

Town of Stuyvesant

Comprehensive Plan

Final Report

February 1996

Submitted by

Town of Stuyvesant Greenway Committee

Funding and technical assistance for the preparation of this Comprehensive Plan were provided by the Hudson River Valley Greenway Communities Council.

TOWN OF STUYVESANT, NEW YORK

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Board Members
Town of Stuyvesant
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Dear Board Members:

The Stuyvesant Greenway Committee herewith presents to the Town Board for its consideration and guidance a Comprehensive Plan for the future of the Town of Stuyvesant.

This Plan represents a consensus reached after 2-1/2 years of discussion and deliberation by a diverse Committee that represents a good cross section of our community. During the course of its work, the Committee has solicited input from Town residents by holding a series of four special public meetings, by conducting a survey of the farming community, and by mailing every resident a copy of the draft Plan. The Committee has also received guidance and assistance from the planning staff of the Hudson River Valley Greenway Communities Council and from hired planning consultants, the Saratoga Associates.

Our aim in formulating this Comprehensive Plan has been to develop a land-use concept that protects and builds on the resources which give Stuyvesant its unique character, providing ample opportunities for appropriate development while maintaining a high quality of life. We ask that the Board give this Plan its careful consideration and endorsement, and that it use the Plan to guide the decisions that will shape the future of our community.

Sincerely,

Gale Bury, Co-Chair
George Hallenbeck, Co-Chair
Stuyvesant Greenway Committee

Acknowledgments

The Greenway Committee would like to thank the many individuals and organizations that have provided support and assistance in the work to develop this Comprehensive Plan. We appreciate the support of Town Supervisor Tod Greci, Council Members Matt Asbornsen, Valerie Bertram, Brad Webster, and Paul Wied, former Council Members Joe Bruno and Richard Bruno, as well as the help of the Town Clerk, Edna Leiser.

We would also like to acknowledge the following individuals and groups for their advice and assistance: Doug Mayer and Mary Dunbar of the Columbia County Farmland Protection Board, Adrian Ooms, Bill Moore, Paul McDowell, and Sheila Powers of the Farm Bureau, Steve Hadcock and Tom Kiker of Cornell Cooperative Extension, Ed Stiffler of the Columbia County Planning Department, Ann Cooper of the County tourism office, Priscilla Frisbee, Chris Piwonka, Ruth Piwonka, Jianrong Zhang, Professor Allen Lewis of SUNY College of Environmental Science and Forestry, Professor Cliff Ellis and the students of the Comprehensive Planning Studio in the Department of Geography and Planning at SUNY Albany, the Columbia Land Conservancy, the Preservation League, and Crawford Associates. Special mention should go to Dan Sitler and Brian McMahon of the Saratoga Associates for the genuine interest they showed in the Town and their expert facilitation of the Committee's planning discussions.

We would like to express our gratitude to the many residents of Stuyvesant who assisted with Greenway events, field work, mailings, and other activities, as well as those who attended Committee meetings, public information meetings, and workshops to give us their thoughts and opinions.

We owe a special debt to the Hudson River Valley Greenway Communities Council for providing the funding that made possible the development of this Comprehensive Plan. We would like to thank David Sampson of the Greenway Council and Maggie Vinciguerra of the Hudson River Valley Greenway Heritage Conservancy for their help. We are especially grateful to Ken Grudens, Greenway Council planner, for his invaluable guidance and assistance and for the countless hours he spent working with the Committee to help it complete its comprehensive planning tasks successfully.

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1. Introduction

Overview

Our Town of Stuyvesant is one of the finest examples of a rural, agricultural landscape in the Hudson River Valley. Residential and commercial development is concentrated in the hamlets and a few compact areas. Open countryside dotted with farms surrounds these core areas and there is a very clear distinction between where the hamlets end and the countryside begins. Historic homes, farm buildings and other structures are found throughout the Town. In addition, natural resources contribute much to this setting. For example, panoramic views of the Hudson River or the Stuyvesant Falls are memorable for residents and visitors. Throughout the Town, stream corridors and their undisturbed steep slopes also contribute natural and scenic value.

In 1993, the Stuyvesant Town Board created a Greenway Committee composed of 16 Town residents and charged them with developing a Comprehensive Plan for the Town. As part of that process, the Committee set out to define which elements are most desirable or important to the community's identity. Farms, hamlets, waterfront areas, and natural, historic and scenic resources stood out as the major traits that warranted attention. The Committee then developed a land-use concept that protects and builds on these resources. Special consideration was given to crafting an economic development strategy that respects the Town's unique features. This Comprehensive Plan document describes the Committee's planning goals and land-use concept, and provides a map of recommended land uses in the Town.

In addition to promoting the Town's goals, there are several other advantages to adopting the Plan. For example:

The Comprehensive Plan will:

- **Inform developers of the type and pattern of land use desired by the Town's residents;**
- **Encourage consistent decision-making regarding new development;**
- **Provide a legal basis for the adoption or implementation of land-use tools; and**
- **Help the Town to invest wisely in municipal services.**

Perhaps the greatest advantage is the feeling of security and lasting accomplishment the community will gain by helping to assure that future residents will continue to enjoy a high quality of life.

Organization of the Comprehensive Plan Report

The remainder of this section of the Comprehensive Plan report presents the major Town goal, a statement of the basic concept underlying the development of the Plan.

The second section of the report presents the final recommendations of the Stuyvesant Greenway Committee. It includes: the Recommended Land-Use Map for the Town of Stuyvesant; a description of several planning tools that seem especially useful in implementing the Comprehensive Plan; and a list of recommended actions and projects to support the aims of the Plan.

