookingham	Farmhouse, Dutch barn early 1800's
28	173 Fiddler's Bridge Road	D'Amico	939688	12		E. Sheriger	E. Sheriger	Farmhouse and barns early 1800's
29	187 Fiddler's Bridge Road	D'Amico	990607			E. Sheriger	E. Sheriger	Dutch barn
30	106 Fiddler's Bridge Road	Stevens	917543			Unidentified on map	Unidentified on map	Farmhouse and barns late 1800's
31	173 Brown's Pond Road	Rosemarin	730937			Willow Cottage	A. Wallace	Farnhouse middle 1800's
32	207 Brown's Pond Road	Lewis and Sacerdote	799995		Clinton Landmark	H. Wallace	J. Wallace	Farmhouse middle 1800's, fulling mill site late 1700's
33	324 Brown's Pond Road	Malstrom	993233			J. Arnett, Jr.	J. Arnett, Jr.	Farmhouse middle 1800's
34	377 Brown's Pond Road	Beitchman	927379			F. S. Uhl	F. S. Uhl	Farmhouse middle 1800's
35	41 Seelbach Lane	Seelbach	240515			J. A. Filkins	J. A. Filkins	Farmhouse and barn
36	62 Seelbach Lane	Findlay	291583			J. E. Traver	J. E. Traver	Residence middle 1800's
37	631 Fiddler's Bridge Road	Oberly	885392	14		S. Schultz	Mrs. S. Sleight	Farmhouse early 1800's
38	638 Fiddler's Bridge Road	Friedberg and Mainardi	829288			S. Schultz	Mrs. S. Sleight	Barn complex
39	709 Fiddler's Bridge Road	Clark	060417			Dr. P. S. Denny	Dr. P. S. Denny	Farmhouse early 1800's
40	785 Fiddler's Bridge Road	Mahoney and Distal	142535	15		Mrs. Stoutenberg	Mrs. Stoutenberg	Farmhouses and barns late 1700's
41	754 Fiddler's Bridge Road	Mack	066324	16		P. W. Drum	P. W. Drum	Farmhouse and barns late 1700's
42	148 North Creek Road	Adriance	412891	17		A. Cookingham	L. F. Lloyd	Farmhouse, Dutch barn late 1700's
43	115 North Creek Road	Thorpe	280805	18		P.H. and George T. Cookingham	George T. Cookingham	Farmhouse and barn late 1700's
44	2257-2265 Route 9G	Germano	280946			M. Cookingham	J. E. Schultz	Farmhouse middle 1800's
45	137 Hollow Road	Lachmund	513506	19		A. Odell	A. Odell	Farmhouse middle 1700's
46	169-173 Hollow Road	Fried	640517	20		P. Cookingham	P. Cookingham	Farmhouse late 1700's
47	200-206 Hollow Road	Doyle	635348	21		Unidentified on map	B. Van Kuren	Farmhouse early 1800's
48	218 Hollow Road	Mattell and Davino	667352	22	Clinton Landmark	Unidentified on map	Dr. Barnes	Residence middle 1800's
49	224 Hollow Road	Providence Cemetery	862353	23		Cemetery	Cemetery	Providence Cemetery, early 1800's
50	227 Hollow Road	Innello	705381	24		A. Cookingham		Farmhouse, outbuildings, early 1800's
51	90 Fiddler's Bridge Road	Costarino	862596	25		H. Ackert	H. Ackert	Farmhouse early 1800's
52	68 Fiddler's Bridge Road	Swanson	894438	26	Clinton Landmark	Rev. S. Hoyt	Rev. S. Hoyt	Farmhouse, sheds late 1700's
53	61 Fiddler's Bridge Road	PP Cemetery Association	802468	27		Cemetery	Cemetery	Pleasant Plains Cemetery
54	46 Fiddler's Bridge Road	Swanson	801410	28	Clinton Landmark	Private school, Rev. S. Hoit	J. Coleman, Rev. S. Hoyt	Farmhouse and barn, early 1800's
55	34 Fiddler's Bridge Road	Monahan	774410			Not on map	Not on map	Stone cottage, 1950's
56	20 Fiddler's Bridge Road	Hanaburgh	763380	29	Clinton Landmark	Dr. Merritt	J. Frost	Residence early 1800's
57	2 Fiddler's Bridge Road	Pleasant Plains Pres. Church	724352	30	Clinton Landmark	Church, constructed 1837	Church	Pleasant Plains Presbyterian Church

Table 2.1: Parcels with Historic Sites

Map #	Address	Current owner	Property ID	DC #	Recognition	Owner in 1867	Owner in 1876	Information of interest
58	2 Fiddler's Bridge Road	Schoolhouse	724352	31	Clinton Landmark	School #3	School #3	Schoolhouse
59	234 Hollow Road	Fowler-Gallagher & Hastings	620278	32	Clinton Landmark	Dr. Baynes		Farmhouse, barns early 1800's
60	238 Hollow Road	Drago	703319	33	Clinton Landmark	Par.		Parsonage, constructed 1866
61	247 Hollow Road	Monahan	735330	34		H.Van Vlite	H. B. Van Vliet	Deteriorating shed, early 1800's
62	257-259 Hollow Road	Alley	735300	35		H. Van Vlite	H. B. Van Vliet	House early 1800's
63	287 Hollow Road	Keil and McCarthy	795268	36		H. Van Vlite	H. R. Van Vliet	Farmhouse and barns middle 1800's
64	387 Hollow Road	Brien	036140	37		I. Van Vliet	I. Van Vliet	Farmhouse and barns early 1800's
65	409 Hollow Road	Badger	060130			I. Van Vliet	I. Van Vliet	Farmhouse and barns early 1800's
66	40 Hollow Circle	Ferrandi	167075			J. Wilber, Shingle Mill	J. Jewel	Farmhouse and barns middle 1800's
67	Rhynders Road	Van Der Wal	470780	38		J. P. Marquard	C. C. Deroe	Farmhouse late 1700's
68	150 Rhynders Road	Diletto	583686			G. D. Sleight	F. Sleight	Farmhouse and barns
69	204 Rhynders Road	Bonanza	675871			R. Ostrom	C. Wiley (?)	Farmhouse and barn
70	320 Schoolhouse Road	Valentine	820027	39		P. Sleight - Sleight's Center	W. Carpenter	Farmhouse and barns late 1700's, possible cider mill
71	302 Schoolhouse Road	Mackin	090086			R. J. Halstead	J. Mott	Residence
72	1 West Meadowbrook Road	Kramer and Cohen	940330			E. Grazelly - Pine Grove Farm	E. Dudley	Farmhouse middle 1800's
73	134 East Meadowbrook Lane	Provensen	704408	40		J. Lawless - Maple Hill	J. Lawless - Maple Hill	Farmhouse early 1800's
74	213 East Meadowbrook Lane	Dhar	132400		Clinton Landmark	Not on map	T. A. Cookingham	Farmhouse and barns
75	256 East Meadowbrook Lane	Newmann and Heist	944370			M. Lawless	W. Baker	Farmhouse and barns
76	59 Walnut Lane	Blackwood	523154	41		S. and A. Hadden, Elm Grove	S. and A. Hadden	Farmhouse and barns early 1800's
77	98-106 Walnut Lane	Boyer	554305			P. Decker	E. Dolan	Farmhouse and barns
78	8 Walnut Lane	Devlin	452033			A. C. Briggs	A. C. Briggs	Farmhouse middle 1800's
79	616 Hollow Road	Freund-Pickavance	534991			L. J. Robbins	L. J. Robbins	Farmhouse middle 1800's
80	610 Hollow Road	Morse	442907			S. Wiley	S. Hanley	Farmhouse middle 1800's
81	109 Rymph Road	Rymph Properties	989906	43		J. Rimph	J. Rymph	Spencer Family Cemetery, early 1800's
82	162 Rymph Road	Tyszjuewicz	080033	44		J. Rimph	J. Rymph	Farmhouse m
83	109 Rymph Road	Rymph Properties	989906	45		J. Rimph	J. Rymph	Farmhouse, early 1800's
84	41 Rymph Road	Goldie	938732	46		Wm. Rymph	W. Rymph	Farmhouse and barn early 1800's
85	141 East Fallkill Road	Girdlestone	682605			H. Hoag	Van Wagner	Residence
86	205 East Fallkill Road	Estabrooke	819678			I. Van Wagner	H. Van Wagner	Farmhouse and barns
87	291 East Fallkill Road	Grotzer	011660			H. Frost - Franklin Farm	E. S. Haines	Frmhouse
88	300 Ruskey Lane	Kraayenbrink	276364	47		L. Ward	A. H. Ward	Farmhouse and barn early 1700's
89	280 Ruskey Lane	Near	225282	48		S. Ives	W. Hoag	Farmhouse and buildings late 1700's
90	277 Ruskey Lane	Di Lorenzo	198277	49		P. Olivet	P. Olivet	Farmhouse late 1700's
91	487 Ruskey Lane	Lambardy	528665	50		M. Smith	E. Smith Estate	Farmhouse and barns late 1700's
92	Ruskey Lane	Town of Clinton	647673	51		School #4	School #4	Schoolhouse
93	78-80 Spooky Hollow Road	Malloy	658617			H. Witherwood	Thomas (?)	Farmhouse and barns
94	356 Browning Road	Bacastow	845741			O. T. Hustead - Cottage Glen	O. T. Husted	Farmhouse and barns
95	11 Browning Road	Cannavino	238165			E. Browning	E. Browning	Farmhouse and barns middle 1800's
96	36 Browning Road	Matsussak	340144	52		W. T. Wood - Locust Farm	W. T. Wood	Farmhouse early 1800's
97	67-73 Browning Road	Clarke	370273			H. Stoutenberg	H. Stoutenberg	Farmhouse early 1800's
98	188 Browning Road	Brown	620273	53		E. Browning	E. Browning	Farmhouse and barns late 1700's
99	293 Clinton Avenue	Boucher	774208	54		J. M. Allen	Mrs. J. M. Allen	Farmhouse and barns late 1700's
100	9 Long Pond Road	Sausto	303480	55		T. Palmer	P. F. Coon	Rooming house in disrepair
101	820 Fiddler's Bridge Road	Marshall	365390	56	Clinton Landmark	Mrs. Schultz	Mrs. L. Schultz	Residence and sheds early 1800's
102	827 Fiddler's Bridge Road	Every	369488	57		R. Sherman	H. Sleight	Mill-related residence late 1700's
103	827 Fiddler's Bridge Road	Pells	339465	58		Mill	Mill	Mill site late 1700's, Schultz family ?
104	219 Hollow Road	West Clinton Firehouse # 2	312467	58		Mill	Mill	Mill site late 1700's, Schultz family ?
105	835 Fiddler's Bridge Road	Stokes	382468	59		Store and P.O.	Store and P. O.	Store, residence early 1800's
106	837 Fiddler's Bridge Road	Wittenburg	392469	60		Store and P.O.	Store and P. O.	Residence early 1800's
107	1144 Centre Road	Clinton Historical Society	410472	61	National Registry	Masonic Lodge	Masonic Temple	Warren Lodge #32 middle 1800's
108	1132 Centre Road	Tompkins	404465	62		Blacksmith shop	Wagon Shop	Schultzville garage middle 1800's
109	1132 Centre Road	Tompkins	405449	63		Agricultural shed, wagon shop	Wagon Shop	Residence and sheds early 1800's
110	5 Nine Partner's Road	Tompkins	420465	64		School # 6	School	Residence middle 1800's
111	14 Nine Partner's Road	Lamb	440437	65		Not on map	School	Residence middle 1800's
112	31-39 Nine Partner's Road	Ifill	541541			W. H. Leroy - High Farm	Leroy	Residence middle 1800's
113	1190-1192 Centre Road	Clinton Alliance Church	412598	66a	Clinton Landmark	M. E. Church	Christian Church	Christian Alliance Church
114	1190-1192 Centre Road	Clinton Alliance Church	412598	66b		Hall	Cemetery	Fellowship Hall

Table 2.1: Parcels with Historic Sites

Map #	Address	Current owner	Property ID	DC #	Recognition	Owner in 1867	Owner in 1876	Information of interest
115	1202 Centre Road	Clinton Alliance Church	415624	66c		Cemetery	Cemetery	Schultzville Union Cemetery
116	1190-1192 Centre Road	Clinton Alliance Church	412598	66d		Parsonage	Parsonage	Parsonage
117	1215 Centre Road	Town of Clinton	369660			Not on map	Not on map	Clinton Town Hall, built in 1920
118	1338 Centre Road	Fierro	469954			G. W. B.	G. W. Budd	Farmhouse middle 1800's
119	1463 Centre Road	Uzzo	348215			E. H. Story	D. Cookingham	Residence middle 1800's
120	1472 Centre Road	Stanbough	390220	67		E. H. Story	E. H. Story	Farmhouse early 1800's
121	1403 Centre Road	Kross and Hamilton	476009	68		G. W. Budd, Evergreen Cottage	G. F. Budd	Farmhouse, large barn across road
122	19 Maple Lane	Halbach	525840	69		G. W. B.	L. P. Budd	Farmhouse middle 1800's
123	67 Maple Lane	Lorne	627852			Mrs. S.	J. Wooden	Farmhouse middle 1800's
124	831-833 Bull's Head Road	AristaData	502537	71		G. Bishop	S. Germund	Home middle 1800's, dam c 1797, mill pond, stream
125	68 Milan Hollow Road	Anderson	716626	72	Clinton Landmark	M. Pultz	G. B. Palmer	Residence of John Teller middle-late 1700's, mill owner
126	865 Bull's Head Road	Fonda	582557	73		G. Bishop	S. D. Stuart	Clinton Mills site
127	81 Bull's Head Road	Glancy	817453	74	Clinton Landmark	F. B. Schultz, School No. 7	F. B. Schultz Estate,School # 7	Farmhouse and barns late 1700's attached to schoolhous
128	995 Pumpkin Lane	Leonart	834422	75	Clinton Landmark	Store and P.O., F. B. Schultz	P. O., F. B. S. Estate	Residence late 1700's
129	99 Old Bull's Head Road	Murphy	830463	76	Clinton Landmark	E. B. Schultz, residence	F. B. S. Estate	Residence late 1700's
130	194 Old Bull's Head Road	Teahan	093613	77	Clinton Landmark	Van Benschoten	D. Brazee	Residence late 1700's
131	43 Field Road	Far Corners Farm	019810	78		G. Bentley - Bentley Hall	G. Bentley - Bentley Hall	Residence late 1700's
132	27 Shadblow Lane	Ettus	906258	79		R. Ricker	R. Rickert	Residence late 1700's
133	253-269 Nine Partner's Road	Ellis	930822	80		L. Sherow	E. Sherow	Farmhouse and barns, about 1750, Schultz family
134	359 Nine Partner's Road	Austrian	230824	81		S. E. Jackson	S. E. Jackson	Residence early 1800's
135	803 Pumpkin Lane	Chik Realty	649105			E. Pultz	Not on map	Site of saw mill, 1850 and 1858 maps
136	631 Pumpkin Lane	Mustello	835569	82		W. Schultz	W. Schultz	Farmhouse early 1800's, possible mill site
137	570-582 Pumpkin Lane	Scharf	944427	83		A. Coon	A. Coon	Farmhouse late 1700's
138	404 Pumpkin Lane	Rouda	340232	84		J. H. Hall	J. H. Sherow	Farmhouse early 1800's
139	1 Schultzville Road	Fehlig	446308	85		J. Green	J. Green	Farnmhouse and barns early 1800's
140	157 Schultzville Road	Heintze & Whyte	692981			Hammerson	Wm Hamilton	Residence middle 1800's
141	1045 Centre Road	Bevan	388200	86		O. Doughty - Rowe Place	O. Doughty	Residence middle 1800's
142	550 Browning Road	Ruggiero	991199			Not on map	Not on map	Residence
143	564 Browning Road	Smith	964230			T. Cookingham	H. Sleight	Residence
144	565 Browning Road	Stone	940222			Geo. C. Briggs	G. C. Briggs	Residence middle 1800's
145	568 Browning Road	Smith	961242	87		Mrs. Tripp	Mrs. Tripp, Harness shop	Residence, harness shop middle 1800's
146	555 Browning Road	Bryce	940195	88		W. Hand	Harness Shop	Residence and harness shop middle 1800's
147	284-288 East Meadowbrook Ln	Hieter	956267	89		T. Crouse	T. Crouse, Store	Store middle 1800's
148	817 Hollow Road	Hitt	910242			W. H. Sleight	T. Crouse, Store	Store middle 1800's
149	826 Hollow Road	Rosen	978236			S. Crouse, J. Height	Mrs. DeGroff, T. Lawless	Farmhouse late 1700's, harness shop
150	832 Hollow Road	King	001250			Mrs. Aphaurt	N. Ackert	Residence middle 1800's
151	835 Hollow Road	Keegan	988295	90	Clinton Landmark	M. Wilbur	M. Wilbur	Residence, wagon shop middle 1800's
152	851 Hollow Road	Scott	020300	91		C. Doughty	C. Doughty	Residence, built in 1743
153	860 Hollow Road	Montross	037276	92		W. G. Rickert	W. G. Rickert	Residence built in 1940
154	860 Hollow Road	Montross	022250	93		W. G. Rickert, mill buildings	Unidentified on map	Mill buildings early 1800's
155	863 Hollow Road	Kaplan and Lee	051285	94		Store, P.O., Mill	M. L. Traver, Store, P.O., Mill	Residence early 1800's
156	869 Hollow Road	Halton	070291	95		A. D. Latin	L. G. Graham	Residence early 1800's
157	866 Hollow Road	Carlberg	058288	96		M. L. Traver	M. L. Traver	Residence middle 1800's
158	55 Schoolhouse Road	Missner	041424	97		M. Crouse	C. Doughty	Residence middle 1800's
159	8 Schoolhouse Road	Hughes-Ghee	054308			W. S.	Wagon Shop	Blacksmith and wagon shop, currently residence
160	12 Schoolhouse Road	Walsh-Vernetti	077325			B. Shop	B. S. Shop	Blacksmith shop, wagon garage, currently residence, dan
161	18 Schoolhouse Road	Perseley	066342			Mrs. Rider	S. Rider	Shoe store, residence
162	17 Schoolhouse Road	Machlouzarides	043348	98		P. Sweet	P. Sweet	Residence early 1800's
163	29 Schoolhouse Road	Simon	046366			J. Ayers	C. Burger	Residence early 1800's
164	83 Schoolhouse Road	Summerlin	085492			Schoolhouse #5	School	School middle 1800's, currently residence
165	7 Hummingbird Way	Baldwin	202722			L. Haight	D. M. Haight	Residence early 1800's
166	918 Hollow Road	Ogles	164207			J. Carpenter	Mrs. Rickert	Residence early 1800's
167	958 Hollow Road	Ingrao	245114			Z. Carpenter	P. Carpenter	Residence late 1700's
168	41 Sunset Trail	Ragsdale	192355	99		J. Thorn - Thorn Place	L. Dutcher	Residence middle 1800's
169	92 Sunset Trail	Borge	412353			L. Dutcher - Cottage Hill	L. Dutcher	Residence middle 1800's
170	140 Sunset Trail	Safriet	378494	100	National Registry	A. Lyon - Lyon Place	A. Lyon	Residence middle 1800's
171	211 Sunset Trail	Volpicelli and Hess	398663			A. Lyon	A. Lyon	Residence middle 1800's

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Map #	Address	Current owner	Property ID	DC #	Recognition	Owner in 1867	Owner in 1876	Information of interest
172	233 Sunset Trail	Schaefer	433747			A. S. Wildey	J. Lansing	Farmhouse and outbuldings, middle 1800's
173	253 Sunset Trail	Grivetti and Feuerman	530825			E. Wilie	E. Wilie	Farmhouse and outbuldings, middle 1800's
174	282-311 Sunset Trail	Smyth	654826			C. W. Allen	G. Green	Farmhouse and outbuldings, middle 1800's
175	1018 Hollow Road	Pisciotta	344053	101		S. Butts - Pine Grove	S. Butts - Pine Grove	Residence and mill site, early 1800's
176	119 Horseshoe Trail	Mueser-Leahy	533388	102a		A. Wing	L. Haight	Residence middle 1800's
177	119 Horseshoe Trail	Meuser-Leahy	533388	102b		A. Wing	A. Wing	Farmhouse, outbuildings, early 1800's
178	24-30 Horseshoe Trail	Ferrandi	712200			F. Ham	F. Ham	Residence early 1800's
179	7 Horseshoe Trail	Cole	469145	103		C. Husted	C. Husted	Residence early 1800's
180	290 Schultzville Road	Blaho	730597			J. Gilmore	J. Gilmore	Residence with barns early 1800's
181	300 Schultzville Road	Botway	885710	104		Cem., J. Gilmore	Cem., J. Gilmore	Lyon family ground, cemetery from 1793 to 1906
182	7 Willow Lane	Cortese	955841			D. Carpenter	D. Carpenter	Farmhouse early 1800's
183	31 Willow Lane	Koch and Werner	027794	105a		I. Wing	S. Buckman	Farnhouse early 1800's
184	63 Willow Lane	Thomas	061862			M. Maybee	M. Maybee	Farmhouse and barns middle 1800's
185	83 Willow Lane	Murphy	129884	105b		J. Ireland	J. Ireland	Farmhouse early 1800's
186	95 Willow Lane	Mahony	197863			W. Stuart	W. Stuart	Farmhouse and barns, middle 1800's
187	146 Willow Lane	Madden	271881			J. R.	J. Gilmore	Farmhouse middle 1800's
188	347 Schultzville Road	Froelich	004679	106		W. E. Mott	W. E. Mott	Residence
189	386 Schultzville Road	Manning	949586			Not on map	H. Hadden	Residence late 1700's
190	450 Schultzville Road	Feder	994380	107		G. E. Wing - Pleasant View	G. E. Wing	Residence middle 1800's
191	465 Schultzville Road	Olson	134518	108		P. H. Smith	S. Ireland	Farmhouse and outbuildings, late 1700's
192	511-521 Schultzville Road	Appolonia	257398	109		E. Russell - Fruit Farm	A. D, Van Vlack	Farmhouse and barn
193	564 Schultzville Road	Guernsey	242231	110		W. D. and J. Griffin	W. D. Griffin	Residence and mill site, early 1800's
194	90 Germond Road	Juress	209058	111		Mrs. Griffin	J. Griffin	Residence middle 1800's, Dutch barn
195	54 West Halstead Road	Corrin	982772	112b		Mrs. C. Hoag	C. Travers	Methodist churchyard, church moved 1850
196	651 Schultzville Road	Eltz	421057			A. A. U.	Not legible	Residence
197	243-257 Schultzville Road	Botway	842864			S. Halstead	W. Stewart	Residence
198	147 Woodlea Road	Calame	423879	113		H. Ganse	H. Ganse	Farmhouse and outbuildings, early 1800's
199	192 Allen Road	Holman	619485	114		E. C. Butler	E. C. Butler	Farmhouse and outbuildings, early 1800's
200	171 Allen Road	Strupp	484465	115		D. B. Haight - Bellford Place	D. B. Haight, res. 108 acres	Farmhouse and barns late 1700's
201	102 Allen Road	Wild	630324	116		Unidentified on map	Unidentified on map	Farmhouse and mill
202	38 Allen Road	Greenberg	642119	117	Clinton Landmark	G. Pearsall - Hill Side	J. Daly	Farmhouse and outbuildings, early 1800's
203	47 Oak Grove Road	Walsh	641749			Schoolhouse #7	W. E. Mott	Residence
204	364 Clinton Hollow Road	Clark	082534			J. Nelson	E. Wilie	Farm and outbuildings
205	320 Clinton Hollow Road	McColloch	177477			J. H. Nelson - Cherry Cottage	J. Lansing	Farm and outbuildings
206	278 Clinton Hollow Road	Smith	200341		Clinton Landmark	M. Kelly	H. Ganse	Farm and outbuildings
207	62-64 North Creek Road	Odell	289701	118a		Unidentified on map	Not legible	Residence early 1900's
208	62-64 North Creek Road	Odell	325640	118b		Unidentified on map	Unidentified on map	"Dutch" barn
209	18 Hollow Road	Zipser	227660	119	State Registry	A. Leroy	Van Fredenberg and Burger	John Dewitt House, 1773 original home
210	27 Hollow Road	Mark	283653	120a	Clinton Landmark	A. Leroy, store	D. H. Carhart, store and P.O.	Residence, store, late 1700's
211	29 Hollow Road	Urquhart	294632	120b		Tenant house of sawyer	Tenant house of sawyer	Residence late 1700's
212	40 South Creek Road	Burger	337552	120c		Site of saw and grist mill	Site of saw and grist mill	Mill site, John Dewitt, late 1700's
213	43 South Creek Road	Kronn	247628	121		Unidentified on map	Unidentified on map	Residence middle 1800's
214	40 South Creek Road	Burger	337552	122		A. J. Lowry	Wright	Residence middle 1800's
215	2056 Route 9G	Marchant	092469			School #3	School #3	Residence, middle 1800's
216	1499 Hollow Road	De Evoli	136338			Unmarked on map	Unidentified on map	Residence, late 1700's
217	1282 Hollow Road	Somnolet	805730			J. Costello	J. Costello	Farmhouse and outbuildings, early 1800's
218	745 Hollow Road	Davis	815139			T. A. Cookingham	T. A. Cookingham	Farmhouse and outbuildings, early 1800's
219	1245 Hollow Road	Lowin	806652		Clinton Landmark	W. Bedell	JP Sheldon	Residence middle 1800's
220	2261-2263 Salt Point Turnpike	Bird	217521	123a		F. Cheeseman	N. F. and Ch. Cheeseman	Residence, early 1800's
221	1439 Hollow Road	Romano and Orioli	003402			D. B. Hicks	E. Ketcham	Farmhouse early 1800's
222	2229 Salt Point Turnpike	Dor	144430	123b		Cem.	Cem.	Tripp Family Ground, Cemetery
223	2229 Salt Point Turnpike	Dor	144430			Dr. E. Case	Ilegible name	Residence moved to site early 1900's
224	2297 Salt Point Turnpike	Salt Point Land Holding LLC	282597	124		J. D. Alley	J. D. Alley	Residence, early 1800's
225	2313 Salt Point Turnpike	Schwarze	336610	125		E. Montrose	Dr. E. Case	Farm and outbuildings
226	2327 Salt Point Turnpike	Meyer	382618	126		W. H. Cornell (Nursery)	Widow Cornell	Farmhouse and outbuildings, early 1800's
227	2362 Salt Point Turnpike	McAvoy	462643				C. B. Deyo	Farmhouse and barns
228	2039-2127 Salt Point Turnpike	O'Leary	861415			G. Ham	G. Ham	Farmhouse, barns and outbuildings

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Map #	Address	Current owner	Property ID	DC #	Recognition	Owner in 1867	Owner in 1876	Information of interest
229	Schultzville Road	Kraashaur	412985	127	Clinton Landmark	A. A. Underhill - The Meadows	C. G. Tousey	Residence early 1800's
230	2579 Salt Point Turnpike	Daniel	490232	128		M. Upton	S. Harris	Farmhouse and barns late 1700's
231	2497-2499 Salt Point Turnpike	Friend's U. L. Cemetery Assoc.	549098	129		Hicksite Friend's Meeting House	Quaker Meeting House	Meeting house moved in 1890's
232	2497-2499 Salt Point Turnpike	Avila-Baldwin	473897	130	National Registry	Does not appear on 1867 map	Does not appear on 1876 map	Fine 1900's estate with landscape
233	2498 Salt Point Turnpike	Petree	538939	131	Clinton Landmark	D. Olivet	Dr. Pearsall	Residence early 1800's
234	2486 Salt Point Turnpike	Bowman	547917	132	Clinton Landmark	School #8	School #8	Clinton Corners Post Office
235	2482 Salt Point Turnpike	Walker	556912			Unidentified on map	Unidentified on map	Residence early 1800's
236	2480 Salt Point Turnpike	Van Hook	567902	133		Unidentified on map	Cardell	Garage
237	2470 Salt Point Turnpike	Garofalo	560880			Unidentified on map	J. Frost	Farmhouse with outbuildings early 1800's
238	24 Salt Point Turnpike	Kerr	577881			Unidentified on map	W. Stewart	Farm cottage
239	2462 Salt Point Turnpike	Di Francesco and Rand	573856	134		A. A. T.	Kingman (?)	Residence, middle 1800's
240	2461 Salt Point Turnpike	Grandfield and Jensen	551846	135		S. Tibbals	Richardson	Residence middle 1800's
241	2444 Salt Point Turnpike	Pfisterer	588815	136		A. Rommus (?)	E. Wilson	Residence, middle 1800's
242	2433 Salt Point Turnpike	Clinton Historical Society	562787	137a	National Registry	Fr. Church	Quaker Meeting House	Quaker Meeting House erected 1777
243	2425 Salt Point Turnpike	Friend's Cemetery Association	550782	137b	National Registry	Cem.	Cem.	Orthodox Friend's Ground
244	2432 Salt Point Turnpike	Schulhoff and Davis	589776	138		E. Cornell	E. Cornell	Residence, middle to late 1800's
245	2438 Salt Point Turnpike	Dor and Klein	585792	139	National Registry	Built in 1828	Part of E. Cornell property	Evangelite Friends Church, originally "Hicksite"
246	2428 Salt Point Turnpike	Lacey	578768	140		E. Cornell	E. Cornell	Farmhouse and barns early 1800's
247	2424 Salt Point Turnpike	Laffin	590758			Unidentified on map	Unidentified on map	Residence, middle 1800's
248	2422 Salt Point Turnpike	Raia	585745	141		Unidentified on map	S. C. Brigg, blacksmith to north	Residence, late 1800's
249	2417 Salt Point Turnpike	Gabbe and Causey	551743	142		Misses Hull	Misses Hull	Residence late 1700's
250	2416 Salt Point Turnpike	Botway	588730	143		J. T. Winans, blacksmith to south	R. Sherman, blacksmith to north	Residence, late 1700's
251	2411 Salt Point Turnpike	Lewis	543734	144		E. W. and E. H. Cornell	E. Cornell	Commercial, residential, late 1700's
252	438 Clinton Corners Road	Hackett	570715	145		S. Scutt, wagon shop to south	Mrs. McCord, wagon shop to S.	Residence, late 1700's
253	2407 Salt Point Turnpike	Simon	538718	146		J. B. Smith	Dr. Pearsall	Residence, late 1700's
254	2404 Salt Point Turnpike	Riata, Ltd.	550709	147a		Store & P. O.	Store & P. O.	Commercial middle 1800's, vacant
255	2400 Salt Point Turnpike	McChesney	539698	147b		Unidentified on map	Unidentified on map	Residence middle 1800's
256	2394 Salt Point Turnpike	Bugosh	530685	147c		RC	Shoe shop	Residence early 1800's
257	3 Jameson Hill Road	Kinney	565677	148		Mrs. Hathaway's land	S. Hathaway's land	Residence, early 1800's
258	416 Clinton Corners Road	Fountain	585640	149		E. Weed	J. H. Nelson	Residence
259	416 Clinton Corners Road	Di Cintio	538670			Unidentified on map	Knickerbocker	Residence, middle 1800's
260	423 Clinton Corners Road	Burns	546688			Unidentified on map	Unidentified on map	Residence middle 1800's
261	429 Clinton Corners Road	Minnerly	565691	150		Unidentified on map	Bothway	Residence middle 1800's
262	430 Clinton Corners Road	Russell	548700			Unidentified on map	Unidentified on map	Residence early 1800's
263	432 Clinton Corners Road	Cavanaugh	570701	151		Unidentified on map	Unidentified on map	Residence middle 1800's
264	400 Clinton Corners Road	Roman Catholic Church	570615	152		On lands of Tallerday	On lands of A. Tallerday	Roman Catholic Church of Clinton Corners, early 1900's
265	391 Clinton Corners Road	Roebke	544593			Not on map	Not on map	Residence and barns, middle 1800's
266	390 Clinton Corners Road	Rose	596569	153		Mrs. Thomas	Mrs. Thomas	Residence and carriage house, middle 1800's
267	370 Clinton Corners Road	Smith	561529			Not on map	Not on map	Residence and barns, middle 1800's
268	359 Clinton Corners Road	Perini	508512			Not on map	Not on map	Residence, late 1700's
269	350 Clinton Corners Road	Rubinstein	589493			Not on map	Not on map	Residence middle 1800's
270	351 Clinton Corners Road	Loussedes	533489			Not on map	Not on map	Residence middle 1800's
271	346 Clinton Corners Road	Michaels	533226	154		T. S. Toby	D. Doty	Farmhouse with outbuildings early 1800's
272	196 Clinton Corners Road	Johnson	552107	155		P. Selson	H. Devine	Residence middle 1800's
273	415 Hibernia Road	Barandas	609109			Unidentified on map	BS shop	Residence, late 1700's
274	419 Hibernia Road	Graham	610074	156		J. Dormmon	G. R. Vail	Residence early 1700's
275	419 Hibernia Road	Laub	623112			Unidentified on map	Store and P. O.	Residence middle 1800's
276	422-424 Hibernia Road	Graham	634074	157		I. Davis	T. Davis	Residence early 1700's
277	433 Hibernia Road	Parker	642138	158		J. Dormmon	Bedell and Doty	Residence, mill related, late 1700's
278	441 Hibernia Road	Hurley	658121	159	Clinton Landmark	J. Green	Widow Lee (?)	Residence, mill related, late 1700's
279	434 Hibernia Road	Neuman	646093	160a		Grist mill	Unidentified on map	Residence, site of saw and grist mills, late 1700's
280	438 Hibernia Road	Beneviste	651080	160b		Mill	Unidentified on map	Residence early 1800's, mill middle 1700's
281	1561 Hollow Road	Weiland	304323	161	Clinton Landmark	W. H. Case	W. H. Case	Farmhouse with outbuildings late 1700's
282	174-176 Schoolhouse Road	Rubin	058730	162		F. Crouse	E. Crouse	Residence, possible mill, early 1800's
283	357 Pumpkin Lane	Zelnick	408031	163		J. Robbins	Unidentified on map	Residence middle 1800's
284	173 Pumpkin Lane	Taub	370619		Clinton Landmark	Warehouse	H. Warehouse	Residence, middle 1800's
285	96 Schoolhouse Road	Manikowski	101545			T. Crouse	S. W. Oakley	Farmhouse and barns, middle 1800's

Table 2.1: Parcels with Historic Sites

Map #	Address	Current owner	Property ID	DC #	Recognition	Owner in 1867	Owner in 1876	Information of interest
286	260 Schoolhouse Road	Gillespie	804837			W. A. Shanaker	A. Wildey	Residence, middle 1800's
287	7 Firehouse Lane	LeRoy	528721			Unidentified on map	Unidentified on map	Residence, middle 1800's
288	2395 Salt Point Turnpike	Bilodeau and Norton	517697			Unidentified on map	Unidentified on map	Residence, middle 1800's
289	7 Jamison Hill Road	Geary and Wright	577683			Unidentified on map	Unidentified on map	Residence, early 1800's
290	11 Jamison Hill Road	Colgan	596693			Unidentified on map	Unidentified on map	Residence middle 1800's
291	429 Clinton Corners Road	Burns	546688			Unidentified on map	Unidentified on map	Residence, middle 1800's
293	2417 Salt Point Turnpike	Gabe and Causey	542745			Unidentified on map	Unidentified on map	Residence and school, middle 1800's
294	323 Hibernia Road	Lambert and Walters	323151			Not on map	Not on map	Ford through Wappinger Creek
295	396 Clinton Corners Road	Nickerson	572608			A. Tallerday	Illegible on map	Residence
296	29 Deer Ridge Drive	Trusz	194970			Episcopal Church	Illegible on map	Residence
297	191-195 East Meadowbrook Ln	Dowell	841552		Clinton Landmark	T. A. Cookingham	T. A. Cookingham	Farmhouse and barns

CHAPTER THREE: NATURAL RESOURCES

Natural systems are formed by a complex balance of interdependent forces and cycles. In the town of Clinton, the natural systems provide us with air, water, geological features, ambient sound, and light well suited for the human physiology, a well as buffering for extremes such as floods and droughts. Our natural surroundings also provide our community with recreational opportunities, and a rural atmosphere. These natural systems support incalculable benefits, and their economic value should also be considered.

Human activities affect the natural systems and have the potential to transform in a matter of days or months what has evolved over hundreds or thousands of years. Some impacts, such as the pollution of groundwater or the loss of prime agricultural soils, can be irreversible. Environmental problems develop when activities overtax the ability of natural systems to replenish and restore themselves. One of the most important factors to be considered in the planning process is the capacity of the land to accept development. Environmental compatibility assessments should underlie all land use and density decisions. A thorough understanding of an area's natural systems enables communities to both use and protect the resource base on which they depend.

Despite its location in close proximity to spreading urbanized areas, Clinton retains large areas of agricultural and undeveloped land. The town contains a wide variety of natural resources of exceptional quality, including lakes, extensive wetlands, large wooded tracts, rural settings, and several creek basins. These and other natural features are considered amenities that attract development, but they can also place environmental constraints on actual construction. As Clinton continues to grow and sensitive areas are targeted for development, the natural features of the land must be respected, not only for health and safety reasons, but also to preserve the high quality environment and rural character that provided the original attraction to the area.

This chapter focuses on the Town's natural resources in order to identify critical environments and assess the suitability of land for future development and preservation.

Topography

Relief and slope are two topographic features that significantly affect land use. Relief refers to the pattern of elevations or irregularities on the land surface. The slope of an area is its degree of steepness. The pattern of alternating rocky hills and valleys, steep slopes and wetlands, contribute greatly to the beauty of Clinton.

The examination of the natural topography is crucial to determining areas where development should be avoided; where potential site constraints may exist; and it can also be useful for determining areas where potential habitat for endangered, threatened, or rare species may be present. Slopes that are 15 percent to 25 percent are considered moderately steep and slopes greater than 25 percent are considered extremely steep.[1] Slopes greater than 15 percent are usually more difficult and expensive to develop in an environmentally sensitive manner due to increases in the amounts of required excavation and/or filling which in turn can increase the potential for stormwater runoff and erosion to occur.

Relief

Clinton lies in the hilly area between the lowlands along the Hudson River and the ridges of higher land in central and eastern Dutchess County. Most of the town is characterized by a multitude of small irregular hills with streams, ponds and wetlands in the low-lying pockets. (Please see Figure 3.1: *Topography: Shaded Relief*.) Rough terrain and rock outcroppings often present serious problems for the construction of buildings and roads. The overall pattern of hills runs generally southwest to northeast with the higher elevations in the northern sections. The highest elevation is Schultz Hill at 780 feet with several other points topping 700 feet in the ridgeline to the west of the Long Pond, Mud Pond, and Silver Lake valley.

The lowest elevation of 240 feet is recorded along the Wappinger Creek near Hibernia. This broad creek basin dominates the southeast corner of the town in the area of the Salt Point Turnpike north to Clinton Corners. Elevations under 300 feet also extend in narrower bands up the Little Wappinger Creek to Clinton Hollow and along the Crum Elbow Creek at the western border of the town.

Slopes

An important factor for gauging development potential[2] is the steepness of sloping ground. Steep slopes, generally defined as 15 percent or more, are associated with access problems, the potential for serious erosion, shallow soils and difficulties locating septic systems. Runoff from steeply sloping driveways can overflow onto public roads, creating hazardous conditions. Builders who recognize the constraints of steep slopes can use hillsides attractively without environmental harm, but construction costs will be significantly higher.

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[1] *Dutchess County Natural Resource Inventory Data Book* (Dutchess County Environmental Management Council and the Dutchess County Department of Planning, 1985)

[2] Refer to most recent copy of the Town's Zoning Law for more specific information.

As a general rule, development of slopes over 15 percent should be subject to careful scrutiny and slopes over 25 percent avoided.

The locations of steep slopes (15 percent or greater) throughout the Town are illustrated in Figure 3.2: *Steep Slopes*. There are approximately 4,486 acres of moderately steep slopes (15 to 24.9 percent) and 1,584 acres of extremely steep slopes (over 25 percent) mapped within the Town. Rocky outcrops are common in many of these steep slope areas. Scattered areas of steep slopes appear throughout Clinton, but are most common along the ridgelines to the east of Crum Elbow Creek, just to the west of the three large lakes in northern Clinton, and flanking the Little Wappinger Creek south of Schultzville (see Figure 3.2: *Steep Slopes*). Areas of particularly steep ground include Leroy Mountain and Cookingham Hill near Frost Mills, the Little Wappinger Creek gorge approaching the Pleasant Valley border, Schultz Hill, and along the ridge in the extreme northwest portion of the town.

Geology

The geology of the Town of Clinton is characterized by irregular topography controlled by series of shallow bedrock ridges and hills, overlain by various classes of glacial sediments supporting soils. The rock base of Dutchess County generally consists of younger unconsolidated materials (glacial and recent deposits) overlying older consolidated bedrock. The geological features of the area influence drainage, topography, ground-water availability, and soil types. Each of these natural characteristics, in turn, has helped shape the patterns of development in the area and affects the potential for future growth.

Figure 3.3: *General Geology* and Figure 3.4: *Soils: Depth to Bedrock* provide an overview of the geologic features of the Town. However, it is important to recognize that Clinton's geology, like the rest of Dutchess County's, is far more complex than what maps showing only surface deposits can portray. Test borings often find layers of till that contain sizeable pockets of sand or clay, or both. Cross-sections of some sand and gravel formations show alternating layers of till, while other gravel deposits in the same region or aquifer may be pure all the way down to bedrock. Maps of surface features are useful indicators of the dominant geological characteristics of the town, but they should not be used as substitutes for field investigations of areas proposed for subdivision or development.

Most communities obtain water from wells placed in deep, high-yield sand and gravel aquifers. Deep glacial till and bedrock are other major sources of groundwater. Wells located in glacial till vary in yield depending on the recharge area and composition of the till deposit. Wells in bedrock vary in yield depending on well depth, rock density, rock fractures, and geologic faults.

For consistency in this chapter, definitions of groundwater and aquifer are from the U.S. Geological Survey, as follows: "Water moves downward through empty spaces or cracks in the soil, sand or rocks, until it reaches a layer of rock through which it cannot easily move. The water then fills the empty spaces and cracks above that layer. The top of the water in the soil sand, or rocks, is called the water table and the water that fills the empty spaces and cracks is called groundwater. An aquifer is underground soil or rock through which groundwater can easily move. The amount of ground water that can flow through soil or rock depends on the size of the spaces in the soil or rock and how well the spaces are connected."[3]

The county's surface and bedrock geology were mapped for the Dutchess County Department of Planning in 1982 using soil survey data and state geological reports. Field surveys for the updated Soil Survey of Dutchess County (USDA) were completed in 1991. The following descriptions of surficial deposits and bedrock use information from both sources.

Bedrock

Bedrock types have distinct characteristics which affect land development, particularly in terms of water supply. Variations in bedrock type also affect the permeability, porosity, and chemical makeup of the soils above which, in turn, affect vegetation and habitats, and subsequently the type and density of development that is most appropriate in a given area.

The bedrock in Clinton can be divided into three generalized types: shales, carbonate rocks, and schist-phyllite formations. Shale groupings underlie most of the southern and western portions of the town. Austin Glen Greywacke is the primary bedrock type in the southwestern quadrant of the town with shales, argillite, and siltstone combinations extending up Crum Elbow Creek and under most of the southeastern sections as shown in Figure 3.3: *General Geology*. These shale formations tend to have a high clay or silt content with low porosity and permeability. Shale and argillite combine with quartzite between the ridgelines east of Crum Elbow Creek and west of the Long Pond--Silver Lake valley. There is also a wide section of Walloomsac Phyllite, Schist, and Meta-Greywacke that underlies the areas east of the Little Wappinger Creek and generally north of Schultzville.

The significant exceptions to this pattern are the two narrow bands of Wappinger Group Carbonate rocks (limestone, dolostone, and shale). One section runs from Upton Lake through the Clinton Corners area down along the Wappinger Creek valley as it passes into Pleasant Valley, and the other is between the mid-point of Silver Lake and Long Pond and the

[3] W. Alley, et. al., *Sustainability of Ground-Water Resources* (Denver, Colorado: U.S. Geological Survey Circular 1186, 1999)

Little Wappinger Creek north of Schultzville. The prevailing characteristics of the bedrock, however, are of greater importance for land use planning purposes than the names of the specific bedrock types.

Carbonate rocks form the most productive bedrock aquifers in the county, with a range of 1 to 220 gpm from drilled wells. This productivity is largely due to the fact that carbonate rocks dissolve easily, allowing water to flow into the channels and caverns that develop in rock. However, they also allow easy transmission of pollution. Water from limestone rock types is generally hard with relatively high levels of dissolved solids.

Shale bedrock is a less productive water source because of its low porosity and permeability. Since water is obtained from fissures and cavities in bedrock, the quantity of water yielded depends on how much the rock is fractured and how well the fractures, crevices, and cavities interconnect. In shale such interconnections and cavities are less common than in limestone. Wells drilled into shale and greywacke are not reliable sources of large groundwater volumes, yielding from 0 to 135 gpm in Dutchess County.

As a special area within the Town, the Milan Window is so named because the younger bedrock of the valley floor is surrounded by older bedrock uplands. The valley is carbonate rock (dolostone and limestone) overlain by glacial outwash. The surrounding hills are mostly slate overlain by till. Soils in the valley include carbonate-derived and slate-derived types.