The remaining sections of the report are organized around four major components: agriculture, the waterfront, natural and cultural resources, and economic development. Each section provides an overview of the subject area, describes the planning goals and land-use principles developed for that area, summarizes public-meeting input, and presents recommended actions and tools that, along with the land-use proposals in the Recommended Land-Use Map, can help to achieve the planning goals.

Extensive appendices are included at the end of the report to provide background information and serve as resources during the implementation of the Plan. The appendices include two lengthy documents—the Comprehensive Plan Final Inventory Report and the Comprehensive Plan Final Analysis Report—that were prepared for the Greenway Committee by the Saratoga Associates. Several shorter documents are also presented to help clarify the thinking of the Committee and explain the basis for the decisions and recommendations presented in this Comprehensive Plan.

Two other supplementary volumes accompany this Comprehensive Plan report and document the work of the Committee. One volume contains the minutes of the Stuyvesant Greenway Committee meetings, the Committee's Greenway Work Plan, records of the special public meetings hosted by the Greenway Committee, and other items documenting the activities of the Committee. The second volume provides copies of the various grant applications drafted by the Greenway Committee for submission by the Town of Stuyvesant.

As part of the planning process, the Saratoga Associates prepared a set of detailed inventory maps for the Committee. These maps are on file with the Town. A full list of the maps appears in Appendix C of this report.

Major Town Goal

Early in the comprehensive planning process, the Greenway Committee developed the Major Town Goal. This major goal is the most significant concept underlying the development of the Town's Comprehensive Plan. Other goals and recommendations that follow in this Plan reflect the fundamental importance of this major goal. The Goal is as follows:

MAJOR GOAL: Enhance the Town's quality of life primarily as a place to live through the enhancement of the recreational resources along the Hudson River, the conservation of the historic and natural resources townwide, and the stimulation of agricultural industries and other compatible forms of economic development, including residential and commercial development and appropriately controlled tourism, while maintaining the overall rural character that delineates the Town.

The idea is to shape a community that is primarily agricultural and residential with a rural and scenic atmosphere as an economically and recreationally attractive setting for living and working. Specifically, the Town plans to strengthen and/or enhance in a compatible fashion:

- Recreational resources with appropriate access along the Hudson River and Kinderhook Creek waterfronts;
- Historic resources;
- Natural resources;
- Agriculture;
- Industrial/business development; and
- Tourism.

2. Final Recommendations

Recommended Land Uses

The accompanying map depicts the land uses in the Town of Stuyvesant that are recommended by the Stuyvesant Greenway Committee.

This map is *not* a zoning map. Rather, it describes the overall quality of land use that should be encouraged for different areas of the Town. Although zoning is an important tool in implementing the recommended land uses in the Comprehensive Plan, it is not the only tool that can be used to guide development in conformity with the recommended land uses.

Changes from Draft Plan

The final Recommended Land-Use Map differs slightly from the version of the map that appeared in the draft Comprehensive Plan brochure that was mailed to Town residents. The changes are as follows:

1. *The "Agricultural Industrial and Rural Residential" area between Summerset and Gibbons roads has been changed to "Medium Density Residential."* There were two reasons for this change: (1) it was decided that there was no need to differentiate agriculture-related industry from other types of light industry; and (2) it was felt that this location was not optimal for industrial enterprises because of its distance from a major transportation artery and the potential for creating heavy truck traffic on Town roads.
2. *The size of the "Light Industrial" area on Route 9 in Stuyvesant Falls has been expanded somewhat.* This expansion was made to accommodate more industrial development in order to compensate for the removal of the industrial area on Gibbons Road.
3. *Part of the "Medium Density Residential" area to the east of Sunnyside Road has been changed to "Agricultural."* This change was made because the area in question contains prime agricultural soils, it is currently being farmed, and the amount of land elsewhere designated for medium density residential development should support foreseeable housing needs.

Preliminary Land-Use Definitions

The following are the definitions of the land-use categories contained in the map. These preliminary definitions were created to clarify the Committee's intent about the types of development it would like to see within each land-use area.

Service Industrial:

Small-scale neighborhood service businesses that serve local population needs.

Examples: small engine repair shop, woodworking shop.

Light Industrial:

Industrial facilities at a scale and use that generally do not generate excessive noise, truck traffic, fumes or other nuisances. They should have minimal impact on any neighbors and on the natural environment.

Examples: Melo Bag, Bioforce.

Medium Highway Commercial:

Small and mid-sized retail commercial enterprises along Route 9 that serve the residents of Stuyvesant and nearby towns.

Examples: grocery market, general merchandise store, hardware store, small-sized commercial plaza.

Waterfront Tourism Commercial:

Small-scale businesses that provide primarily recreation-related conveniences for residents and places for visitors to spend money in Town.

Examples: B & B's, marinas, cafes, tackle shops, restaurants, antique shops.

Waterfront Conservation, Tourism and Recreation:

Least dense development. Tourism-/recreation-related uses.

Examples: Swimming areas, parks and related recreation structures, trails.

Community Service:

Businesses or institutions that provide spiritual, educational, recreational and other services to the residents of Stuyvesant and nearby towns.

Examples: Churches, college satellite campus, swimming pools, health facilities

Hamlet Commercial:

Small-scale retail stores and services that meet the day-to-day needs of residents in the hamlet centers.

Examples: day care centers, small food stores, bakeries, card shops, hair salons, photocopy services.

High-Density Residential:

A higher density of housing than is allowed under current zoning. Housing may take the form of single-family homes on small lots (1/2 to 3/4 acre). Options may also include paired homes or small apartment houses, designed to be similar in scale and character to surrounding residences.