Parent Materials

Parent materials are the unconsolidated materials in which soils are formed. These deposits influence the physical, chemical and mineralogical composition of the soils. Most soils in the Town formed in till deposited by glaciers and glacial meltwaters; less extensive are glacial outwash, alluvial deposits, lacustrine and organic deposits.

Glacial till consists of a mixture of materials deposited directly by the glaciers, ranging in size from microscopic silt to boulders. Its permeability and porosity can vary widely. Most of the till deposits in Dutchess County have a high clay content and low permeability rates. This limits their usefulness as groundwater supplies and makes it necessary for septic systems in till areas to be carefully designed and separated. Reported yields from till wells range from 1 to 180 gallons per minute.

Glacial till deposits more than three feet thick are the major surficial category in the southern half of Clinton with exposed bedrock and thin glacial till the more common category in the north. Till deposits tend to be thicker in low areas than in highlands which is where they are more vulnerable to erosion. Large areas of till with small scattered bedrock sections cover

the land from Pleasant Plains east almost to Clinton Corners and north to Schultzville. Wide bands of bedrock dominate the major ridgelines along the eastern and western town borders and the areas west of Silver Lake and Long Pond.

Glacial outwash. As glacial ice melted, large quantities of meltwater transported and sorted unconsolidated materials and redeposited these layers of sand and gravel on outwash plains and terraces. These deposits are the county's most productive groundwater sources, with reported yields of 2 to 1,400 gallons per minute. They are the best water transmitters and, therefore, are the most reliable recharge areas for sand and gravel aquifers. 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. These deposits also provide important building and road construction materials, extracted from mines throughout the county.

Sand and gravel deposits more than five feet thick are found in a few scattered lowlands and along the major lake and creek valleys. The widest area of thick glacial outwash or ice-contact sand and gravel extends from the Wappinger Creek west of Hibernia through Clinton Corners up to Upton Lake in Stanford. Other significant sand and gravel deposits in the southern half of the town are along the Crum Elbow Creek, an area north and west of the Pleasant Plains intersection, and along the Little Wappinger Creek from south of the Fran Mark Town Park to north of Clinton Hollow. In northern Clinton, large areas of thick sand and gravel exist along the Little Wappinger Creek north of Schultzville and west of Old Bulls Head, as well as in the Silver Lake, Mud Pond, and Long Pond valley. Scattered sand and gravel deposits overlie the Milan Window and surround Silver Lake, Mud Pond, and Long Pond. These ponds are essentially "low spots" in the sand and gravel deposits which expose the water table of the local aquifer.

Lacustrine deposits. Relatively rare in the Town of Clinton, these stone-free fine textured (clay and silt) sediments were deposited in glacial lakes fed by glacial meltwater.

Alluvial deposits. Overflowing streams have deposited alluvial material on flood plains. Variable in texture, soils formed from this material show weak soil profile development.

Organic deposits. These deposits were formed in closed depressions, sometimes from the well-decomposed remains of vegetation.

Soils

Soil suitability is an important factor in determining the best and most cost efficient locations for new development. Soil suitability is determined based upon degree of wetness, degree of

slope, and size and texture of soil particles. Improper development in areas with unsuitable soils has the potential to lead to contamination of surface or groundwater resources. Suitability issues commonly associated with development include the siting of septic systems and building foundations. Soils are also a key factor in determining the suitability of lands for various agricultural practices and the productivity of lands worked for crops. By limiting the amount of clearing and grading at a site it protects against soil erosion, sedimentation, and steep slope vulnerability while at the same time preserves the natural and rural features, and ecological functions (e.g. watersheds).

The analysis of soils in the Town is based upon the Soil Survey of Dutchess County, which was first prepared in 1939 and subsequently updated in 1972 and 2001. The Soil Survey lists, describes and maps 120 different soil units within Dutchess County based on a variety of characteristics including color, texture, structure, consistency, derivation, acidity, depth to bedrock, quantity of gravel or rocks, slope and erosion loss. On the basis of these characteristics, areas that are alike in kind, thickness and arrangement of their layers are mapped as one soil type.

Prime and Important Agricultural Soils

Prime farmland soils are defined by the United States Department of Agriculture[4] (USDA) as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to produce, economically, sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods." Based on 2006 mapping provided by the USDA, areas in Clinton mapped as prime farmland soils are relatively limited in size and are scattered throughout the Town without any noteworthy areas of widespread occurrence. Several "pockets" of prime farmland soils are located in the west-central portion of the Town, near Rhynders Road, and along southern sections of the Little Wappinger Creek floodplain. Figure 3.5: *Agricultural Soils* depicts the areas mapped throughout the Town as prime farmland soils.

Statewide Important Agricultural Soils are identified as soils that are used "for the production of food, feed, fiber, forage, and oilseed crops. Criteria for defining and delineating this land are to be determined by the appropriate State agency or agencies. Generally, additional

[4] USDA Departmental Regulations. Number 9500-003 dated March 22, 1983 and also referenced in the *Soil Survey Manual* (Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.)

farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods."[5] Statewide important soils are mapped throughout the southern half of the Town with expanses of acreage extending north along the Little Wappinger Creek floodplain and the lowlands surrounding Silver Lake, Mud Pond, and Long Pond. (See Figure 3.5.)

General Soil Overview

The soils table (Table 1) found in Appendix 3.1 (General Properties of Soils) contain a summary of information about the soils found in the Town of Clinton. It is important to note these are general descriptions. Within each major group of soils, smaller areas, or inclusions, of different soils may be found. Depressions and other low areas may support poorly drained soils; upland soils may vary according to local topography and geologic conditions. The soils listed in Table 1 correspond to these general descriptions and are mapped in the Town of Clinton by the Soil Survey of Dutchess County (see Figure 3.6: *General Soils*). These soil types, as depicted on the detailed soil maps within the Survey, may not exactly match actual field conditions because of differences in scale. Field examination is necessary to verify soil conditions and types, and accurately describe soils on a particular site.

Soil characteristics such as structure, chemical composition, and depth to water table affect not only the integrity of structures placed upon them, but also the plant communities that in turn provide habitat for animals. Certain rare plants may be associated with particular soil characteristics, including the soil's ability to retain water, and its pH which influences the types of plants and animals that become established at a particular location.

Of the 33 soil types or series found in the Town of Clinton, the three most prevalent are Dutchess-Cardigan complex (about 22 percent of the Town's area), Nassau-Cardigan complex (about 28 percent); and Sun silt loam (about 9 percent). General characteristics of these soils, including important considerations for construction, are summarized below. It should be noted that the discussion which follows is generalized and should not be substituted for site-specific analysis.

> ***Dutchess-Cardigan complex***. Formed from glacial till, this soil includes about 40 percent Dutchess soils, 30 percent Cardigan, 30 percent other soils including rock outcrop. "Other soils" generally include moderately well-drained Georgia soils, somewhat poorly drained Massena soils and poorly-

[5] USDA Departmental Regulations. Number 9500-003 dated March 22, 1983 and also referenced in the *Soil Survey Manual* (Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.)

very poorly drained Sun soils. Depth to bedrock is generally greater than 60 inches, except in and near rock outcrops. The soil is generally well drained and exhibits a moderate infiltration rate when thoroughly wetted (Hydrologic Group B). However because of the intricate pattern of soil types included in this group, construction limitations may be present depending on specific site conditions. Construction limitations may include a shallow depth to bedrock and rock outcrops, moderate to severe erosion hazard depending on slope percentage and frost action (freezing and thawing of soil moisture). For the placement of septic fields, depth to bedrock in areas of Cardigan soils and rock outcrops, as well as slow percolation in areas of Dutchess soils are the main concern.

Nassau-Cardigan complex (very rocky). Also formed from glacial till, this soil contains about 40 percent shallow, somewhat excessively drained Nassau soils, 40 percent moderately deep, well-drained Cardigan soils, and 20 percent other soils including rock outcrop. In locations where slopes exceed 15 percent, these aforementioned ratios shift to 45 percent Nassau, 30 percent Cardigan, and 25 percent other soils. "Other soils" generally include somewhat poorly drained Massena soils and poorly- very poorly drained Sun soils. Because of the different soils within this complex that may be found on a particular site, depth to bedrock and depth to water table may be quite variable. While this soil series is generally well drained and exhibits a low infiltration rate when thoroughly wetted (Hydrologic Group C), site specific conditions may vary due to the mix of soils present in this complex. Construction limitations may include shallow depth to bedrock and rock outcrops, moderate to severe erosion hazard depending on slope percentage and frost action. For the placement of septic fields, limitations are shallow depth to bedrock and areas of rock outcrops. In addition, a water pollution hazard exists because the soil is not deep enough to filter effluent.

Sun silt loam. This hydric soil is also formed from glacial till. It is poorly to very poorly drained, found in depressions and drainage ways between hills and on plains. Slopes are 0-3 percent and depth to bedrock is greater than 60 inches. Inclusions of other soil types (including very poorly drained Palms and Canandaigua and poorly drained Massena soils) comprise about 20 percent of the areas mapped as "sun" soils. Construction limitations are mainly due to the seasonal high water table (0.5 feet or less from the ground surface) and frost action. Slow percolation is also a limitation for construction of septic tank absorption fields.

It should be noted that hydric soils (such as the Sun soils) are almost always wetlands as well. Hydric soils are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation, and are generally indicative of wetlands. Once wetlands have been properly delineated on a site, they will include the areas of hydric soils (as well as other soils) and as such are not appropriate for construction and development. Approximately 15 percent of the Town of Clinton consists of soils that are mapped as "hydric" as shown on Figure 3.9 *Water Resources*.

The relationship between soil and water on a specific site is particularly significant in terms of the plants and animals that inhabit the site, and in terms of suitability for various construction activities. The depth to water table is the distance from the soil surface to the upper limit of the soil or underlying rock material that is wholly saturated with water. A water table may be apparent, as indicated by the level at which water stands in an uncased borehole, or perched, where the water table lies above an unsaturated zone. The water table may lie above a pan, which is a compact, dense layer in a soil that impedes the movement of water and the growth of roots. Examples include hardpan, fragipan, and claypan. Hardpan is a hardened or cemented soil horizon or layer. The soil material is cemented by iron oxide, silica, calcium carbonate or other substances. Fragipan is a loamy, brittle subsurface horizon low in porosity and organic matter, low to moderate in clay content, and high in silt or very fine sand. It appears to be cemented and restricts root growth.

Movement of water through the soil is described by drainage class and soil hydrologic group. The drainage class refers to the frequency and duration of periods of saturation or partial saturation during soil formation; it pertains only to natural soil conditions, and therefore does not include artificial drainage, irrigation, or blocked drainage outlets. In addition, soils are classified by the Natural Resource Conservation Service into four Hydrologic Soil Groups based on the soil's runoff potential, ranging from the A group which has the smallest runoff potential to the D soils group which has the greatest runoff potential. Hydrologic group characteristics affect aquifer recharge rates and sustainable septic system density (see Aquifer Recharge section of this Chapter).

Water Resources

All water resources, surface and groundwater, within the town of Clinton are part of a larger watershed system. A watershed is the area of land where all of the water that is under it or drains from it flows into the same stream, lake or other water body. All wetlands, streams, ponds, lakes and aquifers are interrelated within this system. Watersheds collect water from precipitation, wetlands, soils, vegetation, depressions, channels, and river floodplains.

Figure 3.7: Components of a Watershed Source - Lane Council of Governments

The rate at which water infiltrates and percolates through the soil affects the amount of water collected; plant cover, root systems, and plant litter improve infiltration rates. Vegetative cover affects percolation by maintaining soil permeability. Watersheds also store water and release it gradually to lakes and streams. This is especially important during periods of drought, as well as during floods. Wetlands, lakes and pervious surfaces are necessary for groundwater replenishment and aquifer recharge. Water released into the ground moves into seeps, springs, and wetlands, and eventually reaches streams and rivers. The amount of water released depends on the amount stored in soils, stream banks, wetlands and riparian areas. Watersheds also provide transport paths for sediment, nutrients, minerals and chemicals. Sediment deposition on floodplains rejuvenates soil and affects the productivity and diversity of stream corridor ecosystems.

The position and availability of water within a watershed is dependent on the area's water balance, or water cycle, which is illustrated in the following figure from New York State Department of Environmental Conservation's (DEC) Stormwater Design Manual.

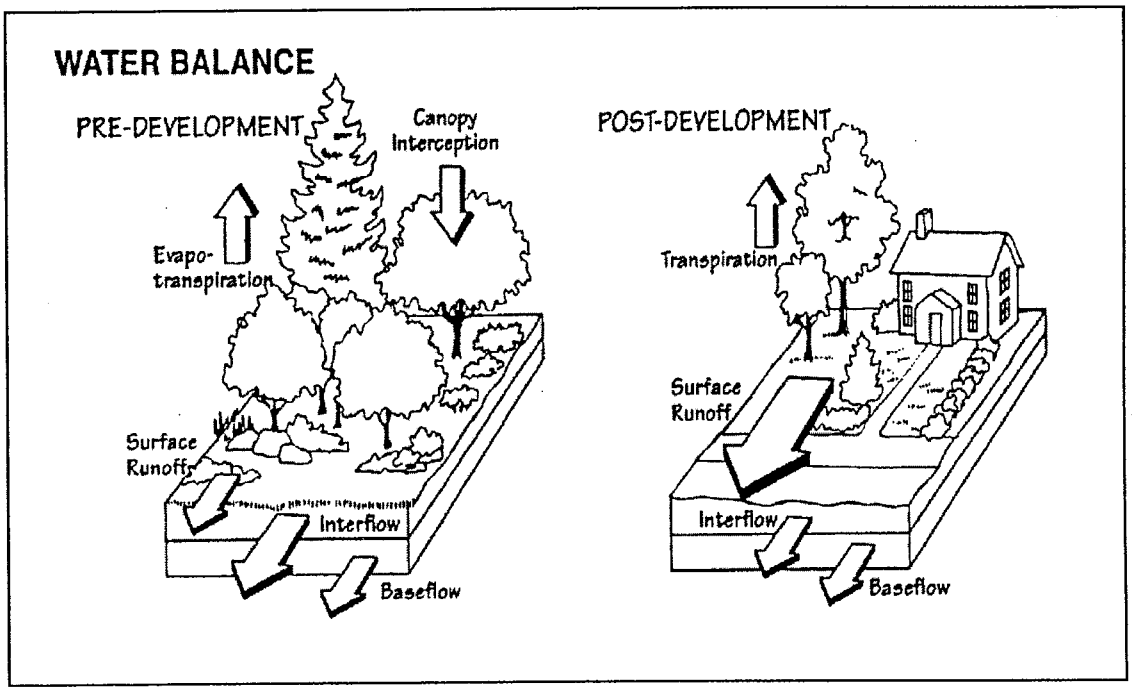

Figure 3.8: Water Balance at a Developed and Undeveloped Site
Source-Center for Watershed Protection, 2003. *DEC's Stormwater Design Manual*

Interflow is the lateral movement of water through the upper soil horizons, normally during or following significant precipitation events. Baseflow (dry-weather flow) in a stream or river is the flow of water derived from the seepage of groundwater, and/or interflow into the surface watercourse. At times of peak river flow, baseflow forms only a small proportion of the total flow, but in periods of drought it may represent nearly 100 percent, often allowing a stream or river to flow even when no rain has fallen for some time.

Forest cover, vegetated riparian buffers, and wetlands are essential for protecting watershed functions. Forests reduce stormwater runoff and flooding, reduce stream channel erosion, improve soil and water quality, provide habitat and reduce summer air and water temperatures. The important link between forests and watershed health has been documented by several research studies, including the Wappinger Creek watershed management plan[6] and Environment Canada's[7] recommendation that at least 30 percent forest cover is needed to maintain a healthy watershed.

[6] *Natural Resource Management Plan for the Wappinger Creek Watershed (*Dutchess County, NY: Dutchess County Environmental Management Council et.al., 2000).

[7] *How Much Habitat is Enough? (*Downsview, Ontario: Environment Canada, Canadian Wildlife Service, 2002). Available online at www.on.ec.gc.ca/wildlife.

Riparian Areas

Riparian areas within the watershed are transitional areas between aquatic and upland terrestrial systems. Although they often represent less than 1percent of the landscape, riparian areas support a disproportionately high number of wildlife species and provide a variety of ecological functions and values. Riparian vegetation provides habitat for a variety of plant and animal species (including many species of conservation concern), stabilizes streambanks, provides nutrients for downstream areas, moderates flood flows, and prevents erosion. Banks with overhanging vegetation maintain cooler water temperature especially in small streams. Stable, non-eroding banks are associated with sediment free bottom habitat, which is more favorable for a variety of benthic invertebrates, an important food source for fish. Streambank vegetation traps sediments and reduces the erosive energy of the stream or river during high water.

Despite their value, more than 80 percent of riparian areas in North America have disappeared over the past 200 years, and are constantly threatened by adjacent or upstream human activities[8].

In 2002, the Ecological Society of America convened a committee of leading scientists to identify principles of ecology relevant to land use, and develop guidelines for land use decision-making. Based on these guidelines, The Environmental Law Institute, in *Conservation Thresholds for Land Use Planners* compiled results from scientific literature to describe potential ecological thresholds for protection of biodiversity resources. Specific information pertaining to riparian buffers is included in the survey based on more than 140 recommendations found within the scientific literature. Factors that influence effective buffer widths include type of riparian vegetation, intensity of adjacent land use, value of the aquatic resource, and steep slopes. (Refer to pages 20-21 of *Conservation Thresholds for Land Use Planners* for more details[9]).

As a result of the analysis of this information, the Environmental Law Institute recommends that "land use planners should strive to establish 100 meter wide riparian buffers to enhance water quality and wildlife protection" and that watershed protection efforts should prioritize the establishment of continuous buffer strips along the maximum reach of a stream, and protect headwater (the originating source) streams as well as broad downstream floodplains.[10] For example, a Maryland study found that streams rated in excellent health

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[8] *Conservation Thresholds For Land Use Planners* (Environmental Law Institute, 2003), page 19. Available online at http://www.elistore.org/reports_detail.asp?ID=10839.

[9] *Ibid*.

[10] *Ibid*.

had at least 65 percent of their length in forested cover (within 100 feet of the stream); those in good health had 45 percent cover.[11]

Similarly, various types of wetlands within a watershed provide functions such as flood storage, habitat, pollution treatment and prevention, erosion control, flood conveyance and storage, shoreline protection, and water supply protection. The percent wetland cover needed in a watershed varies depending on wetland type, watershed size and topography, and region. In some studies, higher peak stormwater flows were found in watersheds where less than 10 percent was in wetlands; in other watersheds flood control and general water quality functions were retained as long as at least 3-7 percent of their area was in wetlands; 15 percent wetland cover was needed for phosphorus removal.[12]

Many small streams flow into the Town's major creeks and provide important linkages between lakes, ponds, and wetland areas. These streams may be perennial, intermittent or ephemeral, defined as follows:

> ***Perennial***: Flows more than 90 percent of the time
>
> ***Intermittent***: Flows only during wet periods (30-90 percent of the time) and flows in a continuous well-defined channel
>
> ***Ephemeral***: Flows only during storms and may or may not have a well-defined channel.

As part of the larger surface drainage system, all of these streams types should be considered during the development process. Each has its own drainage subbasin within the watersheds described below.

Regulatory Information

Designations for the streams and waterbodies within New York State are based upon the best usages for such waters. Waters designated as Class AA and A have the highest ranking and they are best used as a source of drinking water. Waters designated as Class B are not used for drinking; however, they are used primarily for swimming and other recreation events. Class C waters support fisheries and they are suitable for non-contact activities. Class D waters have the lowest ranking. Watercourses designated with a standard of (T) or (TS) indicate that they may support a trout population or support trout spawning, respectively.

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[11] *Watershed Forestry Research Guide: A Partnership of the Center for Watershed Protection and the U.S. Forest Service* (www.forestsforwatersheds.org).

[12] T. Wright, et. al., *Direct and Indirect Impacts of Urbanization on Wetland Quality* (Washington, D.C.: Center for Watershed Protection and U.S. Environmental Protection Agency, 2006).

Under Article 15 of the New York ECL,[13] streams and small water bodies that are designated as C (T) or higher (i.e., C(TS), B, A or AA) are regulated by the DEC. Intermittent and ephemeral streams receive no protection under the current State regulations.

Some of the above mentioned streams are further classified according to their best use by the DEC. According to 2007 mapping provided by the DEC, the majority (approximately 74 miles) of watercourses within the Town are State-regulated watercourses (i.e., C(T) or higher). An additional 12.99 miles of watercourses designated as Class "C" watercourses are also mapped within the Town. Although not regulated, these watercourses still support fisheries and they are attractive amenities for non-contact activities. A testament to the Town's unspoiled condition is reflected in the fact that at present there are no Class D waters mapped by the DEC in Clinton. Figure 3.9: *Water Resources* depicts the approximate locations of the DEC regulated watercourses.

Class "A" watercourses are closely associated with Crum Elbow Creek, which has reaches of the creek that are classified as "A(T)" or "A." The northern portion of Little Wappinger Creek and many of its tributaries flowing through the Town are mapped as Class "B" waters. An approximately four mile stretch of Little Wappinger Creek flowing through Clinton Hollow is designated as Class "B(T)" waters. The portion of Wappinger Creek located within the Town is classified as a "B(TS)" water. A tributary to Wappinger Creek located in the southeastern portion of the Town is designated as Class "C(T)" waters along its northern reaches, near Clinton Corners, and Class "C(TS)" waters near its intersection with Wappinger Creek.

The following lakes are classified as follows: Silver Lake: AA-T (the use of septic systems on small lots extremely close to the water of Silver Lake is a problem in terms of water quality impacts); Long Pond: AA; Brown's Pond: A; Mud Pond: B. These classifications indicate the water quality protection is a critical consideration for these lakes.

Certain activities within the beds or banks of these waters including placement of structures (i.e., bridges, culverts, pipelines) in or across a stream, excavations within the stream bed, and lowering stream banks are a few examples of development projects that require a permit from the DEC. The DEC permit issuance standards are found at 6 NYCRR 608.8. As discussed in Section 2.5.2 therein, the discharge of dredged or fill materials within the limits of the stream (as defined by the Ordinary High Water Mark) would also be regulated by the Army Corp of Engineers.

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[13] See 6 NYCRR 608.2.

In 2008, the Town Board amended the Zoning Law regulations[14] governing freshwater wetlands, watercourses, lakes, ponds and floodplains. For watercourses, this involves the watercourse and land within one hundred feet of a watercourse, lake or pond. (Please see Figure 3.12: *Water Resources Protection* for a map of regulated areas.) This law exempts certain activities and requires a permit issued by the Planning Board for activities which are regulated. Regulated activities include:

- Placement or construction of any structure;
- Placement or construction of any part of a septic system or other type of sewage disposal system, including a sewage treatment plant;
- Construction or installation of any road, driveway, utilities or utility corridor, or other improvements, including the driving of pilings or placement of other obstructions, unless all other alternatives are clearly impractical;
- Any form of draining, dredging, excavation or removal of material either directly or indirectly;
- Any form of dumping, filling or depositing of material either directly or indirectly;
- Introduction of any form of pollution, including but not limited to surface or water discharge from a sewage system, the deposition or introduction of inorganic chemicals, animal wastes, pesticides or fertilizers and the discharging of solid, liquid or gaseous wastes;
- Alteration or modification of any natural features and contours or natural drainage patterns;
- Construction of dams or other water control devices;
- Clearcuts of trees at once or over time, not regulated under Zoning Law Section 5.44, Soil Erosion and Sediment Control;
- Creation of an increase or decrease in the flow, velocity or volume of water in any wetland, watercourse, lake, or pond, excluding customary seasonal raising and/or lowering;
- Any other activity that may impair the natural function(s) of a wetland, watercourse, lake, pond, or floodplain.

[14] Local Law No 2 of 2008. Copies are available in Town Hall and on the Town's website at http://www.townofclinton.com/pdf/20081111-percent20FINAL2008percent20WATERpercent20LAW.pdf.

Watersheds in the Town of Clinton

The Town of Clinton is located completely within the Hudson River watershed, which drains approximately 13,400 square miles of eastern New York and northern New Jersey. This huge watershed is divided into smaller watersheds and subwatersheds as shown in Figure 3.9: *Water Resources*, which depicts the approximate boundaries of these watersheds in the town. The main characteristics of these watersheds, including wetlands and streams, are summarized below.

Wappinger Creek Watershed

Wappinger Creek and its tributaries drain approximately one quarter of Dutchess County, with a total watershed area of approximately 210 square miles. 70 percent of the Town of Clinton lies within the Wappinger Creek watershed. This represents 13percent of the watershed's total area. The Wappinger Creek watershed has been further divided into subwatersheds. In the town of Clinton these subwatersheds are the Little Wappinger Creek, Great Spring Creek and Upton Lake Creek.

A complete analysis of the Wappinger Creek watershed (and each of its sixteen subwatersheds) is provided in "Natural Resource Management Plan for the Wappinger Creek Watershed" (herein referred to as the NRMP Wappinger Creek). Based on the review of the past and present studies, a three-phase water quality study was designed and conducted from summer 1997 to spring 2000. The first phase consisted of a baseline water quality monitoring study of the main stem of the Wappinger Creek. The second phase involved monitoring of the major tributaries to the Wappinger Creek. The third phase was a study of wetlands in the watershed to determine their capacity to filter nonpoint source pollution in three different land use areas.

Much of the information presented in the following paragraphs is summarized from the NRMP Wappinger Creek.

Among the top ten threats to the watershed are nonpoint source pollution (nutrients, sediment, bacteria), overdevelopment within the watershed (excessive water consumption that results in reduced base flow and an increase in impervious surfaces that decreases recharge); loss or fragmentation of habitat and accompanying loss of biodiversity; lack of stream management/enforcement of existing regulations; and lack of information regarding the public water supply, how it works and what needs to be done to protect surface and groundwater.

The Dutchess County Water Quality Strategy Committee (DCWQSC) has designated the Wappinger Creek Watershed as the top priority for nonpoint source pollution reduction in Dutchess County, and formed the Wappinger Creek Watershed Planning Committee to address specific watershed issues. In addition, the Department of Environmental Conservation (NYSDEC) Priority Waterbody List identifies waterbodies in need of restoration based on pollutant levels; currently the list includes the main stem of Wappinger Creek, Hunns Lake, Hunns Lake Creek, Long Pond, Silver Lake, Mud Pond (Twin Island Lake), and Upton Lake. Nutrient loading and sedimentation are the primary problems in these water bodies. Since 75 percent of the municipalities in the watershed rely on groundwater exclusively for drinking water, protection of groundwater quality and quantity has been identified as a critical issue for the watershed.

The following Wappinger Creek subwatersheds are found in the Town of Clinton.

Little Wappinger Creek

Of the sixteen subwatersheds in the Wappinger watershed, the Little Wappinger ranks second in total area (21,296 acres), third in percent forested area, eleventh in percent agricultural land, ninth in percent developed area, and fifth in extent of wetlands. The Little Wappinger Creek, which originates in the Town of Milan, is the largest watershed within the Town of Clinton. It extends through the central portion from the Town's northeast corner to its southeast boundary. Subwatershed land use includes 17 percent agriculture, 56 percent forested, and 17 percent residential and 6 percent wetlands and waterbodies.

Tributaries

At least sixteen tributaries (from small intermittent streams to larger perennial streams) flow into the Little Wappinger Creek; most of these are located south of Fiddler's Bridge Road, and originate in small ponds or wetlands. The most extensive is a tributary system with several branches that converge in two places, flowing into the Creek near Nine Partners Road and to the north near Pumpkin Lane. Another larger tributary originates in the wetlands on both sides of Horseshoe Trail and along Hollow Road and flows into the Creek north of Woodlea Road.

Wetlands

According to the NRMP Wappinger Creek, this region is experiencing moderate wetland loss. This can increase the threat of flood damage and increase the level of nutrients and sediment in streams and lakes. Since nutrient and sediment loading were identified in the NRMP Wappinger Creek as primary water quality impairments within the watershed, a

study[15] of the relationship between surrounding land use and the filtering capacity of wetlands for removal of nutrients and suspended material was conducted. The study included three wetlands dominated by agricultural, residential or forested land use, and found that these wetlands acted as sinks that trapped organic debris and subsequently released it following rainfall events and during the non-growing season (October-March). The residential wetland received the greatest amount of nutrients in lbs./day/acre of wetland watershed, and the agricultural wetland received the greatest amount of suspended material in lbs./day/acre of wetland watershed. The agricultural wetland demonstrated a high level of biological stress during the summer months, when high bacteria levels reduced dissolved oxygen, which placed stress on aquatic organisms.

Lakes

Within the Milan Window, there are four lakes in the valley, from north to south: an unnamed lake just north of Clinton's boundary, Silver Lake, Mud Pond (Twin Island Lake), and Long Pond. The lakes are circumneutral bog lakes[16] with a variety of associated wetlands Although Long Pond and Silver Lake have the highest water quality classifications in the watershed (AA and AA(t)[17]), they have both been listed on the NYSDEC priority water list as stressed due to excess nutrients. Excess aquatic vegetation in the lakes is an indication of excess nutrient loading, probably from onsite septic systems and fertilizer applications to lakeside property.

Groundwater/Aquifer

The Little Wappinger Creek subwatershed contains an extensive sand and gravel aquifer along most of the Creek's run through the town, from the north town boundary to Fiddler's Bridge Road. A narrower but still extensive aquifer extends from just east of Breezy Hill Road, along both sides of the creek almost to the Town's south boundary. Also within this watershed are the hamlets of Schultzville and Clinton Hollow, and intensive development in close proximity to the south side of Silver Lake. An example of the relationship between human consumption of groundwater and streamflow is described in the NRMP Wappinger Creek (pg. 19) as follows:

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[15] The additional study is included in the NRMP Wappinger Creek and was conducted by the Dutchess County Environmental Management Council (EMC) with support from Marist College, the Institute of Ecosystem Studies, and an EPA Wetlands and Watershed Planning Grant.

[16] These lakes are spring-fed, with deep organic substrate and often support floating peat mats. They support vegetation of both acidic bogs and calcareous marshes, with emergent vegetation and abundant pond-lilies.

[17] Please refer to previous section on *Regulatory Information* for more information on these classifications.

During dry periods, water in the Wappinger Creek consists solely of groundwater discharging from aquifers in the watershed. Under 10-year drought conditions Wappinger Creek flow measured at Wappingers Falls decreases to 4.9 million gallons per day (gpd) (Aquifer discharge during wetter periods is much higher). The Watershed above Wappingers Falls contains 181 square miles, or 115,840 acres. This means each acre contributes approximately 42 gallons per day during droughts. Since the average person consumes 20 or more gallons per day, wherever population equals 2 persons per acre groundwater no longer reaches the Wappinger Creek during droughts. And wherever population exceeds 2 persons per acre, deficit withdrawals are occurring and stream flow is reduced, affecting fish survival, wildlife habitat, swimming, boating, and water quality.*

* Consumption is the difference between water entering the home and water returned to nature through septic systems or sewage treatment plants. Per capita water consumption for individuals using septic systems is probably higher than 20 gpd due to evapotranspiration losses off leaching fields.

Water Quality

The data presented in the NRMP Wappinger Creek show that nitrate and phosphate levels in the subwatershed tributaries were fairly high throughout the watershed. Most likely, the nutrient concentrations can be attributed to the rapid groundwater transport of local septic system effluent, residential fertilizer applications, atmospheric deposition and agricultural operations. Symptoms of contamination include the eutrophication of watershed lakes and ponds and the increasing number of drinking water wells in the watershed contaminated with nitrate and bacteria. Based on water quality data for suspended material, fecal coliform bacteria, nitrate, and phosphate concentrations in the Little Wappinger Creek, future threats to the subwatershed identified in the NRMP Wappinger Creek include poor septic system siting, destruction of stream vegetative buffer zones, poorly planned residential development, and agriculture operations that do not employ best management practices.

Upton Lake Creek

Of the sixteen subwatersheds in the Wappinger watershed the Upton Lake Creek subwatershed ranks eleventh in total area, third in percent agricultural land, eleventh in percent forested land, eighth in percent developed land and 14th in percent wetlands. Comprising a total of 5,523 acres, this subwatershed lies in the southeastern corner of the town of Clinton. It contains the Taconic Parkway corridor and the hamlet of Clinton Corners,

and small portions extend into the neighboring towns of Pleasant Valley, Washington, and Stanford.

Tributaries

In the Town of Clinton, this subwatershed includes a highly branched network of tributaries that originate in intermittent streams and wetlands in several locations. This includes areas in the vicinity of Spruce Lane, northeast of the intersection of Willow Lane and Schultzville road, west of the Taconic and east of Woodlands Trail, and outside the Town at Upton Lake. The various tributaries converge to enter Wappinger Creek south of Rte. 14, midway between the Taconic and Salt Point Turnpike. Upton Lake Creek will support fish propagation and survival including trout as long as high quality habitat is maintained. Upton Lake Creek transported relatively high nitrate concentrations to Wappinger Creek in 1999. A large stretch of the tributary that runs from Upton Lake and through Clinton Corners traverses developed land. In several places, the stream vegetative buffer zone has been significantly damaged or removed. The destruction of this vegetated buffer zone will increase sediment and nutrient loading to the stream, lead to an increase in water temperatures, and threaten aquatic life (including trout).

Wetlands

Numerous small ponds and wetlands are distributed throughout this watershed, and many of them are connected by small streams. However, according to the NRMP Wappinger Creek, this subwatershed has the third-lowest percentage of wetlands compared to all sixteen Wappinger Creek subwatersheds. Therefore, as documented in NRMP Wappinger Creek, there is little natural capacity to absorb nitrate through plant uptake in wetlands.

Lakes

Upton Lake is located in the town of Stanford near its boundary with Clinton, and is surrounded by residential land use. The lake has been listed on the NYSDEC priority water list as stressed by excess nutrients. A proliferation of aquatic vegetation in the summer months impairs swimming, and is an indication of excess nutrient loading into the lake. The nutrient loading can probably be attributed to onsite septic systems and fertilizer applications to lakeside property

Aquifers

A large sand and gravel aquifer is found in the southeast corner of the town, beneath some of the more intensively developed areas from Clinton Corners to Hibernia.

Water Quality

Upton Lake Creek has high nitrate levels identified in NRMP Wappinger Creek, probably due to residential fertilizer applications, agricultural operations, and the rapid groundwater transport of nitrate from local septic systems. In several places within the Upton Lake Creek drainage destruction of the stream vegetative buffer zone has led to increased sediment and nutrient loading to the stream.

Great Spring Creek

Great Spring Creek is the third largest subwatershed in the Wappinger watershed, encompassing 12,068 acres. It ranks 13th in percent forested area, fifth in percent agricultural land, seventh in percent developed land, and fourth in percent wetlands. The Great Spring Creek subwatershed lies between the Fallkill and Little Wappinger Creek watersheds, and extends south beyond Clinton's boundary and into Pleasant Valley. Only a small portion (headwaters) of this subwatershed lies within the Town of Clinton. Land use throughout the entire subwatershed includes 32percent agriculture, 38percent forested, 20 percent residential, and 7percent wetland and waterbodies; however these may be somewhat different in the town of Clinton.

Tributaries and Wetlands

This somewhat narrow headwaters area of the watershed begins in a narrow wetland/stream complex just north of Fiddlers Bridge Road. An interconnected series of wetlands and streams extends on both sides of Walnut lane and Sodom Road, to the south boundary of the town; the watershed doubles its width along the town's boundary with Pleasant Valley. There is a very large wetland complex between Ruskey Lane and Hollow Road, and another just south of Browning Road. In general, the portion of this subwatershed within the Town of Clinton supports a high proportion of wetlands.

Water quality

The NRMP Wappinger Creek reports that this stream contains elevated levels of nitrate, phosphate, suspended material, and fecal coliform bacteria (fecal coliform bacteria median concentrations were the highest of any of the subwatersheds, as reported in NRMP Wappinger Creek). While it is likely that most of these impacts are incurred south of Clinton's boundary, it is relevant to note the probable causes which include: rapid groundwater transport of nitrate from local septic systems, poorly planned residential fertilizer applications, possibly agricultural operations, high suspended solid concentrations from stormwater runoff, and clearing of the vegetated buffer zone along the stream. NRMP

Wappinger Creek reports that even though this subwatershed has a relatively high percentage of wetland area the capacity of the wetlands to filter nutrients, sediment and bacteria may be exhausted in areas stressed by higher levels of contamination (i.e. south of Clinton).

Other Watersheds Within the Town of Clinton

Crum Elbow Creek

Crum Elbow Creek, which flows along the western border of the town, has a drainage area of approximately 19 square miles with a watershed which is approximately 1.5 miles wide and 12 miles long. This watershed extends into the Towns of Rhinebeck and Hyde Park (where the creek flows into the Hudson River). Approximately a third of the watershed (which includes a significant portion of the headwaters) lies within the northwestern section of the Town of Clinton. The watershed originates in the vicinity of Slate Quarry Road and Enterprise Road. The Davis Swamp area just east of Mountain View road receives water from several small streams that converge at its north end and wetlands and ponds at its east side (Stonehouse Road and Kansas Road intersection). This large area drains to the Crum Elbow via a series of wetland and streams near the Schultz Hill Road and Mountain View Road intersection. A smaller group of streams and wetlands drain into the Crum Elbow north of this tributary. South, another tributary flows into the Crum Elbow from Brown's Pond, which receives water from another tributary and associated wetlands extending to Seelbach Road. Hilly terrain throughout this watershed is interspersed with wetland/stream complexes and a large number of scattered small wetlands.

A large sand and gravel aquifer is located near the town boundary at Fiddler's Bridge and Hollow roads, with other sand and gravel aquifers along the Creek, especially in the area from Primrose Hill road extending along the creek beyond the town boundary and into Hyde Park. The residential hamlets of Pleasant Plains and Frost Mills are also located in the southern portion of the watershed near the town's boundary with Hyde Park.

Fallkill Creek

This watershed comprises 12,476 acres (in portions of the towns of Clinton, Hyde Park, Pleasant Valley and the City of Poughkeepsie where it flows into the Hudson River), of which 1,888 acres (approx. 15 percent) are in the Town of Clinton. Though small, the portion of this watershed within the town is a significant headwaters area that is relatively undisturbed, with large wetlands and forested areas. These play an important role in maintaining the health of the watershed, and support a high diversity of plant and animal species.

A large wetland /stream complex is found just south of Fallkill Road; this drains to the Fallkill across the southwest boundary of the town of Clinton. Farther east, an even larger branch of the same complex extends from Hollow Road to the southern boundary of the Town, draining to the Fallkill near the Hyde Park boundary.

Small Watershed Areas

Small portions of the Pleasant Valley East Stream, Tamarack Swamp Creek, and East Branch Wappinger Creek are located in the extreme southeast corner of the Town of Clinton, where the residential hamlet of Hibernia is also found. The East Branch Wappinger Creek flows north into the Town and joins with Wappinger Creek near Hibernia. A very small area of the Willow Brook watershed lies along the Town's east boundary, where the Taconic parkway enters the Town of Clinton.

A very small headwaters portion of the Landsman Kill watershed extends into the town of Clinton along the town's north boundary; most of this watershed lies within the town of Rhinebeck. In the town of Clinton this watershed does not contain significant water features, but provides forested cover from which water flows into a large wetland complex just north of the Town boundary.

Lakes and Ponds

The Town of Clinton contains four large lakes and numerous smaller lakes and ponds which are scattered throughout the town as shown in Figure 3.9: *Water Resources*. Three lakes lie in the Milan Window valley in Clinton, from north to south: Silver Lake, Mud Pond, and Long Pond. Silver Lake, Mud Pond, and Long Pond are located in a valley north of Schultzville and west of the Little Wappinger Creek. These three surface waterbodies and the lowland areas adjacent to and between this chain of lakes form an extensive wetland complex in the northern portion of the Town, within the valley north of Schultzville and west of Little Wappinger Creek. Circumneutral bog lakes in this area may include wooded swamps, bogs, fens, calcareous wet meadow or shrub swamps along their margins. Wooded swamps, cattail and swamp loosestrife (*Lysimachia terrestris*) on floating mats, tussocky marshes, and acidic shrub bogs may be found in coves and behind islands. There are also areas of waterlilies (*Nymphaea* spp. and *Nuphar* spp.) and submerged vegetation.

Silver Lake is the largest waterbody totaling approximately 107 acres. It lies at the northernmost part of the Milan Window wetland complex. It is bordered to the north by emergent and forested wetlands; along its southern shore by a number of summer homes (many of them now winterized) sited on lots averaging less than one-half acre; to the west by

a subdivision; and to the east by more residential property on small lots and a large Residential Treatment Center.

Long Pond is the second largest waterbody within the Town with an approximate size of 82 acres. It is located at the southern portion of the Milan window wetland complex, and is bordered to the west by a campground and The Omega Institute, an educational conference center; to the northeast by a small recreational campground; and along the eastern shore by approximately 12 tightly clustered houses at the end of Camp Drive.

Mud Pond is the third largest lake, totaling approximately 23 acres. It is located between Silver Lake and Long Pond, and is mostly surrounded by wetlands; however, a private campground is located along its western edge.

Browns Pond is the fourth largest lake/pond in Clinton at approximately 14 acres in size. The pond is located in the west-central portion of the Town. Browns Pond has several homes on the eastern and western shore.

Frost Pond (6 acres) is located to the north of Pleasant Plains. Frost Pond is contained within one large parcel with several houses on the property.

Groundwater Resources

Water moves downward through empty spaces or cracks in the soil, sand or rock until it reaches a layer of rock through which it cannot easily move. The water then fills the empty spaces and cracks above that layer. The top of the water in the soil, sand, or rocks is called the water table. The water that fills the empty spaces and cracks is called ground water.

The slow infiltration of rainfall through the soil is essential for replenishing groundwater. As a critical resource, groundwater not only provides drinking water for residents, but also is necessary for the health of many aquatic systems. During periods of dry weather, groundwater sustains flows in streams and helps to maintain the hydrology of wetlands. The contribution of groundwater to total streamflow varies widely, but hydrologists estimate the average contribution is between 40-50 percent in small and medium-sized streams. Groundwater is also a major source of water to lakes and wetlands. Under natural conditions, groundwater moves along flow paths from areas of recharge to areas of discharge at springs and along streams, lakes and wetlands.

Aquifers

An aquifer is underground soil or rock through which ground water can easily move. The amount of groundwater that can flow through soil or rock depends on the size of the spaces

in the soil or rock and how well the spaces are connected. Sand and gravel form the most productive surficial aquifers, and carbonate rocks such as limestone form the best bedrock aquifers. Areas where sand and gravel overlie limestone are, therefore, the most productive, as well as the most vulnerable, aquifers in the county.

Clinton has several such areas including the Silver Lake to Long Pond valley over to the Little Wappinger Creek and in the Clinton Corners-Wappinger Creek corridor. These prime water-producing formations deserve special consideration for aquifer protection measures. Please see Figure 3.9: *Water Resources* for more information.

The aquifers underneath the Town of Clinton were identified by the Dutchess County Water and Wastewater Authority in 1993 and are shown in Figure 3.9: *Water Resources*. The aquifers were broken into three different possible zones:

> Zone 1: Permeable deposits directly overlying the aquifer. Contaminants can move directly downward to the underlying aquifer with little or no natural filtration by the soil because the water is moving too quickly.
>
> Zone 2: Less permeable deposits located up gradient from the aquifer. These areas contribute recharge to the aquifer through both overland runoff and through ground water flow. Contaminant pathways are generally longer and slower in Zone 2 than Zone 1.
>
> Zone 3: These areas contribute to a stream, which may subsequently be induced to contribute to the aquifer through infiltration.

Aquifer Recharge

The information in this section is summarized from the *Dutchess County Aquifer Recharge Rates & Sustainable Septic System Density Recommendations*[18] report prepared for the Dutchess County Water and Wastewater Authority (2006) to provide communities with guidance on sustainable development densities in areas which rely on individual well and septic systems based on a better understanding of aquifer recharge rates. The recommendations in this report provide insight into water resource management and represent the most current information available for Dutchess County at this time. The report (pg. 10) describes different types of recharge as follows:

> *Under various names, these include direct recharge falling on a site, additional localized recharge flowing onto a site from adjacent areas to*

[18] Prepared by The Chazen Companies. To view the entire report, please see http://co.dutchess.ny.us/countygov/departments/waterandwaste/ratesanddensityrecommendations.pdf.

> *supplement direct recharge, and indirect or induced recharge which occurs where pumping wells draw surface water down into aquifers. There are also important distinctions between types of recharge and infiltration: infiltration refers to water movement into the subsurface, while recharge refers to the share of infiltration which reaches either the uppermost surface of the aquifer known as the water table, recognized here as aquifer recharge, or at least reaches shallow groundwater flow pathways below root zones and so escapes prompt transpiration back to the atmosphere.*

In Dutchess County recharge comes in the form of a portion of precipitation infiltrating to underlying saturated porespace or fractures. The study assigned aquifer recharge rates to four hydrological soils groups (HSG) based on the Natural Resource Conservation Service. These hydrological soil groups range from HSG group A soils with the highest infiltration rates to HSG group D soils with the most restrictive infiltration rates.

The Town of Clinton was evaluated in the study as part of the larger Wappinger Creek Watershed (see Figure 3.10 below). The aquifer recharge data associated with this watershed lies between the values reported for the Ten Mile River, whose annual precipitation is 44 inches, and the Northwest Region, where annual rainfall is 38 inches. Based upon this information, it is estimated that the Town of Clinton receives approximately 40 inches of precipitation each year. The past few years, e.g. 2006-2008, have exceeded this average while 2001 and 2002 were drought. The Town has been geologically characterized above as having a limited range of vertical relief, thin soils, and mostly shale-derived bedrock. Because of the generally low relief, streams are slow-moving, and wetlands and other static aquatic landscape features are common.

Most of the Town is covered by soils assigned by the Natural Resource Conservation Service to Hydrologic Soil Groups B and C. Aquifer recharge through these soils in the Town of Clinton is 13.3 inches/year and 6.8 inches/year, respectively. Aquifer recharge in the few areas with Hydrologic Soil Groups A and D soils are 18.2 inches/year and 3.8 inches/year, respectively. The distributions of Hydrologic Soil Groups in Clinton are shown on Figure 3.11: *Hydrologic Soils*.

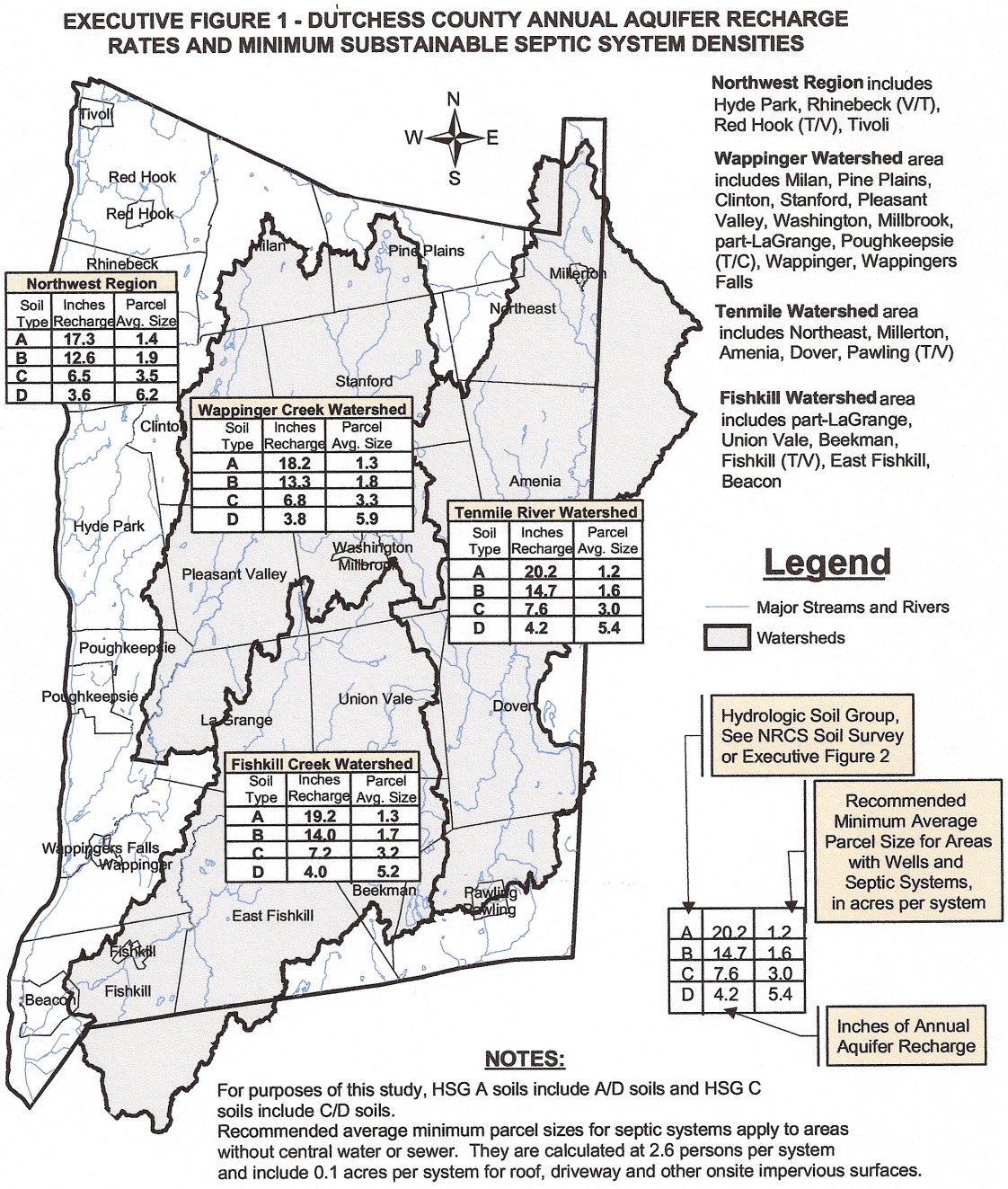

Figure 3.10: Dutchess County Annual Aquifer Recharge Rates
Source: *Dutchess County Aquifer Recharge Rates & Sustainable Septic System Density Recommendations*

With the exception of land aligned with Long Pond and Silver Lake where the underlying bedrock geology consists of fractured limestone covered by glacial outwash sediments, most of Clinton's geology consists of minimally-fractured shale bedrock covered by soils of glacial till origin tending toward silts and clays. These dominant hydrologic conditions lead to the following general groundwater resource conditions:

1. Rates of groundwater recharge in most areas are generally much less than half of the annual recharge, typically between 6.8 and 13.3 inches per year.
2. Rates of runoff during storms are correspondingly high.
3. There are few-to-no sand and gravel aquifer areas in the Town except near Long Pond and Silver Lake and along select streams.
4. Most wells withdraw water from the Town's shale fractured bedrock aquifer. This formation extends across several watersheds.
5. Most well yields are low-to-modest (e.g. 2 to 10 gpm) due to the limited fracturing of the shale bedrock aquifer.
6. Moderate-to-low aquifer recharge rates and the general scarcity of fractures within which groundwater can be stored, only result in low rates of groundwater migration toward streams to sustain their flow during extended rainless periods.

County-wide stream gauging conducted in 2002 and 2003 by The Chazen Companies for the Dutchess County Water and Wastewater Authority indicated that the Crum Elbow Creek and the Little Wappinger Creek have the lowest dry-season flows in Dutchess County. These two creeks each have their headwaters in the Town of Clinton. Low dry-season flows are characteristic of watersheds with below average rates of groundwater recharge and/or groundwater storage capacity.

As of 2008, there is no public water supply system in Clinton and there is no sufficient data to support any estimate of how much water is consumed by agricultural operations. However, according to the USGS New York Water-Use Program and Data (2000), on a statewide basis, irrigation accounts for less than 1 percent of the fresh surface water withdrawals and only about 3 percent of the fresh groundwater withdrawals. Conversely statewide, public water supply accounted for 32 percent and 65 percent respectively.

Floodplains

Floodplains are low-lying areas, normally adjacent to streams, which are inundated in times of heavy rains or severe snow melts. They often contain wetlands. Within a watershed they provide space for excess runoff. Left undisturbed, floodplains can also serve as groundwater recharge areas.

Floodplains that have a one percent chance of being completely inundated in a given year are called 100-year floodplains. Clinton's floodplains were remapped in June of 1984 as part of the National Flood Insurance Program administered by the Federal Emergency Management Agency. Under this program, communities that adopt and enforce floodplain ordinances are

eligible for federal disaster assistance. In addition, individuals who own or purchase property in the floodplain may purchase insurance to cover flood losses.

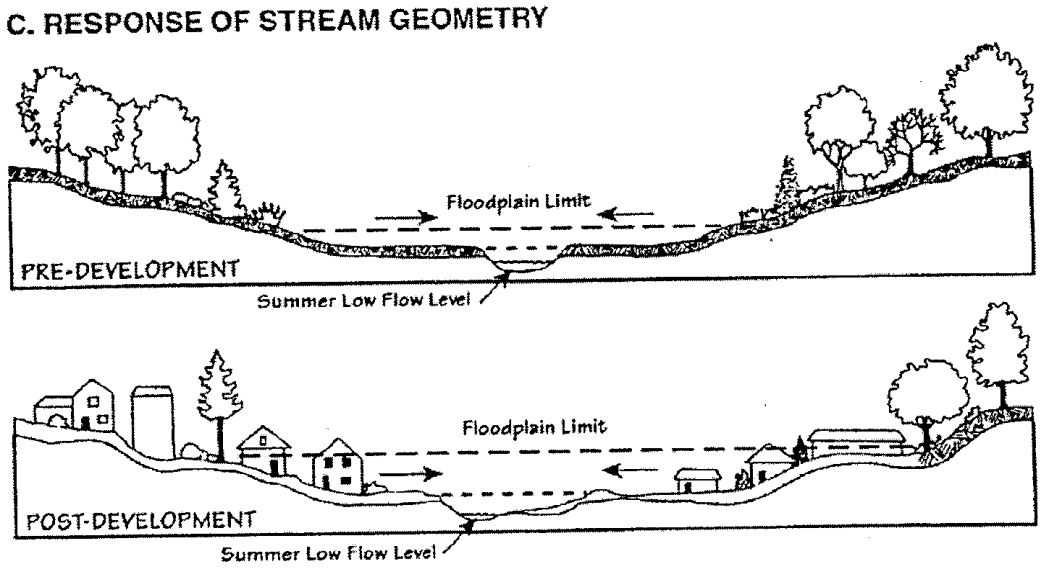

Figure 3.13: Floodplain Expansion with New Development.
Source: NYS DEC Stormwater Design Manual

Clinton's 100-year floodplains are especially evident along the three primary waterways--the Wappinger Creek, Little Wappinger Creek and Crum Elbow Creek. Particularly wide flood prone areas are along the Wappinger Creek west of the Taconic Parkway, the northern half of Little Wappinger Creek, and north and south of Mud Pond. Also, several low-lying pockets in the southwestern section of the town contain small streams that tend to flood, please refer to Figure 3.9: *Water Resources*. In reviewing floodplain maps, however, it is important to note that the locations of floodplain boundaries are not static. Floodplain filling, changes in the amount of developed land area and impervious surfaces, changes in stream flow characteristics, and other activities that alter the drainage characteristics of a watershed can affect the shape and size of floodplains.

The Town Zoning Map (1991) and associated Zoning Law include a Floodplain (F) Zoning District. The district coincides with the FEMA 100 year floodplains. This district restricts permitted uses to agriculture, forestry, recreation and other uses minimally affected by high water. There are no residential uses permitted in the F district. In 2008, the Town Board amended the Zoning Law to include regulations governing freshwater wetlands, watercourses, lakes, ponds and floodplains. For floodplains, this involves all land within the 100 year floodplain. Please see *Regulatory Information* subsection in the section *Watersheds* for a list of regulated activities.

Wetlands

Wetlands are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. They are generally identified by a combination of specific vegetation, soil, and hydrologic characteristics. For purposes of consistency, the definition of wetlands and description of these characteristics in this chapter are from the US Army Corps of Engineers (1989) Wetland Delineation Manual and represent a coordinated effort including input from the US Fish and Wildlife Service and the US Environmental Protection Agency.

Wetlands play an important role in watershed functioning, often through hydrologic connections with groundwater and surface water resources such as streams and ponds. Wetlands store water during periods of drought and release it gradually into the watershed; attenuate flooding by storing floodwater and releasing it gradually; contribute to groundwater recharge; and improve water quality. Additional wetland functions include: water quality protection, food chain support, nutrient cycling, habitat, biodiversity, recreation, education and research, and mitigation of climate change effects.

Wetlands also function as important wildlife corridors when combined with stream channels and open water bodies. Their habitat value includes not only a wide array of plants and wildlife, but also a high percentage of endangered, threatened, and rare species. Within the United States, over 50 percent of the nationally-listed endangered and threatened wildlife species are associated with wetlands.

All wetlands have an associated contributing drainage area (CDA), defined as the landscape features that transmit water to wetlands (e.g. surface drainage areas, groundwater recharge areas, stormwater outfalls). Similar to a watershed, the condition of the CDA is critical to wetland protection. Vegetative cover and the percent of impervious surface within the CDA influence the quality and condition of the wetland. For example, impervious surface of 10 percent or more within the CDA is associated with wetland and water quality degradation with significant degradation at 20 percent.

Wetlands are not all alike, but differ in soil, hydrologic regime, vegetation, and associated animal species. Larger wetland complexes may include several wetland types. These types generally include but are not limited to: swamps, marshes, wet meadow, bogs, fens, intermittent streams, vernal pools and shallow water zones of rivers, lakes, and ponds.

The Town of Clinton contains an array of particularly significant wetlands in the vicinity of the Milan Window. The biodiversity significance of these wetlands is identified as a "significant biodiversity area" by the New York Natural Heritage Program (refer to the

Biodiversity section of this chapter for additional information). The lakes and associated wetlands and streams within this "window" are characterized by a unique combination of features that produce habitat for an unusually high number of plants and animals of conservation concern. Wetland types within this area include lakeshores, circumneutral bog lakes, tussock marshes, acidic shrub bogs, buttonbush-dominated vernal pools, red maple swamps, fens and wet meadow[19].

Various mapping efforts have been undertaken to identify the extent of wetlands within the town. While these provide valuable information, none of them is accurate or comprehensive enough to provide a complete picture of all wetlands within the town. However, if all wetland mapping information (state, Dutchess County, National Wetland Inventory) is placed on one map, along with hydric soils, the probable locations of most of the town's wetlands should be apparent. Please see Figure 3.9: *Water Resources*.

None of these wetland maps can be substituted for the onsite wetland identification and delineation of wetland boundaries. And although mapping efforts often focus on the larger wetlands, the cumulative function of all of the smaller wetlands throughout the town is critical for protecting water quality and supply, supporting wildlife, and maintaining biodiversity.

Regulatory Information

Many wetlands provide significant habitat or watershed functions, whether or not they fall under federal or state regulatory jurisdiction. Federal and state regulations protect some, but not all, wetland and water resources and the habitats and species associated with them. New York State maps represent an approximation of wetland size and location, for wetlands that are 12.4 acres or larger. When delineated, wetlands are often more extensive than the New York State maps indicate and as a result new DEC wetland maps now show a 500 foot "check zone" along all mapped wetland edges, indicating the larger area within which the wetland may be found to extend when it is delineated. This 500 foot area is not a regulated area; however, New York State does protect a minimum 100 foot wetland buffer on mapped wetlands of 12.4 acres or larger.

There are forty-seven wetlands presently mapped in the Town of Clinton that meet the criteria to receive State protection under Article 24 of the Environmental Conservation Law. These wetlands occupy approximately 1,532 acres according to the DEC freshwater wetlands dataset (2007) or approximately 6.2 percent of the Town. These maps are being updated by

[19] For more detailed descriptions of these habitats refer to E. Kiviat and G. Stevens, *Biodiversity Assessment Manual for the Hudson River Corridor* (Hudsonia, Ltd., 2001).

the DEC; however updated maps are not yet available. Although many wetlands, small and large, are scattered throughout Clinton, more concentrated areas are in the Silver Lake to Long Pond valley and in the southwestern quadrant of the town.

Under Section 404 of the Clean Water Act, the discharge of dredged or fill material into wetlands of any size is a regulated activity by the U.S. Army Corps of Engineers (ACOE). A permit is typically required before dredged or fill materials can be placed into waters of the United States, including wetlands. This pertains to wetlands of all sizes that are not 'isolated'; determination of 'isolated' status should be confirmed by ACOE field personnel. Some wetlands that appear to be isolated may be hydrologically connected to other wetlands or water bodies. The ACOE does not protect wetland buffers, There are no maps of wetlands under ACOE jurisdiction; jurisdictional determination is based on site conditions.

Of the wetlands that are generally not protected by federal or state regulations, vernal pools are particularly significant in terms of habitat. Vernal pools are generally seasonal bodies of water, usually small in size (less than 2 acres) that attain maximum depths in spring or fall, and lack permanent surface water connections with other water bodies. They support a number of animal species that are adapted to living in temporary, fishless pools and that depend on vernal pools for their survival. Additional information about vernal pools is provided in the biodiversity section of this chapter.

The wetlands mapped by Hudsonia may identify some of the vernal pools that currently exist in the Town and could be used as a reference guide to locate these pools in the future. A review of mapping resources indicates that a significant number of vernal pools are likely to be present within the Town[20] (Canham et al. 2001). Conservation of vernal pools is often dependent upon regulatory mechanisms implemented at the local level of government.

National Wetland Inventory (NWI) maps (produced by the U.S. Fish and Wildlife Service) are not regulatory maps; they do not represent all wetlands under the U.S Army Corps of Engineers jurisdiction. They do include wetlands of all sizes, however not all wetlands are identified. Although recently updated NWI maps are more accurate than older maps, they are not accurate to a site-specific scale and are not a substitute for field delineation. The NWI map currently includes 1,896.6 acres of wetland in the town of Clinton or approximately 7.6 percent of the Town.

In 2008, the Town Board amended the Zoning Law covering regulations governing freshwater wetlands, watercourses, lakes, ponds and floodplains. Wetlands are defined in

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[20] Charles Canham, Norene Coller, Pat Hancock and Bill Relyea (authors). Margaret Pierpont and Eliot Werner (editors) *Clinton Open Space and Land Stewardship Plan Recommendations* (November 13, 2001).

Local Law No. 2 of 2008 which utilizes a widely accepted standard to identify wetlands based on the ACOE *1989 Wetland Delineation Manual*. For any wetland in the Town of Clinton between ½ acre and 5 acres there is a regulated associated area within fifty (50) feet of the boundary of such wetland. For any wetland between 5 and 12.4 acres, there is a regulated associated area within one hundred (100) feet of the boundary of such wetland. Wetlands smaller than ½ acre are not regulated by the Town. Please see *Regulatory Information* subsection in the *Watersheds section* above for a list of regulated activities.

Biodiversity

Biodiversity conservation (i.e. the protection of habitats, the ecosystems that support them and the species of plants and animals that inhabit them) is an essential component of rural character and the health of the human habitat. A clean abundant supply of water, for example, depends on the healthy functioning of ecosystems within the watershed. Biodiversity is best protected when it is assessed and described proactively so that the most significant ecosystem features can be preserved before they are threatened, degraded or lost.

Biological diversity or "biodiversity" is the variety of life at all its levels, and the ecological and evolutionary processes that sustain it. It includes all the variation in nature: ecosystems biological communities, species and genetic diversity (within and between populations of species), and all of the interactions between organisms and their environment. Genetic variation within and between populations of species affects their physical characteristics, viability, productivity, resilience to stress, and adaptability to change.

A biological community is a group of plants and animals that share a common environment and interact with each other. Ecosystems include the community of plants, animals and microorganisms, the non-biological environment, and all interactions between them. Ecosystem diversity encompasses the variety of species and habitats that occur within a region.

It is important to understand the full range of the meaning of "biodiversity" as the context for evaluating habitat and species information. For purposes of this chapter, the discussion of biodiversity within the Town of Clinton will focus on an overview of habitats, species, and ecological interrelationships.

<u>Habitats: terrestrial, aquatic, wetland</u>

Biodiversity is not measured only by the number of species in a particular habitat; habitats that support relatively few species may be equally important to overall diversity as those that support many species. Some habitats that support relatively few species are critical for the

survival of those species. Other species may require habitat complexes for their survival—different habitats during different stages of their life cycle (e.g. nesting, breeding, foraging). All of these factor into the importance of habitat diversity within the Town.

An overview of more than twenty-five habitats found in the Town of Clinton is provided in Appendix 3.2 (Habitats) of this report. These include aquatic habitats such as perennial and intermittent streams, lakes, and ponds. Please refer to Figure 3.14: *Habitats* to view various habitat locations in the Town.

Each of these habitats supports one or more communities of plants and animals. The ability of the habitat to support and sustain particular species of plants and animals depends in part on its condition, and its proximity to other habitats. The latter is especially important for animals that need habitat complexes for survival, i.e. they depend on different adjacent habitats at different stages of their life cycle or at different seasons of the year. This includes habitat for breeding, nursery habitat, foraging, seasonal movements, nesting, overwintering, and population dispersal. An example of this is the spotted turtle, which moves seasonally between vernal pools, nesting habitat, semi-permanent ponds, upland forest and red maple swamps.

A description of habitat quality or condition includes the consideration of a number of specific characteristics. The size and shape of the habitat "patch" and the degree to which it is connected to other habitats is the first consideration. It also includes an assessment of the level of habitat fragmentation that has occurred on a particular site or within a larger region, and the diversity of native plant species present. For wooded habitats, a description of the age and size of trees is important; mature forests comprise a different habitat from young stands. The quality of these habitats sometimes depends on "microhabitat" features such as downed wood, standing snags, rocks, and organic debris. The observable quality of surface water (e.g. level of turbidity, presence of visible contaminants) and substrate condition (e.g. abundance of algae, level of siltation) contribute to the assessment of aquatic and wetland habitat quality. More specific means of measuring aquatic habitat quality includes stream biomonitoring.

The level of human disturbance is another important consideration for habitat quality. Examples of disturbance include the introduction of non native or invasive species, logging, foot traffic, construction, roads, ATV's, use of pesticides, herbicides, and fertilizers, and in the case of watercourses and wetlands, stormwater runoff and erosion.

Habitat evaluation includes consideration of the observed presence of habitat specialist species (e.g. vernal pool amphibians, interior forest birds) which require specific habitat conditions for their survival. The presence of generalist species that can thrive in a variety of

conditions (often including disturbed habitat) along with the absence of habitat specialists, indicate lower quality habitat that may be more suitable for development.

Protecting the value of water-based habitats extends beyond prevention of physical alteration such as filling, grading and dredging. It also includes maintenance of water quality and water supply. Aquatic communities are affected by both water (instream) and surrounding vegetation and topographical features. Both the quality and the quantity of available habitat affect the composition of biological communities. Some species of macroinvertebrates, fish and amphibians are extremely sensitive to water contamination or to inadequate water supply.

Similarly, wetland habitat may depend on specific environmental conditions that influence its suitability for particular species. These conditions include depth and seasonality of ponded water, connections with other wetlands, streams or waterbodies, water quality, and condition and extent of vegetated wetland buffer and other surrounding uplands. Vernal pools are habitats of particular concern. These seasonal bodies of water lack permanent surface water connections with other wetlands or waterbodies, and are typified by a wet-dry cycle that generally varies from less than a month to more than a year. They supply essential breeding habitat for fairy shrimp, wood frogs, marbled salamanders, blue-spotted salamanders, Jefferson salamanders, and spotted salamanders. Adjacent uplands or "critical terrestrial habitat" is particularly important for pool-breeding amphibians that travel hundreds of feet from the pool itself to reside in upland habitat after the breeding season.[21]

The quality of upland habitat is often dependent on the size of the "habitat patch". For example, open uplands such as old fields and meadows often provide significant habitat for nesting birds; research indicates that some bird species require a certain minimum field habitat size in order to thrive. Birds that nest in "forest interior" habitats also often have minimum habitat size requirements. Thus larger fields or forest habitat patches are often critical as adequate habitat for the species that cannot thrive in smaller patches.

Species of conservation concern

Good quality habitat will generally support a variety of common plant and animal species. This represents an important resource, recognized in DEC's NYS Comprehensive Wildlife Conservation Strategy, which states that one of its goals is to keep common species common. Other groups of species are of "conservation concern" because of declining populations, sensitivity to habitat changes, and other factors.

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[21] A. Calhoun and M. Klemens, *Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States (*MCA Technical Paper No.5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York, 2002).

Plant and animal species of conservation concern are commonly identified as follows:

- Endangered or Threatened under the federal Endangered Species Act
- NYS list of Endangered, Threatened, Rare, or Special Concern species (animals)
- NYS list of Endangered threatened, rare, and exploitably vulnerable species (plants)
- Animals listed as Species of Greatest Conservation Need, in NYS Comprehensive Wildlife Conservation Strategy www.dec.state.ny.us
- S1, S2, or S3 by the New York Natural Heritage Program
- Regionally rare, scarce, declining, or vulnerable in Kiviat and Stevens (2001)
- NYNHP Rare plant status list (www.nynhp.org)

The listing of (animal) Species of Greatest Conservation Need (in the New York State Comprehensive Wildlife Conservation Strategy Plan) by the NYS Department of Environmental Conservation is of special note. The Plan includes detailed information about these species, their habitat needs, threats and impacts, and mitigation. By considering the habitats required by these species (which include the Endangered, Threatened, and Species of Special Concern listed by New York State) and other species of conservation concern, it may be possible to reduce the likelihood of additional species being listed by the State of New York as threatened or endangered in the future.

Tables that list the species of plants and animals of conservation concern in the Town of Clinton are included in Appendix 3.3 (Species of Conservation Concern). This includes Tables of plants, birds, reptiles, amphibians, and mammals of conservation concern. These listings include all species that are threatened or endangered, or listed by New York State as Special Concern (wildlife) or rare (plants).

The New York State Open Space Plan describes a large area that includes significant turtle conservation sites in the Hudson Valley. This area, which includes the Wappinger Creek drainage basin, supports the highest diversity of turtles in New York State and provides habitat for five species of state listed endangered, threatened and special concern species. The sites include rare and significant ecological communities such as calcareous fens, dwarf shrub bogs, shrub swamps, and floodplain forest.

Invasive Species

Invasive species are non native species that can cause harm to the environment or to human health. The Federal Invasive Species Task Force adopted the following definition from federal Executive Order 13112, 1999: "An invasive species is: 1) non-native to the

ecosystem under consideration, and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. In the latter case, the harm must significantly outweigh any benefits."

In New York State, about one-third of our plants are native to places other than New York, however, only about 10-15 percent of these cause the level of harm necessary to be considered "invasive". Invasive plants are introduced species that can thrive in areas beyond their natural range of dispersal. These plants are characteristically adaptable, aggressive, and have a high reproductive capacity. Their vigorous growth combined with a lack of natural enemies often leads to outbreak populations. Parks, yards and gardens are invaded by kudzu, Norway maple, garlic mustard, Japanese barberry, black swallow-wort, purple loosestrife, multiflora rose, and oriental bittersweet. The Invasive Plant Council of New York State lists the following as 'target' species: water chestnut, giant hogweed, Japanese stiltgrass, Japanese knotweed, mile-a-minute vine, and pale swallow-wort. Some invasives cause disease in plants; in New York State these include the pathogens that cause southern bacterial wilt, soybean rust, sudden oak death, and plum pox.

Invasive species cause problems for ecosystems (including managed forests), food supply, industry, landscaping, infrastructure, gardens and pets. Costs associated with invasives are substantial. During the past few decades the following have come to New York: Zebra and Quagga mussels, fishhook and spiny waterfleas, round goby, West Nile virus, hemlock woolly adelgid, and Asian long-horned beetle – all of which cause millions of dollars worth of damage annually. And the list is growing. Since the Invasive Species Task Force convened in 2004, new invasive species in New York include Chinese mitten crab, European crane fly, European wood wasp, Swede midge, brown fir long-horned beetle, emerald ash borer, bighead and silver carp, and the northern snakehead fish.

Invasive and other non-native species thrive because they have no predators or diseases that would keep their populations in balance in their natural ecosystems. As a result, they out-compete native species that are naturally controlled by predators, pests and disease. Many scientists consider invasive species to be the second largest threat to biodiversity (the primary threat is habitat loss). This decreased biodiversity often leads to significant impacts throughout ecosytems. For example, many of the native species of trees and shrubs support a wide variety of insect species, which in turn provide food for many birds. These native species are removed from the landscape and replaced by non-native species during the course of most development projects. These non-native species support very few insect species, and as a result can result in significant shortages of the particular insects that are required by birds during the nesting season.[22]

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[22] Douglas W. Tallamy, *Bringing Nature Home* (Portland, Oregon: Timber Press, 2001).

Nationwide, about half the species listed as threatened or endangered are at risk because of invasive species and in some cases invasives are the primary cause of endangerment. Examples of invasives that have reduced biodiversity include the European starling, purple loosestrife, Eurasian watermilfoil, sea lamprey, and common reed (Phragmites).

The DEC has posted an alert regarding didymo (or, 'rock snot'), an algae that can completely change stream bottom habitat, with devastating effects on other aquatic life. As with some other aquatic invasives, these algae can be spread by water-based recreation, including boats and fishing gear. The DEC website provides more information on aquatic invasives and prevention/control options.

Many invasives have damaged forests, including chestnut blight, Dutch elm disease, beech bark disease, European gypsy moth, tent caterpillar. More recent threats are posed by the Asian long horned beetle, hemlock wooly adelgid, pineshoot beetle, sirex woodwasp, emerald ash borer and Asian gypsy moth. Of growing concern are invasive insects transported via firewood. The DEC provides information about new regulations that prohibit the import of firewood unless it has been heat treated to kill pests. Transportation of untreated firewood is limited to within 50 miles of its source.

To address the problems caused by invasive species the following steps have been identified by the *Final Report of the New York State Invasive Species Task Force*[23]: Prevention, Early Detection, Rapid Response and Eradication, Control and Management, and Restoration. Management varies according to species. Examples include: 1) "weed management areas" which are established on a watershed level to eradicate specific invasive plants; 2) establishment of species monitoring networks for inventories and identification of infested areas; 3) Invasive Plant Database, created by the Invasive Plant Council of New York State for reliable distribution and management information on invasive plants.

The overall quality and health of habitats are generally reflected in the vegetation present: the higher the proportion of invasive species, the lower the general habitat quality. For example, purple loosestrife can coexist with native species in healthy wetland systems and even provide food and shelter for a number of animals. However, loosestrife has a higher tolerance for a variety of site conditions including variations in water availability–when wetland soils are disturbed and the wetland's hydroperiod changes, or when salinity rises, loosestrife is often able to out-compete more sensitive native species and form monoculture stands with lower habitat quality.

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[23] New York State Invasive Species Task Force. 2005. Final Report of the New York State Invasive Species Task Force. NY State Dept. of Environmental Conservation and NY State Dept. of Agriculture and Markets.

For more information on invasive species and management options, refer to the U.S. Deptartment of Agriculture National Invasive Species Information Center, the New York State Department of Environmental Conservation website (Nuisance and Invasive Species) and the Invasive Plant Council of New York State.

Biodiversity Assessment: Hubs, Connections, and Focal Species

The first paragraph of this section defined biodiversity and stated that the variety of species in an ecosystem is a function of its structural and functional characteristics and the diversity of its ecological processes. Interpreting and evaluating biodiversity information is often a complex process that involves much more than listing species that are threatened or endangered. The following very brief description of a biodiversity plan is included here to illustrate that biodiversity assessment and conservation involve consideration of interrelationships as well as species.

The Wildlife Conservation Society's program, Metropolitan Conservation Alliance (MCA)[24], has produced a series of technical papers that provide examples of collecting and interpreting information on habitats and species in specific geographic areas, and evaluating biodiversity value.

As part of this method, wildlife species are divided into two groups: development-sensitive (includes species of conservation concern) and development-associated (includes common species). The ratio of these two groups is then compared to describe the relative health and condition of the habitat. Habitat areas are generally described as:

1. "Core" or hub habitat (relatively high biodiversity value); biodiversity within these 'source' areas can help to replenish the biodiversity of other nearby habitats; hubs include adequate acreage to support species that require large areas, relatively high quality habitat, and links to adjacent habitats.
2. Corridors which are broad swaths of habitat that also link other habitats together; these connections often include river and stream corridors.
3. Constrictions; areas where movement between habitats is impeded.

This information can be used to generate maps that identify the biodiversity hubs, and corridors/connections. In turn, this serves as a source of information for local and regional

[24] N. Miller, M. Klemens, and J. Schmitz, *Southern Wallkill Biodiversity Plan: Balancing Development and the Environment in the Hudson River Estuary Watershed (*MCA Tech. Paper No. 8. Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York, 2005).

biodiversity conservation. More details about biodiversity plans and their relationship to land use planning are provided in several MCA technical papers[25].

The following section documents several areas within the Town that demonstrate a high level of species and habitat diversity, including threatened and endangered species and species of conservation concern.

Overview of some of the Town's significant biodiversity areas

The New York Natural Heritage Program (NYNHP) has identified a significant biodiversity area called the "Dutchess County Wetlands", which includes the Milan Window in the Wappinger Creek watershed, and most of the Crum Elbow Creek. These wetlands contain habitats that are unusual or scarce in the region, and support rare plants and animals including the Blandings turtle, and possibly the bog turtle. In addition, these wetlands contain the only known occurrences of the northern cricket frog (state endangered species), and habitat for the state threatened pied billed grebe. Also present are plants listed as state threatened or endangered including swamp cottonwood, woodland agrimony, Hooker's orchid, Rocky Mountain sedge, glaucous sedge, willdenow's sedge, prickly hornwort, button–bush dodder, smartweed dodder, little leaf tick-trefoil. In addition to the species mentioned here, these wetlands also provide habitat for a larger number of animal and plant species of conservation concern.

The NYNHP provides additional information on these general significant areas in the Town of Clinton. In addition to the threatened and endangered species noted above, two significant ecosystems have been identified—four acres of medium fen and a two acre dwarf shrub bog. Additional significant resources may be found as more data is collected. Please see Figure 3.15: *Significant Ecosystems and Rare Species* for the areas identified by the NYNHP as important for rare plants, animals and ecosystems. Please note this map should not be considered all inclusive, but rather a starting point for significant habitat areas.

Currently the NYNHP has also mapped five "important areas" within Clinton. These are based on documented occurrences of rare species or ecosystems and include a buffer. Minimum required buffer widths are designed to preserve habitats which are critical for the protection of rare species and ecosystems. Buffer widths are designed to preserve habitats which are critical for protection of rare species and ecosystems. Buffer widths depend on a variety of factors including available habitat, number of individuals documented, degree of habitat fragmentation, quality of habitat, topography, possible habitat degradation, and

[25] Southern Wallkill Biodiversity Plan, Northern Wallkill Biodiversity Plan, Croton-to-Highlands Biodiversity Plan, Eastern Westchester Biotic Corridor.

species' habitat needs. The five important areas that have been mapped in Clinton include Mud Pond Wetlands, Hyde Park Important Area, Crum Elbow Creek Wetlands, Route 9G Wetlands, and Zipfelberg Bog.

1. The Milan Window site boundaries include the Silver Lake, Mud Pond, Long Pond chain of lakes and associated wetlands, the outwash plain matrix, and buffer zones to protect the lakes and to accommodate known turtle nesting areas. These boundaries encompass the portions of the Milan Window currently known to support rare native species; the boundaries may need expansion northward, possibly as far as Route 199, with continued biological surveys. The NRMP Wappinger Creek for the Wappinger Creek Watershed also identifies these lakes as important wetlands within the Little Wappinger Creek subwatershed; in addition to providing significant critical habitat they are in an important aquifer recharge area, help maintain water quality and provide flood control. Milan Window lakes are described as circumneutral bog lakes because of their relatively neutral pH which supports unusual vegetation including floating mats. They are associated with a variety of wetlands—wooded swamps, cattail and swamp loosestrife (*Lysimachia terrestris*) on floating mats, tussocky marshes, and acidic shrub bogs in coves and behind islands. There are also areas of waterlilies (*Nymphaea* spp. and *Nuphar* spp.) and submerged vegetation. There are also wetlands that are isolated from the lakes; these include buttonbush (*Cephalanthus occidentalis*) dominated vernal pools, red maple (*Acer rubrum*) swamps, and a fen-like meadow. Hardwood swamps border Little Wappinger Creek in places. Uplands include hardwood forests, old fields, and farmland. These lakes support rare plants and are breeding and foraging areas for numerous amphibian, reptile, bird and mammal species, some of which are threatened and endangered. It includes important breeding habitat for both Blanding's turtles and northern cricket frogs. Species of conservation concern in this area include but are not limited to the following:

    - Bog turtle (*Clemmys muhlenbergii*)
    - Blanding's turtle (*Emydoidea blandingii*)
    - Golden eagle (*Aquila chrysaetos*)
    - Northern cricket frog (*Acris c. crepitans*)
    - American bittern (*Botaurus lentiginosus*)
    - Red-shouldered hawk (*Buteo lineatus*)
    - Rocky Mountain sedge (*Carex backii*)

- Swamp cottonwood (*Populus heterophylla*)
- Blue-spotted salamander (*Ambystoma laterale*)
- Spotted turtle (*Clemmys guttata*)
- Wood turtle *(Clemmys insculpta)*
- 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*)

Private residences, institutions, and a recreational vehicle campground border the lakes. Impairments to habitat quality within the critical habitat and adjacent buffer areas include shoreline development along Silver Lake and Long Pond, and the habitat fragmenting effects of Long Pond Road, Slate Quarry Road and Lake Drive.

Another area that could be considered as a potential addition to the Milan Window site is the extensive, ledged, forested upland on the west side of the lakes noted above. A great blue heron rookery, a significant habitat, is located between the Mud Pond Wetlands and the Hyde Park Important Area.

2. The Hyde Park Important Area covers the mid- and southwest portions of the Town. This area is of importance since it contains numerous wetlands, diverse habitats, and limited development.

3. Directly west of the Hyde Park area is the Crum Elbow Creek Wetlands. This area provides quality habitat due to limited development, density of streams and wetlands, and limited fragmentation and includes suitable habitat for Blanding's turtles.

4. North of the Crum Elbow Creek Wetlands are the Route 9G Wetlands which provide good habitat consisting of streams, wetlands, and upland areas, as well as limited fragmentation and development.

5. The Nature Conservancy's Zipfelberg Bog (a dwarf shrub bog) is a preserve on the western edge of that upland. The Bog is a kettle-like formation with steep slopes on

its eastern edge. The open bog in the center consists of a deep saturated peat mat. The area provides habitat for many species of conservation concern.

Dutchess County has recognized the Chain of Lakes and Zipfelburg Bog as regionally significant in the *Dutchess County Natural Resources Inventory*.

There may be other areas where species of conservation concern are found. For example, it is suspected that areas between the Hyde Park Area, Crum Elbow Creek Wetlands and the Route 9G Wetlands contain Blanding's turtles. They serve as corridors between known areas of importance and provide quality habitat such as streams and shallow wetlands which are commonly utilized by species such as Blanding's turtles. This area, as well as the heron rookery mentioned above, should be considered natural resources of high importance.

The Natural Resources Management Plan for the Wappinger Creek Watershed identifies: (1) a wetland of 11 acres that is within the Upton Lake subwatershed and is designated by the DEC as wetland of Unusual Local Importance; and (2) a 25-acre class II wetland north of Hollow Road on a tributary of Wappinger Creek as potentially significant pending additional information. Both wetlands are privately owned.

Additional habitats of significance are noted by the Town's CAC:

South of Mud Pond is a complex of wetlands; two are kettle shrub pools underlain by poorly drained organic soil. These wetlands have a moat of water with the center vegetated, characteristically by buttonbush. These unusual wetlands are known breeding and foraging areas for species of conservation concern. The connecting waterways allow movement of many species. Nearby upland areas are often "excessively drained" gravel, (Hoosic-Channery loam) creating excellent nesting habitat for conservation concern animals.

North of Mud Pond and south of Slate Quarry Road there are several circumneutral wet meadows which are located on carbonaceous soils and may support rare plants and woody swamps.

The Little Wappinger Creek provides significant wildlife habitat and a corridor for wildlife movement in Clinton. Its riparian zone is largely forested. Perennial and intermittent streams were noted on the west side of Long Pond, some continuing east into the pond. Intermittent streams cross the power line right-of-way, some streams flowing east toward the Little Wappinger Creek and others west toward the Crum Elbow Creek. Ephemeral streams were noted on the west side of Silver Lake.

Significant vernal pools were identified on the slopes west of Silver Lake. These temporary pools had large breeding populations of wood frogs. Other vernal pools were identified west of Mud Pond and Long Pond.

On the slopes west of the chain of lakes there are rocky mixed woodlands that total approximately 918 acres of contiguous forest. These woodlands are a mixture of deciduous and coniferous trees, with some stands of hemlocks. Most trees are not of large size although there are a few 12" diameter at breast height. Indication of good habitat quality was noted by the presence of pileated woodpeckers in some areas. Other similar areas in Clinton support breeding populations of red-shouldered hawk and barred owl.

East of the lakes is a mix of shrubby old field habitat, farmland which is classified as upland meadow and rocky mixed woodland. This area has historically been the location of successful farms in Clinton. A large horse training facility is also located in this area. Many plant and animal species use these habitats, as inactive farmland reverts to woodland or other land use.

Summary and Implications for Planning

Rural character and green infrastructure

A community's character is defined by its appearance, consisting of the built and non-built features of the landscape. In Clinton, the residents have indicated that the town's natural beauty and rural character are among its greatest assets. Natural beauty typically refers to the natural landscape—forests, wetlands, meadows, and rock outcrops and the working landscape (farms). These landscape features play a prominent role in how residents perceive their sense of place and what makes it special for them. These features, which are closely related to one another, offer many positive images of rural character or atmosphere; and many of them are also environmentally significant. These features include stone walls, trees along roads, open and planted fields, farm animals, vistas, historic sites, woodlands, wildlife, rivers and streams, and mountains. Clinton, as evidenced in its survey of natural resources, has abundant natural assets worthy of special consideration if the town wishes to maintain its natural beauty and rural character.

Both natural and working landscapes provide a variety of functions in a community–from signifying "small town feel" to the cleansing of water. For example, natural features often create a visual context, a signal that differentiates the "settled" area–a village or hamlet–from the rural countryside. Residents of Clinton have acknowledged the value of the town's historic hamlet areas, indicating that they favor protecting the hamlets from incompatible development.

The community's natural assets can be protected during the planning process. Also known as "green infrastructure" these assets comprise a network of land and water that maintain farmlands and ecological processes, supports biodiversity and sustains clean air and water resources. Communities typically plan for standard infrastructure needs, such as roads, schools, water and sewer comprehensively, so that they are developed in an organized and fiscally responsible fashion. Many communities now recognize the value of their "green infrastructure," and are beginning to plan, design and invest in those assets, as well.

In addition to the typical natural resources analyzed in a comprehensive planning process, the Comprehensive Plan also recognizes quality of life attributes closely related to natural resources. Specifically, air quality, noise and light are elements which affect the attractiveness of Clinton. In terms of air quality, Dutchess County is in an area designated by the Environmental Protection Agency as moderate non-attainment for ozone. Unhealthy levels of ozone cause health risks including but not limited to chest pain, congestion and lung inflammation. Ozone can also damage vegetation and crops. While this is a regional issue affected by wind and weather, healthy air is a quality of life issue which plays a role in the decision making process for people looking to move into a region.

Rural areas generally have adequate access to natural sunlight which provides several health benefits. These include the production of Vitamin D, and increased production of endorphins and serotonin which are known to make people feel better and can in turn increase melatonin, which helps people fall asleep. Sunlight is a critical element in the production of crops and for healthy vegetation. Artificial light can cause light pollution and degrade the night time dark sky experience for residents in rural areas. Lighting regulations are frequently developed to prevent glare and from having light spill over to neighboring properties.

Clinton is a relatively quiet community in terms of noise. Most noise is likely to come from transportation sources such as motor vehicles and trucks. Prolonged exposure to noise is related to several health issues such as hypertension, increased stress levels, hearing loss and sleep disturbance. The Town regulations include provisions for maintaining a quiet atmosphere.

Planning which protects the community's natural assets while accommodating future growth can be challenging, but it is necessary for the health of both. Many considerations require careful attention and balancing of interests to achieve the community's desire for the future. In assessing impacts on natural resources, including those that stem from growth and development, it is important to recognize all impacts and their true costs (short term and long term). These impacts include (1) direct impacts, which affect the physical appearance of resources, e.g. filling a wetland, clear cutting, uncontrolled logging, stream crossings,

changing hydrology, excavating steep slopes, and (2) indirect impacts, which may not be immediately apparent but may have as great an effect as direct impacts, for example, increasing the amount of impervious surface within a stream or wetland watershed (e.g. by construction of buildings or roads, driveways, parking lots), drawing down aquifers, changing stream water supply and flow, reducing groundwater recharge, increasing pollutant load to wetlands and streams; and (3) cumulative impacts, including reduction of forested land within a watershed, increasing impervious surfaces to more than 10 percent within a watershed, incremental loss of habitat and fragmentation, many sites withdrawing water from the same aquifer, and significant reduction of riparian buffers along the entire course of a stream.

Topography

Slopes greater than 15 percent are usually more difficult and expensive to develop in an environmentally sensitive manner due to increases in the amounts of required excavation and/or filling which in turn can increase the potential for stormwater runoff and erosion to occur. Under the Town's current Zoning regulations, approval standards are provided for construction on moderately steep slopes (15 to 24.9 percent) while a special permit is required from the Planning Board before disturbances can occur on extremely steep slopes (>25 percent).

Geology and Soils

Geological features influence drainage, topography, ground-water availability, and soil types. Bedrock types have distinct characteristics which affect land development, particularly in terms of water supply. Variations in bedrock type also affect the permeability, porosity, and chemical makeup of soils which, in turn, affect vegetation and habitats, and subsequently the type and density of development that is most appropriate in a given area.