Medium-Density Residential:

Single or multi-family housing at one unit per acre, with incentives to promote cluster housing on larger parcels to protect farmland, views and natural resources and create small-scale neighborhoods.

Conservation:

Low-density development along steep slopes and near streams and wetlands to minimize impacts to these sensitive resources. Development limited by allowable units per acre and standards for construction.

Agricultural:

Agriculture as well as related uses that promote farming or support the livelihood of farmers and are in keeping with the character of agriculture.

Examples: traditional farms and farm uses, farm stands, greenhouses, farm-based recreational events, barn exhibits, ski touring centers.

Recommended Planning Tools

The Greenway Committee recommends several planning tools that may be useful in achieving the goals and land uses proposed as part of this Comprehensive Plan.

Priority Tools to Develop

1. Zoning Ordinance Amendments

Zoning is one of the most important tools for putting the Comprehensive Plan into action. The text of the ordinance specifies the permitted uses, the size of lots, and building height and setbacks. A zoning map explains where these requirements apply to different areas of the Town.

The Town's Zoning Ordinance text and map should be amended to reflect the goals, guiding principles, and proposed land-use map of this Comprehensive Plan. The pattern of development embodied in the land-use map is intended to maintain the overall existing rural character of the Town and the close-knit neighborhoods of the hamlets. Allowances should be made for new cottage industries and tourism initiatives as well as for landowners to realize some economic return on their land.

While the zoning map should conform in general to the proposed land-use map, it does not have to duplicate this map exactly. There may be selected areas where planning tools other than zoning are used to achieve conformity with the intent of the land-use recommendations so that existing zoning is left unchanged in these areas. However, whatever changes *are* made to the Town's Zoning Ordinance should conform to the proposed land uses in the Comprehensive Plan as outlined in the Recommended Land-Use Map.

2. Site Plan/Building Design Standards

Design standards allow rural communities to develop their economic base while retaining their rural character. They seek to protect the Town from unsightly development that would detract from the appearance of the community and reduce property values. These standards are often developed and implemented as part of a Design Review Ordinance, utilized by the Planning Board when reviewing new commercial, industrial and sometimes residential developments. Design standards are particularly useful for addressing the character of new developments within historic hamlets and along visible road corridors.

A Design Review Ordinance is often used in communities that have a unique historic character or development pattern they want to preserve and enhance, where scenic resources exist that they want to screen from new development, or where tourism is promoted. Specifically, a design ordinance can maintain the character of the Town with standards for architectural character, form and orientation of new buildings, rural landscaping design and materials, narrower road

widths and clear automobile circulation, as well as unobtrusive parking lot location and lighting. This tool will help to keep the Town attractive. In turn, the Town will have more appeal to prospective residents, businesses and tourists.

Design standards must be tailored to fit community needs. Consideration should be given to existing site and building patterns and conditions in the areas being addressed. The impacts of implementing such standards should be carefully evaluated. When a Design Review Ordinance is created, the use of incentives should be considered and requirements should be kept as simple as possible to encourage new development. A developer will usually gladly meet design standards that contain economic incentives and are clearly outlined.

3. Clustering

Clustering provisions allow a developer to cluster new residential units in a designated area of the development parcel on lots smaller than would be allowed without clustering, leaving some portion of the parcel intact. The built-up area of the subdivision can be restricted to a certain percentage of the total acreage while providing the same total number of lots. The developer or owner agrees to legally protect the undeveloped area of the parcel from future development. This area can be left open for agriculture, open space, recreation, or conservation purposes. The Town currently has a voluntary clustering program which has not been widely used.

While standard clustering can decrease the cost of development for the property owner, additional incentives can further enhance those savings. An incentive cluster provision could allow a property owner to create more lots or build narrower roads than would otherwise be permitted for that parcel development. Incentive clustering can be used to help protect prime agricultural soils, scenic views or sensitive natural areas by requiring that the residential clusters be outside these areas.

4. Purchase of Farmland Conservation Easements

The purchase of farmland conservation easements, frequently known as the Purchase of Development Rights (PDRs), preserves farmland through direct compensation to landowners for some or all of the equity in their land. Under a PDR arrangement, the farmer sells the development rights and receives compensation for the restrictions placed on the land. The farmer retains title to the land and can sell or pass along the land to others. A conservation easement is attached to the land in perpetuity, often prohibiting residential development except for the owners, their children or farm labor.

The goal of the program is to preserve both farmland and farming. The tool provides long-term protection of farmlands. The farmer can use the capital gained from the sale of development rights to repay debt, reinvest in equipment, or for other purposes. The program is voluntary and can be implemented at a local,

county or state level. At this time, funding is not available from government sources, but may be available from private non-profit organizations.

The most important consideration in using PDRs is prioritizing which farmland to preserve. The decision should be based on the significance of land to the practice of agriculture. When preparing for such a program, a town should always consider the productivity of soils for farming. Other important factors to look for include a critical massing of farms within the Town to maintain the rural fabric and viability of farming within the community and several economic factors that show the overall stability of agriculture in that area. Farming in the midst of subdivisions is virtually impossible.

Secondary Tools to Develop

1. Preservation Overlay Zones

The Town may consider designating certain areas for additional protection in an "overlay" zone. An overlay is a special zone or district that is superimposed on current zoning regulations and provides a set of additional incentives, guidelines or regulations designed to encourage preservation of the unique character of the given area. These provisions may be voluntary or mandatory. Historic overlay districts are the most common type of overlay zone and can help preserve historic structures important to local heritage and sense of place. Although historic overlay zones are the most familiar, some communities have created local overlay designation programs to promote natural resource preservation as well.