Soil suitability is an important factor in determining the best and most cost efficient locations for new development which includes the siting of septic systems, roads and foundations. Improper development in areas with unsuitable soils has the potential to lead to contamination of surface or groundwater resources and increased erosion. Soils are also a key factor in determining the suitability of lands for various agricultural practices. Limiting the amount of clearing and grading at a site minimizes soil erosion, sedimentation, and steep slope vulnerability while at the same time preserving the natural and rural features, and ecological functions (e.g. watersheds).

Watersheds

Watershed planning is directly related to the availability of a high quality supply of water, the ability of watershed features to absorb floods, and the healthy functioning of wetland, lake and stream ecosystems. It takes into consideration the manner in which development alters the local hydrologic cycle during the initial clearing and grading that occurs during construction. Trees and other vegetation that intercept rainfall are removed, and natural depressions that hold temporarily ponded water are graded to a uniform slope. The spongy humus layer of the forest floor that absorbs rainfall is scraped off, eroded or severely compacted; having lost its natural storage capacity, a cleared and graded site can no longer prevent rainfall from being rapidly converted into stormwater runoff. After construction, impervious surfaces no longer allow rainfall to soak into the ground; consequently, most rainfall is directly converted into stormwater runoff. The volume of stormwater runoff and its pollutant load increases sharply with increase in impervious surfaces. For example, a one acre parking lot can produce 16 times more stormwater runoff than a one-acre meadow each year[26].

A net decrease in groundwater recharge rates in a watershed can result from an increase in impervious surfaces that prevent natural recharge. This may result in sharply reduced streamflow during dry periods. In smaller headwater streams a decline in streamflow can cause a perennial stream to become seasonally dry. Well drawdowns also affect recharge rates. Pumping groundwater from a well always causes (1) a decline in groundwater levels at and near the well; (2) a diversion to the pumping well of groundwater that was moving slowly to its natural area of discharge.[27]

Decreased water quality and impacts on healthy stream and wetland functioning within the watershed can result from increases in the percent impervious surface within a watershed or drainage basin, increased stormwater runoff levels, changes in streamflow related to groundwater recharge, and removal of bank and riparian vegetation. Direct and indirect impacts to streams include: stream channel enlargement, increased level and frequency of 'bankfull' water levels and subsequent bank erosion, increased overbank flooding, reduced streamflow during dry periods or drought, siltation of the bottom substrate, and increases in temperature (e.g. due to a decrease in riparian vegetation that shades the water).

The Natural Resources Management Plan for the Wappinger Creek Watershed provides a discussion of specific recommendations for watershed (stream, lake and wetland) protection. These include: protection of stream vegetated buffers that are of sufficient width and length

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[26] NYS Department of Environmental Conservation, *Stormwater Management Design Manual (2003),* p. 21.

[27] USGS. *Circular 1186 - Sustainability of Groundwater Resources* (1999), p. 11.

to protect water quality and habitat; proper septic system siting and maintenance; properly designed agricultural and residential best management practices (e.g. implementation of DEC's stormwater management Better Site Design principles); where significant resources are in private ownership, local and state agencies need to work with landowners and lake associations to reduce nonpoint source pollution, from homeowner activities and septic systems.

In general watershed resources can be protected and restored by providing adequate vegetated buffers along wetlands and streams, maintaining adequate forested cover throughout the watershed, and keeping the percent impervious surface within a watershed below thresholds that result in water quality degradation.

Wetlands

Wetlands are an important feature of watersheds, providing many important ecosystem functions. While impacts to wetlands are commonly described only in terms of direct impacts such as filling or draining, indirect impacts are often responsible for significant wetland degradation and functional loss. The assessment of indirect impacts to wetlands and development of effective mitigation is essential for protection of wetland functions mentioned in this chapter. These indirect impacts include but are not limited to: extent of impervious surface within the wetland contributing drainage area, changes in water supply, changes in hydroperiod (seasonal water level fluctuations), flow constrictions from crossings and other construction, changes in water depth (ponding), changes in water quality, stormwater runoff pollutant load that is not removed by stormwater management facilities (e.g. road salt), concentrated pollutant load in stormwater facility outflows, and changes in vegetative composition including the introduction of invasive species.

On-site Septic Systems

Clinton, like many of its neighboring towns in Dutchess County, relies heavily on individual septic systems to address wastewater disposal. Wastewater returned to septic systems requires dilution within an aquifer to manage concentrations of nitrate and other non-degradable constituents. Nitrate is released from septic systems at concentrations approximately 4 times the drinking water standard. To achieve a protective planning target for drinking water standards, typical discharges must therefore be diluted before the concentration drops reliably.

Since local groundwater recharge rates govern the availability of the groundwater available to provide this dilution, managing average parcel sizes per septic system can help ensure that groundwater wells remain potable. As described in the *Dutchess County Aquifer Recharge*

Rates and Sustainable Density Recommendations report, soils are classified by the Natural Resource Conservation Service into four Hydrologic Soil Groups based on the soil's runoff potential. The four Hydrologic Soils Groups are A, B, C and D with the A group of soils generally representing the smallest runoff potential and with D soils groups representing the greatest. For septic systems installed in areas with Hydrologic Soil Groups A, B, C and D, (see Figure 3.11: *Hydrologic Soils*) recommended minimum average parcel sizes are 1.3, 1.8, 3.3 and 5.9 acres, respectively. Larger parcel sizes or cluster development provide greater groundwater quality protection since more recharge will be available per septic system to dilute not only nitrates but also other chemical and pharmaceutical residues commonly associated with domestic wastewater. Little development occurs on Hydrologic Soil Group D soils, which are typically clay and wetland sites. Based on information in the Dutchess County recharge study, in general, a minimum average parcel size of at least 3.3 acres per septic system would help protect potability of domestic wells in the Town of Clinton.

Biodiversity

Biodiversity conservation (i.e. the protection of habitats, the ecosystems that support them and the species of plants and animals that inhabit them) is an essential component of rural character and the health of the human habitat. A clean abundant supply of water, for example, depends on the healthy functioning of ecosystems within the watershed. Biodiversity is best protected when it is assessed and described proactively so that the most significant ecosystem features can be preserved before they are degraded or lost.

An assessment of biodiversity within the town includes: (1) the habitats that are present and their size, condition and quality, as well as their relationship with each other in the landscape; (2) the species that use those habitats, including common species and invasives as well as species of conservation concern; and (3) sites throughout the Town that contain significant species and ecosystems. It also includes an evaluation of biodiversity centers, or hubs, and the corridors that connect them to smaller habitat patches.

Recommended actions for conserving the town's biodiversity resources begin with complete and updated species/habitat inventories, and range from protecting or preserving biodiversity 'hotspots' to implementing land use planning measures such as conservation subdivisions and overlay districts, and requiring mitigation for significant biodiversity impacts during site plan and SEQRA reviews. The provision of adequately sized, vegetated buffers around wetlands and streams, and protection of watersheds (in terms of forested cover, riparian vegetation and buffers) are also essential components of biodiversity conservation. Depending on ecological features and plant and animal species at a particular location, buffers that are adequately

sized for habitat protection will often exceed the minimal 100-foot state regulatory requirement for general wetland protection.

Economic considerations

Lastly, one should not overlook the economic value of a community's natural assets. Open space and agriculture do not require the same level of public services as an average residential area. Vegetative stream buffers help to reduce erosion, provide wildlife habitat and pathways and moderate stream water temperatures; wooded areas clean the air; and wetlands and fields aid in the groundwater recharge process. Protecting groundwater resources costs far less, for example, than attempting the difficult, if not impossible, task of remediating contaminated wells and aquifers.

The implementation of planning practices that protect valuable natural resources is economically important as well. Natural resource protection is less expensive than restoration or replacement of degraded resources, assuming restoration of lost or degraded biodiversity resources is even possible.

CHAPTER FOUR: POPULATION AND ECONOMIC PROFILE

An understanding of the general characteristics of Clinton's population and economic structure is a crucial component of the master plan process. Basic background data on growth rates, income, and employment patterns compared to other towns in the immediate area, as well as Dutchess County as a whole, provide insights into Clinton's more unique qualities and common area-wide needs. Population projections, in particular, supply essential information on the potential requirements for community services, but the analysis in this chapter will also influence policy recommendations on such issues as land use, transportation, economic development, and housing.

Trends in Population Growth

Dutchess County's population has grown significantly since 1920, as illustrated in Table 4.1. Steady growth rates of about 13 to 15 percent prevailed from 1920 to 1950, then doubled to 29 to 26 percent in the 1950s and 1960s, before dropping back in the 1970s and 1980s to approximately 10 percent and 6 percent, respectively. In the 1990s there was an increase to 8.0 percent, bringing the rate of change to near the 1910 state of 7.3 percent. Most of the county's population has been concentrated in the southwestern portion from Hyde Park south to Fishkill along the river and spreading inland to Pleasant Valley, LaGrange, and East Fishkill.

By comparison, the census figures for Clinton show a more erratic pattern. Population actually declined in each of the decades between 1900 and 1930, but recovered strongly after 1940 to continually exceed the countywide average before dropping below in 2000.

Clinton's population as a percent of Dutchess County's declined from about 1.7 to 0.9 percent between 1900 and 1950. Thereafter it increased steadily, reaching 1.45 percent in 1990 before dropping back slightly to 1.43 percent in 2000.

TABLE 4.1: POPULATION CHANGE, 1900-2000

Clinton			Dutchess County		Clinton as % of Dutchess County
Year	Population	% Change	Population	% Change	
1900	1,370	--	81,670	--	1.68
1910	1,278	-6.7	87,661	7.3	1.46
1920	1,197	-6.3	91,747	4.7	1.30
1930	1,041	-13.1	105,462	14.9	0.99
1940	1,070	2.8	120,542	14.3	0.89
1950	1,233	15.2	136,781	13.5	0.90

TABLE 4.1: POPULATION CHANGE, 1900-2000					
Clinton			Dutchess County		Clinton as % of Dutchess County
Year	Population	% Change	Population	% Change	
1960	1,639	32.9	176,008	28.7	0.93
1970	2,604	58.9	222,295	26.3	1.17
1980	3,394	30.3	245,055	10.2	1.38
1990	3,760	10.8	259,462	5.9	1.45
2000	4,010	6.6	280,150	8.0	1.43

Source: U.S. Bureau of the Census

Tables 4.2 and 4.3 compare Clinton's total population and the rates of change with adjacent towns from 1930 to 2000. Clinton's population growth lagged behind adjacent towns up to 1950 and such high-growth areas as Hyde Park and Pleasant Valley until 1960.

Between 1960 and 1970, however, Clinton surpassed its neighbors with a 58.9 percent growth rate and remained high on the list in the 1980, -90 and -00 census periods. However, in 1990 and 2000, Clinton's rate of growth declined substantially, as did that of its neighbors, as shown in Tables 4.2 and 4.3.

TABLE 4.2: POPULATION CHANGE, CLINTON AND ADJACENT TOWNS, 1930-2000								
Municipality	1930	1940	1950	1960	1970	1980	1990	2000
Clinton	1,041	1,070	1,233	1,639	2,604	3,394	3,760	4,010
Hyde Park	3,388	4,056	6,136	12,681	16,910	20,768	21,230	20,851
Milan	622	695	806	944	1,322	1,688	1,895	2,356
Pleasant Valley	1,520	2,061	2,751	4,046	6,021	6,892	8,063	9,066
Rhinebeck (T&V)	2,968	3,264	3,746	4,612	5,658	7,062	7,558	7,762
Stanford	1,269	1,386	1,473	1,614	2,479	3,319	3,495	3,544

TABLE 4.3: POPULATION RATE OF CHANGE, CLINTON AND ADJACENT TOWNS, 1930-2000								
Municipality	1930	1940	1950	1960	1970	1980	1990	2000
Clinton	-13.1%	2.8%	15.2%	32.9%	58.9%	30.3%	10.8%	6.6%
Hyde Park	17.6	19.7	51.3	106.7	33.3	22.8	2.2	-1.8
Milan	-11.6	11.7	16.0	17.2	40.0	26.2	12.3	24.3
Pleasant Valley	31.0	35.6	33.5	47.1	48.8	14.5	17.0	12.4
Rhinebeck (T&V)	7.1	10.0	14.8	23.1	22.7	24.8	7.0	2.7
Stanford	-7.3	9.2	6.3	9.6	53.6	33.9	5.3	1.4

Source: U.S. Bureau of Census

Clinton's earlier slump in population and later boom can be largely attributed to shifting economic opportunities. As the agricultural economy generally declined in importance, the town's population base also decreased in the first half of the last century. The more recent growth in Clinton can be linked to the general patterns of development in Dutchess County and the mid-Hudson region. New York State as a whole lost people between 1970 and 1980, but between 1980 and 1990 the growth was 2.5 percent and between 1990 and 2000 the growth was 5.5 percent. The economy of Dutchess County has expanded, due in part to construction of IBM facilities in East Fishkill, Poughkeepsie, and Kingston in the 1960s, 1970s and 1980s, which led to an increase in the number of available jobs. In the 1990s, like many companies nation-wide, the IBM economy saw a substantial reduction in employment. This clearly had a significant impact on population growth in the 1990s in Dutchess County, including Clinton and the surrounding towns. Nevertheless, growth continues in Clinton and in most of its neighbors, even though at lower rates than experienced in the 1970s and 1980s.

On a more local level, the construction of the Kingston-Rhinecliff Bridge in 1957 made commuting to the Kingston employment area from Dutchess County's northern communities much more convenient. Easy access to the Taconic State Parkway and the availability of Amtrak service, as well as Metro-North from Poughkeepsie has placed Clinton within reasonable commuting distance of major centers to the north and south.

Characteristics of the Population

Household Population

As shown in Table 4.4, Dutchess County has seen a rate of change in the number of households from 1990 to 2000 of about 11 percent. This growth trend is seen in all Towns surrounding Clinton; however, it should be noted that the rate of change is much lower in Hyde Park and Rhinebeck.

TABLE 4.4: HOUSEHOLDS, DUTCHESS, CLINTON AND ADJACENT TOWNS, 1990-2000

Municipality	1990	2000	Change	% Change
Clinton	1,322	1,502	180	13.6
Hyde Park	7,048	7,395	347	4.9
Milan	721	882	161	22.3
Pleasant Valley	3,013	3,467	545	15.1
Rhinebeck (T&V)	2,799	3,001	202	7.2
Stanford	1,262	1,398	136	10.8
Dutchess County	89,567	99,536	9,969	11.1

Source: U.S. Census Bureau General Population and Housing Characteristics, 1990 and 2000

Age Distribution

The distribution of major age groups in Clinton can be important in determining which services are needed most in the community. Table 4.5 provides an overview of Clinton's population breakdown and the changes that have occurred between 1960 and 2000.

The composition has varied significantly over the 40-year period from 1960 to 2000. The 0 - 4 age group has generally declined from about 11 to 6%. The 5 - 19 age group increased from 25 to 30% between 1960 and 1970 and then declined to about 20% from 1980 to 2000. The 20 - 44 age group increased from 29% to over 40% by 1990, but subsequently declined to 32.5% in 2000. This decline is probably attributable in part to the decreases in IBM employment, including the closing of its Kingston facility in the 1990s.

The 45 - 64 age group decreased 5% from 1960 to 1970, but then started growing, escalating rapidly from about 21% to 30% between 1990 and 2000. Despite the relative swing between the 20 - 44 and 45 - 64 age groups over this 10-year period, it is interesting to note that the 1990 and 2000 combined totals for these groups are nearly identical, 62.1% and 62.5%, respectively.

The 45 - 64 age group in 1980 would be in the 65 - 74 and 75+ age groups in 2000. Looked at in this fashion, the 646 (19%) in 1980 would now be in the last two groups, 256+200=456 (11.4%). This indicates that a number of people may be leaving the town as they reach retirement.

The foregoing taken together may perhaps be taken as an indicator of the relative affordability of housing in the town. The middle age group, at the peak of their earning years, would appear to be driving the growth. Absent any changes, this is likely to continue for the next 10-20 years.

The other increasing age group is the 75+, reflecting the national trend toward longer life spans. After a relative decrease between 1960 and 1980 in those 65 and older from 12.6 to 9.9% of the town's population, the figures have reversed and increased to 10.4% in 1990 and 11.4% in 2000. This factor will become increasingly critical as the bulge now in the middle of the population charts moves toward older age classifications.

TABLE 4.5: POPULATION COMPOSITION BY AGE, 1960-2000										
	1960		1970		1980		1990		2000	
Age Group	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
0-4	178	10.9	244	9.4	191	5.6	301	8.0	246	6.1
5-19	410	25.0	814	31.3	909	26.8	733	19.5	802	20.0
20-44	481	29.3	828	31.8	1,314	38.7	1,539	40.9	1,302	32.5
45-64	364	22.1	445	17.1	646	19.0	797	21.2	1,204	30.0
65-74	149	9.1	181	6.9	192	5.7	251	6.7	256	6.4
75+	57	3.5	92	3.5	142	4.2	139	3.7	200	5.0
Total	**1,639**	**100**	**2,604**	**100**	**3,394**	**100**	**3,760**	**100**	**4,010**	**100**

Source: U.S. Bureau of the Census

Race and Ethnicity

The Town of Clinton continues to have a small but increasing minority population. In the 1980 Census, the minority population in Clinton was 1.4%, compared to 9.5% for Dutchess County. In the 1990 Census, these figures were 2.6% and 11.7%, respectively. In 2000 they had increased to 4.0% and 16.3%, respectively. Table 4.6 provides additional details. However, it is important to understand that due to changes in the 2000 Census question format regarding race and ethnicity, you cannot make direct comparisons to prior Census results.

TABLE 4.6: RACE AND ETHNICITY, 1980-2000														
	Dutchess Co.		**Clinton**		**Hyde Park**		**Milan**		**Pleasant Valley**		**Rhinebeck (T&V)**		**Stanford**	
1980	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
White	--	90.5	--	98.6	--	--	--	--	--	--	--	--	--	--
Black	--	7.0	--	<1.0	--	2.9	--	0.5	--	1.0	--	2.4	--	1.3
American Indian, Eskimo, Asian, Pacific Islander, Other Race -- Data not available for 1980														
1990														
White	229,194	88.3	3,662	97.4	19,823	93.4	1,852	97.7	7,813	96.9	7,221	95.5	3,405	97.4
Black	21,788	8.4	52	1.4	920	4.3	28	1.5	137	1.7	224	3.0	61	1.7
Am. Indian, Eskimo or Aleut.	374	0.1	3	0.1	17	0.1	7	0.4	9	0.1	5	0.1	5	0.1
Asian or Pacific Islander	5,826	2.2	31	0.8	364	1.7	5	0.3	80	1.0	67	0.9	7	0.2
Other Race	2,280	0.9	12	0.3	106	0.5	3	0.1	24	0.3	41	0.5	17	0.5
Total	**259,462**		**3,760**		**21,230**		**1,895**		**8,063**		**7,558**		**3,495**	

TABLE 4.6: RACE AND ETHNICITY, 1980-2000														
	Dutchess Co.		Clinton		Hyde Park		Milan		Pleasant Valley		Rhinebeck (T&V)		Stanford	
2000	#	%	#	%	#	%	#	%	#	%	#	%	#	%
White Alone	234,385	83.7	3,851	96.0	18,976	91.0	2,764*	60.6	8,654	95.5	7,180	92.5	3,365	94.9
Black or African Alone	26,097	9.3	64	1.6	887	4.3	1,241*	27.2	175	1.9	280	3.6	54	1.5
Am. Indian & Alaska Native Alone	609	0.2	14	0.3	42	0.2	30*	0.7	11	0.1	7	0.1	7	0.2
Asian Alone	7,048	--	41	--	290	--	34*	--	58	--	106	--	39	--
Native Hawaiian & Other Pacific Islander	88	--	0	--	17	--	2*	--	2	--	0	--	1	--
Asian & Pacific	7,136	2.5	41	1.0	307	1.5	36*	0.8	60	0.7	106	1.4	40	1.1
Some Other Race Alone	6,626	--	9	--	249	--	450*	--	75	--	91	--	29	--
Two or More Races	5,297	--	31	--	388	--	38*	--	91	--	98	--	49	--
Other Race	11,923	4.3	40	1.0	637	3.0	488*	10.7	166	1.8	189	2.4	78	2.2
Total	**280,150**		**4,010**		**20,851**		**4559***		**9,066**		**7,762**		**3,544**	

Source: U.S. Bureau of the Census (*Note: The figures for the Town of Milan for the year 2000 are known to be in error. The Census Bureau has acknowledged incorrectly including the population of Green Haven Prison in the Town of Milan, but has not issued corrected figures.)

Population Projections

The former Clinton Master Plan's projections from 1968 estimated total population in 1970 would be 2,500 people, in 1980 between 3,100 and 3,700, and in 1990 between 4,500 and 5,500. The actual 1970 Census reported 2,604 residents and the 1980 count was almost exactly in the middle of the projected range at 3,394. The Clinton Master Plan approved in 1991 contained a range of population estimates, as shown in Table 4.7. A line has been added to that table to show the actual population in 1990 and 2000. Note that the actual results were at the low end of the range of the three projections.

TABLE 4.7: TAKEN FROM THE 1991 CLINTON MASTER PLAN, POPULATION PROJECTIONS, TOWN OF CLINTON, 1990-2010			
Source/Method	**1990**	**2000**	**2010**
New York State Department of Environmental Conservation Projection	3,650	3,950	4,150
Constant percent of county (1.4%) Dutchess County Metropolitan Planning Organization Base	3,941	4,499	5,057
Continuation of 1970-1980 growth rate (30.3% per decade)	4,422	5,762	7,508
Actual U.S. Census Bureau Figure	3,760	4,010	

Source: New York State Department of Environmental Conservation and Dutchess County Dept. of Planning

Population projections into the future are a necessary exercise in order to continually plan for community service needs. It should be noted that all projections are merely educated guesses based on past and present data. Population growth in neighboring areas may have a significant effect on the need for community services in Clinton. Projections shown should be used only as guidelines because unforeseen factors such as increased migration rates, economic recession, or technological changes may alter anticipated patterns of growth.

TABLE 4.8: POPULATION PROJECTIONS, TOWN OF CLINTON, 2005-2030						
Source/Method	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Poughkeepsie-Dutchess County Transportation Council*	4,168	4,276	4,407	4,638	4,850	n/a
Continuation of 1990-2000 growth rate (6.6% per decade)	4,142	4,275	4,416	4,557	4,707	4,857
Resumption of 1980-1990 growth rate (10.8% per decade)	4,227	4,443	4,701	4,922	5,188	5,455

* Source: Poughkeepsie-Dutchess County Transportation Council (Note: It appears that this forecast is based on each Town's actual percentage of the Dutchess County Total Population in 2000 applied to their projection of Dutchess County Total Population in each year of the forecast. Their forecast only went through 2025.)

In the course of updating Table 4.7, contact with the New York State Department of Environmental Conservation indicated they no longer produce population forecasts. The committee was able to obtain a Poughkeepsie-Dutchess County Transportation Council Forecast. This appears to be based on a projection of Dutchess County population, with each municipality remaining at its 2000 census percentage of the Dutchess County total. This is similar to the second methodology in Table 4.7, and is shown as the first line in Table 4.8. Contact with the Dutchess County Department of Planning indicated they are not aware of any other available forecasts of population growth by municipality.

The second line in Table 4.8 assumes that the actual growth rate for the 1990-2000 decade continues into the future.

The third line in Table 4.8 assumes the resumption of a higher growth rate, namely that which actually occurred in the 1980-1990 decade. The committee did find that the U.S. Census Bureau produces short-term estimates, looking backward, for the years between actual censuses. These estimates for the year 2005 were 4,214 (2006 Estimate) and 4,200 (2007 Estimate). These figures are close to the 2005 figure of 4,227 produced by the third method.[1]

Economic Profile

History

Clinton's economic development has reflected that of Dutchess County, which is on the edge of the New York metropolitan economic region and in the midst of the Hudson River economic region. During the eighteenth century, farmers extended their activities inland from the early Hudson River holdings, and the area experienced a period of settlement and growth based on wheat production. But with the opening of the Erie Canal in 1825, competition from upstate and beyond for the larger regional markets forced many Dutchess farmers to switch to dairy. The dairy industry flourished as new rail service made New York City markets more accessible to Dutchess County production of perishable goods. Agriculture, especially dairy, and the local mills combined to make this a prosperous area for over half a century. But, in the decades following the Civil War, there was a general decline in local manufacturing as production became more concentrated in industrial centers. Dairy farming remained profitable, but did not constitute the economic force of the earlier period.

The next significant movement affecting the growth of the area was the urban to rural migration which began in the 1950s. Many of the new residents were commuters working in Poughkeepsie and other developing communities in southwestern Dutchess. This migration has gradually generated the primarily residential character of the town. With a transportation network relatively inferior to that of southwestern Dutchess, the town did not experience any significant industrial development.

Today, Clinton is on the periphery of a prosperous and expanding urban economy. It is flanked by state highways that serve as a direct link to southwest Dutchess and to areas south and north of the county. The town is becoming more attractive as a place of residence for more distant commuters and can expect pressures for further residential expansion in the future.

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[1] Subsequent to writing this Chapter, early 2010 Census Bureau information was released which shows that Clinton's 2010 population is 4,312 persons, within the range projected in Table 4.8. Additional 2010 census data is not yet available.

Employment

The 2000 unemployed civilian labor force rates were as follows: Dutchess county 5.7%, Clinton 1.8%, Hyde Park 10.8%, Milan 2.8%, Pleasant Valley 2.9%, Rhinebeck 8.2% and Stanford 2.0%.

Table 4.9 demonstrates that in 1980, 1990 and 2000 Clinton had a relatively high percentage of its adult population in the labor force, higher than its neighbors and Dutchess County as a whole. This most likely indicates that Clinton has a high percentage of two-wage earner families and a lower than average number of retired persons. Indeed, in 2000 the percentage of residents over 65 years old in Clinton (11.4%) was lower than the countywide average (12.0%).

TABLE 4.9: LABOR FORCE PARTICIPATION

Municipality	Population			Adult Population (16+)			Adult Population in Labor Force					
	1980	1990	2000	1980	1990	2000	1980		1990		2000	
							#	%	#	%	#	%
Clinton	3,394	3,760	4,010	2,560	2,911	3,134	1,742	68.0	2,203	75.7	2,292	73.1
Hyde Park	20,768	21,219	20,851	15,819	16,849	16,217	9,808	62.0	10,904	64.7	10,842	66.9
Milan	1,668	1,895	2,356*	1,297	1,485	3,960*	756	58.3	1,022	68.8	1,162*	29.3*
Pleasant Valley	6,892	8,063	9,066	5,243	6,263	6,922	3,379	64.4	4,548	72.6	4,706	68.0
Rhinebeck (T&V)	7,062	4,833	4,685	5,351	6,089	6,406	3,008	53.2	3,524	57.9	3,801	59.3
Stanford	3,319	3,495	3,544	2,511	2,689	2,844	1,563	62.2	1,934	71.9	1,907	67.1
Dutchess County	245,055	259,462	280,150	186,482	203,844	218,021	112,277	60.2	113,694	65.6	138,815	63.7

Source: U.S. Bureau of the Census (*Note: The figures for the Town of Milan for the year 2000 are known to be in error. The census bureau has acknowledged incorrectly including the population of Green Haven Prison in the town of Milan, but has not issued corrected figures.)

Occupation

Table 4.10 illustrates the distribution of employment by occupation in 1980, 1990 and 2000 for Clinton, its surrounding towns and Dutchess County. It should be noted that this section discusses jobs held by the respective town residents regardless of place of employment.

By far, the largest category represented is management and professional positions. This category has grown from 40.1 percent in 1980 to 47.9 percent in 2000. This figure exceeds not only the Dutchess County average, but all these neighboring towns except Rhinebeck.

Although the reporting categories were somewhat different in 1960, the equivalent grouping of professional and technical workers listed only 12.6 percent, revealing a remarkable rise in higher income occupations among Clinton residents over the forty year period.

Other occupation categories in the census figures in Table 4.10 are closer to the county norms, although all the other categories, particularly the service and sales& office occupations had lower than average counts. Farming and forestry workers in Clinton declined from 2.7 percent in 1980 to 0.5 percent in 2000, slightly higher than the county average of 0.4 percent.

TABLE 4.10: EMPLOYMENT BY OCCUPATION, PERCENT, 1980-2000

Municipality		Management Professional & Related Occupations	Service	Sales & Office	Farming, Fishing & Forestry	Construction Extraction & Maintenance	Production, Transportation & Material Moving
Clinton	1980	40.1%	11.4%	21.9%	2.7%	12.8%	11.0%
	1990	35.1	12.3	27.4	4.2	10.1	10.9
	2000	47.9	11.1	22.6	0.5	8.5	9.3
Hyde Park	1980	26.9	17.6	30.3	0.9	13.5	10.7
	1990	31.0	13.2	34.4	1.3	10.7	9.4
	2000	36.9	15.5	27.1	0.1	10.9	9.7
Milan	1980	23.9	17.4	25.0	5.7	15.1	12.9
	1990	31.2	14.4	27.8	2.9	15.7	7.9
	2000	40.7	17.5	21.7	1.1	8.5	10.5
Pleasant Valley	1980	29.9	12.6	27.8	4.6	13.0	12.2
	1990	30.6	9.9	33.5	1.2	14.0	10.8
	2000	40.2	12.8	21.6	0.8	13.7	10.9
Rhinebeck (T&V)	1980	31.8	14.7	24.9	3.7	11.0	13.1
	1990	42.2	10.4	28.6	1.8	9.4	7.5
	2000	49.4	13.4	22.5	0.1	8.9	5.3
Stanford	1980	28.1	12.0	24.0	8.1	13.8	13.2
	1990	33.9	14.8	25.5	6.5	11.2	8.1
	2000	38.4	16.4	20.4	1.0	10.1	4.9
Dutchess County	1980	32.3	14.7	21.3	1.7	12.7	17.3
	1990	33.0	13.2	31.8	1.5	10.6	10.0
	2000	38.4	15.6	25.3	0.4	10.1	10.2

Source: U.S. Bureau of the Census

Industry

The census categories used in 1990 and 2000 changed, so comparisons with 1980 are not practical. Table 4.11 reflects the industries considered in 1990 and 2000. It should be noted that for Clinton, its surrounding neighbors and Dutchess County, "Manufacturing" decreased substantially over the ten year period. "Art, Entertainment, Recreation, Accommodation and Food Services", "Education, Health and Social Services" and "Professional, Scientific, Management, Administrative and Waste Management Services" all increased significantly. "Retail Trade" declined. Also, Clinton led the relative decline in "Agriculture, Forestry, Fishing & Hunting and Mining". Of particular note is that in 2000 more than 25% of employees are in the category "Education, Health and Social Services." Also in 2000, Clinton exceeded the County's percentage in the following categories:

(a) Agriculture, Forestry, Fishing & Hunting and Mining
(b) Manufacturing
(c) Finance, Insurance, Real Estate Rental & Leasing
(d) Other Services (Except Public Administration)
(e) Public Administration

TABLE 4.11: EMPLOYMENT BY INDUSTRY, 1990 AND 2000

		Clinton		Hyde Park		Rhinebeck (T&V)		Milan		Stanford		Pleasant Valley		Dutchess County	
Industry		#	%	#	%	#	%	#	%	#	%	#	%	#	%
Agriculture, Forestry, Fishing, Hunting & Mining	1990	98	4.6	117	1.1	58	1.7	38	3.9	134	7.1	89	2.0	2,367	1.4
	2000	33	1.5	29	0.3	30	0.9	20	1.8	126	6.7	71	1.6	1,341	1.0
Construction	1990	171	8.0	707	6.8	284	8.3	134	13.6	222	11.8	399	9.1	8,347	6.5
	2000	132	5.9	679	7.0	294	8.4	77	6.8	126	6.7	337	7.4	8,904	6.8
Manufacturing	1990	483	22.5	2,283	22.0	522	15.3	122	12.4	233	12.4	1,188	27.1	29,486	23.0
	2000	294	13.1	1,115	11.5	197	5.6	113	10.0	179	9.6	659	14.4	16,084	12.3
Wholesale Trade	1990	46	2.1	255	2.5	41	1.2	21	2.1	40	2.1	97	2.2	2,928	2.3
	2000	57	2.5	250	2.6	54	1.5	20	1.8	26	1.4	100	2.2	3,319	2.5
Retail Trade	1990	264	12.3	1,521	14.6	504	14.8	139	14.1	215	11.4	595	13.6	18,572	14.5
	2000	237	10.5	1,326	13.7	418	12.0	137	12.1	145	7.8	535	11.7	14,894	11.4
Transportation, Warehousing & Utilities	1990	92	4.3	355	3.4	100	3.1	40	4.1	50	2.7	152	3.5	4,375	3.4
	2000	67	3.0	348	3.6	91	2.6	31	2.7	98	5.2	170	3.7	6,440	4.9
Information	1990	82	3.8	320	3.1	26	0.7	19	1.9	37	2.0	128	2.9	4,073	3.2
	2000	71	3.2	264	2.7	131	3.8	17	1.5	44	2.4	114	2.5	4,258	3.3
Finance, Insurance, Real Estate Rental & Leasing	1990	112	5.2	554	5.3	226	6.6	51	5.2	69	3.7	218	5.0	6,830	5.3
	2000	166	7.4	446	4.6	232	6.6	29	2.6	45	2.4	233	5.1	7,690	5.9
Professional, Scientific, Management, Administration, & Waste Management Services	1990	131	6.1	596	5.7	377	11.1	110	11.1	184	9.8	234	5.3	8,173	6.4
	2000	197	8.8	897	9.3	331	9.5	144	12.8	151	8.1	476	10.4	11,842	9.1
Education, Health and Social Services	1990	381	17.7	2,504	24.1	868	25.5	192	19.5	444	23.5	882	20.1	27,721	21.7
	2000	586	26.0	2,580	6.7	1,120	32.1	339	30.0	497	26.6	1,152	25.2	34,542	26.4
Art, Entertainment, Recreation, Accommodation & Food Services	1990	14	0.7	150	1.4	109	3.2	14	1.4	7	0.4	38	0.9	1,431	1.1
	2000	97	4.3	711	7.4	244	7.0	88	7.8	174	9.3	134	2.9	8,271	6.3
Other Services except Public Administration	1990	143	6.7	656	6.3	154	4.5	59	6.0	156	8.3	219	5.0	7,920	6.2
	2000	158	7.0	492	5.1	194	5.6	33	2.9	113	6.0	308	6.7	6,073	4.6
Public Administration	1990	130	6.1	380	3.7	132	3.9	47	4.8	95	5.0	149	3.4	5,702	4.5
	2000	155	6.9	526	5.4	154	4.4	81	7.2	144	7.7	279	6.1	7,165	5.5
Total Employed	1990	2,147		10,398		3,407		986		1,886		4,388		127,925	
	2000	2,250		9,663		3,490		1,129		1,868		4,568		130,793	

Source: U.S. Bureau of the Census

Commuting Patterns

As might be expected, given the small number of employment opportunities in Clinton, only 11.8 percent of the labor force worked within the town in 1980. This compared to 31 percent average of the county labor force that lived and worked in the same municipality. A total of 83.4 percent of Clinton's workers were employed in Dutchess County, 14.1 percent traveling to Poughkeepsie. Only 14.5 percent commuted to other New York counties, while 2.1 percent worked outside the state. The mean travel time to work for commuters averaged 31.2 minutes, with 17.7 percent of workers reporting travel times of over 45 minutes. The average county commuting time is 22.5 minutes.

The Comprehensive Plan Committee was unable to find comparable data regarding where the labor force worked in 1990 and 2000. However, using the statistics for those who used bicycles (15) or walked (63), together with those that worked at home (134), suggests that 212 or only 9.6% of the labor force lived and worked within the town in 2000. In 1990, the mean travel time to work was 29.1 minutes. In 2000 this had increased to 33.3 minutes, with 21.8% over 45 minutes. This compares to the average commuting times of 24.5 minutes in 1990 and 29.8 minutes in 2000 for the county.

Tables 4.12 and 4.13 show that there have been significant changes in the means of transportation to work in Clinton, the surrounding towns and Dutchess County over the 1980-2000 period. In 1980 most of the Clinton workers drove alone (63.6%), but in 2000 that number had increased to 81.9%. At the same time the number who car pooled decreased from 22.3% to 5.1%. This may be due in large part to IBM's downsizing from about 30,000 to 10-12,000 workers in the area, including the closing of the Kingston facility, during this period. The number of physical locations where many workers go, and also work similar hours, is more limited than it was in 1980. Practical car pooling and mass transportation are problems of rural living and relatively long commutes. This is further demonstrated by the relative decreases in those using public transit and other means from 5.8 and 4.3 % in 1980 to 3.5 and 3.5% in 2000, respectively. Given that the Dutchess County LOOP bus service is fairly limited in Clinton (in fact, with the 2009 restructuring of the LOOP bus service, there no longer is any regular service within Clinton), it seems likely that the mass transportation numbers are reflective of the use of AMTRAK and MTA train service. The number of actual users grew from 48 in 1990 to 77 in 2000. However, at 3.5%, it appears that the improved train service over the last 20 years has not had a significant impact on Clinton workers. It is worth noting that the percentage working at home in 1980 was 4.0%, while in 2000 it had increased to 6.0%. While the actual number working at home (134) is still small, it seems

likely that this will continue to increase, given the increasing costs of commuting and the growing opportunities to telecommute.

TABLE 4.12: TRANSPORTATION TO WORK, CLINTON AND DUTCHESS COUNTY, PERCENT 1980 & 2000

			Dutchess County					
Means	**Clinton**		**Average**		**High**		**Low**	
	1980	**2000**	**1980**	**2000**	**1980**	**2000**	**1980**	**2000**
Drive Alone	63.6%	81.9%	66.9%	78.5%	74.8%	84.9%	54.6%	66.0%
Share Ride	22.3	5.1	20.7	9.6	26.0	14.5	15.9	5.1
Public Transportation	5.8	3.5	3.2	4.2	5.8	9.9	0.5	0.7
Other, including Walking	4.3	3.5	7.4	4.7	17.9	11.5	0.7	0.5
Work at Home	4.0	6.0	1.9	3.2	6.1	8.7	0.8	0.5

Source: U.S. Bureau of the Census

TABLE 4.13: JOURNEY TO WORK, CLINTON, ADJACENT TOWNS AND DUTCHESS COUNTY 1990 & 2000

	2000										
	# of Workers	**Drive Alone**		**Car Pool**		**Public Transit**		**Other Means**		**Work at Home**	
		#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Clinton	2,218	1,816	81.9	113	5.1	77	3.5	78	3.5	134	6.0
Hyde Park	9,549	7,952	83.3	929	9.7	210	2.2	272	2.8	186	1.9
Milan	1,112	882	79.3	72	6.5	34	3.1	65	5.8	59	5.3
Pleasant Valley	4,512	3,831	84.9	346	7.7	53	1.2	68	1.5	214	4.7
Rhinebeck (Town only)	3,451	2,663	77.2	224	6.5	106	3.1	158	4.6	300	8.7
Stanford	1,838	1,414	76.9	101	5.5	38	2.1	182	9.9	103	5.6
Dutchess County	128,437	100,776	78.5	12,347	9.6	5,342	4.2	5,810	4.5	4,162	3.2
	1990										
	# of Workers	**Drive Alone**		**Car Pool**		**Public Transit**		**Other Means**		**Work at Home**	
		#	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Clinton	2,126	1,666	78.4	241	11.3	48	2.3	58	2.7	113	5.3
Hyde Park	10,155	8,400	82.7	981	9.7	238	2.3	317	3.1	219	2.2
Milan	968	728	75.2	116	12.0	27	2.8	35	3.6	62	6.4
Pleasant Valley	4,310	3,478	80.7	593	13.8	51	1.2	76	1.8	112	2.6
Rhinebeck (Town only)	3,371	2,635	78.2	302	8.9	113	3.4	130	3.9	191	5.7
Stanford	1,881	1,435	76.3	176	9.4	83	4.4	106	5.6	81	4.3
Dutchess County	125,726	97,935	77.9	14,247	11.3	3,984	3.2	6,569	5.2	2,991	2.4

Source: U.S. Bureau of the Census

Income

Several statistics can be used to compare the income of Clinton residents to those of other municipalities. These include mean family and mean household income (the averages of all family and all household incomes, respectively), median family and median household income (the middle values with 50% of all cases being higher and 50% being lower), and per capita income (the average income per person, rather than per family).

Table 4.14 shows all these measures for 1980, 1990 and 2000. Clinton ranks higher than Dutchess County average incomes under all five measures in all three Census periods. This is in sharp contrast to 1960 Census figures, which show the town of Clinton lagging 23 per cent behind the county median family income. Relative to adjacent towns, Clinton's per capita income was higher than Milan, Rhinebeck, Stanford, and Hyde Park, but lower than Pleasant Valley in 1980. In 1990 and 2000 it was higher in all cases. However, Clinton's family median household and median family income was higher than all these surrounding communities in all three years. Clinton's household mean income was also higher in all three Census periods. However, its family mean income, while being higher in 1980 and 1990, was substantially below that of Milan, Rhinebeck and Stanford in 2000. One possible explanation for this last case is that the average (mean) figure can be skewed by a relatively small number of incomes that are much higher than the average. This suggests that perhaps Clinton did not have such a situation in 2000.

The reader should note that the data presented in this table has not been adjusted for inflation and comparisons between the Census periods for each category cannot be made. For example, household income for 1980 cannot be directly compared to 2000; however the reader can analyze the data within each Census period (Clinton can be compared to the County and surrounding towns as noted in the text above).

Tables 4.15 and 4.16 show the distribution of Family Income for the years 1990 and 2000, respectively. Table 4.16 shows that the year 2000 percent of family incomes greater than $200,000 exceeded 6 percent in Milan, Rhinebeck and Stanford, whereas in Clinton it was 1.5 percent. This appears to confirm the above hypothesis.

Another measure of the relative affluence in Clinton is that in 2000 the percent of persons with incomes below the poverty level was lower than its neighboring towns with the exception of the Town and Village of Rhinebeck. Also the percent of families with incomes below the poverty level was lower than most of its neighbors. In both cases, the figures were well below the Dutchess County figures. This is summarized in table 4.17

TABLE 4.14: ECONOMIC INDICATORS, 1980-2000								
		Clinton	Hyde Park	Milan	Pleasant Valley	Rhinebeck (V&T)	Stanford	Dutchess County
Per Capita	1980	$8,118	$7,523	$6,913	$8,201	$7,152	$7,461	$7,558
	1990	20,303	16,098	17,146	17,719	18,246	19,957	17,420
	2000	29,565	21,260	19,002	25,942	29,069	29,236	23,440
Family Mean	1980	26,794	25,722	22,540	25,512	24,026	24,067	25,247
	1990	63,381	52,123	49,597	53,635	57,831	62,297	55,580
	2000	78,165	66,730	91,276	77,026	87,732	81,820	75,654
Family Median	1980	24,948	22,929	20,740	23,228	22,195	20,849	23,123
	1990	52,371	49,617	39,643	48,078	46,766	46,141	49,305
	2000	71,908	58,047	65,250	62,264	67,837	62,171	63,254
Household Mean	1980	24,558	22,883	20,722	23,139	20,567	16,242	22,513
	1990	53,038	47,256	45,096	47,963	46,370	52,924	49,039
	2000	74,969	58,145	67,580	67,133	65,631	68,232	64,805
Household Median	1980	23,099	20,027	18,750	20,783	17,550	14,084	20,267
	1990	47,656	44,064	35,643	42,238	37,235	41,635	42,250
	2000	66,406	50,870	54,491	54,518	52,679	54,118	53,086

Source: U.S. Bureau of the Census

TABLE 4.15: FAMILY INCOME, 1990											
		Less than $10,000	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 to $74,999	$75,000 to $99,999	$100,000 to $149,999	$150,000 or More	# of Families
Clinton	#	20	32	70	143	212	303	145	81	51	1,057
	%	1.9	3.0	6.6	13.5	20.1	28.7	13.7	7.7	4.8	
Hyde Park	#	99	168	520	701	1,131	1,684	618	233	35	5,189
	%	1.9	3.2	10.0	13.5	21.8	32.5	11.9	4.5	0.7	
Milan	#	37	16	61	89	128	102	55	16	14	518
	%	7.1	3.1	11.8	17.2	24.7	19.7	10.6	3.1	2.7	
Pleasant Valley	#	32	80	219	309	546	629	272	139	23	2,249
	%	1.4	3.6	9.7	13.7	24.3	28.0	12.1	6.2	1.0	
Rhinebeck (T&V)	#	26	58	255	245	389	488	210	56	60	1,787
	%	1.5	3.2	14.3	13.7	21.8	27.3	11.8	3.1	3.4	
Stanford	#	15	40	94	140	223	275	63	68	31	949
	%	1.6	4.2	9.9	14.8	23.5	29.0	6.6	7.2	3.3	
Dutchess County	#	2,326	2,405	6,443	8,032	9,543	23,559	8,134	3,758	1,138	65,338
	%	3.6	3.9	9.9	12.3	14.6	36.1	12.4	5.8	1.7	

Source: U.S. Bureau of the Census

TABLE 4.16: FAMILY INCOME, 2000												
		Less than $10,000	$10,000 to $14,999	$15,000 to $24,999	$25,000 to $34,999	$35,000 to $49,999	$50,000 to $74,999	$75,000 to $99,999	$100,000 to $149,999	$150,000 to $199,999	$200,000 or More	# of Families
Clinton	#	33	13	58	80	154	284	246	204	44	17	1,133
	%	2.9	1.1	5.1	7.1	13.6	25.1	21.7	18.0	3.9	1.5	
Hyde Park	#	168	79	388	563	855	1,491	849	689	138	66	5,286
	%	3.2	1.5	7.3	10.7	16.2	28.2	16.1	13.0	2.6	1.2	
Milan	#	14	15	13	79	87	162	123	48	26	40	607
	%	2.3	2.5	2.1	13.0	14.3	26.7	20.3	7.9	4.3	6.6	
Pleasant Valley	#	66	55	152	210	413	672	415	381	113	67	2,455
	%	2.6	2.2	6.0	8.3	16.2	26.4	16.3	15.0	4.4	2.6	
Rhinebeck (T&V)	#	37	67	54	229	155	478	310	304	64	114	1,812
	%	2.0	3.7	3.0	12.6	8.6	26.4	17.1	16.8	3.5	6.3	
Stanford	#	16	32	58	102	154	238	124	163	21	64	972
	%	1.6	3.3	6.0	10.5	15.8	24.5	12.3	16.3	2.2	6.6	
Dutchess County	#	2,193	1,742	4,470	6,033	10,280	17,392	12,368	10,631	2,865	1,802	69,776
	%	3.1	2.5	6.4	8.6	14.7	24.9	17.7	15.2	4.1	2.6	

Source: U.S. Bureau of the Census

TABLE 4.17: PER CAPITA INCOME AND POVERTY LEVELS, 2000			
	Per Capita Income	% Persons Below Poverty	% Families Below Poverty
Clinton	$29,565	3.7	3.4
Hyde Park	21,260	5.7	4.4
Milan	19,002*	4.6*	2.8*
Pleasant Valley	25,942	5.6	3.9
Rhinebeck (T&V)	29,069	9.7	3.1
Stanford	29,236	4.3	2.7
Dutchess County	23,490	7.5	5.0

Source: U. S. Bureau of the Census [*Note; the figures for the Town of Milan are known to be in error. The Census Bureau has acknowledged incorrectly including the population of Green Haven Prison in the Town of Milan, but has not issued corrected figures.]