Existing Town Tools

The Stuyvesant Greenway Committee recommends that the following existing Town tools continue to be used to protect agriculture in the Town:

1. Agricultural Districts
2. Right-to-Farm Laws

Recommended Actions

The proposed land uses outlined in the Recommended Land-Use Map support the general planning goals formulated by the Stuyvesant Greenway Committee in the areas of agriculture, the waterfront, natural and cultural resources, and economic development. To further advance these goals, the Committee recommends that the following actions be taken. (The planning goals and principles that provide the rationale for these recommendations can be found in the remaining sections of this report.)

GENERAL

1. Make available to the Town Planning Board and the Zoning Board of Appeals the set of inventory maps prepared for the Stuyvesant Greenway Committee by the Saratoga Associates so that they can be used as a resource by these boards in their decision making.
2. In planning new Town improvements and programs, consider the feasibility of tying these efforts in with applicable state programs that can provide technical assistance and/or grant funding. Programs to consider include the Department of State's Local Waterfront Revitalization Program (LWRP), the Department of Transportation's ISTEA enhancement funds and Scenic Byways Program, and the Office of Parks, Recreation and Historic Preservation's Historic Landscape Designation Program.

AGRICULTURE

1. Conduct a study comparing the cost of providing community services to farms and to residences with the tax revenues generated by each of these land uses; develop strategies for balancing the differences. *(Cost-of-community-services studies typically find that farms generate tax revenues significantly greater in value than the cost of services they impose, while residential development generates significantly less revenues than the cost of the services provided to the residents. Performing a cost-of-community-services study can: (1) provide a sound basis for Town policy making and (2) help educate Town residents about the economic benefits of preserving farmland and open space.)*
2. Help Stuyvesant farmers solicit assistance from organizations (such as the Farm Bureau, Cooperative Extension, American Farmland Trust, Columbia Land Conservancy) that can provide technical guidance for improving and diversifying economic gain.
3. In encouraging economic development in the Town, give special emphasis to seeking out agriculture-related services and industrial enterprises to locate in the

Town. *(The agricultural survey conducted by the Greenway Committee showed that farmers must now journey to other parts of Columbia County or beyond to find support services and markets for their products.)*

4. Allow farmers to supplement farm income by engaging in some limited commercial and recreational service activities that are in keeping with the character of agriculture. *(Examples are: farm produce stands; camping; hunting; trails for hiking and cross-country skiing; hay rides; etc. Such activities should be clearly related to agriculture or to the enjoyment of nature and open space and should be able to coexist with, not replace, agriculture.)*

5. Consider developing agricultural driving tours, farm tours, Townwide farmers' markets, and other similar activities that promote links between small-scale tourism and agriculture. *(Such activities help bring visitors into the Town to spend money. Agriculture-related activities could be integrated with similar tourism-related activities focusing on historic and scenic resources of the Town. For maximum economic gain, farmers' markets might best be pursued in cooperation with towns such as Kinderhook, which already has a farmers' market.)*

6. Encourage the Columbia County Agricultural and Farmland Protection Board to expedite the development of a Columbia County Farmland Protection Plan.

WATERFRONT

1. Continue to work with DEC, DOT and the Greenway Council/Conservancy to improve access to the River and develop a park and boat launch, create historic interpretive facilities and complete the Ferry Road picnic and park area at Nutten Hook.

2. Plan and develop a multi-use trail system along the entire length of the Hudson River in the Town of Stuyvesant utilizing state and railroad lands and voluntary private easements. *(This trail could then become part of the Hudson River Greenway Trail system.)*

3. Promote Stuyvesant Landing as a waterfront destination point for appropriately controlled tourism.

- Continue to improve the landing area as a public recreation area and to stabilize the fire dock.
 - Continue to discuss the possibility of transferring OGS lands along the river to DEC for recreational purposes with joint management by the Town.
4. Promote the Kinderhook Creek in Stuyvesant Falls as a public recreation area.
- Continue to pursue funding to develop a park with a picnic area, waterfront trail, and swimming area at the Sandbar.

- Plan and develop a trail linking the Sandbar, bridge, upper falls overlook, and milk pond.
 - Pursue permanent public access to the power station owned by Niagara Mohawk for recreational purposes.
5. Develop education programs that promote the waterfront and its heritage.
 6. Continue discussions with the Village of Coxsackie regarding cross river regional planning between the two municipalities.

NATURAL AND CULTURAL RESOURCES

1. Pursue funding and technical assistance to identify and map ground water resources (aquifers). *(Accurate knowledge of these resources is important to guide development, determine growth potential, protect water quality, and ensure adequate drinking water supplies.)*

2. Prioritize historic resources for protection and develop plans for assuring their preservation.

- Pursue funding for improving historic resources in the Town
- Continue to document the Town's history and heritage *(e.g., compile oral histories from long-time residents, work with folklorists)*
- Consider the desirability of creating one or more Town-level historic districts and determine their boundaries. *(Such districts would comprise an overlay on regular zoning districts and could include voluntary guidelines to promote preservation of historic structures and features and compatibility of new construction. The creation of historic districts can help promote tourism, help make the Town more attractive for potential businesses, and under some circumstances may increase property values.)*

3. Link the Town's many historic resources, especially those along the waterfronts, to a tourism development program. *(Bringing visitors into the Town can help support local businesses and create jobs.)*

Some suggested activities include the following:

- Continue Historic Stuyvesant Day as a Town event that spotlights different historic resources while promoting community spirit and an appreciation of the Town's heritage.
- Consider developing historic walks, historic driving tours, and other similar activities that capitalize on the Town's historic resources to promote tourism. *(Such activities could be integrated with other tourism-related activities focusing on scenic and agricultural aspects).*