In Table 4.18, when family incomes are sorted into levels and compared to county averages, some patterns emerge. The Town of Clinton was below the county in the lower levels up to $25,000 in each year. In 1980 and 1990 Clinton exceeded the county in the $25,000 to $50,000 range, but by 2000 had slipped below the county. This was probably influenced by the economic decline in the early – mid-1990s. Clinton was above the county in the range of $50,000 to $150,000, with the exception of the $50,000 to $75,000 range in the 1990s.

However, for the very highest levels, above $150,000 in 2000, Clinton was below the county. It is worth noting the significant change of levels after 1980 and the increase in the higher levels from Census to Census.

TABLE 4.18: FAMILY INCOME DISTRIBUTION, PERCENT, 1980-2000

Family Income	Clinton			Dutchess County		
	1980	1990	2000	1980	1990	2000
Under $10,000	10.9%	1.9%	2.9%	13.8%	3.6%	3.1%
$10,000 - $14,999	11.4	3.0	1.1	12.1	3.9	2.5
$15,000 - $24,999	27.8	6.6	5.1	29.7	9.9	6.4
$25,000 - $34,999	27.9	13.5	7.1	23.5	12.3	8.6
$35,000 - $49,999	15.5	20.1	13.6	15.1	14.6	14.7
$50,000 or more	6.4			5.8		
$50,000 - $74,999		28.7	25.1		36.1	24.9
$75,000 - $99,999		13.7	21.7		12.4	17.7
$100,000 - $149,999		7.7	18.0		5.8	15.2
$150,000 or more		4.8			1.7	
$150,000 - $199,999			3.9			4.1
$200,000 or more			1.5			2.6

Source: U.S. Bureau of the Census

Summary and Implications for Planning

The town of Clinton's population and income base have been growing. If past trends continue, Clinton's 2000 population of 4,010 could increase to some 4,800-5,400 people by the year 2030. A shortage of affordable housing could, however, impede this growth, or make it impossible for moderate income households to find suitable living places in the town.

At the same time the construction of poorly planned housing development could severely diminish important natural, historic, and agricultural features of the town. As the most convenient building sites are developed, construction has begun to, and will increasingly, encroach on farmland and sensitive natural resources such as wetlands, steep slopes, and flood-prone areas. Greater population also generally brings the demand for local commercial services and more community facilities. Careful planning and zoning are needed to help the town to accommodate growth while preserving the valued characteristics of the community.

The age distribution in Clinton is growing fastest in the middle age (45-64) grouping. This will continue to stimulate the high-level housing market. Current levels of pre-school population are likely to continue to decline over the next decade. The percentage of elderly persons will also probably continue to increase over the long term, posing particular housing

needs that will be difficult to address in the predominant single family housing pattern. Clinton's planning and zoning policies should offer housing choices for all its residents.

The 2000 census figures also track a continuing dramatic shift in occupations and income levels since 1960. Residents are increasingly employed in management and professional jobs, at higher percentages than the averages of the county and adjacent towns. As a result, median family incomes have risen sharply from far below county norms in 1960 to well above average in 1980, 1990 and 2000. The long-term transformation of Clinton from an agriculturally based economy to a residential community for commuters to outside work places appears to have accelerated markedly over the last forty-five years.

However, if the economic downturn that began in 2008 is prolonged, steady growth in both the Town and County may be impeded.

CHAPTER FIVE: HOUSING

Housing provides people with basic shelter and a setting for their daily activities. It is the comprehensive plan issue that affects everyone most personally. In a broader sense, housing forms the framework for the town's land use pattern and largely determines its overall character. The stability of a community can be gauged by such housing data as length of residence and percentage of older homes in the housing stock. Because Clinton's land use is overwhelmingly residential, its future, more than most towns in Dutchess County, will be decided by the strength of the housing market in the context of residential zoning decisions.

The Master Plan completed in 1968 contained only limited information on housing. At that time, housing was affordable to most local households, a situation made possible by low interest rates, federal mortgage insurance, less expensive energy and construction costs, and low land prices. It was not an issue then that required the urgent attention of local decision makers.

The Master Plan completed in 1991 recognized that the growing demand for housing in Dutchess County, as well as in the entire New York Metropolitan Area, had led to a rapid escalation of housing costs for both rental and owner-occupied units. Clinton needed to assess that changing housing situation and the possible effects that limited housing alternatives would have on its current residents. This chapter will update the material presented in the 1991 report and will analyze existing housing characteristics, costs and affordability factors in order to predict the future demand for housing in Clinton.

It is important for the reader to understand the context of affordable housing. For the purposes of this plan, the definition of affordable housing is based on the family income relationship to median family income. In Clinton, we are concerned about those making the equivalent of median family income (2008 estimate of $86,582) and less. This potentially affects people in our community who are blue and white collar workers such as school teachers, government workers and laborers.

Housing Supply

According to the 2000 census, there were 1,734 housing units in Clinton. The number of housing units increased steadily over the last four Census periods, maintaining a 20 percent growth in the 1960s, 22.4 percent in the 1970s and 23.0 percent in the 1980s, before declining to 12.3 percent in the 1990s. Table 5.1 indicates that these increases fell below countywide averages and generally below those of adjacent towns in the 1960s and 1970s.

However, in the 1980s and 1990s, Clinton's percent increase substantially exceeded not only the county, but also all of the adjacent towns except for Pleasant Valley. Notably, in all instances the 1990s growth was substantially below that of the 1980s.

TABLE 5.1: NUMBER OF HOUSING UNITS, CLINTON AND ADJACENT TOWNS, 1960-2000

Municipality*	1960	1970	% Change 1960-1970	1980	% Change 1970-1980	1990	% Change 1980-1990	2000	% Change 1990-2000
Clinton	854	1,025	20.0	1,255	22.4	1,544	23.0	1,734	12.3
Hyde Park	3,737	4,996	33.7	6,782	35.7	7,473	10.2	7,704	3.1
Milan	635	714	12.4	837	17.2	974	16.4	1,090	11.9
Pleasant Valley	1,473	1,995	35.4	2,584	29.5	3,186	23.3	3,614	13.4
Rhinebeck	1,787	2,050	14.7	2,581	25.9	3,047	18.1	3,255	6.8
Stanford	764	1,058	38.9	1,314	24.2	1,564	19.0	1,712	9.5
Dutchess County	54,647	69,126	26.5	86,852	25.6	97,632	12.4	106,103	8.7

* Towns including villages.
Source: U.S. Bureau of the Census

In the years 2000 to 2008, statistics from the Clinton Building Department show 170 new units have been built, representing a 9.8 percent increase in a nine year period. The growth in new residential construction in the 2000s has continued at approximately the rate of the previous decade. However, there was a noticeable decline in both new residential construction and in other building activity in 2007 and 2008.

TABLE 5.2: BUILDING PERMITS, 2000-2007

Year	Number of Permits	New Residential	Other*
2000	146	34	112
2001	144	17	127
2002	164	32	132
2003	159	18	141
2004	165	11	154
2005	173	25	148
2006	181	19	162
2007	134	9	125
2008	98	5	93
Total:	**1,364**	**170**	**1,194**

* Other: Additions, Accessory Structures, Alterations, Sundry Construction
Source: Building Department, Town of Clinton

Housing Characteristics

Types of Housing

It is important from a planning perspective to see what types of housing stock exist and what is currently being built. Tables 5.3, 5.4 and 5.5 classify the number of housing units by type of structure for the years 1980, 1990 and 2000, respectively. In 1980, Clinton had one of the highest percentages of detached single-family homes (86.1 percent) in its vicinity. In 1990 and in 2000, Clinton's percentage had increased to 89.6 percent and 91.9 percent, respectively, substantially exceeding all its neighbors in both years. The relatively uniform nature of the housing supply suggests a lack of opportunities for smaller families or single-person households who cannot afford or do not desire large, single-family homes.

At the other extreme, Clinton has the lowest percentage of mobile homes in the surrounding area. There are no mobile home parks, only scattered non-conforming units on single lots. Mobile homes have declined from 4.3 percent of the housing mix in the 1968 Comprehensive Plan land use survey to 1.6 percent in the 1980 census, 1.2 percent in the 1990 census and 1.0 percent in the 2000 census. The actual number of units declined from 20 to 18 between 1980 and 2000.

TABLE 5.3: NUMBER OF UNITS BY TYPE OF STRUCTURE, CLINTON AND ADJACENT TOWNS* 1980

	Detached One-Family		Mobile Home	Attached One-Family	Two-Family	Three and Four-Family	Five-Family
	Number	% of Total					
Clinton	1,045	86.1%	20	0	105	20	24
Hyde Park	4,515	67.3	468	92	324	247	1,060
Milan	566	86.5	18	10	37	15	8
Pleasant Valley	1,887	74.1	258	0	187	57	156
Rhinebeck	1,138	76.3	87	35	99	74	58
Stanford	995	79.4	19	31	121	44	43

* Excluding villages
Source: U.S. Bureau of the Census

TABLE 5.4: NUMBER OF UNITS BY TYPE OF STRUCTURE, CLINTON AND ADJACENT TOWNS* 1990

	Detached One-Family		Mobile Home	Attached One-Family	Two-Family	Three & Four-Family	Five-Family	Other
	Number	% of Total						
Clinton	1,384	89.6%	19	29	58	24	4	26
Hyde Park	4,953	66.3	742	185	247	312	944	90
Milan	850	87.3	37	8	44	14	13	8
Pleasant Valley	2,144	67.3	364	54	109	133	353	29

TABLE 5.4: NUMBER OF UNITS BY TYPE OF STRUCTURE, CLINTON AND ADJACENT TOWNS* 1990								
	Detached One-Family		Mobile Home	Attached One-Family	Two-Family	Three & Four-Family	Five-Family	Other
	Number	% of Total						
Rhinebeck	2,036	66.8	99	128	210	156	359	59
Stanford	1,314	84.0	34	20	55	54	40	47

* Excluding villages
Source: U.S. Bureau of the Census

TABLE 5.5: NUMBER OF UNITS BY TYPE OF STRUCTURE, CLINTON AND ADJACENT TOWNS* 2000								
	Detached One-Family		Mobile Home	Attached One-Family	Two-Family	Three & Four-Family	Five-Family	Boat, RV, Van, etc.
	Number	% of Total						
Clinton	1,593	91.9%	18	27	62	16	12	6
Hyde Park	5,301	68.8	733	158	302	362	839	9
Milan	947	86.9	48	0	66	24	5	0
Pleasant Valley	2,474	68.5	415	64	123	157	381	0
Rhinebeck	2,253	69.2	130	178	205	123	366	0
Stanford	1,422	83.1	36	41	83	62	68	0

* Excluding villages
Source: U.S. Bureau of the Census

Over 97 percent (1,220) of the total units in 1980 were year-round, with the remaining percentage classified as seasonal/migratory. These figures are roughly comparable to the county average of 98.5 percent year-round residences. Of the year-round units, 106 or 8.7 percent were listed as vacant, which is higher than the 5.5 percent county average, and may indicate a relatively large number of vacation or second homes.

In 2000, 89.2% (1,547) of the total 1734 units were year-round, with the remaining 10.8 percent classified as seasonal/recreational/occasional use. These figures were substantially below the county average of 97.7% year-round residences. Of the year-round units, 232 or 13.4 percent were listed as vacant, which is much higher than the 6.2 percent county average, and may indicate a relatively large number of vacation or second homes.

Type of Occupancy

Tables 5.6, 5.7 and 5.8 show the distribution of year-round housing by type of occupancy. In 1980, 75.2 percent of housing units were occupied by the owners, a substantial deviation of 12.4 percentage points above the average in Dutchess County of 62.8 percent. By 2000, this difference had decreased to 9.2 percentage points.

On the other hand, only 16.1 percent of the total units were reported as rentals in 1980. In 2000 this had decreased to 12.7 percent. The proportion of owners over renters in Clinton

continued to be the highest among the surrounding towns. It is also worth noting that in Clinton the number of vacant units attributed to seasonal, recreational or occasional use increased substantially from 45 in 1980 to 187 in 2000, as indicated in the footnote.

TABLE 5.6: TYPE OF OCCUPANCY, 1980-2000

		Total Units Year-Round	Total Occupied Units	Owner-Occupied		Renter-Occupied		Vacant	
Clinton	**1980**	1,220	1,114	917	75.2%	197	16.1%	106*	8.7%
	1990	1,544	1,322	1,121	72.6%	201	13.0%	222	14.4%
	2000	1,734	1,502	1,281	73.9%	221	12.7%	232	13.4%
Dutchess County	**1980**	85,336	80,642	53,591	62.8%	27,051	31.7%	4,694	5.5%
	1990	97,632	89,567	61,899	63.4%	27,668	28.3%	8,065	8.3%
	2000	106,103	99,536	68,636	64.7%	30,900	29.1%	6,567	6.2%

* Includes for Sale (4), for Rent (9), Occasional Use (45), and Other (48)
Source: U.S. Bureau of the Census

TABLE 5.7: TYPE OF OCCUPANCY, CLINTON AND ADJACENT TOWNS, 1990

	Total Units	Total Occupied Units	Owner-Occupied		Renter-Occupied		Vacant	
Clinton	1,544	1,322	1,121	72.6%	201	13.0%	222*	14.4%
Hyde Park	7,420	7,048	5,352	72.1%	1,696	22.9%	424	5.7%
Milan	974	721	558	57.3%	163	16.7%	253	26.0%
Pleasant Valley	3,186	3,013	2,208	69.3%	805	25.3%	173	5.4%
Rhinebeck	3,047	2,799	1,916	62.9%	883	29.0%	248	8.1%
Stanford	1,564	1,262	943	60.3%	319	20.4%	302	19.3%
Dutchess County	97,632	89,567	61,899	63.4%	27,668	28.3%	8,065	8.3%

* Includes for Sale (18), for Rent (15), Seasonal, Recreational or Occasional Use (75), and Other (114)
Source: U.S. Bureau of the Census

TABLE 5.8: TYPE OF OCCUPANCY, CLINTON AND ADJACENT TOWNS, 2000

	Total Units	Total Occupied Units	Owner-Occupied		Renter-Occupied		Vacant	
Clinton	1,734	1,502	1,281	73.9%	221	12.7%	232*	13.4%
Hyde Park	7,704	7,395	5,480	71.1%	1,915	24.9%	309	4.0%
Milan	1,090	882	697	63.9%	185	17.0%	208	19.1%
Pleasant Valley	3,614	3,467	2,517	69.6%	950	26.3%	147	4.1%
Rhinebeck	3,255	3,001	2,018	62.0%	983	30.2%	254	7.8%
Stanford	1,712	1,398	1,006	58.8%	392	22.9%	314	18.3%
Dutchess County	106,103	99,536	68,636	64.7%	30,900	29.1%	6,567	6.2%

* Includes for Sale (8), for Rent (7), Seasonal, Recreational or Occasional Use (187), and Other (30)
Source: U.S. Bureau of the Census

Age of Housing Stock

The breakdown of the housing stock by age in Table 5.9 reveals that 24.1 percent of Clinton's housing stock was built before 1939. This is higher than the countywide average of 20.9 percent, but lower than three of five of its neighboring towns. In poorer communities, a large percentage of older houses can lead to a problem with deterioration, but it also represents an opportunity for the renovation of a stock of traditional-style housing. Clinton also has a larger than countywide average percentage of homes built in the period 1970 to 1990. It is worth noting that growth in the housing stock in the 1990s dropped rather dramatically from that of the preceding two decades in Dutchess County, Clinton and all of its surrounding towns except Milan. Clinton's growth dropped below the countywide average for the first time since the 1960s.

TABLE 5.9: AGE OF HOUSING STOCK, CLINTON AND ADJACENT TOWNS*, 2000 IN PERCENT

	Built 1939 or Earlier	1940-49	1950-59	1960-69	1970-79	1980-89	1990-Mar 2000
Clinton	418 (24.1%)	76 (4.4%)	199 (11.5%)	206 (11.9%)	329 (19.0%)	344 (19.8%)	162 (9.3%)
Hyde Park	1,056 (13.7%)	598 (7.8%)	1,568 (20.3%)	1,326 (17.2%)	1,688 (21.9%)	931 (12.1%)	537 (7.0%)
Milan	305 (28.0%)	76 (7.0%)	131 (12.0%)	139 (12.8%)	171 (15.7%)	143 (13.2%)	125 (11.5%)
Pleasant Valley	564 (15.6%)	286 (7.9%)	430 (11.9%)	486 (13.4%)	542 (15.0%)	836 (23.1%)	470 (13.0%)
Rhinebeck	1,099 (33.8%)	211 (6.5%)	341 (10.5%)	245 (7.5%)	480 (14.7%)	611 (18.8%)	268 (8.2%)
Stanford	488 (28.5%)	55 (3.2%)	158 (9.2%)	258 (15.1%)	349 (20.4%)	312 (18.3%)	92 (5.4%)
Dutchess County	22,164 (20.9%)	7,023 (6.6%)	15,259 (14.4%)	17,715 (16.7%)	18,431 (17.4%)	15,295 (14.4%)	10,216 (9.7%)

* Excluding villages

Source: U.S. Bureau of the Census

Average Household Size[1]

A trend toward smaller household size is occurring locally and nationally. Table 5.10 shows that both Clinton and Dutchess County have been following that tendency. There are many factors contributing to this decrease, such as the divorce rate, older marriages, decisions by couples to limit the size of their families, the ability of older people to live independently and non-traditional households.

TABLE 5.10: AVERAGE HOUSEHOLD SIZE, 1960-2000

Year	Clinton	Dutchess County
1960	3.16	3.73
1970	3.44	3.21
1980	3.03	2.84
1990	2.81	2.69
2000	2.63	2.63

Source: U.S. Bureau of the Census

Trends toward fewer children and single parent or other forms of non-traditional households are affecting housing demand, not only in terms of the number of units needed, but also the type of unit required. An indication of the increasing diversity in household formation patterns is the relative growth rate of households, as shown in Table 5.11. Clinton has an increasing proportion of one or two person households, with a significant percentage of such households being occupied by those 65 or older, as shown in table 5.12.

TABLE 5.11: RELATIVE INCREASES IN HOUSEHOLDS, POPULATION AND HOUSING UNITS

	1970-1980	1980-1990	1990-2000
Increase in Number of Households	49.7%	12.8%	13.6%
Increase in Total Population	30.3%	10.8%	6.6%
Increase in Housing Units	22.4%	23.0%	12.3%

Source: U.S. Bureau of the Census

[1] The U.S Census Bureau, Census 2000 Reference Shelf provides the following definitions. A "household" is a person or group of people who occupy a housing unit. The "householder" is a person in whose name the housing unit is owned, being bought, or rented. A "family household" consists of a householder and one or more people living together in the same household who are related to the householder by birth, marriage, or adoption – it may also include people unrelated to the householder. If the householder is married and living with his/her spouse, then the household is designated a "married-couple household." The remaining types of family households not maintained by a married couple are designated by the sex of the householder. A "nonfamily household" consists of a person living alone or a householder who shares the home with nonrelatives only; for example, with roommates or an unmarried partner.

TABLE 5.12: COMPARISON OF SELECTED HOUSEHOLD OCCUPANCY PERCENTAGES			
	1980	**1990**	**2000**
Singe Person Households	13.7%	15.7%	19.2%
One or Two Person Households	45.5%	49.8%	57.3%
One Person Households Occupied by Person 65 or Older	Almost Half	38.2%	35.8%
One Person Households Occupied by One Person 65 or Older as a Percentage of All Persons 65 or Older	22.5%	20.3%	22.6%

Source: U.S. Bureau of the Census

Housing Costs

Owner-Occupied Units

Between the 1980 and 1990 census reports, the median housing value in Dutchess County rose 203 percent, from $49,300 to $149,200. During that same period, Clinton's median value climbed from $51,000 to $154,200, a 202 percent increase. Between 1990 and 2000, the change in median value slowed substantially. Dutchess County's increased to $150,800, an increase of 1 percent, while Clinton's rose to $169,200, an increase of 10 percent. Table 5.13 shows that Clinton's median value in 1980, 1990 and 2000 exceeded the Dutchess County figures. In 1990, while Clinton's median value exceeded that of Hyde Park and Milan, it was comparable to that of Pleasant Valley, Rhinebeck and Stanford. In 2000, while Clinton's median value exceeded that of Hyde Park, Milan and Pleasant Valley, it was below that of Rhinebeck and Stanford.

TABLE 5.13: MEDIAN VALUE OF OWNER-OCCUPIED UNITS, 1970-2000							
	1970	**1980**	**Percent Change 1970-1980**	**1990**	**Percent Change 1980-1990**	**2000**	**Percent Change 1990-2000**
Clinton	$20,579	$51,000	148%	$154,100	202%	$169,200	10%
Hyde Park	$20,946	$45,900	119%	$136,100	197%	$125,600	- 8%
Milan	$18,208	$42,100	131%	$133,700	218%	$151,300	13%
Pleasant Valley	$21,360	$51,100	139%	$155,300	204%	$154,600	0%
Rhinebeck	$19,360	$48,100	149%	$155,000	222%	$174,500	13%
Stanford	$21,267	$50,900	139%	$153,800	202%	$182,100	18%
Dutchess County	$22,039	$49,300	124%	$149,200	203%	$150,800	1%

Source: U.S. Bureau of the Census

Although the 2000 census provides the most recent consistent data base for housing costs, it is too outdated for proper analysis of current trends. Because of the sharp escalation in housing prices in the 2000 to 2007 period, it is helpful to consider up-to-date figures on real estate sales. The "Poughkeepsie Journal Factbook," 2008-2009 Edition, page 6, provides a

table of single-family house sales in Dutchess County for the January 2007 – December 2007 period. The average price for the 42 sales in Clinton was $532,939, with a median price (50 percent sold for more, 50 percent sold for less) of $392,500. This median value is an increase of 132 percent from the 2000 figure in Table 5.13. By comparison, the average price for 1,967 sales in all of Dutchess County was $387,222 (the median value was not provided in the data).

The Dutchess County Department of Planning and Development Housing Coordinator provided the Comprehensive Plan Committee with the following information. In 2007, there were 32 sales in the Town of Clinton involving properties with 10 acres or less. The median sales price for these 32 was $391,250. These 32 sales suggest an increase of some 131 percent over the 2000 census figure of $169,200 for all Owner-Occupied Units. (The average sales price was $423,006. There was one "outlier" at $1.2 million for a 3-acre property.)

It is too soon to know or be able to quantify what the impact of the nation's sub-prime mortgage crisis and subsequent decline in housing prices will have on Clinton and Dutchess County. The Dutchess County Department of Planning and Development indicated that the median sales price for Dutchess County for the first six months of 2008 was about 10 percent below the 2007 figure.

Rental Units

In 1970, the median monthly contract rent in Clinton was $97.50. Ten years later, the median rental figure had climbed to $231, an increase of 137 percent. Again, the 1980 housing costs for rentals in the town exceeded both the Dutchess median of $225 and the overall county growth rate of 122 percent.

In 1990, the median monthly contract rent in Clinton was $525, an increase over 1980 of 127 percent. In 1990, the Dutchess County median figure had grown to $530, an increase over 1980 of 136 percent. In 1990, the Clinton median rental cost was actually less than that of Dutchess County.

Ten years later, in 2000, the median Clinton rental figure had climbed to $648, a further increase over 1990 of 23 percent. In 2000 the housing costs for rentals in the town once again exceeded both the Dutchess County median of $630 and the overall county growth rate of 19 percent.

Current rent data is more difficult to document, given the scattered nature of Clinton's rental units. The Dutchess County Department of Planning and Development does conduct an annual survey of rental housing, but limits its questionnaires to complexes with 20 or more units. Since there are no apartment complexes in Clinton, Hyde Park, Pleasant Valley and Rhinebeck were chosen, since they border Clinton. Table 5.14 shows the data on the units responding for 2006.

TABLE 5.14: APARTMENT COMPLEXES, AVERAGE RENT BY MUNICIPALITY/SIZE

	Total Number of Rental Units	Average Rents			
		Studios	1-Bedroom	2-Bedroom	3-Bedroom
Hyde Park	601	$504	$669	$790	$1,100
Pleasant Valley	396	N/A	$897	$1,306	$1,625
Rhinebeck (T&V)	144	N/A	$930	$1,060	N/A
Dutchess County	6,952	$692	$912	$1,145	$1,517

Source: Dutchess County Department of Planning and Development, 2006

To estimate rental rates for multi-family units, single-family homes and condominiums, the survey looked at listings in the "Poughkeepsie Journal," "Taconic Newspapers" and the "Pennysaver" for dates covering the month of October 2006. For multi-family units, the results for Clinton and the surrounding municipalities are shown in Table 5.15.

TABLE 5.15: MULTI-FAMILY UNITS, AVERAGE RENT BY MUNICIPALITY/SIZE

	Total Number of Rental Units	Average Rents			
		Studios	1-Bedroom	2-Bedroom	3-Bedroom
Clinton	6	$575	$750	$905	N/A
Hyde Park	25	N/A	$826	$1,036	$1,500
Milan	2	N/A	N/A	$945	N/A
Pleasant Valley	20	$894	$786	$1,068	$1,353
Rhinebeck (T&V)	24	$762	$696	$975	$1,225
Stanford	11	N/A	$778	$1,007	N/A
Dutchess County	608	$693	$798	$1,039	$1,263

Source: Dutchess County Department of Planning and Development, 2006

The survey showed the following numbers of single family houses and condominiums for rent: Clinton-10, Hyde Park-20, Milan-4, Pleasant Valley-19, Rhinebeck (T&V)-38 and Stanford-4. The survey provided county-wide average and median rental rates, but did not provide a detailed breakdown by municipality for these housing types.

TABLE 5.16: CONDOMINIUM UNITS, AVERAGE AND MEDIAN DUTCHESS COUNTY RENTS BY UNIT SIZE			
Unit Size	**Total Number of Rental Units**	**Average Rent**	**Median Rent**
1-Bedroom	22	$915	$900
2-Bedroom	25	$1,309	$1,275
3-Bedroom	7	$1,314	$1,309

Source: Dutchess County Department of Planning and Development, 2006

TABLE 5.17: HOMES FOR RENT, AVERAGE AND MEDIAN DUTCHESS COUNTY RENTS BY UNIT SIZE			
Unit Size	**Total Number of Rental Units**	**Average Rent**	**Median Rent**
1-Bedroom	56	$944	$912
2-Bedroom	74	$1,213	$1,200
3-Bedroom	86	$1,553	$1,550
4-Bedroom	41	$1,805	$1,750

Source: Dutchess County Department of Planning and Development, 2006

The survey calculates the annual household income that would be required to afford an apartment at the average Dutchess County rents listed. Using the U.S. Department of Housing and Urban Development's guidelines that a household should not pay more than 30 percent of its gross income for housing (including utilities), households would need the incomes shown in Table 5.18 to afford the average rents in the survey.

TABLE 5.18: ANNUAL HOUSEHOLD INCOME TO AFFORD RENTAL UNITS BY TYPE AND SIZE		
Type	**Unit Size**	**Annual Income**
Apartment Complexes	Studio	$27,260
	1-Bedroom	$36,568
	2-Bedroom	$45,715
	3-Bedroom	$60,971
Multi-Family Units	Studio	$27,560
	1-Bedroom	$33,800
	2-Bedroom	$40,280
	3-Bedroom	$50,040

Source: Dutchess County Department of Planning and Development, 2006

The survey concludes that, "While the income levels noted above may not be difficult for two-income families to attain, they are difficult for senior citizens, single-income families and entry-level employees. In addition, although two-income families are better able to

afford these rents than the groups noted above, these rents consume such a large portion of their income that it is difficult to save money for the down payment and closing costs associated with the purchasing of a home."

Affordability Factors

Affordable housing has become a familiar phrase without a consistent meaning. A precise definition is difficult because of the many forces that influence the housing market, including land values, mortgage interest rates, demographic shifts, and unemployment levels, to name a few. The concept of affordability seems even more elusive when competitors in the local housing market come from neighboring counties to the south, bringing with them different standards of what is inexpensive.

At its most basic level, affordability is a relationship between housing costs and income. For example, between 1970 and 1980, the median value of owner-occupied housing units in Clinton rose 148 percent and the median rental rate climbed 137 percent, while the median family income level gained only 122 percent. Between 1980 and 1990, the median value of owner-occupied housing units rose 202 percent and the median rental rate climbed 127 percent, while the median family income rose 110 percent. Between 1990 and 2000, the median value of owner-occupied housing units rose another 5 percent to $162,200, the median rental rate climbed 39 percent to $748, and the median family income rose 37 percent to $71,908. In other words, over the period from 1970 to 1990, housing became generally less affordable for Clinton residents, although home-ownership became slightly more affordable between 1990 and 2000.

In order to establish housing goals for Clinton and understand the problems of target groups that are most affected by the high cost of housing, like single households, first-time home buyers, and the elderly, more specific guidelines are necessary. The key variables in determining relative affordability of housing are the rental index, the purchase price multiplier, the price/income gap and mortgage interest rates.

The rental index is a method used by the U.S. Department of Housing and Urban Development (HUD) to compute the maximum gross rent a given household can afford. In times past, this was set at 25 percent of the household's monthly income, or one week's pay. Recent economic conditions have increased that cap to 30 percent of monthly income. We know, however, that many households are actually paying an even greater portion of their income for rent. The Dutchess County Department of Planning and Development indicates that the 2008 Dutchess County Median Family Income is $76,400. In 2000, the Dutchess

County and Town of Clinton Median Family Incomes were $63,254 and $71,908, respectively. If one assumes that the Town of Clinton to Dutchess County Ratio of 113.68 percent prevailed into 2008, the estimated Town of Clinton Median Family Income is $86,852. This would mean a monthly rental of $1,809 to $2,171 would be considered affordable, which was above the median rental price.

The purchase price multiplier is a rule of thumb used by real estate agents to determine the affordability or, more accurately, the maximum mortgage approval amount for potential home buyers. In an era of higher interest rates a 2.5 multiplier was used. Barring any major indebtedness, a family that earned the Clinton median family income of $71,908 in 2000, could have found financing for $179,770 toward their home. With a 10 percent down payment, this family could shop for a home up to $197,700, which was above the median price for homes in 2000.

The Dutchess County Department of Planning and Development has explained to the committee that in the current era of lower interest rates, an income multiplier of 3.0 – 3.25 is more appropriate than the 2.5 factor, and that a down payment of 3 percent, rather than 10 percent, is also more typical. Rather than using an income factor, a more accurate methodology is to start with the 30 percent of income housing guide, subtract the estimated property taxes and insurance cost, and assume the resulting difference is available to support the mortgage. Under this methodology, a household with the estimated Clinton Median Family Income can afford a home costing $291,500 (assuming a 30-year fixed rate mortgage at 6.5 percent with a 3 percent down payment, $4,000 in property taxes and $600 insurance). To afford the median home price of $391,250, a household would need an income of $115,000 (assuming a 30-year fixed rate mortgage at 6.5 percent with a 3 percent down payment, $5,000 property taxes and $800 insurance).

These variables are used for determining the specific price/income gap affecting Clinton households entering the housing market. For the purpose of this analysis, long-time homeowners with substantial equity in their homes are not included. However, it should be noted that these homeowners are just as affected by the rising housing costs of property taxes and maintenance.

While some areas seek to attract only wealthier residents, a fundamental assumption of this chapter is that the town and its residents want to support, not change, the basic fabric of its economically diverse community. This is certainly in line with the sentiments expressed in the Community Values Survey.

Income Target Groups

The 2000 median household income in Clinton was $66,406. Median-income prospective homeowners, using the 2.5 multiplier, could qualify for a mortgage of $166,000. Adding a 10 percent down payment, they could purchase a home costing up to $182,600. This was greater than the median home value of $162,200. Using the rental index, this same median household could theoretically afford a maximum gross rent of $1,660.This was well above the median monthly rents for this area.

Using the estimated 2008 median Family Income of $86,852 and the more accurate methodology described in the previous section suggests such a family could purchase a home costing up to $291,500. This is less than the 2007 median home sales price of $391,250. It is also less than the $352,125 value that results from assuming the median sales value has decreased by the Dutchess County average of 10 percent. Using the rental index, this same median family could theoretically afford a maximum gross rent of $2,171, which is well above the median monthly rents for this area.

Different problems and strategies arise for more moderate and lower income households. For this purpose, separate responses are determined from three target groups.

Group I consists of families earning 80 to 100 percent of the Clinton median income. In 2000, 17.4 percent of families earned between $60,000 and $75,000.

Group II consists of families earning between 50 and 80 percent of the town's median income. In 2000, this group represented approximately 21.3 percent of all Clinton's households.

Group III consists of families earning less than 50 percent of the median. The 2000 census data reported approximately 16.2 percent of households earned less than $35,000.

The housing options for each group are displayed in Table 5.19, which is based strictly on the 2000 census data. It is significant to note that the Dutchess County Department of Planning and Development suggests that a family with less than about 60 percent of the Median Family Income ordinarily should not be considering home ownership, unless they already have significant equity built up.

TABLE 5.19: HOUSING COSTS AND OPTIONS FOR 2000			
	Group I Approximately 80 - 100% Median	**Group II Approximately 50 - 80% Median**	**Group III Approximately Less than 50% Median**
Income Range	$60,000 - $74,999	$35,000 - $59,999	$0 - $34,999
Mortgage Ceiling	$150,000 - $187,500	$87,500 - $150,000	up to $87,500
Maximum Gross Rent	$1,500 - $1,875	$875 - $1,500	up to $875
Possible Housing Options	Luxury Apartments, House Rentals, Limited Choice of Single-Family Homes	Most Rental Options, Modular or Mobile Homes on Small Lots, Cottage/ Bungalows	Smaller Rentals, Accessory Apartments, Older Mobile Homes, Subsidized Housing
Constant 2000 Ratio of Clinton Households Affected	17.4%	21.3%	16.2%

Base Rate: QT-P32 Income Distribution in 1999 of Households and Families for Town of Clinton
Assumptions: Mortgage Ceiling = 2.5 x Gross Income; Maximum Rental = 30% Gross Monthly Income

Table 5.20 updates Table 5.19 to the extent possible. It is based on the estimated 2008 Median family Income of $86,852. The income ranges shown are the given percentages times the number. The mortgage ceiling multiplier has been changed to 3.25, based on the discussion in the previous section. The Ratio of Households Affected has been held at the 2000 Census percentages, since updated information on this is not available

TABLE 5.20: HOUSING COSTS AND OPTIONS FOR 2008			
	Group I Estimated 80 - 100% Median	**Group II Estimated 50 - 80% Median**	**Group III Estimated Less than 50% Median**
Income Range	$69,482 - $86,852	$43,426 - $69,482	$0 - $43,426
Mortgage Ceiling	$225,815 - $282,269	$141,135 - $225,815	up to $141,135
Maximum Gross Rent	$1,737 - $2,171	$1,086 - $1,737	up to $1,086
Possible Housing Options	Luxury Apartments, House Rentals, Limited Choice of Single-Family Homes	Most Rental Options, Modular or Mobile Homes on Small Lots, Cottage/ Bungalows	Smaller Rentals, Accessory Apartments, Older Mobile Homes, Subsidized Housing
Constant 2000 Ratio of Clinton Households Affected	17.4%	21.3%	16.2%

Assumptions: 2008 Estimated Town of Clinton Median Family Income of $86,852; Mortgage Ceiling = 3.25 x Gross Income; Maximum Rental = 30% Gross Monthly Income; Ratio of Clinton Households Affected taken from Table 5.19

Due to the absence of affordable housing, some localities are experiencing an exodus of the young adult work force and the elderly. If rental housing was available in sufficient numbers, target groups I and II could be accommodated. Group III, however, earning less than 50 percent of the median per family and having the most limited housing choices, includes many entry-level blue and white collar workers. Volunteer firefighters, municipal

employees, farmhands, laborers, clerical and service workers often fall within this income group. Communities in high housing demand areas are being compelled to sharply increase salaries (and property taxes) to recruit and retain emergency personnel, school teachers, and other government employees when low cost housing is not available. Significant numbers of young people who grew up in Clinton, and retired, lifelong residents could be forced to leave because of the lack of housing alternatives.

Housing Demand

Rapid economic development in Dutchess County and the metropolitan area to its south has fueled an ever-increasing demand for housing. Housing prices have skyrocketed in Westchester and other downstate counties as well as in Connecticut. Many people employed in those areas have been forced to look for homes in Dutchess County, a trend which is partly responsible for the local increases in housing costs. This regional market drive, combined with changing household formation patterns and the large percentage of vacant land in Clinton, will likely produce a steady demand for residential development.

Table 5.21 shows the projected housing needs for Clinton, given the three rates of population growth as discussed in Chapter Four. According to the projections, the minimum number of units needed over the next 16 years is 231 and the maximum is 471. As shown in Table 5.2, 170 units have already been built between 2000 and 2008, an average of about 19 per year. If this average rate of construction activity were to continue, the number of units created would be close to the high end of the range.

TABLE 5.21: PROJECTED HOUSING DEMAND, 2000-2030

Projection Method*	Occupied Units 2000	Total Units Needed						Percent Increase 2000-2025
		2005	2010	2015	2020	2025	2030	
Poughkeepsie-Dutchess County Transportation Council population projection	1,502	1,585	1,626	1,676	1,763	1,844	N/A	22.8%
Continuation of 1990-2000 growth rate of 6.6% per decade	1,502	1,575	1,625	1,679	1,733	1,790	1,847	19.2%
Resumption of 1980-1990 growth rate of 10.8% per decade	1,502	1,607	1,689	1,787	1,871	1,973	2,074	31.4%

* Population Projections as given in Table 4.8 of Chapter Four at 2.63 Persons per Household (2000).
Source: U.S. Bureau of the Census, New York State Department of Environmental Conservation, and Dutchess County Department of Planning and Development

The foregoing table assumes that the 2000 Persons Per Household number continues into the future. Examining Table 5.10 shows that this figure has been declining in each decade since 1970. It is reasonable to expect that this trend may continue into the future. If it does, then Table 5.21 understates the number of housing units that would be needed to meet the range of population forecasts.

Table 5.22 has been constructed assuming that the Persons Per household figure continues to decline at the 6.4 percent per decade rate observed between 1990 and 2000.

TABLE 5.22: ALTERNATE PROJECTED HOUSING DEMAND, 2000-2030*

Projection Method	Occupied Units 2000	Total Units Needed						Percent Increase 2000-2005
		2005	2010	2015	2020	2025	2030	
Assumed Persons Per Household	2.63	2.56	2.46	2.38	2.31	2.24	2.17	
Poughkeepsie-Dutchess County Transportation Council population projection	1,502	1,628	1,738	1,852	2,008	2,165	N/A	44.1%
Continuation of 1990-2000 growth rate of 6.6% per decade	1,502	1,618	1,738	1,855	1,973	2,101	2,238	39.9%
Resumption of 1980-1990 growth rate of 10.8% per decade	1,502	1,651	1,806	1,975	2,131	2,316	2,514	54.2%

* Assumes Population Projections used in Table 5.21, but further assumes Persons Per Household continues to decline at 6.4% per decade observed between 1990 and 2000.

Note that the assumed persons per household decline results in a significant increase in the number of new housing units needed by 2025 from a minimum of 663 to a maximum of 814. Subtracting the 170 already built results in a range of 31 to 40 units per year, which would be a significant increase from the 19 per year average from 2000-2008. The foregoing indicates that the number of new housing units can be influenced significantly by what happens to the average persons per household figure in the future.

Summary and Implications for Planning

The economic and housing trends suggest that Clinton is on its way to becoming an exclusive residential community. Both median income levels and house values have gone from below countywide averages in 1960 to above average in 1980, 1990 and 2000. Clinton has one of the highest percentages of detached single-family homes and among the lowest percentages of multi-family units, mobile homes and total rental units in the area. This relative

uniformity in the housing stock will become even more pronounced in the future if the current predominance of single-family construction on large lots continues.

In 2000, median income Clinton households could afford to purchase median value houses. The rising demand for housing and subsequent higher costs has made home ownership impossible for a large percentage of Clinton's residents. More rental units are needed for the significant numbers of current residents, including single households and elderly persons, who cannot finance the purchase of a home on their incomes. A variety in size of units is also important given the declining average household size and more flexible household formation patterns. Options that are compatible with Clinton's historic hamlets and rural character include accessory apartments, two-family residences, conversion of existing buildings, elder cottages, and small clustered units.

Unrestrained by community guidelines, market forces will operate on a regional basis to drive up local housing prices to match the inflated levels of the nearby New York Metropolitan Area. If Clinton sets clear goals for housing needs of all types, in varying price ranges, and follows through with ordinance provisions to facilitate such goals, developers will respond accordingly. Without specific strategies to provide diversity in the housing stock, the town of Clinton's current mix of income groups will shift toward exclusively affluent residents over the long term. The desire to conserve Clinton's character, which was the overriding theme of the Community Values Survey, rests as much with the stability of its people as with its historic and natural resources.

CHAPTER SIX: COMMUNITY FACILITIES

Community facilities are the physical components that give a town its identity. While some services are basic necessities, such as fire and police protection, others fulfill social or educational needs. These cultural functions bring the population together in a rural residential area like Clinton and help to create the very sense of community.

Community facilities are most often administered by a governmental agency or by a private nonprofit organization. Generally, they are financed through taxation, user fees or public subscription. The demand for larger and more varied community facilities and services increases as population grows. With the increasing demands placed upon public budgets, intelligent planning of facilities is essential.

This chapter will examine Clinton's community facilities and services in relation to current needs as of 2008 and projected demands, including discussion of public buildings, fire, police and rescue squad facilities, schools, the library, parks and recreation, the senior citizens' group, post office, water, sewer and solid waste disposal. The location of community facilities in the town is shown on Figure 6.1,and the Fire Districts are shown on Figure 6.2.

Town Hall

The Town Hall is located on the west side of Centre Road (County Route 18) between Nine Partners Road and Maple Lane, just north of Schultzville. The land for the Town Hall was donated by George Budd in 1921 and the construction of the building was paid for by a grant from the estate of John Lyons, and completed in 1924. Since 1969, the Town Hall has had two additions. The first addition, funded through volunteer donations, was to the north side to provide ample space for the town library, as well as for offices downstairs. The 1988 addition, a donation of Mrs. Putnam Davis in memory of her husband, is to the rear of the building for a new courtroom, space for records, and court offices. The main floor of Town Hall contains a large assembly room. Downstairs there is a smaller meeting room, kitchen area, and the town offices.

Preservation and restoration of the original Town Hall was completed in 2005 as the result of the efforts of a volunteer group. The successful fundraising resulted in major restoration to the stairs, siding and interior rooms, including handicapped access ramps and landscaping. Several years ago a study of space and services indicated the need for additional town offices and the court. To resolve the need for additional office space and town courts needs, the town moved two historic buildings (the Schoolhouse and the Masonic Hall) to the town hall site in 2011.

The Supervisor, Town Clerk, Assessor and two Justices are part time elected offices. The Town of Clinton staff consists of thirteen part time positions. The office staff consists of an Administrative Assistant and Senior Clerk to the Supervisor. The Building and Fire Inspector and Zoning Administrator have a Deputy, an Assistant and a Clerk. In addition, there is a Clerk to the Planning Board and Zoning Board of Appeals. The Town Clerk has two Deputies. The Assessor and two Judges each have a Clerk.

Highway Department

The Highway Department facilities are located behind the Town Hall on Centre Road. The Highway Department has four major buildings. The town's most recent facilities addition, completed in 2006, is a 6,800 square foot salt shed built on a concrete pad where salt and sand are mixed and loaded into trucks. In the 1980s a 7,000 square foot garage was constructed which is used for washing and maintenance of equipment, as well as the Highway Department office and, more recently, an office for a substation of the Dutchess County Sheriff. This building contains bathrooms, kitchen and rest area. In the 1960s a 2,300 square foot building was completed, which is currently used for equipment storage. The original 1950s building, a 2,850 square foot structure, is used for storage of town equipment and an all terrain vehicle used by the Sheriff's deputies. The old salt bin is used for the storage of gravel. In 2004 a berm and swale was completed between the Highway Department buildings and work area and the Little Wappinger Creek funded by a grant from the National Association of Counties. This feature traps sediment and salt from the work area and protects the riparian zone and water of the creek.

The staff consists of an elected Highway Superintendent, eight full-time positions, including a clerk. The Highway Department is also currently responsible for maintenance at the town's recreation areas and hires two part-time staff in the summer. The Highway Department maintains 70 miles of roads in Clinton, approximately 17 miles of which have an unpaved surface. Snow and ice removal on some county roads within the town is currently contracted to the Town of Clinton Highway Department.

The department's current inventory of heavy equipment includes seventeen trucks and graders ranging in age from 1990 to 2007. In addition, the department owns mowers, rollers, a chipper, snowblower, post hole digger, York rake, sweeper and a variety of other equipment. The Highway Department has a 20 year plan for the replacement of large trucks, and a 10 year plan for the replacement of smaller trucks. Other equipment is replaced as needed, often with second hand purchases.

The Highway Department needs to add one 20 foot by 70 foot bay to the 1980s maintenance building, including a contained wash area where oil and water will be separated according to

recommendations from the New York State Department of Environmental Conservation. Expansion of the loft area upstairs would create more space for the staff and Sheriff's Deputies. On Saturday mornings the Town Trash Transfer and Recycling activities occur at the Highway Garage.

Fire and Rescue Operations

The town of Clinton is served by two volunteer fire districts, the East Clinton Fire District and the West Clinton Fire District, each of which is independently governed and separate from the Town government. The East Clinton and West Clinton Fire Districts run north and south (see Figure 6.2). The district line runs north along the Little Wappinger Creek to Centre Road and east on Old Bulls Head Road to Milan Hollow Road. Continued close cooperation between the two districts is necessary since the narrow rural road network can affect response times. The districts are also part of the county's mutual aid system which provides assistance to and from neighboring towns in the case of major emergencies.

The station for the East Clinton District is located at Fire House Lane in Clinton Corners near the intersection of Salt Point Turnpike (CR 17) and Clinton Corners Road (CR 13). The volunteer fire department consists of approximately 40 active members. The Fire Corps Rescue Squad has 15 members. The station was taken over by the fire dept. in 1932 and is currently in need of roof work and to be brought up to building code. The department is in the process of deciding if a new building or a retrofit of the current building is more beneficial. Equipment includes a fully certified ambulance, two tankers, a scene support vehicle, a pumper and a central command vehicle. The East Clinton Fire District extends into the Town of Washington.

The West Clinton Fire District Station #1 is located at 219 Hollow Road (CR 14) west of the intersection with Fiddlers Bridge Road in Pleasant Plains. Station #1 was first built in 1946, had several additions, and finally a major reconstruction in 1994, resulting in a new 9600 square foot building. The fire station has a large public room which is used by many community groups for meetings and events. Station #2, constructed in 1971, is at the intersection of Fiddler's Bridge Road and Long Pond Road, just west of Schultzville. The building is about 1,400 square feet in size. The West Clinton Fire District extends into Hyde Park to cover the northern end of Quaker Lane for three to four square miles.

The West Clinton volunteer fire district consists of approximately 77 active members at Station #1, and 27 active members at Station #2. The Rescue Squad has 25 active members which consists of EMT's and support members. Station #1 equipment includes a fully certified ambulance, two utility trucks, a rescue truck, a pumper and a 6-wheel drive all terrain vehicle which is used for putting out forest fires and rescue operations. Station #2

equipment includes a pumper and a tanker. West Clinton #2 Station is in need of remodeling and adding more space.

To assist with fire protection, dry hydrants have been installed by both fire districts at Fiddler's Bridge Road, the Omega Institute on Lake Drive, Ruskey Lane, Lakeview Drive off Fifth Avenue, Sunset Trail and at the Upton Lake Christian Academy on Salt Point Turnpike.

Emergency response facilities are provided by the East and West Clinton Fire Districts. West Clinton #1 has a generator, heat and water in case of emergency. Town Hall also has the capability to provide shelter for town residents in disaster circumstances.

The most pressing problem facing the fire departments is the difficulty in finding volunteers available to serve on the force. Most members of the fire departments do not work in Clinton, making weekday coverage particularly troublesome. As the population grows, so will the need for more emergency services; therefore, it may soon become necessary to have paid members on the fire department, and especially the ambulance squad.

Police

Police protection is furnished by county and state levels: the Dutchess County Sheriff's Department and the New York State Police, Troop K at Washington Hollow. Dutchess County Sheriff's Department installed a small substation at the Town Highway Department in 2007.

Educational Facilities

The Town of Clinton is served by four school districts: Hyde Park Central School District No. 1, Millbrook Central School District No. 1, Pine Plains Central School District No. 1 and Rhinebeck Central School District No. 1. None of these school districts have facilities in the town. The Upton Lake Christian Academy, a coed school with 103 students in grades kindergarden through grade 12 and a staff of eleven teachers, is the only private school located in Clinton. The school districts do not have boundaries that are coterminous with town boundaries, and none keep records relating to municipal registration or attendance. Thus, it is difficult to determine the exact percentage of children in each school district from an individual municipality.

According to the Hyde Park Central School District, the schools have exceeded their capacity for a number of years. FD Roosevelt High School is at 148 percent of capacity. At present, the Planning Boards of the five towns that make up the school district have given approval

for the construction of 4000 future housing units. The district is considering another bond and may add trailers to several buildings, as needed.

The Millbrook Central School District completed a new high school in 2007. There are no plans for future building or additions.

Pine Plains Central School District does not foresee any reason to expand as they put on an addition several years ago and their enrollment has been decreasing.

Rhinebeck has recently put an addition on the high school and can absorb another 150 students before adding more space.

The Omega Institute, located on a campus of 206 acres on the west side of Long Pond, is a not-for-profit organization which holds workshops and conferences dealing with topics ranging from exploring, teaching, and embracing new ideas, focusing on health and wellness, personal spiritual growth, and self-awareness. Many thousands of people visit the Omega Institute during the spring, summer and fall when the campus is open.

Religious Institutions

Clinton has several churches located throughout the town. The oldest church is Pleasant Plains Presbyterian Church at 246 Hollow Road (County Route 14) in Pleasant Plains. St. Joseph's Church is located on Clinton Corners Road in Clinton Corners. The Christian Alliance Church at 1192 Centre Road (County Route19) is found in Schultzville. The Evangelical Free Church meets at 20 Shephard's Way in Clinton Corners. Recent churches are the Cornerstone Bible Fellowship at 1592 Hollow Road (County Route 14) and Valley Community Church at 2260 Salt Point Turnpike (NYS Route 115).

Library

The Clinton Community Library is located in a wing attached to the Town Hall on Centre Road. The library is open five days a week with weekend hours. The library has six part time paid staff and several volunteers. The library offers programs for all ages, including story hour, adult computer classes and additional seasonal programming. In addition to print material, the library offers over 900 audio and video recordings, two early childhood learning stations and two computers with wireless internet access available for patron use. The library offers wireless internet access with access to over twenty databases.

The library is chartered by the New York State Board of Regents (2003) under the State Department of Education and established by that charter as a 501(c)(3) non-profit corporation, subject to certain minimum standards which include the selection and hiring of

a qualified library director and the periodic assessment of the needs of the community. The library long range planning and the requisite sustainable funding requirements are to be driven by the community needs assessment. It is reasonable to anticipate the need for improved funding to meet current and future community needs. Future concerns for the library are the constant need for volunteers, as well as finding more effective ways to reach out to the community.

Parks and Recreation

Total town public recreation space amounts to approximately 76.5 acres. There are no public school facilities or county and state recreational areas in Clinton to supplement the local parks. Residents can travel to Wilcox Park in Milan, Baird State Park in LaGrange or the extensive federal and state land in Hyde Park. Existing public recreation facilities include:

1. Frances J. Mark Park, a town recreation area of 39 acres between Little Wappinger Creek and County Route 18, south of Halstead Road. This park includes a ballfield, play apparatus, pavilion picnic area, restrooms and swimming facilities.
2. A two acre ballfield behind the Town Hall.
3. Friend's Park, a 14.5 acre site on Salt Point Turnpike at the southern edge of Clinton Corners, with a Little League field, tennis court, basketball courts, play equipment and restrooms.
4. In 1990 the town purchased 21 acres north of Town Hall using funds from the Iroquois Gas Transmission Company. This land has been designated as the Clinton Nature Trail. A hiking trail and map is being developed. Volunteers of the Conservation Advisory Council have hosted public events to educate residents about the natural feature of the property and to identify birds and other animals. Future plans may include the construction of a picnic pavilion in the Nature Trail.

The *New York Statewide Comprehensive Recreation Plan* recommends a minimum of 10 acres of suitable park and recreation land per 1,000 people to be served. Again, using the Poughkeepsie-Dutchess County Transportation Council population projection of 4,850 and a constant growth rate projection of 4,857 for 2025, the minimum parks and recreation needs of the town are about 50 acres. According to this recommendation, Clinton's total of 76.5 acres of recreation and park land exceeds the state guidelines.

The Recreation Commission feels that the town has enough park and recreation land. The facilities of two existing parks may be improved to make better use of the entire property. Making improvements at both parks should satisfy the recreation needs of the Town. The

Recreation Commission has discussed improvements to the parks such as additional ball fields, swimming area, hiking trails and pavilions.

Clinton's Senior Citizens

As the population of Clinton becomes relatively older, organizations and opportunities for recreation, crafts, and other activities will need to be encouraged. Currently, Clinton has senior citizen exercise classes on Tuesday and Thursday mornings attended by twenty residents. A Clinton volunteer leads the exercise classes. Equipment for the classes is stored in Town Hall. Some seniors take advantage of classes offered by the Clinton Community Library in computer skills, CPR and other interests.

Post Office

The only post office in the town is located on Clinton Corners Road in the hamlet of Clinton Corners and serves a number of citizens in eastern Clinton. Large parts of the town also fall under the Rhinebeck, Staatsburg, Hyde Park, and Salt Point zip code districts. The Clinton Corners Post Office does not have any plans for expansion. Any future expansion will be determined by requirements of the U. S. Postal Service within the limits of the current zoning.

Water Supply

There are no central water supply systems in the Town of Clinton at this time. Residents rely on individual on-lot wells. In the future, a large development project or water contamination problem in the more densely settled areas may create a need for a centralized water system. The well log reports for this area and all major new proposals should be reviewed by local planners and the County Health Department staff to ensure continued acceptability of ground-water quantity and quality. However, since major growth is expected to occur in a primarily dispersed fashion on large lots, individual wells will continue to provide most of the water that is used. The town should plan for densities that are low enough to avoid pollution problems in those areas where it is suspected to be a problem and where future central systems would be impractical.

It was recognized in previous Comprehensive Plans that the town might consider a water district in the general vicinity of Clinton Corners, as well as providing central water to the western part of the town along NYS Route 9G and Hollow Road. The Clinton Conservation Advisory Council has placed a high priority on the education of town residents about protecting groundwater supply and has assisted the town in developing an amendment to the zoning law to protect wetlands.

Sewage Disposal

Presently, there are no central sewage systems in the town. Individual on-site systems will continue to be used as growth occurs. However, if a large project is proposed or development is planned for areas that are not suitable for on-site disposal, a centralized system approved by the County Health Department may be necessary.

Septic tank sewage disposal systems function adequately for many years if properly installed and maintained, but only if placed in satisfactory soils and sufficiently separated from well sites and surface water. Percolation tests should be conducted in any area proposed for a leach field and careful calculations should be made to determine the proper size and location for a field.

Solid Waste Disposal

In 1981, the town landfill on Slate Quarry Road ceased operation. Currently, some refuse is picked up by private haulers and taken to the Dutchess County Resource Recovery Agency on Sand Dock Road in Poughkeepsie or to transfer stations outside of the town.

In 1991, Clinton opened a transfer station operated by a commercial hauler which is open from 8 AM to 1 PM on Saturdays. Fees to dispose of a 30 gallon bag of trash are reasonable. Residents may recycle glass, metal, plastics (#1, 2, 3, 5 and 7), cardboard, newspaper and magazines at no cost. Other materials may be deposited for a fee determined by the hauler. Residents may deposit metals and appliances in a rolloff at the Highway Department. This service is heavily used by town residents. Residents have indicated that they would support extending the hours of operation of the transfer station to other days of the week.

Hazardous materials may be delivered to the Dutchess County Resource Recovery Agency at regular times throughout the year.

Clinton Historical Society

The Clinton Historical Society obtained ownership of the Creek Meeting House on Salt Point Turnpike in Clinton Corners from the Upton Lake Grange in 1995. This stone building was constructed in 1777 as a meeting house for the Quakers, passing in time to the Grange. The society has raised funds to restore and maintain the building and holds regular meetings, dinners and public exhibits. Most recently, the Clinton Historical Society sponsors Heritage Day on Labor Day weekend, celebrating the rural, agricultural past of the community.

In 1999, the Masonic organization gave the Masonic Hall located on Centre Road in Schultzville to the Clinton Historical Society. The historic 1865 Masonic Hall was

recognized by being placed on the National Historic Register and, in 2007, becoming a New York State Landmark. The Clinton Historical Society held music events and dinners in the Masonic Hall until the building was relocated to the Town Hall site in 2011. Clinton is unusual because the past is easily visible in the seven historic hamlets and many old farmhouses and barns. The activities of the Clinton Historical Society have been important in raising public awareness to the importance of protecting the town's historic heritage.

Clinton Business Association

The Clinton Business Association was established in 1994. Clinton has no town center and the businesses are typically small. The association's annual dues provide a website and brochure listing which provides advertising for the members. The association sponsors local events and donates funds to local good causes.

Nine Partners Lions Club

Since 1960 the Nine Partners Lions give something back to their community. Lions club members are aware of the needs of our community and seek to effectively make a difference. All Lions clubs provide sight and hearing services. In addition, the Nine Partners Club is very conscious of the needs of our rural community. The Nine Partners Lions Club seeks to help people with hearing and vision problems, our seniors, youth and the disadvantaged in our community and around the world. The Nine Partners Lions Club has supported many local events and causes. In addition the Nine Partner Lions Club made a major contribution to the pavilion at the Town of Clinton Frances Mark Memorial Recreation Park and has eye glass collection sites at the Clinton Community Library, Schultzville General Store and various churches in town.

Summary and Implications for Planning

As we summarize this chapter, it is worth noting that the following related questions were in the 2007 Community Survey as well as the survey in 1988. As can be seen, only question eight (8) was a new item and only question six (6) saw a decrease in the percent of positive response. All other questions saw a significant improvement in the percent of change.

Survey Question #	Survey Question	2007 Response	1988 Response
Question #3	Clinton has an adequate Library	80% agree	58% agree
Question #4	Clinton has adequate Police protection	71% agree	44% agree
Question #5	Clinton has adequate Fire protection	91% agree	81% agree
Question #6	Clinton has adequate Emergency Ambulance service	77% agree	81% agree
Question #7	Clinton has adequate Cablevision service	65% agree	54% agree
Question #8	Clinton has adequate Cell Phone service	42% agree	question not asked
Question #9	Clinton Town Road System is well maintained	89% agree	70% agree
Question #10	Clinton County Road System is well maintained	92% agree	73% agree
Question #11	Clinton State Road System is well maintained	90% agree	73% agree

Although many factors influence the percent of positive response from one survey period to another it is worth noting the change over such a long period.

Summary Recommendations

Because of increase in numbers of staff and hours of operation, the Town Hall complex requires increased space for office needs. The needs of the Town Court have also changed, necessitating increased and different arrangement of space. And the Highway Department needs to add a maintenance bay.

Exclusive volunteer staffing of fire departments may prove to be inadequate in the future, as most organizations are experiencing reduction in volunteers. Paid staffing could have a significant impact on future fire department budgets.

The cost of continually upgrading fire department and highway equipment needs must be planned and implemented in future budgets. Failure to implement planned changes will cause additional cost and risks effective performance of service.

As growth in the town occurs, assessment of parks and recreational space must be reviewed. The west and northern part of the town are currently void of such service.

CHAPTER SEVEN: TRANSPORTATION

The transportation network is an essential component of the community, connecting people's homes with the places where they work, shop, and participate in leisure activities. For Clinton and most other communities in Dutchess County, the predominant mode of travel is the private automobile traveling on an extensive network of roads and highways. Although air, water, and rail transportation facilities are available elsewhere in the county, none serve Clinton directly. They do have an indirect impact on growth within the town in that they support economic activities that provides employment opportunities for residents of Clinton.

County Transportation Systems

Airports

The Dutchess County Airport is a publicly-owned, public-use, General Aviation facility located on Route 376 in the town of Wappinger. The current state of development of the airport is under review due to the introduction of passenger service at the neighboring Stewart International Airport in Orange County, New York, and the resultant termination of commercial air service at the DC Airport. Information about the current services is available at the Dutchess County Airport. Other airport facilities in Dutchess County include the Sky Acres Airport in the Town of Unionvale, Stormville Airport in the Town of East Fishkill, Airhaven on North Quaker Lane, Staatsburg, and the Old Rhinebeck Aerodrome in Red Hook.

Full service aviation facilities and commuter services are available at Stewart International Airport in New Windsor, NY; Albany International Airport in Albany, NY; Westchester County Airport in White Plains, NY; LaGuardia Airport in New York City, NY; John F. Kennedy (JFK) International Airport in New York City, NY; and Newark Liberty International Airport in Newark, NJ. All are accessible by automobile and limousine services, but only Stewart Airport is within a one hour commute.

Railroads

Metro North provides rail transportation from Grand Central Station in New York City on two lines to the southern half of the county. The Harlem Line in eastern Dutchess runs as far north as Wassaic with stops at Pawling, Appalachian Trail, Wingdale, Dover Plains, Ten Mile River and Wassaic. In the western part of the county, the Hudson Line stops at Beacon, New Hamburg and Poughkeepsie. In addition, Amtrak provides service from Poughkeepsie and

Rhinecliff to points north and south. Freight service is also offered on the Hudson Line and supports several industries in Beacon and Poughkeepsie.

As mentioned in Chapter 4, in the year 2000, 87 percent of Clinton residents who work, drove to work, 3.5 percent percent use public transportation (down from 5.8 percent), and the balance either work at home or use other means, such as walking, to get to work. According to the 2007 Community Values Survey, approximately 16.5 percent of the residents reported that they worked outside of Dutchess County. It is reasonable to assume that most commuters who use public transportation drive either to Rhinecliff or Poughkeepsie and use the rail system.

Bus System

Clinton is no longer served by the Dutchess County LOOP bus system. Future use of the bus service, including a connection to the rail station in Poughkeepsie, might help ease the increasing traffic volumes on local roads. Buses compatible with the number of riders should be considered.

At this time, there is no Dial-A-Ride service for senior citizens in Clinton, although the neighboring towns of Rhinebeck, Red Hook, Pleasant Valley, Hyde Park and communities in southern Dutchess County participate in the system. Dutchess County is considering a Flex-Ride system which would allow Clinton residents to obtain van service one day a week.

Local Road and Highway Network

As previously mentioned, the primary mode of transportation within the town and surrounding county is by private vehicle on public roads**.** These public roads are provided by various levels of government and perform different functions for their users. The town of Clinton owns and maintains 69.28 miles of roads. Dutchess County owns and maintains 25.36 miles of road in the town. New York State has responsibility for the regional highway network, including 6.80 miles of road in Clinton.

TABLE 7.1: NUMBER OF MILES UNDER EACH JURISDICTION, TOWN OF CLINTON 2010

Jurisdiction	Miles	Percent of Total
New York State	2.35	2.4%
Taconic State Parkway	4.45	4.4%
Dutchess County	25.36	24.0%
Clinton	69.28	68.2%
Total	**101.44**	**100.0%**

Source: Dutchess County Department of Public Works, Annual Mileage Survey, 2010

Function

The functional classification of roads is related to their level of use and type of service they provide. An ideal system would separate the various functions, so that regional uses do not conflict with local uses. Although roads may be designed for multiple functions, most can be included in one of three general categories: thoroughfares, collectors, and local roads. Thoroughfares are roads which provide for through traffic to areas outside the municipality and outside the county. They carry large volumes of traffic and are usually maintained by the state. Industrial or large-scale commercial activities with a limited number of access points are best suited to this type of road. In Clinton, there is a limited access highway, the Taconic State Parkway, which leads south to Interstate 84 and the New York metropolitan area and north to Interstate 90. However, the Taconic State Parkway is limited to non-commercial vehicles**.** In addition, a small portion of New York State 9G, a major thoroughfare, travels through the western edge of Clinton, with an intersection at Hollow Road.

Collector roads function to link areas in the municipality to one another and to the major highways. They should serve to collect traffic from local roads and channel it to the larger highways. These roads typically provide the most appropriate locations for community facilities and larger residential developments. Roads that are used as collector roads include Hollow Road (CR 14**)**, North Quaker Lane (CR 16), Slate Quarry/Bulls Head Road (CR 19), Centre Road and Clinton Hollow Road (CR 18), Salt Point Turnpike (NYS 115 and CR 17), Clinton Corners Road (CR 13), and Fiddlers Bridge Road. However, most of these roads, especially Fiddlers Bridge and Hollow roads, have characteristics more typical of local roads, such as numerous driveways, short sight distances, and sharp curves.

Local roads provide access to individual properties from the collectors and thoroughfares. They are not meant to carry through traffic or large volumes of local traffic; they generally serve detached single-family residential uses. These roads are generally maintained by the town.

Problems occur when roads serve more than one function. When residences and commercial uses are located along major highways, these roads must serve two functions: regional (moving goods and people from one locality to another) and local (providing access to adjacent properties). The result is traffic congestion, frequent accidents, and a much lower speed on what should be a high-speed thoroughfare. In Clinton, due to the dual use of local roads acting as collector roads, the traveling speed is often much higher than is safe for local conditions.

Traffic Volumes

The amount or volume of traffic that a road carries is a good indicator of the importance of that road in the municipal or regional network. In Dutchess County, traffic counts are taken by the New York State Department of Transportation (NYSDOT) and the Dutchess County Department of Public Works (DPW) for the state and county roads. In addition, these agencies may also undertake special counts on local roads if requested and paid for by the municipality.

NYSDOT traffic volume information is expressed as average annual daily traffic (AADT), or the average (arithmetic mean) 24-hour traffic volume during the year. The Dutchess County DPW maintains two-way traffic counts for all county roads. The average daily counts for county roads are based on a 12-hour day as compared with the 24-hour counts taken by the state.

TABLE 7.2: AVERAGE ANNUAL DAILY TRAFFIC COUNTS, STATE ROADS

NYS Route	Section of Road	Previous Counts/Year	Recent Counts/Year	Percent Change
Taconic State Parkway	NY 115 to NY 199	7,775 (1998)	8,848 (2007)	14%
NYS 9G	CR 14 to NY 308	6,474 (2000)	7,345 (2009)	13%
Salt Point Turnpike (NY 115)	TSP to CR 17	2,343 (1996)	3,166 (2008)	35%

Source: 2010 Traffic Volume Report, Dutchess County Department of Planning and Development

The following Table records traffic volumes on county roads from 1982 to 2009. These traffic volumes are illustrated on Figure 7.1[1].

TABLE 7.3: AVERAGE ANNUAL DAILY TRAFFIC COUNTS, COUNTY ROADS, 1982-2009

Road Name	From	To	AADT	Year
NY 9G	CR 14 (Hollow Rd)	NY 308	7,345	2009
			8,410	2006
			7,687	2003
			6,474	2000
NY 115 (Salt Point Trnpk)	TSP	CR 17 (Salt Point Trnpk)	3,166	2008
			3,471	2005
			2,524	2002
			2,884	1999
			2,343	1996
TSP	NY 115 (Salt Point Trnpk)	NY 199	8,848	2007

[1] Figure 7.1 shows the most recently measured traffic volumes, some of which may not be included in Table 7.3.

TABLE 7.3: AVERAGE ANNUAL DAILY TRAFFIC COUNTS, COUNTY ROADS, 1982-2009				
Road Name	**From**	**To**	**AADT**	**Year**
			7,238	2004
			9,014	2002
			7,019	2001
			7,775	1998
CR 12 (Schultzville Rd)	Germond Rd	Harpers Rd	308	2006
			236	2002
			218	1999
CR 13 (Clinton Corners Rd)	Hibernia Rd	CR 14 (Hollow Rd)	976	2007
			909	2004
			308	2001
CR 13 (Clinton Corners Rd)	CR 14 (Hollow Rd)	CR 17 (Salt Point Trnpk)	945	2007
			921	2004
			1,190	2002
			542	2001
CR 13 (Clinton Corners Rd)	Jameson Hill Rd	CR 17 (Salt Point Trnpk)	903	1987
			727	1982
CR 14 (Hollow Rd)	NY 9G	W Cookingham Rd	3,558	2007
			3,675	2003
			3,127	2000
CR 14 (Hollow Rd)	Creek Rd	Cookingham Rd	2,408	1984
			2,104	1982
CR 14 (Hollow Rd)	W Cookingham Rd	CR 16 (North Quaker Ln)	3,616	2007
			3,645	2003
			2,993	2000
CR 14 (Hollow Rd)	CR 16 (North Quaker Ln)	Fiddlers Bridge Rd	1,944	2007
			2,274	2003
			1,746	2000
			2,056	1987
			1,533	1982
Quaker Ln (CR 16)	Fallkill Rd	Hollow Rd (CR 14)	1,757	1987
			1,135	1982
CR 14 (Hollow Rd)	Fiddlers Bridge Rd	Sodom Rd	1,204	2007
			1,363	2003
			984	2000
CR 14 (Hollow Rd)	Sodom Rd	Browning Rd	1,202	2007
			1,241	2003
			1,030	2000

TABLE 7.3: AVERAGE ANNUAL DAILY TRAFFIC COUNTS, COUNTY ROADS, 1982-2009				
Road Name	**From**	**To**	**AADT**	**Year**
CR 14 (Hollow Rd)	Browning Rd	CR 18 (Clinton Hollow Rd)	1,665	2007
			1,717	2003
			1,375	2000
CR 14 (Hollow Rd)	Browning Rd	E. Meadowbrook Ln	1,439	1987
			1,341	1982
CR 14 (Hollow Rd)	Centre Rd	Sunset Tr	908	1987
			572	1982
CR 14 (Hollow Rd)	CR 18 (Clinton Hollow Rd)	Allen Rd	989	2009
			1,211	2006
			1,166	2003
			881	2000
CR 14 (Hollow Rd)	Allen Rd	Horseshoe Tr	1,007	2009
			1,139	2006
			1,111	2003
			880	2000
CR 14 (Hollow Rd)	Horseshoe Tr	NY 115 (Salt Point Trnpk)	1,139	2006
			1,238	2003
			950	2000
			885	1987
			577	1982
CR 14 (Hollow Rd)	NY 115 (Salt Point Trnpk)	TSP	164	2008
			184	2005
			849	2002
			636	2000
			644	1997
			695	1987
			474	1982
CR 14 (Hollow Rd)	TSP	CR 13 (Clinton Corners Rd)	71	2008
			91	2005
			327	2002
			301	1999
			279	1987
			273	1984
Milan Hollow Rd (CR 15)	Old Bulls Head Rd	Pink Ln	322	1984
			311	1982
CR 17 (Salt Point Trnpk)	TSP	CR 13 (Clinton Corners Rd)	3,393	2007
			3,237	2004

TABLE 7.3: AVERAGE ANNUAL DAILY TRAFFIC COUNTS, COUNTY ROADS, 1982-2009				
Road Name	**From**	**To**	**AADT**	**Year**
			1,924	2001
			2,011	1987
			1,781	1982
CR 17 (Salt Point Trnpk)	CR 13 (Clinton Corners Rd)	Talleur Rd	2,815	2007
			2,692	2004
			2,099	2001
CR 17 (Salt Point Trnpk)	CR 13 (Clinton Corners Rd)	Schultzville Rd	1,756	1987
			1,170	1982
CR 17 (Salt Point Trnpk)	Talleur Rd	Schultzville Rd	2,546	2007
			2,517	2004
			1,870	2001
CR 17 (Salt Point Trnpk)	Schultzville Rd	Pumpkin Ln	2,268	2007
			2,293	2004
			1,697	2001
CR 18 (Clinton Hollow Rd)	NY 115 (Salt Point Trnpk)	E Halsted Rd	1,138	2007
			1,183	2003
			962	2000
CR 18 (Clinton Hollow Rd)	E Halsted Rd	CR 14 (Hollow Rd)	1,000	2009
			1,000	2006
			1,101	2003
			701	2000
CR 18 (Clinton Hollow Rd)	Allen Rd	Woodlea Rd	1,473	1987
			820	1982
CR 18 (Clinton Hollow Rd)	Halstead Rd	Hollow Rd (CR 14)	1,050	1987
			732	1982
CR 18 (Clinton Hollow Rd)	Hollow Rd (CR 14)	Breezy Hill Rd	918	1987
			565	1982
CR 18 (Centre Rd)	CR 14 (Hollow Rd)	CR 19 (Slate Quarry Rd)	976	2007
			1,344	2003
			626	2000
CR 18 (Centre Rd)	Maple Ln	CR 19 (Slate Quarry Rd)	522	1984
			409	1982
CR 19 (Slate Quarry Rd)	White Schoolhouse Rd	Kansas Rd	4,214	2007
			3,978	2003
			3,027	2000
CR 19 (Slate Quarry Rd)	Kansas Rd	CR 18 (Centre Rd)	4,042	2007
			3,801	2003

TABLE 7.3: AVERAGE ANNUAL DAILY TRAFFIC COUNTS, COUNTY ROADS, 1982-2009				
Road Name	**From**	**To**	**AADT**	**Year**
			2,691	2000
CR 19 (Slate Quarry Rd)	Mountainview Rd	Burger Rd	3,369	1987
			2,378	1982
CR 19 (Slate Quarry Rd)	Eighmyville Rd	Silver Lake Rd	3,278	1987
			2,038	1982
CR 19 (Bulls Head Rd)	CR 18 (Centre Rd)	Pumpkin Ln	2,657	2009
			2,818	2006
			2,864	2003
			2,185	2000
CR 19 (Bulls Head Rd)	Pumpkin Ln	Field Rd	2,474	2009
			2,640	2006
			2,796	2003
			1,830	2000
CR 19 (Bulls Head Rd)	Centre Rd (CR 18)	Milan Hollow Rd (CR 15)	2,524	1987
			1,536	1982
Hibernia Rd	TSP	CR 13 (Clinton Corners Rd)	414	2008
			458	2005
			1,603	2,002
			1,552	1,999

Source: Poughkeepsie Dutchess County Transportation Council

Although in all cases current volumes are still below normal two-lane collector road capacities, factors such as curving alignments and often unsafe driving speeds make existing volumes a continuing concern. The traffic volumes cited in Table 7.3 are being carried on a road system that largely retains its narrow rural character.

Traffic Accidents

Using information supplied by the Dutchess County Traffic Safety Board, a map was prepared showing the general location of all accidents reported to the Dutchess County Sheriff's Department or the New York State Police from 2006 to 2009 (see Figure 7.2: *Crash Locations*). There was an average of 122 accidents per year in Clinton, which is an increase over the average accident rate of 109 from 1985 to 1987. A number of accidents occurred on the Taconic State Parkway, many of these involving deer. Approximately 20 percent of all reported accidents in Clinton from 2006 to 2009 involved collisions with animals.

Intersections are generally the most dangerous locations. Areas with a relatively high number of accidents include the intersection and curve above Frost Mills, the curve at the

bridge and intersection in Clinton Hollow, and the acute-angled intersection in the center of Clinton Corners. Salt Point Turnpike west of the Taconic State Parkway also recorded a significant number of accidents. Most of these accident-prone areas are located along or at intersections with state or county highways. When improvements are planned, these areas should be reviewed using context-sensitive design[2] and, if necessary, included on the transportation improvement programs. The town should work cooperatively with the state and county agencies to identify future capital improvements.

Road Conditions and Improvement Plans

State Roads

State roads in the town are maintained according to federal standards adhered to by the NYSDOT. Planned improvements are described in the Poughkeepsie-Dutchess County Metropolitan Planning Organization's annual Transportation Improvement Program (TIP) report, which establishes allocations for the following five years.

As travel speeds have tended to increase on the Taconic State Parkway, the NYSDOT's general policy is to reduce the number of at-grade crossings to reduce accidents and improve the limited access quality of the parkway. In 2002 NYSDOT closed all at-grade crossings of the Taconic State Parkway in the Town of Clinton. That is, crossings at Hibernia Road, Hollow Road, Willow Lane, Pumpkin Lane and Nine Partner's Road were closed. All crossings of the Taconic State Parkway were channeled to the overpasses at Salt Point Turnpike and north to Bulls Head Road in the Town of Stanford. These closings have changed traffic patterns in Clinton, causing two to three times the volume of travel on Clinton Corners Road, which parallels the Taconic State Parkway and great reduction of travel on Hollow Road and Hibernia Road between the Taconic State Parkway and neighboring roads**.** It was agreed that NYSDOT would replace a culvert on Field Road as part of the settlement with the Town of Clinton at the time of the road closings. That construction has not occurred. There is a plan to create an interchange with the Taconic State Parkway and Pumpkin Lane; however, no time has been set for construction. It is recommended that the construction of a Park and Ride be considered as part of this interchange.

County Roads

In 2006 the Dutchess County DPW erected a blinking traffic light at the intersection of Hollow Road and Centre Road in Clinton Hollow because of an increased number of

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[2] *Context Sensitive Design* (CSD, also called *Context Sensitive Solutions*) refers to roadway standards and development practices that are flexible and sensitive to community values. CSD allows roadway design decisions to better balance economic, social and environmental objectives. (Victoria Transport Policy Institute)

accidents. Two bridges over Centre Road (CR 18) north of Maple Lane were replaced in 2007 and 2008.

Currently, the bridge on Hollow Road (CR 14) over the Little Wappinger Creek in Clinton Hollow is slated for replacement in 2012, or as federal funding becomes available. The current bridge was constructed in 1934. The Dutchess County DPW repaved Hollow Road from 1,500 feet west of Browning Road to Salt Point Turnpike in 2011. The culvert under Hollow Road will be replaced in the future.

Traffic calming measures should be used in the hamlets to slow traffic speeds and encourage walking. Because of increasing serious accidents on Hollow Road in Frost Mills, the Highway Superintendent and Committee recommend that a new county road bypassing both Pleasant Plains and Frost Mills should be a priority. The use of Hollow Road for high speed transport connecting north and south highways is increasing the hazard for all travelers. Slate Quarry-Bulls Head Road (CR 19) is also heavily traveled with increasing speeds.

Town Roads

The Clinton Highway Department maintains almost 70 miles of town roads and takes responsibility for winter plowing and sanding an additional 20 miles under contract with the county. The current maintenance schedule provides for resurfacing all roads as needed, as funds are available**,** under direction of the Highway Superintendent. The past record of maintenance on town roads is shown in Appendix 7.1.

Clinton roads are unique since the great majority is shown on the 1867 historic map connecting farms and hamlets. Clinton's town roads tend to be either narrow dirt or winding hard-top surface, still reflecting their former low-volume agricultural past. The remaining dirt road sections such as Shadblow Lane, Kansas Road, Browns Pond Road, Lake Drive, Pumpkin Lane, and Deer Ridge Drive, are being subjected to increased traffic loads. They are regularly maintained by applying new stone, filling irregularities and shaping. The Highway Superintendent plans to maintain all town roads as needed, and as funds are available.

On October 11, 1988, the Town Board passed a resolution requesting the Dutchess County Superintendent of Highways to reduce the speed limit on County roads in Clinton and reduce speed limits in the hamlets to 30 miles per hour (mph). After a year of review, a New York State Highway Engineer (September 27, 1989) recommended that some County Roads should have reduced speed limits, and further that, while some town roads could safely sustain speeds of 30 mph, other roads which are “single lane unpaved roads with many horizontal and vertical curves are not conducive to speeds of 30 mph.” It was noted that the

Clinton Highway Department had posted speed limits lower than 30 mph on one-lane dirt roads and other roads with narrow curves. See Figure 7.3 indicating speed limits.

The State Legislature has passed legislation to allow for lower design and maintenance standards for rural roads that would not only relieve local governments from the costly responsibility of continually upgrading low volume roads, but also reduce their liability exposure. The Clinton Highway Superintendent has implemented road maintenance practices recommended by Cornell Local Roads Program which keeps the roads narrow, with shoulder maintenance that allows for the presence of stone walls, trees and other vegetation. In the April/May issue of the Dutchess County Planning Federation newsletter Greenway guidelines have been proposed for maintaining rural roads, which is supported by the Clinton Highway Superintendent. These recommendations should be accepted by the Town Board.

As described in Chapter Two, the 1988 designation of 49 Historic Roads in the town provides a process by which the issues of safety and appearance can be fairly considered from all points of view. The Scenic and Historic Road Committee, established by the town in 2001, will recommend a reasonable balance between the need to maintain safe and efficient roadways and preserving the scenic values of natural contours and vegetation, open space views, stone walls, tree-lined roads, and historic structures. They will receive public comments on proposed road improvements and can recommend alternatives that will preserve the rural roadside character that is so important to Clinton's identity.

Summary and Implications for Planning

In 2006 the Town of Clinton took part in a Local Site Planning Roundtable which was a partnership between the town, the Dutchess County Environmental Management Council, the NYSDEC Hudson River Estuary Program and the Center for Watershed Protection of Maryland. It is recommended that the Clinton Town Board adopt the following concepts based on consensus developed in the roundtable discussions as summarized below:

1. The Town of Clinton should reduce the minimum required street pavement width for new subdivision roads to 20 feet.
    a) New subdivision roads should include shoulders designed to Town Highway Specification or AASHTO standards that are a minimum of 3 feet on each side, or unpaved gravel or grass shoulders 5 feet wide where needed for snow removal or drainage.
2. Reduce total length of residential streets by examining alternative street layout to determine the best option for increasing the number of homes per unit length as recommended in the Town of Clinton *Hamlet Design Guidelines* (2000).

3. Residential right-of-way widths should reflect the minimum required to accommodate the travel-way, sidewalk and vegetated open channel. Utilities in new subdivisions should be required to install lines underground and share one trench.
    a) Fifty foot minimum right-of-way width for new subdivision roads should be retained.
    b) Where density, topography, soils and slope permit, vegetated open channels should be used in the street right-of-way to convey and treat stormwater runoff.
4. The Planning Board should provide a Model Shared Parking Agreement to applicants to curb excess parking space construction. Cul-de-sacs may be recommended by the Planning Board; however, installation of a vegetated center island should be encouraged.
5. Whenever possible, provide stormwater treatment for parking lot runoff using vegetated swales, bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.
6. Advocate development that minimizes total impervious area, reduces infrastructure construction costs, encourages shared parking, conserves natural areas, provides community recreational space and promotes watershed protection.
    a) Use Greenway Guides E-1 and E-3 (Dutchess County Department of Planning and Development) for design of parking lots.
7. Encourage flexible design for gravel walking paths rather than sidewalks.
8. Promote pervious driveway surfaces and shared driveways.
9. Encourage homeowners to direct runoff from driveways and parking areas to pervious areas such as yards, open channels or vegetated areas without adversely affecting other landowners.

In addition, the Town of Clinton should adopt the new Greenway Guide of March/April 2010 on Rural Roads which recommends adopting practices which are consistent with rural conditions, including:

- Protecting roadside features such as rock outcroppings, stone walls and rows of trees,
- Keeping grading and clearing to the minimum based on safety
- Avoiding the use of curbing
- Minimizing road width
- Promoting common driveways

- Using wooden guide rails
- Considering alternatives to asphalt, such as porous paving, chip and seal and gravel
- Designating local scenic roads and establish standards for their protection and maintenance

The higher traffic volumes shown in Table 7.3 are being carried on a road system that largely retains its narrow, rural character. Up to now, the town has been bypassed by the large-scale commercial and residential development that is so evident in some neighboring communities, primarily due to a combination of existing zoning restrictions and an inadequate road system for heavy traffic loads. Clinton is unusual in Dutchess County in that major state highways do not pass directly through the town, but rather only skirt the edges.

It is recommended that speed limits of 30 mph be established on Salt Point Turnpike (CR 17) and Clinton Corners Road (CR 13) in the hamlet of Clinton Corners because of increased traffic due to the closings of the Taconic State Parkway at grade crossings and the increased speed of traffic in this congested area.

As discussed above, because of increasing serious accidents on Hollow Road in Frost Mills, it is recommended that a new county road bypassing both Pleasant Plains and Frost Mills should be a priority.

It recommended that the Town work with the Dutchess County Transportation Council to establish public transportation for some roads in Clinton.

CHAPTER EIGHT: LAND USE

Understanding how land is used in Clinton, and how that pattern of use is changing, is a critical step in planning for the future of the town. Trends and patterns in the way land is developed determine needs for public services, transportation improvements, and environmental protection; they also fundamentally affect the appearance and character of the community.

This chapter presents an inventory of land use in the town and discusses how land use has changed since a previous inventory was undertaken in 1988. This is followed by a discussion of land use trends and their implications. This update recognizes that there have been developments in land use techniques and site design considerations over the last 20+ years. Therefore sections on these important items have been added. A summary and implications for planning section concludes the chapter.

Land Use Survey Method

During the summer of 1988, the previous Clinton Master Plan Committee assembled a land use inventory of the town. The primary source of information was the town's property tax records. Results were checked against a large composite air-photo map of Clinton and recorded on the property tax map series. Finally, a color-coded presentation map at 1"=1000' scale was produced using a generalized land use code that had been developed by the Dutchess County Department of Planning [now the Dutchess County Department of Planning and Development ("DCDPD")].

The current Comprehensive Plan Committee was able to borrow the 1988 map from the DCDPD and make digital photographs. With the assistance of the Cornell Cooperative Extension Dutchess County Geographic Information System ("GIS") Laboratory, the Committee was able to create maps and overlays that were then used to compare how the three major uses of land in the town (residential, agricultural and undeveloped/vacant) have changed over the last 20-year period. Changes in all the other uses have been minor in nature, but also will be discussed.

Comparisons were based on the land use codes currently in use for assessment and planning purposes. The major codes categories are shown on Table 8.1 "Property Type Major Classification Codes." The detailed extensive sub-categories for each of these major

categories are shown in Appendix 8.1. The land use boundaries conform to property boundaries.[1]

TABLE 8.1: PROPERTY TYPE MAJOR CLASSIFICATION CODES

The New York State Office of Real Property Services has developed a simple and uniform classification system to be used in assessment administration in New York State.

The system of classification consists of numeric codes in nine categories. Each category is composed of divisions indicated by the second digit and subdivisions (where required) indicated by a third digit. The nine categories are:

Classification Code	Category	Descriptive Land Use
100	Agricultural	Property used for production of crops or livestock
200	Residential	Property used for human habitation. Living accommodations such as hotels, motels and apartments are in the Commercial category – 400.
300	Vacant Land	Property that is not in use, is in temporary use, or lacks permanent improvement.
400	Commercial	Property used for the sale of goods and/or services.
500	Recreation	Property used by groups for recreation, amusement, or entertainment.
600	Community & Entertainment	Property used for the well being of the community service.
700	Industrial	Property used for the production and fabrication of durable and nondurable man-made goods.
800	Public Services	Property used to provide services to the general public.
900	Wild, Forested, Conservation, Lands & Public Parks	Reforested lands, preserves, and private hunting and fishing clubs.

Source: New York State Office of Real Property Services "Assessor's Manual" 9/1/06, p. vii.

Distribution of Land Use

The results of the 1988 land use inventory showed that most of the Town of Clinton was undeveloped, as shown on Figure 8.1: *Land Use 1988*. Because boundaries for specific parcels were not shown on the 1988 map, the amount of vacant land shown may have been overestimated. Vacant land not devoted to crops, pasture, orchards, or any active use comprised the single most extensive land use category. This is shown in white on Figure 8.1.

[1] Appendix 8.1, "Property Type Classification and Ownership Codes (Assessor's Manual)," is 37 pages long and is available digitally.

This category includes the substantial areas in Clinton with severe environmental constraints, such as steep slopes, wetlands or floodplains. Over time the town has seen a dramatic increase in the amount of residential development, as discussed in Chapter 5. A large number of properties in the town are currently identified as "residential" by the property classification code. However, it must be remembered that substantial portions of these lands may still be further developed since the classification codes only identify a property as "vacant" if it lacks any permanent improvements. Thus, lands that are identified as in residential use may be large tracts with only a single home on them. Bearing this in mind, Figure 8.2: *Vacant Land Use Comparison 1988 to 2010* compares the vacant land in 1988 to the vacant land identified by the real property classification code in 2010. The 2010 lands are shown by using an enclosed polygon with diagonal lines going from lower left to upper right within the polygon. This same method is used in Figure 8.3: *Residential Land* and Figure 8.4: *Agricultural Land*. The remaining white areas now have other uses as shown on Figures 8.3 and 8.4.