4 Continue to pursue the purchase and renovation of the old railroad station at Stuyvesant Landing. The next steps should be negotiating a purchase agreement and raising the matching funds required to obtain the ISTEA grant awarded to the Town. *(Because of its proximity to the River, to waterfront public access sites, and to potential trail areas, the station could be invaluable as a focus of tourist activities and could serve, for example, as a trail head, information center, etc.)*

5. Develop a plan for protecting scenic views in the Town and for promoting public enjoyment of these views.

Some suggested activities include the following:

- Create and promote scenic walking or driving tours. One Stuyvesant scenic driving tour has already been developed and has been included in county tourism materials.
- Consider voluntary guidelines to promote preservation of scenic views and features. *(The preservation of scenic resources can help promote tourism, improve the quality of life and make the Town more attractive for potential development, and under some circumstances may increase property values.)*
- Determine the feasibility of establishing a local scenic byway program along Route 9J and other roads in the Town. *(Such a program should build on and extend the state scenic byways program and the DOT/Greenway "Bike Route 9" bike trail. A local program should consider construction of and pursue funding for various pedestrian, bicycle, and automobile facilities and amenities (e.g., pedestrian paths, bike racks and bike lanes, automobile turnouts) to enhance the enjoyment of scenic roads.)*

6. Develop a plan and pursue funding for a system of trails linking publicly accessible natural areas, important historic resources, scenic viewpoints, and other areas of recreational value. *(Such a trail system would improve the quality of life for residents, make the Town more attractive for development, and attract visitors who could help support local businesses. Local trails developed along the Hudson River can become part of the regional Greenway Trail.)*

Prime areas to be considered for trail development include:

- The unused Conrail railbed north of Stuyvesant Landing. *(Conrail has already expressed a willingness to allow a trail to be developed along all but the first half mile of the railbed.)*
- The OGS land along the Hudson River between Nutten Hook and Stuyvesant Landing. *(DEC has already discussed with the Town the possibility of taking over this land from OGS and managing it for recreational purposes.)*
- The unused utility right of way (old "trolley line").
- Kinderhook Creek and other creek beds.

ECONOMIC DEVELOPMENT

1. Develop a plan to attract to the Town businesses that are compatible with the Town's character and with the comprehensive land-use plan.

- Give special attention to attracting agriculture related enterprises to locate in the Town's new industrial area.

2 Encourage development of home businesses (cottage industries) in the Town that are compatible with the local residential character and the historic nature of the homes housing them.

To help this process, some suggested activities include:

- Inventory and survey existing home businesses
- Research corollary commercial businesses to service cottage industries

3 Promote and provide initiatives for the establishment of local tourism programs that capitalize on scenic and cultural resources (especially in the hamlets and waterfront areas) and that link to farming, while minimizing detrimental impacts to the Town's rural character. *(Tourism is an attractive industry for the Town of Stuyvesant to pursue because it can build on existing scenic, cultural, and natural resources, can be started on a small scale with minimal investment and expanded as resources allow, and is a "clean" industry that provides incentives for protecting the Town's resources.)*

4 Begin a feasibility study for the development of additional infrastructure for the hamlets of Stuyvesant Falls and Stuyvesant Landing.

Elements to consider include:

- water service
- sewage treatment
- lighting
- sidewalks

Recommended Projects

The Greenway Committee identified and prioritized several projects members would like to see implemented that help to support the goals and recommendations of this Comprehensive Plan. Each Committee member present for the discussion was given 50 points to distribute as desired (in blocks of 5, 10, or 15 points) among all of the projects listed below. The table shows the projects in order of priority from high to low based on the total number of points each project was assigned.

# pts	Project
125	Purchase & rehabilitate RR station at Stuyvesant Landing
80	Develop park at Stuyvesant Landing
65	Develop park at Kinderhook Creek sandbar
65	Create/develop scenic viewpoints on 9J
55	Develop hiking/biking trail along abandoned tracks Stuyvesant Landing
40	Develop hiking/biking trail along abandoned trolley tracks in Stuyvesant Falls
30	Install historic/Greenway Trail signage/interpretation
25	Develop trail/bike path from Newton Hook to Stuyvesant Landing
25	Develop trail/bike path from Newton Hook to Gay's Point
20	Add picnic grills and tables at gazebo
20	Document historical information on underground RR tunnels
20	Add beach below Stuyvesant Landing Park
15	Re-develop Island Park (Stuyvesant Falls)
10	Develop historic trail on private/public lands

3. Agriculture

Goals

Maintain agriculture as the dominant land use by conserving farmlands and economically stimulating local agricultural industry.

- **Protect and conserve important prime agricultural lands.**
- **Strengthen the Town's agricultural industries and support services.**
- **Increase economic gains to farmers who work in production and/or retail agricultural businesses.**

Overview

Agriculture is the primary use of land within the Town. The Town's adoption of a right-to-farm law and a resolution declaring Stuyvesant to be an "agricultural community" are evidence of its strong commitment to farming. A critical concern is the ability of farmers to continue in agriculture.

Within Stuyvesant, low prices for products and high taxes on land are considered to have a major negative effect on farming by over 90 percent of the respondents in a recent survey of farmers conducted by the Greenway Committee. "Use value" taxation, "right to farm" laws and local planning and zoning were the leading factors considered "very important" by the farmers for preserving agriculture. At a local level, the Town has substantial influence over planning and zoning.

Development of local agricultural industries is also important to support farming. Possible facilities include a bottling plant for non-BST cow dairies, milk transfer station and creamery for cheese and yogurt production. An area along Route 9 has been proposed for locating these types of agricultural industrial enterprises. In addition, agriculture-related tourism and recreational services, such as educational farm tours and cross-country ski trails, were identified as uses that could strengthen the financial viability of farming. These types of uses should be permitted on farmland properties under the Town's Zoning Ordinance.

Maintaining agriculture in Stuyvesant also requires the protection of farmland. Therefore, the Plan seeks to minimize the conversion of key farmland into subdivisions. Key farmland includes active farms and areas with soils that have been rated most productive for agriculture by the Soil Conservation Service or the

Cornell Cooperative Extension. The land-use map indicates the areas where farming and farmland preservation are the preferred land use.

The Plan recognizes that some residential development will occur in agricultural areas. However, this development should take place in a manner that is consistent with agricultural preservation policies while at the same time protecting the farmer's investment. Techniques such as providing incentives for residential clustering and low-density zoning are recommended for achieving this objective.

Summary of Public Meeting Survey

A public meeting was held on October 24, 1994, to discuss the Comprehensive Plan being prepared by the Stuyvesant Greenway Committee. Those in attendance answered a survey that included questions related to agriculture (among other topics). Results of the pertinent portions of the survey are summarized below. (A copy of the survey questionnaire with a complete tally of the results can be found in Appendix G.)

Agriculture is the dominant land use in the Town of Stuyvesant and takes up approximately two-thirds of the land in the Town. Meeting participants were asked to indicate how much change, if any, they would like to see in the proportion of land devoted to agriculture, residential, and commercial/industrial development. About 56% of participants would like to maintain the existing level of agriculture in Town; 42% would like to see even more agriculture in Stuyvesant than there is now; only 2% preferred that less land be devoted to agriculture. (The majority of participants also preferred the same or more residential and commercial/industrial development.)

When asked to identify the types of economic development that could help boost the Town's economy, 86% of participants cited farming and agriculture-related industry as holding the most promise. Agriculture was ranked ahead of all other forms of economic development in importance for the Town.

Highlights of Stuyvesant Farmer Survey

In the spring of 1994, the Agriculture Subcommittee of the Stuyvesant Greenway Committee sent a survey questionnaire to all farmers in Stuyvesant. Approximately 70% of farmers (19 of 32) returned the questionnaires. Highlights of their responses are given below. A more complete report of the results can be found in Appendix F.

Farmer profile

- More than three-quarters of the farmers surveyed have been farming for at least 10 years; half have been farming for more than 20 years.
- Three-quarters of those surveyed are full-time farmers.
- About 100 people are working in agriculture in Stuyvesant; slightly more than half of these are farm owners and their family members.

Farm production

- Approximately 7400 acres are currently in farm production in Stuyvesant.
- Dairy farming is the primary type of agriculture in the Town.
- Other commodities produced include beef, sheep, hogs, poultry, hay, corn and grains, vegetables, and forest products.

Farmers' future plans

- All farmers surveyed plan to continue farming for at least the next 5 years.
- About 40% plan to buy or may buy more farmland in the next 5 years; none plan to sell farmland in the near future.

Farm markets and services

- Few farm products are sold locally in Stuyvesant; farmers must go out of Town for buyers.
- No services for farmers (e.g., feed dealers, equipment dealers, processing plants) are available in Stuyvesant; farmers must obtain these services elsewhere.
- Farmers' suggestions for new local industries to support agriculture include: bottling plant for non-BST dairies, creamery, chicken processing plant, wood chip plant, sawmill, and agriculture-related tourism and recreational services such as farm campsites and hayrides.

Factors that hinder and help farming

- Most farmers feel agriculture is adversely affected by:
 - Low prices for products
 - High taxes on land
 - High cost and/or scarcity of farm labor
 - State and federal regulations
 - Cost of equipment
 - High cost of buying land
- Most farmers feel agriculture is helped by:
 - Use value taxation
 - New York State agricultural district laws
 - Right to farm laws
 - New York State farmland protection law
 - Local planning and zoning

Guiding Land-Use Principles for Agriculture

The Greenway Committee formulated several agricultural land-use principles, based on the goals outlined at the beginning of this section, to guide them in developing the land-use map and definitions for the Town Comprehensive Plan. These principles are as follows:

- Consider soil conditions and the Town's Agricultural District in planning for the protection of agricultural lands.
- Minimize the conversion of key farmland into subdivisions.
- Consider appropriate locations for encouraging commercial development related to the tourism potential of the agricultural landscape.
- Consider minimizing residential development in areas where it may conflict with the Town's goals for agricultural areas.
- Allow new development that is consistent with local agricultural preservation policies while protecting the farmer's investment.

Summary of Recommended Actions

The proposed land uses in the Comprehensive Plan support the agricultural planning goals set forward at the beginning of this section. To further advance these goals, the Stuyvesant Greenway Committee recommends several actions that are summarized below. (See "Recommended Actions" in Section 2 for a complete description of each action.)

1. Conduct a cost of community services study.
2. Help Stuyvesant farmers solicit technical assistance from agricultural organizations and agencies to aid in improving and diversifying economic gain.
3. Give special emphasis to seeking out agriculture-related services and industrial enterprises to locate in the Town.
4. Allow farmers to engage in some limited commercial and recreational service activities that are in keeping with the character of agriculture.
5. Consider developing agricultural driving tours, farm tours, Townwide farmers' markets, and other similar activities.
6. Encourage the County Agricultural and Farmland Protection Board to expedite the development of a Columbia County Farmland Protection Plan.