By far the dominant active land use today, as identified by the property classification code, is residential, as shown on Figure 8.3: *Residential Land Use Comparison 1988 to 2010*. Almost all residential uses are low-density, single-family homes (approximately 54 percent, or 1,257 of the 2,346, land parcels as of July 1, 2010), in the hamlets and scattered throughout the town along county and town roads. Only the relatively large lots, varying setbacks, and interspersed vacant parcels prevent the houses beginning to line the roads from forming a strip residential pattern. Several more regular (approximately 1-2 acre lots) low-density subdivisions occur in the town, such as Cookingham Road east of Frost Mills, Heritage Road and Talleur Road near Clinton Corners, and the Longview Road--Shadblow Lane area in northeast Clinton.

Higher density residential uses are scarce, found in only a few concentrations such as around the southern tip of Silver Lake and at the end of Camp Drive on Long Pond. Even the clusters of homes in each of the seven hamlets are generally on lots larger than one-half acre. The July 1, 2010 tax roll shows 50 two-family residences, as well as over 50 multiple residence properties, as compared to the over 1,250 single family parcels. It is recognized that there are only a few apartments, for example over the general stores in Schultzville, Clinton Hollow, and Clinton Corners.

A very limited number of small commercial uses are located in Clinton, primarily in the southern portion of the town. The hamlets of Pleasant Plains, Clinton Hollow, Schultzville, and Clinton Corners have or had businesses, but none have concentrations that would

constitute a business district. Two enterprises are located directly off the Taconic State Parkway. It is worth noting that a portion of these commercial uses are home occupations.

In 1988, three industrial uses were found in Clinton. A small industrial park is located at the far west corner of the town, off of NYS Route 9G, south of Frost Mills. A manufacturing building (currently inactive) is located east of the hamlet of Schultzville, on Electronic Lane. The third (former) manufacturing operation located near the Clinton - Pleasant Valley border on Hibernia Road has become a commercial warehouse. So in 2010, there was only one active manufacturing site.

Extractive industrial uses in Clinton consists of one sand and gravel mining operation found off Hollow Road (CR 14), between the hamlets of Frost Mills and Pleasant Plains. Two electric transmission line corridors, owned by Niagara Mohawk (now a subsidiary of National Grid Co.), run parallel to each other on a slightly northeast-southwest direction through the center of town. A separate electric transmission line, owned by Central Hudson Gas & Electric Corp, (now a subsidiary of CH Energy Group, Inc.), runs through the southeast corner of the town, just north of the hamlet of Hibernia. A natural gas transmission line, owned by the Iroquois Gas Transmission Company, also runs generally north to south through the eastern part of town.

A number of public and quasi-public uses are found throughout the town. Aside from the public buildings discussed in Chapter 6 "Community Facilities," several group homes and a rehabilitation center are scattered among the other residences. This category also includes the Grange Pavilion on Hollow Road, the former 1777 Creek Meeting House and the Masonic Hall, now both owned by the Clinton Historical Society, the six churches and the six cemeteries that are located in the town. Educational uses include one private school, the Upton Lake Christian Academy with frontage in Clinton Corners and its buildings across the town line in Stanford, as well as the Omega Institute for Holistic Studies on Lake Drive to the west of Long Pond. A solid waste transfer station, which is open from 8 AM to 1 PM on Saturdays, is now operated at the Highway Department Garage by a commercial hauler. Established fees are charged for solid waste; however an increasing list of materials can also be recycled at no cost. Recreational land includes both public and private properties. Existing town park land consists of 39 acres on Clinton Hollow Road in south-central Clinton, 14.5 acres on Salt Point Turnpike at the southern edge of Clinton Corners, two acres behind the Town Hall north of Schultzville and 21 acres north of the Town hall that has been designated as the Clinton Nature Trail. Two private campgrounds are in the northern lake region, one on the northwest side of Mud Pond and one with frontage on the northwest half of Long Pond.

Agricultural land use has changed over the past 22 years, as shown on Figure 8.4: *Agricultural Land Use Comparison 1988 to 2010*. In 1988, agricultural land was concentrated mostly in the southern half of Clinton, west of Clinton Hollow Road (CR 18) and south of Fiddlers Bridge Road, but there has been a subsequent shift into the southeast quadrant. There continue to be other agricultural parcels scattered throughout the town. Two dairy farms are still operating in Clinton, as well as some specialty crop, poultry and cattle farms, but much of the lands classified as agriculture are hayfields or pastureland for an increasing number of horse farms. In 2010, 14 properties were coded as horse farms.

Water resources consist of the five named ponds and lakes (Silver Lake, Mud Pond, Long Pond, Brown's Pond and Frost Pond), and numerous smaller ponds and streams, as well as the Little Wappinger, East Branch Wappinger, Wappinger, Crum Elbow and Fallkill Creeks.

Trends in Land Use

A review of the current land use map (Figure 8.5: *Residential, Vacant and Agricultural Land Uses*) compared to the 1988 map (Figure 8.1) reveals significant changes in land use within the town. Figure 8.6: *Non-residential, Non-vacant and Non-agricultural Land Uses* reflects little change other than in the three major categories: three major power line corridors, a natural gas transmission line corridor and the Taconic State Parkway pass through Clinton, interrupting the irregular pattern produced by the hilly topography and winding road system. Not surprisingly, over the last 22 years, the agricultural uses have changed in the town. Residential uses have progressively increased along the rural roads, but in contrast to many towns in Dutchess County, other aspects of the overall land use pattern have not shifted dramatically. The hamlets are still small and intact, major subdivisions have not overwhelmed the countryside, and industrial and commercial uses are only minimally evident. The extent of vacant, open, or wooded land has been reduced, but is still considerable compared to southern Dutchess County.

Direct comparisons with the land use survey conducted in 1988 for the last Master Plan are difficult because some of the survey methods and categories differ. Of course, the primary difference is that more houses have been constructed, but several other changes are noteworthy. Three private campgrounds have been reduced to two, one each on Long and Mud ponds. The Clinton Nature Trail north of the Town Hall has been added. The town solid waste transfer station has been established. The decline in commercial uses in the hamlets has continued. Overall, the town-wide dominance of residential uses is evident even in the hamlet centers. Four of the seven hamlets in Clinton are without a store to act as a

focus for the residential community. Since the store in Clinton Hollow is currently inactive, at the time of this writing this now applies to five of the seven hamlets.

The NYS Assessor's Manual provides the town assessor a tool to define land use as well as aid in the assessment of lands. To appreciate how land use changes, one can compare the codes over time. It is worth noting that code definitions can change as well as codes being added and/or deleted. Two snap shots in time were taken, one in May 2006 and the second in July 2010, of the number of parcels in each of the land use codes in use at those times. Table 8.2 "Example of Town of Clinton Land Use Property Codes" reflects a summary of that picture. In just 4 years one can see changes by comparing the two listings. As one purpose of a Comprehensive Plan is to define a community's land use, now and in the future, it is easy to see that by comparing the codes over time, one can see if a community's goals in land use are being obtained.

TABLE 8.2: EXAMPLE OF TOWN OF CLINTON LAND USE PROPERTY CODES

Code	Description	May 2006 Count	July 1, 2010 Final Tax Roll Count	Code	Description	May 2006 Count	July 1, 2010 Final Tax Roll Count
105	VAC FARMLAND	27	39	110	LIVESTOCK	1	0
111	POULTRY	1	1	112	DAIRY	3	2
113	CATTLE	2	1	117	HORSE	23	14
120	FIELD CROPS	3	2	150 151	ORCHARD FRUIT CROP	2 0	0 1
210	1 FAMILY RES	1214	1257	220	2 FAMILY RES	52	50
230	3 FAMILY RES	1	1	240	RURAL RES	262	277
250	ESTATE	1	2	260	SEASONAL RES	21	15
270	MFG HOUSING	14	13	271 283	MFG HOUSINGS RES w/COM.USE	1 0	1 1
280	MULTIPLE RES	58	55	300	VAC LAND	2	1
311	RES VAC LAND	74	37	312	VAC W/IMP	33	24
313	WATRFRNT VAC	24	0	314	RURAL VAC <10	291	356
315	UNDERWTR IND	3	5	316	WT VAC W/IMP	1	0
322	RURAL VAC>10	113	114	323	VAC RURAL	2	2
380	PUB UTIL VAC	2	4	411	APARTMENT	4	4
417	COTTAGES	1	1	418	INN/LODGE	1	1
432 433	AUTO BODY AUTO BODY	2 0	0 2	449	WAREHOUSE	3	3
455	DEALER PROD	1	1	482	DET ROW BLDG	5	4

TABLE 8.2: EXAMPLE OF TOWN OF CLINTON LAND USE PROPERTY CODES							
Code	**Description**	**May 2006 Count**	**July 1, 2010 Final Tax Roll Count**	**Code**	**Description**	**May 2006 Count**	**July 1, 2010 Final Tax Roll Count**
483	CONVERTED RES	1	1	484	1 USE SM BLD	2	2
486	MINI MART	1	1	581	CHD/ADT CAMP	1	1
582	CAMPING PARK	2	2	600	COMMUNITY SER	1	0
614	SPEC SCHOOL	1	0	620	RELIGIOUS	5	6
632	BENEVOLENT	2	2	642	HEALTH BLDG	1	1
651	HIGHWAY GAR	6	6	662	POLICE/FIRE	3	3
682	REC FACILITY	4	4	692	ROAD/STR/HWY	6	2
695	CEMETERY	6	6	710	MANUFACTURE	2	1
720	MINE/QUARRY	1	0	817	ELEC TRAN	2	0
831	TELEPHONE	2	1	872	ELEC SUBSTATION	1	1
				882	ELEC TRANS IMP	0	1
880	ELEC-GAS-TRANS	1	0	910	PRIV FOREST	4	4
911	FOREST S480	9	9	912	FOREST S480a	0	1
					TOTALS:	**2,312**	**2,346**

(Note: VAC in this listing stands for VACANT)

Table 8.2 indicates the increase in single-family residential development, and the decline in agricultural and vacant land use, that occurred in the town in just a four-year span.

Land Use Techniques

New York State Town Law requires that all town land use regulations must be in accordance with the Town's adopted Comprehensive Plan. The Comprehensive Plan is to address a wide range of goals set forth by the community. Linking the Zoning Law to the Comprehensive Plan should insure the ordinance is reasonable and will achieve the goals of the community. The creation of a Zoning Law must therefore be the result of a careful study and deliberate review of the current and reasonably foreseeable needs and goals of the community.

We have seen the results of the past and obviously can relate to the present, but looking to the future requires readdressing many factors. For example, housing availability and affordability, traffic patterns, road standards, protection of farmlands and environmentally

significant areas, and development of hamlets, to name a few, all require an understanding of what land use tools are available to help reach the community goals.

Over the past twenty (20) years various techniques for land use have proven of value. Boards and committees serving the Town of Clinton need to consider what they are and how they may be of further value in helping encourage and direct the desirable land uses in our community. As a foundation, the Pace University School of Law has provided a "Glossary of Terms and Phrases" that has been included as Appendix 8.2[2]

As time passes, the impact of various laws and amendments will require Clinton boards and committees to continue their education and understanding of such changes.

To insure an effective link of the Zoning Law to the Comprehensive Plan, the committee assigned to review the Zoning Law must address the various chapters in this amended Plan. Each chapter and its related goals should be studied from the standpoint of implementation using the related techniques available.

As an example to appreciate how one might apply land use techniques, consider a situation that landowners could be thrust into. Prior to the establishment of the current zoning districts many subdivisions were created. The developers, in many cases, created deed restrictions so as to establish basic protections for the future owners of the land. A common rule of thumb was to create lots of one acre in size. A lot of this size was thought to have ample land to install both a well and a septic system with adequate safe separation between the two. The developer might create front, rear and side yard restrictions and suggest that rear yards contain the necessary septic system. A typical set of restrictions might be a 50 feet front yard and 15 feet side yard setbacks. Consider an impact on such landowners that now fall in a zoning district that requires a lot size of five acres. Among other restrictions, such a district requires a front yard setback of one hundred feet, a rear yard setback of 75 feet and side yard limits of 50 feet. The Zoning Law recognizes that these pre-existing, non-conforming lots should be allowed to continue; however, to develop the land would likely require the landowner to request variances from the Zoning Board of Appeals. The set of conditions described not only places a time and financial burden on the landowner, but also requires effort on the part of the Planning Board, the Zoning Board of Appeals, and the Zoning Administrator to process the application for a variance. To prevent this additional burden on the landowner as well as the town, the *Comprehensive Plan* recommends that the town should consider alternative means of providing relief from the area and bulk regulations for preexisting non-conforming lots located within low, very low, and conservation density

[2] Appendix 8.2 "Glossary of Terms and Phrases" is 19 pages long and is available digitally.

residential zoning districts. Permitted land uses relating to these districts will also need to be considered when addressing any alternative means. A review of the deed restrictions of the related subdivisions would also be prudent. In reality, this example is a condition that currently exists and should be addressed so as to implement a solution.

A number of available land use tools and methods are recommended throughout this plan to help the town reach its goals. These tools are defined in Appendix 8.2.

- Agricultural zoning district
- Amortization of nonconforming uses
- Architectural review board
- Cluster subdivision (using conservation subdivision design--see Figure 8.8)
- Conservation easement (Restrictive covenant)
- Conservation overlay zones
- Critical environmental area
- Deed restrictions
- Development overlay zones
- Floating zone
- Freshwater wetlands regulation
- Historical district
- Incentive zoning (density bonus)
- Overlay zone
- Planned unit development
- Recreational zoning
- Restrictive covenant
- Sign regulation
- Special use permit (Conditional use permit)
- Transfer of development rights

In general, the land use tools and techniques listed above, along with any new techniques that may be developed in the future, should be considered for implementation of the Plan's goals, but only after a thorough review of all related considerations.

Better Site Design

On April 15, 2005 the Town of Clinton and other municipalities gathered at the Samuel Morse Historic Site, Locust Grove in Poughkeepsie, NY to attend a workshop on Site Designing for Natural Resources. A presentation on Better Site Design ("BSD") Concepts

and Recommendations based upon a "Clinton and Wappinger Analysis" was the introduction of the subject. It is worth noting the participants were given the document "Better Site Design: A Handbook for Changing Development Rules in Your Community" which was prepared for the roundtable with the assistance from:

The Morris and Gwendolyn Cafritz Foundation
US EPA Office of Wetlands, Oceans, and Watersheds
Chesapeake Bay Trust
Turner Foundation
Chesapeake Bay Program

Next, Better Site Design Concepts and Benefits of Better Site Design were reviewed. "BSD" is a process that encompasses 22 model development principals, a code and ordinances review, and a facilitated roundtable process. The 22 model development principles are not national design standards. Instead, they identify areas where existing codes and ordinances can be changed to better protect streams, lakes, and wetlands at the local level. As Table 8.3 "Highlights of the Town of Clinton: Recommended Model Development Principles" illustrates, each principle is presented as a simplified design objective. The development principles are divided into three following areas:

1. Residential Streets and Parking Lots (Habitat for Cars)
2. Lot Development (Habitat for People)
3. Conservation of Natural Areas (Habitat for Nature)

The purpose of the codes and ordinances review is to assess whether or not a community's current regulations allow BSD techniques to be implemented. The review includes both a code and ordinances worksheet as well as interviews with town stakeholders to clearly outline the development review process and any discrepancies within the codes and actual practice. (Reference p. 1 of the report)

To continue with implementing BSD the town of Clinton and Wappinger agreed to perform a case study for their municipality. "For this study, the development process for the two NY towns, Wappinger and Clinton, were reviewed. The three goals of the review process were: 1) to determine if the 22 Model Development Principles are being applied, 2) to assess the major incentives and barriers to the codes that influence their use, and 3) to make recommendations to each town to overcome these barriers and provide incentives for Better Site Design principles." (Reference p. 2 of the report.) The Center for Watershed Protection (Ellicott City, Maryland) assisted the Town of Clinton with the review of local codes,

concluding with the publication of "Dutchess County, NY Better Site Design Case Studies" prepared for the Dutchess County Environmental Management Council.

The next step in the process was to involve a diverse group of local stakeholders to review the initial recommendations made by the Center for Watershed Protection, and then come to consensus on a set of recommendations for local code changes that could be proposed to the Town of Clinton Town Board. The NYSDEC Hudson River Estuary Program assisted with the year-long process which was conducted with the help of a Site Planning Roundtable and two subcommittees: Streets and Lots, and Natural Areas. The final product of the Roundtable was the document, "Town of Clinton: Recommended Model Development Principles for Protection of Natural Resources in the Hudson River Estuary Watershed." In this document, the Town of Clinton stakeholders addressed the 22 principles and for each included in the study: 1) a Principle statement, 2) Recommendations and 3) the associated Rationale. The recommendations are summarized in Table 8.3. The *Comprehensive Plan* suggests it is appropriate that these recommendations be reviewed and that codes and ordinances be re-addressed for potential changes.

Table 8.3: Highlights of the Town of Clinton "Recommended Model Development Principles"

Streets, Parking and Lot Development

- Discourages creation of excess impervious surface by reducing minimum required street pavement width of low-volume local roads to 20 feet using the American Association of State highway and Transportation officials (AASHTO) guidelines.
- Encourages efficient street and driveway layouts to reduce impervious surfaces.
- Encourages use of alternative cul-de-sac designs to reduce impervious surface. Where used, round cul-de-sacs should incorporate center landscaped islands and stormwater management practices.
- Encourages use of vegetated swales by allowing swales as an alternative to enclosed stormwater drainage pipes.
- Encourages shared parking to reduce parking lot size and includes references for development of shared parking language.
- Encourages use of stormwater management practices such as bioretention in parking areas.
- Supports flexible design standards for sidewalks and driveways through existing local codes.
- Encourages use of shared driveways to reduce overall lot imperviousness by suggesting use of a Model Shared Driveway Agreement.
- Recommends formation of a committee to explore potential updates to the Town of Clinton Subdivision Regulations and Zoning Law to further define allowable and unallowable uses of open space and open space management.
- Encourages on-lot stormwater treatment to reduce and infiltrate runoff.

Conservation of Natural Areas

- Recommends that the Planning Board and Zoning Board of Appeals require vegetated stream and wetland buffers be shown on site plans, subdivision maps and special use permit applications. For building permit applications, buffers should be shown where appropriate.
- Supports protection of vegetated buffers by recommending that forested buffers be flagged during construction.
- Recommends implementation and enforcement of existing provisions in the Zoning Law that regulate disturbed project sites near water resources.
- Recommends funding for education to local boards and the public on the importance of forested buffers for water resource protection.
- To minimize impacts of clearing and grading, recommends the use of site fingerprinting techniques*.
- Promotes conservation of native trees and other vegetation by recommending that lists of native plants and invasive species should be provided to homeowners and developers.
- Recommends that committees be formed to further define open space management and also explore development of flexible subdivision provisions incorporating conservation incentives that are allowed in New York State.
- Recommends that all construction site owners and operators be reminded to file for coverage under New York State SPDES General Permit for Stormwater Discharges from Construction Activity (GP-02-01) and submit the required Stormwater Pollution Prevention Plan (SWPP) to the Town of Clinton when the project disturbs one acre or more of soil.

(*Note: Site fingerprinting involves delineating the smallest possible areas and restricting ground disturbance to those areas where structures, roads and rights of way will exist after construction is completed. Site fingerprinting should be encouraged during the planning, development and implementation phases of a project.)

Dutchess County Planning Policies and Greenway Connections

Dutchess County has established a Comprehensive Plan for the County in the document titled "Directions – The Plan for Dutchess County," dated February 1987. Dutchess County's land use goal as stated in that plan is, "To promote a land use pattern that strengthens existing centers, protects important natural resources, maintains an efficient transportation network, provides for economical services and facilities, fosters an orderly pattern of growth and development and helps each community protect its community values and maintain its distinct identity." The plan, "looks to past land use patterns as guides for future growth. It contains more than 250 policies aimed at reinforcing the cities, villages and larger hamlets in the county and protecting the county's natural resource base. The plan explores ways to improve existing commercial strips and diminish the trend toward new strip development. It suggests methods of subdivision design that help promote community living. It proposes environmental protection measures, recreational space standards, methods for supplying affordable housing, and ways to ensure water supply." The plan has stated goals in the following 14 areas:

- Community Values
- Population
- Regional Perspective
- Economic
- Water Resources Protection
- Water Supply and Waste Disposal
- Land Use
- Transportation
- Housing
- Community Facilities
- Recreation and Open Space
- Historic and Cultural Resources
- Energy
- Site Planning

Over the years the Dutchess County Planning Department has added to or influenced this plan by the creation of a reference document known as "Greenway Connections," which represents the County's most current planning model. *Greenway Connections*, Dutchess County's Greenway Compact Program and Guides was approved by the Hudson River Valley Greenway Communities Council in 2000 as a model for the 13 counties in the Hudson Valley region. Since then, the County and 29 out of 30 municipalities, including the Town of Clinton, have joined the Greenway Compact, making them eligible for grants, planning assistance, state liability protection, and other benefits. Dutchess County communities have already received more than $1.7 million of Greenway-related grants. The Greenway program is entirely voluntary, respects local home rule, and relies on incentives and guidelines rather than any requirements.

The Greenway Compact promotes inter-municipal cooperation on five complementary goals:

- Natural and cultural resource protection;
- Economic development, including agriculture, tourism, and urban redevelopment;
- Public access and trail systems, including a Hudson River Greenway Trail;
- Regional planning; and
- Heritage and environmental education.

Examples of this inter-municipal cooperation include Clinton's membership in the Wappinger Inter-municipal Council ("WIC") and the Fallkill Watershed Council.

Greenway Connections is a highly illustrated, easy-to-use sourcebook of inspiring ideas, how-to guidelines, and case study examples that are designed to help local officials and citizen groups improve their surroundings. The "Greenway Guides" offer detailed recommendations on a variety of current planning topics, from saving farmland, designing conservation subdivisions, retrofitting commercial strips, and creating walkable centers to site specifics on signs, parking, lighting, and landscaping.

In 2000 the Town of Clinton adopted Local Law No. 3 Greenway Connections. Section 1 "Adoption of Greenway Connections" Item 1 states "Pursuant to the provisions of Section 44-0119 of the Environmental Conservation Law of the State of New York, the Town of Clinton hereby adopts the statement of land use policies, principles and guides entitled "Greenway Connections; Greenway Compact Program and Guidelines for Dutchess County Communities" by which action the Town of Clinton becomes a participating community in the Greenway Compact."

Section 1 Item 3 of this local law states "It is the stated policy of the Town of Clinton that, to the extent the Town amends its current, or enacts new, land use laws and regulations, such new or amended laws and regulations, where appropriate, will be designed to be consistent with 'Greenway Connections.'"

It is worth noting that Section 2 "Amendment of Zoning Law" and Section 3 "Amendment of Subdivision Law" were also part of Local Law No. 3 of 2000.

In recognizing the above action taken by the Clinton Town Board, it is appropriate that the update of the 1991 Master (Comprehensive) Plan acknowledge this local law and its intended impact on this document and any subsequent revisions to the Clinton Zoning Law and Subdivision Regulations.

Land Preservation

It is also worth noting that as of June 2009, 1,911 acres of land in the Town of Clinton have been protected by Land Trusts or Environmental Organizations, as follows:

- Dutchess Land Conservancy – 1,367 acres
- Winnakee Land Trust – 431 acres
- The Nature Conservancy – 58 acres
- Cary Institute of Ecosystem Studies – 55 acres

Protected lands are identified on Figure 9.1

Current Zoning Districts

The Town's current land use pattern is to a large extent determined by the town's Zoning Law. The Town includes nine Zoning Districts, which appear on Figure 8.7 (Current Zoning Districts) along with the Ridgeline, Scenic and Historic Protection Overlay District, which the Town Board adopted in 2000, and Clinton's seven Critical Environmental Areas. The objective and general location of each of the Zoning Districts are described below, along with specific recommendations for revisions.

Conservation Agricultural Residential (C) District

This district surrounds the three major lakes in the north-central portion of the town. It extends from the floodplain of the Little Wappinger Creek on the east to the ridgeline of the steep slopes to the west of the lakes, from the northern town border to Fiddlers Bridge Road on the south. This area includes the primary watershed of Silver Lake, Mud and Long Ponds.

The C District regulations are intended to preserve and maintain the quality and quantity of surface and groundwater in the primary watershed area of Silver Lake, Mud Pond, and Long Pond. These lakes have been identified as one of Dutchess County's Significant Areas by the Dutchess County Environmental Management Council because of their unique geological formation and important habitats. In addition, they are located over one of Clinton's two prime aquifers, where highly permeable surficial sand and gravel lies over a wide band of carbonate bedrock. The C District permits agriculture and residential uses, but prohibits certain uses and activities that are incompatible with the goal of protecting high-quality water for drinking and recreational use. The restrictions are designed to ensure long-term surface water quality and the substantial groundwater potential in this area, to protect aquatic life, and the health, safety and general welfare of the surrounding residents.

Very Low Density Agricultural Residential (AR5) District

This is the largest district in the Town, covering most of northern and eastern Clinton. The land is generally characterized by areas of steep slopes, extremely shallow soils with exposed bedrock, or soils with poor permeability. Overall, these soil conditions make siting foundations and septic systems difficult, very often requiring fill even in the best location on the property. Principal uses include agriculture and single-family dwellings and accessory uses at a density compatible with the natural limitations of the land and clustered where appropriate. The relatively rugged topography in this district makes these areas, for the most part, rural and lightly developed.

Low Density Agricultural Residential (AR3) District

This district includes a large portion of the south-central portion of the town, covering the area around and to the west of Clinton Hollow, primarily to the west of Little Wappinger Creek. Three smaller areas in the northern portion of the town are also included in this district—a triangular section along Crum Elbow Creek off Route 9G, a long narrow section east of the Little Wappinger Creek between Schultzville and Bulls Head, and an area centered around the intersection of Nine Partners Road and Pumpkin Lane. Since moderately deep soils are generally prevalent in these areas, the land is more conducive to both agriculture and development than most other sections in Clinton. Uses include continued agricultural uses and low-density residential development with clustering and other land conservation techniques encouraged to protect sensitive natural resources, open space, and farm soils.

Hamlet (H) District

Clinton's seven hamlets were historically the centers of economic activity in the town. As the use of water power declined and the modern road network developed, the hamlets retained fewer and fewer businesses, although they still remain residential concentrations and the focus of community identity. Nonetheless, several of the historic hamlets are still amenable to small-scale commercial development.

The Zoning Map does not present one particular area of Clinton as a town center like many of the surrounding towns, but rather allows limited commercial activity in the hamlets of Clinton Corners, Schultzville, and Clinton Hollow. This provides for mixed use within relatively confined areas and encourages smaller-scale businesses that would primarily serve local needs. The H Districts provide for a traditional hamlet land use pattern of mixed residential, community facilities, and small-scale commercial businesses. A variety of uses and housing types, short front setbacks, pedestrian orientation, vacant and interior lot development are encouraged, while highway business uses or suburban strip centers are not allowed. Compatibility with the existing historic and primarily residential character of the hamlets is protected through design criteria in the site plan review process. The principal residential character of the hamlets is retained by encouraging single-family houses on small lots, with some opportunities for small clusters of residential units, either through development of back lots or vacant lots, property on the perimeter or conversions of existing large homes.

The H District includes the existing concentration of buildings, plus a limited amount of undeveloped land on their perimeters. Schultzville, Clinton Hollow, and Clinton Corners all

retain an existing country store as a commercial focal point of activity (although as of 2009 the Clinton Hollow store was vacant). Schultzville and Clinton Hollow are centrally located on County Route 18 in the north and south portions of the town respectively. Clinton Corners is located in the southeast corner of Clinton on Salt Point Turnpike near the Taconic State Parkway.

The purpose of the H District is to locate commercial, medium-density residential and other non-agricultural uses in specific confined areas and to provide identifiable centers within the town. The hamlet district concept seeks to reestablish the vitality of small-scale, mixed uses that were historically the function of the hamlets, centered around the country store, Grange Hall, firehouse, church, or Town Hall. Community focus points like the green in Schultzville, the dam and pond in Clinton Hollow, or the Creek Meeting House and Friends Park in Clinton Corners could be enhanced in the process. The *Comprehensive Plan* recommends that this historic land use pattern be continued, as illustrated on the proposed Centers and Greenspaces Plan (Figure 9.1).

The Schultzville hamlet district includes the Town Hall, Library, nearby church, youth center, and cemetery. This allows for integration of this important public complex and some development opportunity to the north of the traditional hamlet core, in addition to limited room for growth in the open areas to the southwest of the main intersection.

Clinton Hollow, because of the surrounding topography and the power line to the east, is essentially defined by the limits of the existing buildings. Some limited development could occur either through infill or along the base of the western slopes off Meadowbrook Lane. Expansion of this Hamlet District could be considered east of Clinton Hollow Road and south of Hollow Road.

Clinton Corners hamlet has some opportunity for growth with open land near the core and the benefit of a centrally located town park. The land surrounding Talleur Lane to the west of the hamlet is open for additional residential development. This would give Clinton Corners some needed depth and make the hamlet more commercially viable for a variety of small-scale businesses. However, the hamlet zone in Clinton Corners extends west to the Taconic State Parkway to include the currently zoned commercial parcels. This close proximity to the parkway, as well as the hamlet's location on the high volume highway Salt Point Turnpike, makes Clinton Corners vulnerable to strip commercial development, which is inconsistent with the types of activities positively identified in the Community Values Survey and the Plan recommendation that the location and scale of business serve local needs. Furthermore, Salt Point Turnpike may not handle significant increases in traffic volume that would be

associated with larger businesses serving regional needs. Allowable uses are consistent with hamlet-scale businesses serving local needs. Stringent landscaping, setbacks, and screening requirements should be enforced in this area to protect the scenic qualities of the parkway. Traditional neighborhood design standards could also be adopted for commercial uses to ensure small-scale buildings appropriate to the hamlet setting, with parking located to the rear of buildings and pedestrian connections to adjacent residential neighborhoods.

Additionally, growth in the Clinton Corners area is complicated by the fact that the hamlet lies over one of the town's prime aquifers extending south to Wappinger Creek (see Figure 3.9: *Water Resources Map*). The surficial sand and gravel deposits readily disperse septic wastes, but may transmit pollutants directly into the porous bedrock underneath and threaten the common groundwater. This area may require additional restrictions to protect surface and groundwater. Contamination by the existing level of development should also be investigated to determine if a future central water system and possibly sewer system might be warranted. A study of possible central utilities in this area should consider a scenario whereby medium-density development could provide private sewer lines south to Wappinger Creek and a modular plant that, if necessary, could facilitate connection of the existing houses in the area. By determining a long-range central utilities plan for this area, the town could gain the most benefits from private actions and help prevent developers from proposing package sewer plants in areas outside the designated service area.

If the H District boundaries are expanded, the districts should continue to be designed to have defined boundaries with greenbelt buffers to maintain a central identity and to limit sprawl that would overwhelm their historic scale.

Pedestrian pathways linking houses to the core features should be considered and speed limits reduced to encourage informal connections between neighbors and safe, central gathering places for children. The restoration of key historic buildings and the establishment of historic districts can build community pride and aid in commercial revitalization. All development in the hamlet zones should be held to consistently applied standards of compatibility in terms of scale, setback, materials, and function.

Residential Hamlet (RH) District

Several of the historic hamlets (Frost Mills, Pleasant Plains, Bulls Head, and Hibernia) are now less amenable to even small-scale commercial development and, therefore, have been designated "residential hamlets" where commercial development is not permitted. Primary uses are single-family houses and accessory uses on small lots and, if soil conditions are

suitable and other performance standards are satisfied, small clusters of residential units. Development of perimeter parcels and vacant or rear lots is encouraged in conjunction with site plan review to guarantee architectural compatibility. Frost Mills and Hibernia, because of existing development and surrounding topography, have only marginal room for growth, but Pleasant Plains hamlet could accommodate some close-in residential development, especially off Quaker Lane and on the property currently used for gravel mining.

All hamlet districts in Clinton are designed to have defined boundaries to limit sprawl that would overwhelm their historic scale. Whenever possible, a buffer of open greenbelt or farmland should be retained at the edge of the hamlet districts to further set off the boundaries and ensure that the hamlets maintain a central identity. The challenge is to allow a certain level of development to provide for affordable housing options and a focus for community activities, while preserving the essential qualities of each individual hamlet.

Medium Density Residential (MR1) District

This district encompasses the area between Route 9G and the Town's western border along the Crum Elbow Creek. The purpose of this district is to allow a variety of residential uses while protecting the safety and capacity of the state highway and the Crum Elbow Creek stream corridor. One-family, two-family, multifamily, and cluster residential development are allowed, as well as mobile home parks and camping trailer campgrounds. A stream protection buffer at least 100 feet from the mean high water mark of the Crum Elbow Creek must be maintained for all principal uses other than agriculture and one-family or two-family dwellings, and natural vegetation must be maintained in this buffer to prevent erosion. To protect the safety and capacity of the state highway, only a minimum number of driveways are allowed. In order to prevent any possibility of strip commercial development, only a few selected commercial uses are permitted in this district.

Clustered Agricultural Residential (CR1) District

This designation is reserved for the southeast corner of the town, east of Salt Point Turnpike. With direct access to Salt Point Turnpike and the Taconic State Parkway and well-drained soils, this district allows moderate residential densities. The previous Comprehensive Plan recommended requiring clustering development in the CR1 District. Without increasing the overall density, clustering preserves more open space and agricultural land, allows better site plans in relation to the interspersed natural constraints, limits road and other infrastructure costs that contribute to escalating housing prices, and preserves the long-range option to

connect to future central utilities. Clustering is required in the CR1 District; however, the Planning Board may waive this requirement under certain conditions.

Existing parcel sizes in this area are generally smaller than the rest of Clinton because of the close distance between the hamlets of Clinton Corners and Hibernia. This location has excellent access to major highways, and soil conditions between Salt Point Turnpike and Clinton Corners Road are favorable to septic systems. The primary constraints on development in this district are floodplains, shallow soils east of Clinton Corners Road, and the underlying prime aquifer. Again, all uses in this area should be sensitive to the vulnerability of the aquifer to groundwater contamination.

Because of the location and limited constraints, the previous *Comprehensive Plan* suggested a moderate residential density district in this area compared to all other sections outside the hamlets, in conjunction with a requirement for clustering. Without increasing the overall density, clustering, using conservation subdivision design techniques, would preserve more open space and agricultural land, allow better site plans in relation to the interspersed natural constraints, and limit road and other infrastructure costs that contribute to escalating housing prices. Also, clustered arrangements could preserve the long-range option of connecting to a future central sewer system on Wappinger Creek. In practice, the Planning Board could require that all partial subdivisions conform to a clustered plan for the entire existing parcel.

Office-Light Industry (I) District

The purpose of this district is to encourage the development of well-designed office and light industrial uses where such uses are appropriate. The physical design, siting and layout of office and light industrial uses are considered to be essential to ensuring a coherent pattern and appropriate mix of land uses, thereby preserving property values and maintaining the visual and aesthetic environment. Further, properly planned office and light industrial uses will provide area residents with employment opportunities and contribute to the economic vitality of the Town.

This district allows for expansion of industrial uses in two existing locations—over 150 acres off Route 9G at the Hyde Park town line, extending east to include Leroy Mountain, and a 39+ acre parcel on Hibernia Road near the Pleasant Valley border. Permitted uses include light industry, offices, office-research, and nonretail commercial functions to increase the district's flexibility and encourage higher standards of site design. Because of the proximity of these zones to residential uses and nearby hamlets, restrictions on uses that constitute a fire hazard or emit smoke, noise, or dust are enforced and high-quality landscaping and wide buffers are required.

The existing 9G Industrial Center has by no means fully occupied this district, most of which is unbuildable due to shallow soils, steep slopes, and wetlands. The district retains the most developable section of the existing zone, west of the steep slopes of Leroy Mountain. There is still ample room for expansion of the existing facilities. This is the prime location in the town for larger-scale office and industrial uses because of its direct access to Route 9G, the only thoroughfare in Clinton that allows commercial traffic. A secondary access to the proposed bypass route on the south connecting to Hollow Road (CR14) may also be a possibility.

The industrially-zoned property on Hibernia Road is not without problems. It extends into the floodplains of Wappinger Creek to the north and is located over one of Clinton's two prime aquifers. Any uses that would involve possible discharge of wastes in this area should be carefully controlled. Also, industrial districts should ideally be located along major thoroughfares, not local roads. Since the nearby Taconic State Parkway is not open to commercial vehicles, regular truck traffic to this site must travel on roads better suited for residential uses. The Town should re-address the appropriateness of retaining this location on Hibernia Road as an Office-Light industry Zoning District.

Floodplain (F) District

The Floodplain District contains the low-lying areas and major stream corridors defined on the Federal Emergency Management Agency's maps as 100-year floodplains. It primarily consists of the banks of the Crum Elbow, Little Wappinger, and Wappinger creeks. Three major wetland areas in southwest Clinton, the tributary of Wappinger Creek extending north into Clinton Corners, and the area around Mud Pond are also identified. In contrast to the scattered state-regulated and smaller wetlands in Clinton, the 100-year floodplains form continuous corridors of green space.

Uses in the F District are limited to agriculture, forestry, recreation, and other uses that would be minimally affected by high water. Structures, especially those that would house either humans or livestock, are restricted. Floodplain setbacks also provide stream protection. Finally, it should be noted that all three town parks in Clinton are located along the floodplain. Floodplains are typically the skeletal framework of larger open space networks that can provide for trail systems and other recreational opportunities.

Ridgeline, Scenic and Historic Protection Overlay (RS&H) District

The purpose of this overlay district is to protect the aesthetic, scenic and ecological character and nature of higher elevation areas and designated scenic and historic areas in the town.

The purpose of the overlay district is not to regulate the use of land for agriculture or single-family residential development. Rather, the overlay district provides standards for regulating the number, height, design, placement and impacts of structures on lands which are 500 feet or more above sea level, and in designated scenic and historic areas, in order to minimize structural intrusions upon the visual landscape, preserve ecological integrity and maintain the rural character of the town.

The Ridgeline Protection Overlay Area includes lands that are 500 feet or more above sea level. The Scenic and Historic Protection Overlay area includes the Taconic Parkway Viewshed, the hamlets included on the Town Current Zoning Districts map (Figure 8.7) and Clinton's seven Critical Environmental Areas. The Taconic Viewshed is defined as lands in the Town of Clinton which are within 3,000 feet of the paved surface of the Taconic State Parkway. This viewshed is a critical part of Clinton's rural scenery, is the first introduction to Clinton for many travelers, and is frequently viewed by residents of the Town. Clinton's hamlets have historic value and are important to the character of the Town. Their location and boundaries are shown on Clinton's Zoning District Map. Clinton's Critical Environmental Areas have been designated by the Town Board to have scenic, environmental, cultural or historic characteristics which merit special protection. Other areas which offer exceptional viewsheds frequently enjoyed by residents and visitors and/or contain structures or sites of historic importance may be designated as part of the Scenic and Historic Protection Overlay by the Clinton Town Board. The *Comprehensive Plan* recommends that the Ridgeline Protection Overlay Area be amended to include provisions governing single family residential development to ensure that such development fits into the landscape and does not impact this significant aesthetic resource.

Summary and Implications for Planning

Figure 8.5 graphically illustrates three of Clinton's major characteristics: the dominance of low-density residential uses in the town, the extent of vacant, potentially developable land, and the scattered nature of non-residential uses, causing a lack of central focus for the town's activities.

New single-family homes continue to fill in the gaps between the former farmhouses. This land use pattern increases traffic hazards along town and county roads by increasing the number of driveways and access points. Construction along road frontages is making Clinton seem more developed than it is. One way to protect open space views, environmentally sensitive areas, and agricultural land while allowing for more diverse residential uses, is to concentrate residential development, while encouraging clustering, especially around the

hamlet areas. This is one of the better site design principles discussed by the Site Planning Roundtable.

Small commercial businesses could also be encouraged in the hamlet areas to assist in creating a central focus, thus reinforcing a sense of community. At the same time, the potential for commercial strip development along Route 9G and other major roadways should continue to be discouraged in the Zoning Law.

To further protect environmentally sensitive lands, the Zoning Law should be amended to include additional unbuildable features, such as wetlands and steep slopes, that must be deducted prior to calculating permitted lot count. Finally, to preserve rural character and minimize traffic and fiscal impacts, the town should consider reducing permitted building potential in areas identified as greenspaces on Figure 9.1 in the following Chapter, consistent with the regional trend of neighboring communities and the recommendations of the Greenway Guides.

The recognition of available land use tools and methods and Better Site Design principles discussed in this chapter provide an opportunity to strengthen the connectivity between the comprehensive plan and the zoning law and subdivision regulations.

CHAPTER NINE:
COMPREHENSIVE PLAN SUMMARY AND RECOMMENDATIONS

The *Comprehensive Plan* for the town of Clinton is designed to be used as a guide for managing growth and change. It consists of planning principles and maps that express the community's objectives for the town's future. The plan takes into consideration the wishes of those who answered the Community Values Survey described in Chapter One, the information gleaned from the basic studies presented in Chapters Two through Eight, and the goals and objectives set forth in this Chapter, as well as the comments from the public in meetings and public hearings and the deliberations of the Comprehensive Plan Committee, the Planning Board and the Zoning Board of Appeals. It provides a framework for development ten or more years into the future by allocating land among several categories of uses, identifying specific transportation improvements, and setting forth the policies that should guide the town's land use decisions.

This is an updated version of the *Comprehensive Plan* that was prepared by the Dutchess County Department of Planning and Development under the direction of a committee appointed by the town and that was approved in 1991. This new version contains information from both the 1990 Census that was not available in time to include in that plan, plus the 2000 Census information and limited available 2010 Census data. The revisions also consider the knowledge developed through the new research and numerous pertinent studies that have become available since that time. This new information is included in the various Chapters, and is noticeably apparent in the expanded material in the Natural Resources Chapter. Significantly, even in light of all the new information, much of the language in the summary and recommendations of the 1991 *Plan* turned out to still be pertinent and applicable.

Although the *Plan* does not have the legal status of a zoning ordinance, subdivision regulation, building codes, or site plan review regulations, it is a legal prerequisite to zoning, authorized by Section 272-a of New York State Town Law, which states that "all town land use regulations must be in accordance with a comprehensive plan adopted pursuant to this section." A comprehensive plan helps to ensure that land use controls are based on a factual understanding of the community's needs. Of course a plan is only effective if its goals and recommendations are implemented in the Town Code, and if the Town Code, in turn, is enforced. This *Plan* includes a number of recommendations that stress the importance of enforcing Town policies and regulations to realize the goals of the *Plan.*

Changes to a community as it develops over the years are almost always initiated by the private sector, by hundreds of individual decisions to build homes, start new businesses, sell farms, or make other changes. However, the private sector responds to opportunities that governments create through zoning, subdivision regulations, and other official statements of local policy. Local governments can also take the initiative for the protection of valuable resources through the consistent application of comprehensive plan principles and other regulatory actions. A comprehensive plan seeks to guide market forces so that development opportunities and land use goals will be compatible.

Method

The *Comprehensive Plan* is based on technical studies as well as the input of town residents. Sources include:

1. The information and local perspective provided by the Town of Clinton Comprehensive Plan Committee which was appointed by the Town Board to update and revise the Plan, with the assistance of a Planning consultant.
2. The Community Values Survey of 2007 prepared by the Committee using the previous survey as a base and conducted by the town, and the comments and recommendations of residents in the Comprehensive Plan Committee meetings held during the planning process.
3. The updated background studies prepared by the Comprehensive Plan Committee on historic preservation, population and economic profile, housing, community facilities, transportation, and land uses, which consider both existing conditions and future needs. Due to the specialized scientific knowledge required, the natural resources study was revised by a consultant, working under the committee's direction.
4. The Committee's analysis of the regional growth patterns and trends that have affected Clinton's growth and will continue to influence the future development of the town.
5. Planning design techniques for retaining the quality of existing social, economic, and natural environments and improving future development.