4. Waterfront

Goals

Increase public access to the Hudson River and Kinderhook Creek waterfronts for recreational purposes.

- **Establish specific areas as prime recreation destination/access points for various types of recreation.**
- **Develop education programs that promote the waterfront and its heritage.**
- **Preserve the scenic qualities of the waterfront areas.**
- **Protect and enhance the historic structures along the waterfront.**
- **Protect and conserve important natural resource areas along the waterfront.**
- **Encourage appropriate commercial waterfront development related to recreation, education, scenic vistas and historic/natural interpretation.**

Overview

The Hudson River and Kinderhook Creek are valuable but still untapped waterfront resources. Once easier public access is accomplished, the Hudson River and Kinderhook Creek can become the "main street" for Stuyvesant Landing and Stuyvesant Falls, respectively. For recreation and economic development, access to these waterways is central to the interests of the Town.

The Town has over 9 miles of frontage along the Hudson River, yet the number of places where residents can actually touch the waterway are quite limited. Due to the active rail line, creating additional access points will be difficult. Therefore, existing river connections, such as those at the fire dock and beach areas at the Landing and at the Nutten Hook Reserve, should be reserved and improved for public access. Both a car-top and a trailered boat launch are planned for the Nutten Hook Reserve. The Town has initiated discussion with the Stuyvesant Fire District regarding public use of the fire dock area at the Landing. The Town should continue to investigate with the State DEC and OGS the possibility of joint management of the OGS lands north of Nutten Hook for recreation and tourism. In addition, the Town should pursue its negotiations with Conrail on converting the unused rail line north of the Landing to a recreational trail.

The Town plans to provide public access for swimming and picnicking at the Sandbar. This area is located just upstream of the bridge on the east side of Kinderhook Creek. A trail linking the Sandbar, bridge, upper falls overlook and

Milk Pond would help to enhance the public's enjoyment of this waterfront as well as the surrounding hamlet. Over the long term, access to the creek south of the bridge should be developed. The best opportunity for access is the land owned by Niagara Mohawk, which provides views of the creek below the lower falls. The Town should pursue permanent access to or ownership of this property.

The Plan recommends the creation of a multi-use trail stretching the length of the Town along the Hudson River corridor. The trail would link the many natural, cultural and scenic resources that occur along the waterfront. The trail could become part of the Hudson River Greenway Trail, a regional trail system that is being developed by the Greenway Conservancy for the Hudson River Valley.

Summary of Public Meeting Survey

As noted in the previous section, a public meeting was held on October 24, 1994, to discuss the Comprehensive Plan being prepared by the Stuyvesant Greenway Committee. Those in attendance answered a survey that included questions related to waterfront access (among other topics). Results of the pertinent portions of the survey are summarized below. (A copy of the survey questionnaire with a complete tally of the results can be found in Appendix G.)

The Greenway Committee understands that the citizens of Stuyvesant want better access to the Town's waterfronts along the Hudson River and Kinderhook Creek. Four waterfront areas were listed as possible locations for improved public waterfront access: Stuyvesant Landing, the Kinderhook Creek Sandbar, Nutten Hook, and the gazebo area south of the Landing. Meeting participants were asked to indicate which two of these areas they considered most important as public access points. The following table shows the percentage of people that considered each location important:

Stuyvesant Landing (west side of tracks)	82%
Kinderhook Creek Sandbar (Stuyvesant Falls)	58%
Nutten Hook (Ferry & Ice House Roads)	56%
Gazebo Area (south of Landing)	4%

Boating, swimming, fishing, picnicking, hiking, nature observation, and historical signs were cited by participants as desirable activities and amenities for all these areas. In addition, some participants favored hunting at Nutten Hook and children's playground facilities and safety facilities at the Kinderhook Creek Sandbar area.

Participants also suggested other waterfront areas where they would like to see public access. Areas mentioned included: Houghtaling Island, Mill Creek, the riverfront at the north end of Town, Kinderhook Creek above the dam, and the beaches between Stuyvesant landing and the gazebo.

Guiding Land-Use Principles for the Waterfronts

The Greenway Committee formulated several waterfront land-use principles, based on the goals outlined at the beginning of this section, to guide them in developing the land-use map and definitions for the Town Comprehensive Plan. These principles are as follows:

- Promote waterfront access and tourism along the Hudson River and Kinderhook Creek waterfronts.
- Given their underutilization for industrial activity, consider other appropriate uses for the areas along the Hudson River that are currently zoned as industrial. Consider other, more suitable locations for industrial activity in the Town.
- Consider appropriate locations for encouraging commercial development related to the tourism potential of the waterfronts.
- Reserve and improve for public use existing access points that provide residents with a connection to the Hudson River.

Summary of Recommended Actions

The proposed land uses in the Comprehensive Plan support the waterfront planning goals set forward at the beginning of this section. To further advance these goals, the Stuyvesant Greenway Committee recommends several actions that are summarized below. (See "Recommended Actions" in Section 2 for a complete description of each action.)

1. Continue to work with DEC, DOT and the Greenway Council/Conservancy to improve public access and amenities at Nutten Hook.
2. Plan and develop a multi-use trail system along the entire length of the Hudson River.
3. Promote Stuyvesant Landing as a waterfront destination point for tourism.
4. Promote the Kinderhook Creek in Stuyvesant Falls as a public recreation area.
5. Develop education programs that promote the waterfront and its heritage.
6. Continue discussions with the Village of Coxsackie regarding cross river regional planning between the two municipalities.

5. Natural and Cultural Resources

Goals

Protect and enhance the natural, cultural and historic resources important to the rural character of the Town.