The Clinton *Comprehensive Plan* was prepared by the Comprehensive Plan Committee using the following steps:

1. Compiled, distributed, and analyzed the town's Community Values Survey.

2. Reviewed and identified pertinent planning issues.
3. Prepared updated revisions to each of the chapters in the 1991 plan.
   a. Inventoried existing conditions.
   b. Identified apparent problems.
   c. Projected future needs.
4. Analyzed the Assessor's office records to identify land use in the town.
   a. The committee reviewed real property tax records to distinguish land use.
   b. The 1988 land use map underlying the 1991 plan was reviewed and used to compare with maps showing current land uses.
   c. The maps were checked against committee members' personal knowledge of land uses in the town.
5. Prepared a series of maps and figures as follows:
   a. Parcels with Historic Sites (Figure 2.1)
   b. Hamlet Parcels with Historic Sites (Figure 2.2)
   c. Topography: Shaded Relief (Figure 3.1)
   d. Steep Slopes (Figure 3.2)
   e. General Geology (Figure 3.3)
   f. Soils: Depth to Bedrock (Figure 3.4)
   g. Agricultural Soils (Figure 3.5)
   h. General Soils (Figure 3.6)
   i. Components of a Watershed (Figure 3.7)
   j. Water Balance at a Developed and Undeveloped Site (Figure 3.8)
   k. Water Resources (Figure 3.9)
   l. Dutchess County Annual Aquifer Recharge Rates (Figure 3.10)
   m. Hydrologic Soils (Figure 3.11)
   n. Water Resource Protection (Figure 3.12)
   o. Floodplain Expansion with New Development (Figure 3.13)
   p. Habitats (Figure 3.14)
   q. Significant Ecosystems and Rare Species (Figure 3.15)
   r. Community Facilities (Figure 6.1)
   s. Town of Clinton Fire Districts (Figure 6.2)
   t. Traffic Volumes (Figure 7.1)
   u. Crash Locations (Figure 7.2)
   v. Speed Limits (Figure 7.3)
   w. Land Use 1988 (Figure 8.1)
   x. Vacant Land Use Comparison 1988 to 2010 (Figure 8.2)
   y. Residential Land Use Comparison 1988 to 2010 (Figure 8.3)

z. Agricultural Land Use Comparison 1988 to 2010 (Figure 8.4)
aa. Residential, Vacant, and Agricultural Land Uses (Figure 8.5)
bb. Non-Residential, Non-Vacant, and Non-Agricultural Land Uses (Figure 8.6)
cc. Current Zoning Districts (Figure 8.7)
dd. Conservation Subdivision Design – Four Step Process (Figure 8.8)
ee. Centers and Greenspaces Plan (Figure 9.1)

6. Interpreted all data for planning problems and opportunities.
   a. Community Values Survey results – identified issues of concern and assessed degree of support for different land use controls.
   b. Background studies – identified current and potential deficiencies, conflicts, and opportunities in local and regional context.
   c. Natural constraints – identified areas with multiple constraints and areas with few constraints.
   d. Existing land uses – identified existing concentrations of uses and existing or potential land use opportunities and incompatibilities.
7. Updated draft background chapters for Committee review and public comment at Committee meetings.
8. Outlined goals and objectives based on identified problems and opportunities and public comment.
9. Defined planning principles and land use categories that would meet the diverse goals and objectives.
10. Recommended a conceptual "Centers and Greenspaces" land use plan along with zoning tools and techniques to implement that plan.
11. Presented the draft Comprehensive Plan to the Town Planning Board and Zoning Board of Appeals for review and comment.
12. Presented draft Comprehensive Plan for public comment during a Public Hearing, and considered changes based on public comments received.

The following sections summarize the information this process produced, present the town's goals and principles, and describe the land use plan categories and map.

Community Values

A critical step in the planning process was the development of a Community Values Survey. The survey was written using the 1988 Survey as a base, adjusted by the Committee, subsequently distributed by mail to every household on the tax roll in Clinton and also made

available in the Town Hall and on the Town's web site. The survey was designed to solicit opinions and comments from residents about the town and its future.

The 486 returned surveys produced a fair and representative sample of Clinton's residents. An analysis of the returned surveys highlighted many clear preferences on individual issues, including the preservation of the town's historic character and natural features, the desire for only limited growth, and the willingness to advocate land control measures. The results of the survey are described in detail in the Community Values chapter.

On the basis of the survey and follow-up discussions with the Comprehensive Plan Committee, preliminary goals and objectives were identified under the following headings:

- Preserve the town's natural beauty and rural character. (Chapter 1)
- Protect historic elements and character, particularly in the hamlets. (Chapter 2)
- Protect the natural environment. (Chapter 3)
- Encourage agricultural activities. (Chapter 3)
- Allow selected economic opportunities. (Chapter 4)
- Provide for additional options in housing types in appropriate locations. (Chapter 5)
- Encourage community facilities and services that meet the needs of town residents. (Chapter 6)
- Provide a safe and efficient transportation system, while preserving the town's scenic and historic roadside features. **(**Chapter 7)
- Encourage land uses that support the foregoing objectives. (Chapter 8)

Specific recommendations to implement the above goals appear below.

Background Studies

The background studies, included as previous chapters in this plan, presented research on existing conditions and projected future needs for a variety of community issues. Major conclusions with implications for the plan are identified below:

<u>Historic Preservation</u>

- Clinton is rich in historic character, and is committed to preserving it.
- Clinton has designated the seven historic hamlets Critical Environmental Areas.
- Since 1986 the Clinton Historical Society has designated 36 buildings in the town as local landmarks.

- The Town Board has designated 49 roads in the town as "Historic Roads of the Town of Clinton" and appointed the Clinton Scenic and Historic Roads Committee to provide recommendations on protection measures.
- The Dutchess County historic survey of 1988 has identified 163 individual sites with historic value in Clinton. Expansion of this list by the Comprehensive Plan Committee to 297 sites includes structures which have local significance to Clinton, such as the Town Hall built in 1920.

Natural Resources

- Clinton possesses a wide variety of natural features that provide both site amenities and constraints on construction.
- A most important factor to be considered in the planning process is the capacity of the land to accept development.
- Much of the land in Clinton has at least one characteristic (steep slopes, wetlands, floodplains, shallow or low permeability soils) that limits its suitability for development.
- Clinton has two general areas where highly permeable sand and gravel surface deposits coincide with bedrock aquifers—just west of Little Wappinger Creek from Silver Lake to Long Pond and in the Clinton Corners area south to Wappinger Creek.
- Soils rated of statewide importance for agricultural purposes cover substantial portions of the town with scattered pockets of prime-rated farmland also still remaining.
- Clinton has significant habitat supporting rare plants and animals, some which are of conservation concern.

Population and Economic Profile

- Rapid double-digit population growth that continued from 1950 to 1990 slowed significantly in the 1990s; the number of residents increased 6.6 percent from 1990 to 2000. Population has increased 7.5 percent between 2000 and 2010 to a town population of 4,312 persons.[1]
- Average household size is decreasing, consistent with the national trend.
- Continued growth is expected; population projections range from 4,557 to 4,922 by 2020**.**

[1] Based on early 2010 US Census Bureau information. Additional 2010 census data is not yet available.

- The long-term transformation of Clinton from an agriculturally based economy to a residential community for commuters to outside work places (90.5 percent of the work force in 2000) appears to have continued since the 1991 plan.
- Nonetheless, the town still has an overall population density below 150 persons per square mile, the threshold for a "rural" town as designated by the New York State Legislative Commission on Rural Resources. In the year 2010, Clinton's population density was 111 persons per square mile[2].
- Clinton has a lower percentage of public transportation users than the county as a whole (3.5 percent in 2000, compared to 4.2 percent for the county). Use of public transportation by town residents has declined from 5.8 percent in 1991.
- In 2000, Clinton had the next to lowest average, but the highest median, family income of surrounding towns; it also ranked higher than the average and median for Dutchess County (2000 Census data).
- Management and professional positions account for a relatively high percentage of the labor force (47.9 percent in 2000).

Housing

- Construction of new homes was at an all time high in Clinton during the 1980s, with the number of housing units increasing 23 percent during that decade. From 1990 to 1999, the number of housing units in Clinton only increased by 12.3 percent. New home construction further slowed from 2000 through 2008, with the number of housing units only increasing by 9.8 percent for that period.[3]
- Single-family detached homes comprised a high percentage (91.9 percent) of total housing units in 2000. The proportion of owners over renters was the highest among surrounding towns and for Dutchess County as a whole.
- No mobile home parks or apartment complexes exist in Clinton. However, they are allowed in the MR-1 Zoning District.
- From 1990 to 2000, the median market value of a house in Clinton increased 10 percent; this is a significant decrease from the rate increase of 202 percent between 1980 and 1990.
- The gap between housing costs and what median income households can afford steadily widened between 1970 and 1990, although home-ownership became slightly more affordable between 1990 and 2000. Nevertheless, projections for 2008 suggest that households earning less than the median income have few housing choices in

[2] Based on the 2010 US Census Bureau actual population of 4,312 persons. According to the 2010 Census, the Town comprises 38.784974 square miles (including 38.1433 square miles of land area and 0.641674 square miles of water area).

[3] Please note that the number of new homes built in 2009 was not available to include in these calculations.

today's market, raising the possibility that Clinton could become an exclusive residential community unless steps are taken to address this. The *Three-County Regional Housing Needs Assessment* prepared by the Planning Departments of Dutchess, Orange, and Ulster Counties (February 2009) estimates the need for 112 affordable owner-occupied units and 29 affordable rental units in Clinton to address the housing affordability gap by 2020. This estimate is based on 120 percent of median income.

- Projected total housing needs range from 1,625 to 1,806 units by 2010 and 1,733 to 2,131 units by 2020, compared to 1,502 occupied units in 2000.

Community Facilities

- The growth over the last 20 years led to a need for additional facilities in the Town Hall. To resolve the need for additional office space and town court needs, the town moved two historic buildings (the Schoolhouse and the Masonic Hall) to the town hall site in 2011.
- The highway department should ensure that the highway garage meets the requirements of the New York State Department of Environmental Conservation.
- Volunteer staffing of fire departments may become inadequate as population grows due to a lack of volunteers. The upgrading of fire and highway equipment needs to be considered in respective future budgets.
- As growth occurs, assessment of parks and recreational space must be reviewed. The west and northern parts of the town are currently without such space.
- The Town has in place a Disaster Plan which is currently under review.

Transportation

- Traffic calming measures should be used in the hamlets to slow traffic speeds and encourage walking, in conjunction with a bypass road around Frost Mills and Pleasant Plains where traffic volumes and accidents are highest.
- Clinton is almost unique in Dutchess County in that its major state highways (Route 9G and the Taconic State Parkway) do not pass directly through the town, but rather only skirt the edges.
- Traffic volumes on state and county roads are increasing annually, and are being carried on a road system that largely retains its narrow rural character.
- Traffic accidents have been increasing on roads throughout Clinton, with intersections generally being the most dangerous locations.
- All at-grade crossings of the Taconic State Parkway in the Town of Clinton have been closed, which has changed traffic patterns in Clinton.

- Alternative systems to the dependence on individual automobiles, such as ride-sharing are only used by a small portion of the community. (The County halted regular bus service to Clinton in 2009.)
- Town-wide reductions of speed limits would provide the most immediate and comprehensive strategy to reduce traffic accidents.
- Intersections on town roads need to be wide enough to provide good sight distances and handle large vehicles, but should be narrowed in many cases to encourage slow speeds and careful turning movements.
- Reduced design and maintenance standards need to be considered for certain low volume roads, consistent with the recommendations of the *Greenway Guide* on Rural Roads.

Land Use

- Much of the land in Clinton is in low density residential use with extensive fields and woodlands. Most of the remaining land is in agriculture or is vacant.
- Non-residential uses are few in number and scattered, causing a lack of central focus for the town's activities.
- Although agricultural land uses are declining, there are orchards, vineyards, specialty crops, and livestock farms still active within the town, with the primary agricultural use now being horse farms.

Planning Goals and Supporting Objectives

The plan for the town of Clinton focuses on eight policy areas based on the community values and background chapters. These chapters provide the documentation and underlying rationale for the following planning principles. Some are statements of town policy. Others are recommendations for future action. They are the core elements of the plan. When recommended by the Comprehensive Plan Committee, after review by the Town's Planning Board and Zoning Board of Appeals, and once adopted by the Town Board, these planning goals and supporting objectives become the guide for all future land use decisions. To ensure that the goals and objectives of this Comprehensive Plan continue to guide conservation and development of the Town in a manner that is consistent with community values, a comprehensive review of the Plan should be undertaken at least every ten years in conjunction with community surveys and/or resident forums on current planning issues. It should also be stressed that one of the keys of the success of the plan clearly lies in the commitment to adequately enforce all existing and future policies and regulations.

1. Community Values

Goal: To preserve the character of the town and enhance the sense of community among Clinton's residents.

1.1 The town should continue to encourage effective public participation in the decision making process to ensure that the concerns of all are heard.

1.2 Major entranceways to the town and the historic hamlets should be enhanced with landscaped thematic markers to visually identify important boundaries and help generate a sense of community identity.

1.3 To reinforce the hamlets as community centers, the town's land use policies should allow compatible development in and adjacent to the hamlets and limit development in the traditionally more rural, open areas.

1.4 The Town Hall and its grounds should be used as a center for community-wide service activities.

1.5 The town should maintain adequate land use and planning regulations to protect the natural landscape of the town and maintain the rural atmosphere of privacy, peace and quiet, and a friendly community. There should be a strong community resolve to enforce Town policies and regulations.

1.6 Major shopping needs are supported by nearby municipalities, and town residents have little interest in having such shopping opportunities available locally, in order to maintain a rural atmosphere.

1.7 Businesses to be encouraged should be limited to those compatible to a rural residential area focused around scattered hamlets, such as farms, home businesses and country stores.

2. Historic Preservation

Goal: To identify, protect, and restore Clinton's historic buildings, sites, and roadside cultural features.

2.1 Clinton's history, particularly of its hamlet centers, should be promoted through the use of educational materials coordinated with driving, bicycling and walking tours.

2.2 A local archive for the collection of historic township documents and photographs should be created by the Town in an appropriately accessible space.

2.3 The town should continue to support documentation and designation of local historic landmarks that is currently being done by the Clinton Historical Society, with well defined standards.

2.4 The Clinton historic survey should be reviewed and refined for the purpose of nominating historic districts and individual sites to the State and National Registers of Historic Places. Where historic structures do not qualify for such designation, criteria should be created to govern local designation.

2.5 The town's local laws should incorporate specific protection measures for designated local landmarks and National Register districts and sites, using the Model Historic Preservation Law prepared by New York State Office of Parks, Recreation and Historic Preservation as a guide.

2.6 The Critical Environmental Area designation of the seven historic hamlets should continue to be used to thoroughly review the environmental and historic impacts of development decisions. The town should also consider adjusting the existing Critical Environmental Area boundaries to include all land in the Hamlet Zoning Districts in order to provide a more complete level of scrutiny under the State Environmental Quality Review process. The significance of each of the seven hamlets should be determined and plans developed for their preservation.

2.7 The town should encourage the restoration and adaptive reuse of historic properties by permitting a range of uses, such as multi-family housing and bed-and-breakfasts, provided that the reuse is subject to performance standards as part of special permit requirements (which include protection of the historic structure).

2.8 The town should develop guidelines to insure that new development does not detract from the setting, scale, and design of surrounding architecture and landscape features, particularly for development in the hamlets.

2.9 In conjunction with the Clinton Scenic and Historic Roads Committee, the town should strive to retain stone walls, tree-lined roadscapes, barns, mill sites and other cultural features of the landscape.

2.10 The town should improve records on historic sites, with better identification of such sites (GPS locations and Tax Grid Numbers).

2.11 The town should re-address the role of the Scenic and Historic Roads Committee to include developing proposals as to how to improve the protection of the cultural features of the landscape.

2.12 The town should review the designation of Historic Roads and historic sites by relating to the significance of the historic impact(s) noted for each (event, place, unusual use, etc.).

2.13 The town should conduct an archaeological resource inventory that identifies areas in Clinton to be protected.

2.14 The town should preserve archaeological resources by carefully considering sensitive archaeological zones identified by New York State and local archaeologists during the SEQR reviews of proposed developments. File newly discovered archaeological sites with the State archaeological survey for inclusion in its databases.

3. Natural Resources

Goal: To preserve the natural resource base on which the quality of life in Clinton depends.

Groundwater Protection

3.1 Land use policies and regulations should continue to provide for densities that permit adequate aquifer recharge and individual septic system effluent dilution while protecting prime and statewide significant agricultural soils.

3.2 In prime aquifer recharge areas, the town should strictly control land uses or consider developing central or shared utility systems to prevent overuse or contamination of groundwater. To prevent groundwater contamination, the town should consider the development of an aquifer overlay district based on Dutchess County's model aquifer protection ordinance.

3.3 The Town should encourage educational efforts and support septic system best management practices including but not limited to:

- Periodic inspections and pumping (every 1-5 years),
- Providing new homeowners with a well and septic system location map
- Avoiding disposal of bulky items in septics,
- Keeping swimming pools and heavy equipment away from leach fields, and
- Practicing water conservation.

3.4 The Town should encourage the use of nitrate removal systems for the construction of new septic systems.

3.5 The Town should encourage the use of high efficiency plumbing devices for new construction.

3.6 The Town should encourage the development of alternative septic systems for problem areas including establishment of sewer districts in developments surrounding lakes or in areas with soil hydrologic groups that are inappropriate for septic systems. Problem areas should be identified and mapped.

Watershed Protection

3.7 The Town should reduce the pollutant load in runoff by:

- Recommending limiting use of lawn chemicals and fertilizers within a minimum of 100 feet of all wetlands, streams, and water bodies
- Requiring a minimum distance of 100 feet of vegetated buffer between all stormwater management basin outfalls and wetlands, lakes and streams
- Developing guidelines for minimizing the impacts of road salt including disposal of snow at least 100 feet from any receiving waters.
- Implementing Townwide policies that eliminate or minimize all known sources of water pollution including road salt, leaching dump sites, and herbicides/ pesticides/fertilizers applied to landscaped areas and utility corridors.

3.8 New septic systems should be at least 100 feet (200 feet in Conservation Areas) from all wetlands, water bodies or streams; this will require that all wetlands on site in proximity to proposed septic systems are delineated.

3.9 Forested, wetland, watercourse, and lake/pond buffers should be shown on all site plans, subdivision maps and special use permit applications, and for building permit applications where appropriate. All buffers should be flagged prior to any land disturbance.

3.10 The Town should review and update guidelines for protection of stream buffers, including recommended width and vegetation (e.g. use of woody vegetation for stream bank stabilization).

3.11 Educational funding should be included in the town budget to provide information to residents about the importance of forested buffers to the town's biological, aesthetic and water resources. Information on forested buffers and requirements for delineation on plans and in the field should be available in the Town Hall and provided to developers and property owners that submit applications to the Town as appropriate.

3.12 During the review process, the Planning Board should require applicants to conduct onsite delineations of all wetlands in the vicinity of proposed land disturbance activities, regardless of jurisdictional status, prior to granting an approval. This is

needed because: 1) National Wetland Inventory (NWI) and NY State Department of Environmental Conservation (DEC) wetland maps are not accurate at the parcel/site scale; 2) U.S. Army Corps of Engineers (ACOE) jurisdictional wetlands and Town of Clinton wetlands are determined from onsite wetland delineations – they are not shown on state or federal wetland maps and; 3) hydric soils maps are not accurate at the parcel/site scale.

3.13 The Town should use the Environmental Protection Agency's three parameter (physical, chemical, biological) stream health guide for evaluating the health of streams and using this information to inform land use decisions and cumulative impact assessments.

3.14 The Town should give careful consideration to watershed protection in local land use decisions, based on the Natural Resource Management Plan for the Wappinger Creek and Fallkill Creek Watersheds, including the consideration of cumulative impacts of land use practices on watersheds (e.g. impacts on water supply and quality), indirect impacts to wetlands and streams, and impacts affecting wetland contributing drainage areas. A similar recommendation should be followed for the Crum Elbow Watershed. The Town should implement these during SEQR reviews of proposed development projects.

3.15 The Town should adopt, as appropriate, the use of the DEC's *Better Site Design Principles* when evaluating new development and stormwater management provisions — including promoting the use of rain gardens and grassed swales. The Planning Board should continue to encourage the use of vegetated swales where practical in new subdivisions and site plans, and the Highway Superintendent should consider vegetated swales for use in highway projects. Swales should be designed according to the most recent version of the New York State Stormwater Management Design Manual.

3.16 Reduce impervious surfaces by minimizing pavement in parking lots, using pervious materials wherever possible, and incorporating stormwater management practices (i.e. bioretention) in vegetated islands. The town should amend the Zoning Law to permit shared parking to reduce parking lot size, and should encourage use of stormwater management practices such as bioretention in parking areas. The Planning Board should continue to: (1) use Greenway Guides (Dutchess County Department of Planning and Development) to provide standards for parking lot landscaping, and (2) encourage the integration of low-impact development practices into landscaped areas where appropriate to manage and treat stormwater runoff. Properly engineered at grade or depressed planting islands with gaps in the curbs should be encouraged.

3.17 When conducting environmental impact reviews, the Town should evaluate potential impacts of a proposed project to watershed health, giving consideration to the area of impervious surfaces and forested area within watersheds (or sub watersheds), and wetland-contributing drainage areas that include the project site.

3.18 The Town should encourage the reduction in impervious surface associated with roads and streets and should adopt narrower road standards for low-volume streets using the *Greenway Guide* on Rural Roads as a model.

3.19 The Town should develop and implement a logging ordinance to address issues of stormwater management (e.g. erosion control), water quality and habitat protection.

Biodiversity

3.20 A defined open space system should be part of every site plan proposal and, where possible, be linked to form continuous greenspace corridors. Natural corridors should be particularly encouraged along streambeds and wetlands to provide open space, wildlife habitat, and groundwater protection.

3.21 Reduced assessments, development plan trade-offs, government purchase of development rights, conservation easements, and other similar approaches should be encouraged to allow desired natural resource protection.

3.22 The town should amend the Zoning Law to require Special Use permit approval for excavation and tree clearing of any land area ¼ acre and greater in size, with the exception of agricultural activities and selective harvesting/sustained yield forestry consistent with the NYS Best Management Practices and Timber Harvest Guidelines.

3.23 During project reviews, the Planning Board should limit the amount of land to be cleared for new development to the minimum extent possible, allowing clearing only within a specifically defined building envelope. Site clearing and grading and tree preservation requirements should be clarified by requiring that the limits of clearing and grading be delineated both on project plans and in the field.

3.24 Encourage the preservation of areas of contiguous habitat, areas with significant biodiversity, and areas that support species of conservation concern.

3.25 Important wildlife habitats and other significant environmental areas should be identified and protected. During the review of proposed projects, the Planning Board should implement Habitat Assessment Guidelines, and recommend the use of NYS DEC's list of "Species of Greatest Conservation Need" for animals, and the Plant Atlas (Young, 2007 and updated versions) for identification of species of

conservation concern. (Refer to the Species Tables in Appendix 3.3 of the *Comprehensive Plan* for lists of these species.) Habitat Assessment Guidelines should be based on models developed by the Towns of Milan, New Paltz, or Shawangunk.

3.26 The Town should protect naturally vegetated contiguous corridors for the movement of particular wildlife species between habitats. To be effective, these connections and corridors must be of sufficient width and vegetative composition, so that they are tailored to the habitat needs of particular wildlife species rather than 'wildlife' in general. They must also provide connections between specific habitat patches suitable for those species, particularly habitats used for nesting or foraging. Information resources for determining corridor placement or width include but are not limited to the Town's Open Space Plan (Biodiversity section including maps), Hudsonia's Biodiversity Assessment Manual, NYS Natural Heritage program resources and research, and the US Department of Agriculture's "Conservation Buffers" publication[4].

3.27 Significant resources should be described in a natural resources inventory or similar report, or be depicted on maps. The Town has baseline studies for the Wappinger Creek and Fallkill watersheds. Additional baseline studies should be encouraged as needed, in particular for the Crum Elbow watershed, which is part of a larger 'significant biodiversity area' known as the 'Dutchess County Wetlands [5].

3.28 Data collection standards. To facilitate a consistent environmental impact/review process, and ensure better mitigation of impacts to significant habitats and species of conservation concern, the Town should recommend standards for the collection of natural resource data (for example, the use of EPA's stream biomonitoring protocol to evaluate the health of streams) by applicants and consultants, and include peer review as needed.

3.29 As part of project review, the Planning Board should require that significant resources be depicted on site plan and subdivision maps so that they can be avoided or contained in the site's 'open space'. If avoidance is not possible, effective mitigation of impacts should be required. A baseline study may be required as part of this process. Mitigation should correspond to all direct, indirect and cumulative impacts on (1) watersheds and (2) biodiversity- including all habitats used by species of

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[4] Gary Bentrup, *Conservation Buffers: Design Guidelines for Buffers, Corridors and Greenways* (Asheville, NC: Department of Agriculture, Forest Service, Southern Research Station, Gen. Tech. Rep. SRS-109, 2008).

[5] T. Howard, et. al., *Rare Species and Significant Ecological Communities of the Significant Biodiversity Areas within the Hudson River Watershed* (Cornell University and the NYS Department of Environmental Conservation, 2002).

conservation concern at some stage of their life cycle, fragmentation of habitat patches, and interruption of corridors and connections between habitats.

3.30 Amend the Town's subdivision regulations to include submission of a resource analysis during the pre-application phase, based on Dutchess County's model subdivision ordinance.

3.31 Identify the location of vernal pools in the town and use the guidelines described in "Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States"[6] for the protection of vernal pools and their associated Critical Terrestrial Habitat. This includes all vernal pools that may be used by pool-breeding amphibians.

3.32 Amend the cluster provisions in the Zoning Law to include the four-step conservation subdivision design standards. Encourage conservation subdivision and subsequent protection of large continuous rather than fragmented areas of natural habitat. List specific criteria to trigger a requirement for conservation subdivisions, and include a minimum percent of the parcel's area that must be left as open space. All areas set aside as open space should contain the most important features of conservation value, such as water resources, biodiversity, and contiguous habitats on the site. Prime and statewide important agricultural soils should be identified as secondary conservation areas to be preserved.

3.33 Conservation subdivision should be required in the Clustered Residential District. This tool should be coupled with other means of protecting agricultural lands, such as incentive zoning which can be used to raise funds for the purchase of development rights from productive agricultural land while encouraging historically appropriate development in the hamlets.

3.34 Encourage the use of native plants in landscaping throughout the Town, wherever possible. The Planning Board should require inclusion of native and non-invasive plant species during project reviews. Landscaping should be designed in such a way that habitat value is also provided. This will mitigate for a portion of the loss of native vegetation in site clearing/grading. The town should identify and periodically update a list of native plants [7] for new plantings and include a list of invasive plant

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[6] A. Calhoun and M. Klemens, *Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States (*MCA Technical Paper No.5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York, 2002).

[7] Lists of native plants may be obtained from a variety of sources, including the following:

a. www.newyork.plantatlas.usf.edu
b. www.wildflower.org/collections/collection.php?collection=NY
c. Univ. of Connecticut: www.jordancove.uconn.edu/jordan_cove/publications/stormwater_manual/Apx_A_Plant_List.pdf
d. NYS Stormwater Management Design Manual, Appendix H Plant Lists, pp. 10-16.
e. D. Tallamy, *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* (Portland, OR: Timber Press, 2007).

species[8] to discourage use of these plants in landscaping; this information should be provided to homeowners and developers.

3.35 Promote the use of Cape Cod curbing[9], when curbing is required, along all streets in the vicinity of reptile and amphibian habitats.

Planning/Miscellaneous

3.36 The town should identify and protect its scenic resources, including open space views and vistas.

3.37 The town should discourage the development and encourage protection of slopes over 15 percent and ridgelines to ensure minimal disruption of their environmental function and scenic qualities.

3.38 The Town should develop and implement a methodology for conducting preconstruction meetings including:

- *For projects requiring Planning Board approvals*: A pre-construction meeting with the Town Engineer and a representative of the town's Conservation Advisory Committee should be arranged prior to commencing construction.
- *All other approvals through the Building Inspector* (i.e. new construction on pre-existing lots): A similar pre-construction meeting should be held to outline buffer and wetland/watercourse protections and ensure that they are properly marked on the site.

3.39 Amend the subdivision regulations to require that utility lines in new subdivisions should be installed underground, and share one trench. Also require that the subdivider install underground service connections to the property line of each lot before the road or street is paved.

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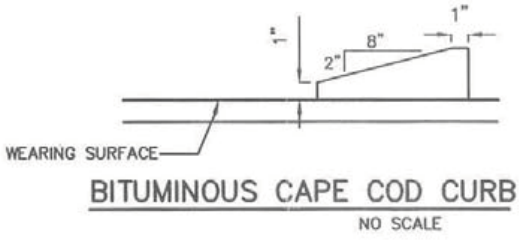
[8] There are many lists of invasive plant species. For example, see "Invasive Exotics of the Eastern Forest" compiled by Leslie Jones Sauer in *The Once and Future Forest* (Andropogon Associates Ltd., 1998).

[9] High (90 degree) curbing creates a significant barrier to migrating amphibians. Many amphibians cannot climb the curbing and are funneled along the curb until they find an opening that allows them to continue their journey, or more often, are swept into or fall into "catch basins." Many other amphibians, wood frogs, green frogs, spring peepers, tree frogs, toads, etc., are also killed en masse due to their tendency to stay within roadways that have steep sided curbs, especially those with pooled water. Studies have shown that Cape Cod style curbing, with its gently sloping surface, allows the amphibians a safer passage to and from their breeding sites. Additionally, as hatchling turtles disperse from their upland nest to their aquatic habitat, they are better able to negotiate a Cape Cod curb than the typical steep-sided curb. The Cape Cod curbing accomplishes the same storm water channeling functions as traditional curbing.



3.40 The Planning Board and Building Department should continue to encourage use of Section 70.9 of the Town Highway Specifications, which supports discharge of rooftop runoff to pervious areas within an existing lot.

3.41 Prime and statewide important agricultural soils should be protected from uses that would destroy the agricultural potential of the land.

3.42 With reference to the NYS Mined Land Reclamation Law (ECL Section 23-2703), the Town should monitor and notify the state of any issues and concerns regarding state-mandated mined land reclamation activities within the town's boundaries.

3.43 The town should ensure that the NYS Department of Environmental Conservation requirements regarding the complete reclamation of mining sites are met, including minimizing the environmental and aesthetic damage caused by extractive operations.

3.44 Develop and implement a plan for effective enforcement of existing natural resources protection regulations. The Town should continue to evaluate the Zoning Law and subdivision regulations for natural resource protection effectiveness, and add provisions as necessary.

4. Population and Economic Profile

Goal: To allow economic opportunities that are consistent with the primarily rural, residential character of the town.

4.1 The town should promote land use and housing policies that provide for the town's mix of ages and income groups.

4.2 Because fluctuations in population over the last 50 years make projections difficult, the town should periodically reassess its housing and community services policies as new significant data become available.

4.3 The town should encourage small businesses that serve the needs of town and hamlet residents and are compatible with the existing community.

4.4 The town should permit home occupations that do not disrupt neighborhood character.

4.5 Clinton should allow only low-intensity tourist activities that are compatible with the rural character of the town's hamlets and open areas.

4.6 The town should encourage agricultural operations, including farm-related businesses, the on-site sale of farm products produced on the property or locally, lower taxation of farms, and the protection of farm activities from constraints

associated with adjacent non-agricultural development. Farm operations and non-farm properties should strive for compatibility while being consistent with the NYS Agriculture and Markets laws.

4.7 The town should recognize the trend in the growth of older population (65 and older) and ensure that its services and housing are consistent with the needs of this age group. This trend is likely to continue as the population ages.

4.8 The town should encourage the County's return of public transportation when economic factors can support the service.

5. Housing

Goal: To provide a broader range of housing sizes and types in appropriate locations for all Clinton's residents, including young people, the elderly, and households earning less than the median income.

5.1 The town should ensure that equal housing laws are enforced and all housing meets public health and safety codes.

5.2 The town should allow for more concentrated housing in established hamlets and within a ¼ to ½ mile radius of the center of each hamlet rather than in outlying areas (while still maintaining open space around the hamlets).

5.3 New single-family development should feature variety in housing design with varied and sufficient setbacks.

5.4 Accessory apartments that are compatible with the existing structure and the surrounding neighborhood should continue to be permitted in owner-occupied homes.

5.5 Performance standards should be reviewed for conversions of existing structures, such as large older homes or unused agricultural buildings, for rental or other residential uses.

5.6 Performance standards should be reviewed for permitting two-family or detached accessory residences in single-family areas.

5.7 Multifamily dwellings should be permitted, subject to site plan review, in hamlet areas, provided they meet performance standards that protect neighboring properties. Multifamily dwellings should not be required to be owner-occupied, with provision for appropriate safeguards for the upkeep and maintenance of the property.

5.8 The town should develop performance standards to allow by special permit the placement of non-permanent Elder Cottage Housing Opportunity (ECHO) dwellings to provide for care of the elderly or disabled.

5.9 The town should encourage conservation subdivision design with preservation of open spaces.

6. Community Facilities

Goal: To provide municipal facilities and services that will meet the residents' basic needs and improve opportunities for community activities.

6.1 The town should continue to develop long-term operations and capital budgets which will provide for the future staffing, equipment, and facility requirements for the Highway Department, recreation programs, fire districts, and other essential services.

6.2 Continue to develop Town Hall as a focus for local services and community events. The town should consider expanding the parking, landscaping, and recreational improvements on the property.

6.3 The town should continue to support the Clinton Library and encourage educational outreach programs in conjunction with area schools and historical groups.

6.4 The town should promote organizations that provide a community-wide public service, such as Clinton's senior citizen's group, with the use of the Town Hall and, when possible, financial assistance.

6.5 The town should continue to provide enclosures and impermeable pads for all Highway Department materials and equipment to prevent pollution and enhance the visual qualities of the site.

6.6 The town should actively promote volunteer staffing for the fire districts and, if necessary, consider paid positions to ensure adequate coverage.

6.7 To improve the fire districts' ability to obtain emergency water supplies, the town should continue to encourage the construction of ponds and the installation of dry hydrants at accessible ponds and creeks.

6.8 The town recreation program should continue to diversify its list of activities, including more passive recreational opportunities for seniors and the creation of linear parks or easements for hiking trails/nature walks.

6.9 As continuing growth in the town occurs, assessment of parks and recreation space must be reviewed. The west and northern parts of the town are currently without such service.

6.10 An engineering study that would include testing of existing wells should be conducted to determine if central utilities need to be established in the future in the vicinity of Clinton Corners to protect the aquifer from increased development in the area.

6.11 The town should consider appointing a recycling coordinator to oversee mandated source separation of household refuse and to work to establish increased recycling opportunities at the town's transfer station.

6.12 The town should continue to resolve the identified needs for increased space for office staff and the town court functions.

7. Transportation

Goal: To provide a safe and efficient transportation system, while preserving the town's scenic and historic roadside features.

7.1 The town should work with the Dutchess County Department of Public Works to address the following issues:

- Traffic calming measures should be used in the hamlets to slow traffic speeds and encourage walking, in conjunction with a bypass road around Frost Mills and Pleasant Plains where traffic volumes and accidents are highest.
- Lower speed limit to 30 mph on Clinton Corners Road (CR 13) and Salt Point Turnpike (CR 17) in the hamlet of Clinton Corners
- Intersection and alignment improvements.

7.2 Clinton should recognize that its roads and right-of-ways are the town's most prominent public spaces, the means by which residents visualize their community, and are areas where the town can most directly control its future character.

7.3 The town should support the Clinton Scenic and Historic Roads Committee's advisory efforts to find solutions to road improvement problems that respect the scenic and rural qualities of the historic road system.

7.4 The town should support a program to enhance its roadside views within the limits of the lands it controls by, for example, rebuilding stone walls, planting buffers to block views at power lines and other visually disruptive locations, selectively pruning to reveal open space vistas, and creating landscaped islands at certain intersections (see

existing examples on Hollow Road at intersections with Walnut Drive and Clinton Corners Road).

7.5 The town should establish an Official Town Map which would include lands and roads owned by the town and other government agencies, and town roads "by use."

7.6 The Highway Department should continue to narrow the width of many of the town's roads and intersections (as long as visibility is not affected), and use other traffic calming measures to promote lower speeds and careful turning movements, as recommended by the new Greenway Guide on Rural Roads (*Greenway Guide* A5) and by the Cornell Local Roads Program, *Highway Standards for Low-Volume Roads in New York State* (2008).

7.7 When improvements are planned to the intersection and curve above Frost Mills, the curve at the bridge and intersection in Clinton Hollow, and the acute-angled intersection in the center of Clinton Corners, these improvements should be made using context-sensitive design and, if necessary, included on transportation improvement programs.

7.8 The town should work with New York State Department of Transportation to construct a culvert at Field Road and to create an interchange and park-and-ride lot at the intersection of Pumpkin Lane and the Taconic State Parkway.

7.9 The town should work with New York State Department of Transportation to improve the intersection where the Taconic State Parkway ramps intersect with Salt Point Turnpike.

7.10 In reviewing proposed subdivisions and site plans, the town should strictly limit the number of access points on collector roads by discouraging strip residential patterns, promoting cluster development and encouraging shared driveways.

7.11 The use of cul-de-sacs streets should be discouraged. Where cul-de-sac streets are necessary to protect natural resources or best serve the community, the town should encourage use of alternative cul-de-sac designs as outlined in the Dutchess Land Conservancy's *Design Guide for Rural Roads* to reduce impervious surfaces and improve aesthetics. Where used, round cul-de-sacs should incorporate center landscaped islands and stormwater management practices rather than a fully paved turnaround.

7.12 As a means to lower housing costs, discourage strip residential development, and limit multiple access points, the town should investigate standards permitting town roads to be built to reduced specifications, but with legal safeguards for quality construction.

7.13 The town should encourage alternatives to the dependence on individual automobiles by promoting employee-sponsored and privately arranged ride sharing and increased use of commuter bus service with direct connections to the train stations.

7.14 Clinton should work with Dutchess County to encourage the reestablishment of public transportation for town residents.

7.15 The Town should implement the recommendations of the Local Site Planning Roundtable outlined in Chapter 7 of this Plan.

7.16 The town should adopt Highway Specifications with rural road standards consistent with context sensitive design as recommended by the *Greenway Guide* on Rural Roads as outlined below:

- Protecting roadside features such as rock outcroppings, stone walls and rows of trees
- Keeping grading and clearing to the minimum based on safety
- Avoiding the use of curbing
- Minimizing road width
- Promoting short common entrances and/or common driveways
- Using wooden guide rails
- Considering alternatives to asphalt, such as porous paving, chip and seal and gravel
- Designating local scenic roads and establish standards for their protection and maintenance

8. Land Use

Goal: To promote a pattern of land use that reinforces the community's hamlets and preserves the town's natural resources and rural character.

8.1 The town should encourage high quality design and construction, with the retention of existing trees whenever possible and the extensive use of native landscape elements that integrates new development with the surrounding area. Projects requiring site plan approval should include landscaping with consideration of passive and active solar potential. The Town should adopt an appropriate architectural Pattern Book as a guide for applicants and reviewing agencies.

8.2 A community design plan should be developed for all of Clinton's historic hamlets to recommend landscaping, parking, circulation, sign and public space improvements, with suggestions for the enhancement of historic buildings and the use of vacant land in the area.

8.3 The town should limit commercial development to hamlet zones to focus activity in historically concentrated areas and ensure that the location and scale of the businesses primarily serve local needs. Exceptions to this concept should continue to include home occupations and be clearly defined in the Zoning Law. Strip commercial development or commercial buildings facing state highways should be strictly avoided.

8.4 The Bulls Head Hamlet Critical Environmental Area should be included in the Residential Hamlet Zoning District.

8.5 The existing hamlet districts should be considered for expansion. However, all hamlet districts should be designed to have defined boundaries to limit sprawl that would overwhelm their historic scale. Whenever possible, a buffer of open space or farmland should be retained at the edge of the hamlet districts to further set off the boundaries and ensure that the hamlets maintain a central identity.

8.6 Growth in the Clinton Corners area is complicated by the fact that the hamlet lies over one of the town's prime aquifers. This area should have additional restrictions, such as an aquifer protection overlay district, to protect surface and ground waters. Contamination by the existing level of development should also be investigated to determine if a future central water system and possibly sewer system might be warranted.

8.7 Stringent landscaping, setbacks, and screening requirements should be enforced in the Clinton Corners Hamlet to protect the scenic qualities of the Taconic Parkway. In addition, traditional neighborhood design standards should be adopted for commercial uses to ensure small-scale buildings appropriate to the hamlet setting, with parking located to the rear of buildings and pedestrian connections to adjacent residential neighborhoods.

8.8 Conservation subdivision design should be required in the Clustered Residence District to preserve open space and agricultural land, allow better site plans in relation to the interspersed natural constraints, and limit road and other infrastructure costs that contribute to escalating housing prices.

8.9 In the case of large parcels that straddle the boundaries of the Hamlet Districts, conservation subdivision should be used to locate new development within the hamlets, leaving the remainder of the property as a protected open space around the hamlet.

8.10 The town should continue to allow light industry and offices in locations with good buffering and access to collector roads, and should review the appropriateness of the locations and boundaries of the current Office Light Industrial Zoning District.

8.11 The town should continue to regulate non-essential, off-site, or excessively large signs, and encourage graphics that are compatible with the building and neighborhood.

8.12 To preserve open space and agricultural lands, the town should promote such techniques as the use of conservation subdivision design, incentive zoning, conservation easements, purchase of development rights, and tax incentives (e.g., leasing of development rights) for the maintenance of open space.

8.13 In areas suitable for agriculture, development should be clustered on marginal soils or embedded within wooded areas whenever feasible

8.14 The Planning Board should continue to have the authority to mandate clustering as an effective means to reduce housing costs, limit access points, and provide additional recreation and open space. Clustering should include the concepts of conservation subdivision design and farmstead complexes.

8.15 The Zoning Law should be amended to include additional unbuildable features, such as wetlands and steep slopes, that must be deducted prior to calculating permitted lot count.

8.16 To preserve rural character and minimize traffic and fiscal impacts, the town should consider reducing permitted building potential in areas identified as greenspaces on Figure 9.1 in the following Chapter, consistent with the regional trend of neighboring communities and the recommendations of the Greenway Guides.

8.17 The town should review the Conservation Agricultural Residential Zoning District and consider additional standards to protect sensitive natural areas, for example, principal aquifers, significant habitats, important agricultural soils, etc.

8.18 The town should amend the Ridgeline Protection Overlay Area to include provisions governing single family residential development to ensure that such development fits into the landscape and does not impact this significant aesthetic resource.

8.19 The town should take full advantage of the State Environmental Quality Review Act as a means to obtain detailed information on the environmental and community impacts of proposed development, make potential concerns open to public comment, and consider project alternatives.

8.20 The town should consider alternative means of providing relief from the area and bulk regulations for preexisting non-conforming lots located within low density residential zoning districts.

8.21 The town should ensure annually that the Real Property Codes are current for all parcels within the town's boundaries.

8.22 The town should return to its previous practice of requiring that all driveways require approval from the Planning Board.

8.23 Moderate density residential uses should only be developed when common community water and sewage facilities can be provided.

8.24 Home occupations should be compatible with the district they exist within and should be clearly defined as to their limitations.

8.25 The town should ensure that all boards, committees and town employees are offered ample opportunities for training and education in their responsibilities and town regulations.

8.26 The town should ensure all boards, committees and appropriate town employees fully understand the existing land use techniques and how and when applied.

8.27 Starting in April 2005 the Town of Clinton participated in a Study of Better Site Design. The results of the Clinton participation are found in the document "Town of Clinton: Recommended Model Development Principles for Protection of Natural Resources in the Hudson River Estuary Watershed". These recommendations should be reviewed and the town codes and ordinances should be addressed for potential changes.

8.28 The town should continue its current relationship with Greenway Connections, Greenway Compact Program and Guidelines of Dutchess County Communities.

Land Use Plan

Based on the goals, background information and planning principles outlined above, the land use plan for Clinton allows a more concentrated level of development and a wider variety of uses in and around the existing hamlet centers, while limiting potential development in the outlying sections, especially areas with sensitive natural characteristics. The resulting plan is meant to help reestablish the traditional settlement pattern by reinforcing the hamlets and preserving the town's open spaces and rural character. It will also help prevent strip residential land use patterns and restrict highway businesses. Agricultural uses are encouraged throughout the town. The Town should use the planning and zoning tools recommended throughout this *Comprehensive Plan* to achieve the land use pattern indicated on the *Centers and Greenspaces Plan* (Figure 9.1).

A description of the Town's current Zoning Districts is included in Chapter 8, and specific recommendations to amend these Zoning Districts appear throughout the *Comprehensive Plan.* Much of Clinton outside the hamlets is currently undeveloped, with low-density

residential uses, agriculture or vacant lands. The plan does not propose any fundamental rearrangement of this settlement pattern. Instead, it seeks to organize, consolidate, and preserve existing patterns, while providing for additional development that will be compatible with Clinton's historic character and a high level of natural resource protection. Generally, development should occur within and adjacent to existing hamlets, and residential density in other areas of the town should be reduced, taking into consideration factors such as traffic impacts and the natural constraints of the land such as depth to bedrock, soil permeability, and the vulnerability of surface and groundwater to contamination. Floodplain corridors are protected in Clinton through their inclusion in a separate Zoning District, but the numerous areas of steep slopes and wetlands, because of their scattered locations throughout the town, will be more efficiently protected through adoption of specific standards in the Zoning ordinance. Use of conservation subdivision design and the deduction of additional unbuildable natural features prior to calculating permitted lot count, for example, are recommended to preserve natural resources and identify the most appropriate areas for development on individual parcels. Other tools, such as incentive zoning, can be used to protect environmentally sensitive and resource rich areas of the Town, such as significant farmlands, while strengthening the existing hamlets. These and other planning techniques recommended in this plan can be used to reinforce the Town's existing "centers and greenspaces" pattern.