- **Protect and conserve important water resources and areas of natural and recreational importance.**
- **Discourage inappropriate development in the areas of greatest environmental value.**
- **Minimize economic losses due to natural hazards such as floods and erosion.**
- **Protect and enhance the historic and scenic resources in the Town.**
- **Establish a physical greenway system of recreation/wildlife corridors between publicly accessible natural areas, historic resources and the two hamlets.**

Overview

Natural Resources - There are a number of special areas that are sensitive, or are not well-suited to new development, yet are important to the long-term economic viability of the Town. These include floodplains, steep slopes, species habitat, freshwater and tidal wetlands, stream corridors, and ground water aquifers. Besides their ecological and economic functions, they add to the Town's natural beauty and provide areas for residents to enjoy the outdoors. To protect these resources, the Plan continues the Town's policy of allowing the least dense development in the most sensitive areas. These areas are shown as Conservation and Waterfront Conservation, Tourism and Recreation on the land-use map. Two sensitive waterfront areas where industrial development had previously been permitted, near Newton Hook and Poolsburg, have been recommended for the Waterfront Conservation, Tourism and Recreation designation and are envisioned for tourism and recreational uses.

Historic Features - The Town contains a wealth of historic features, including homes, industrial sites, cemeteries and other structures. Some of these sites, such as the R&W Scott Ice House in Newton Hook and the Stuyvesant Falls Mills District, are listed on the National and State Registers of Historic Places. It is important that these resources be protected since they add to the local heritage and to the Town's identity. One strategy the Town might adopt to keep touch with its heritage is to link historic resource protection to the Town's tourism development program. The

waterfront areas offer the best opportunity to accomplish this. There is a powerful sense of past along these waterfronts that, combined with water access, natural areas, scenic views and hamlet settings, can help to draw tourism dollars.

Scenic Resources - Undeveloped areas surrounding the hamlets, including farms and natural areas, are an essential part of the Town's scenic character. Views of the Catskill and Berkshire Mountains, Hudson River and Stuyvesant Falls add to the Town's scenic value. In particular, Ridge and Sharptown Roads possess many historic, agricultural, natural and scenic resources. Conceivably, these roads could be included in a scenic tour route which connects to Route 9J, the historic Stuyvesant Landing hamlet and waterfront access points. The Plan recommends that more concentrated residential development be channeled to portions of these roadways that are less visually important, and that development be kept less dense along the portions with the highest scenic value.

The Plan recommends the creation of a multi-use trail along the Hudson River corridor to link the many natural, cultural and scenic resources that occur along the waterfront. Some of the potential segments of the trail include the Nutten Hook Reserve and the OGS land to its north, Stuyvesant Landing fire dock and beach, the unused railroad right of way, the Route 9J Scenic Byway and the Nature Conservancy nature trail system. The trail could become part of the Hudson River Greenway Trail, a regional trail system that is being developed by the Greenway Conservancy for the Hudson River Valley.

An extensive computerized inventory of natural, historic and scenic resources was developed as part of the long-range planning process. This information should be given to the Planning Board for use when reviewing subdivision and site plan applications.

Summary of Public Meeting Survey

As noted in earlier sections, a public meeting was held on October 24, 1994, to discuss the Comprehensive Plan being prepared by the Stuyvesant Greenway Committee. Those in attendance answered a survey that included questions related to natural and cultural resources (among other topics). Results of the pertinent portions of the survey are summarized below. (A copy of the survey questionnaire with a complete tally of the results can be found in Appendix G.)

Historic resources

Nearly 250 sites in the Town have been identified by the Greenway Committee as potentially significant to the Town's heritage, based on historical context, architectural style and overall contribution to the character of the Town. Of the different types of historic structures, the majority of participants at the meeting considered historic homes and farm structures such as barns to contribute most to the Town's heritage and overall character. Many also considered churches and cemeteries to be important historic elements.

Among the specific sites mentioned by participants as important to Stuyvesant's history were: the train station at Stuyvesant Landing, the Pinkowski cemetery, the Odd Fellows Home, the Van Alen house on Schoolhouse Road, the ice house at Nutten Hook, the power plant and mills, the bridge, the old hotel, and the ferry slip and brick factory ruins

Natural Resources

In the course of future growth, many natural areas in the Town may be subject to various types of development pressure. Participants were asked to rate which two of the four types of natural areas listed below were most important to protect. The table shows the percentage of participants who considered the given type of area as one of the two most deserving of protection:

1. Streams (including trout streams)	66%
2. Open Spaces (including fields/meadows)	51%
3. Wetlands (tidal and inland)	47%
4. Woodlands (including ravines)	37%

Other areas participants would like to see protected include: ponds, waterfront beaches, the Hudson River shoreline, and prime agricultural land.

Scenic Resources

The Greenway Committee has identified several areas that are publicly owned (or whose owners are willing to allow public use) that could be sites for recreational

trails. These include the unused rail bed north of Stuyvesant Landing, along the Hudson River to the north and the south of the Landing, and along Kinderhook Creek. Meeting participants were asked to indicate which two of these areas they felt are most desirable as trail sites. The following table shows the percentage of participants that considered each location desirable for trails:

Unused rail bed	61%
Along Hudson River (south of Landing)	61%
Along Kinderhook Creek	55%
Along Hudson River (north of Landing)	22%

Cross-country skiing, hiking, horseback riding, and biking were activities cited by participants as appropriate for most or all of these trail areas. Some participants also mentioned snowmobiling, ATVs, birding, fishing, and hunting as desirable activities for some trails.

Other areas participants suggested as good locations for trails included: Route 9J, woodland areas, the old trolley bed, and the area from Stuyvesant Landing along Route 26A to Sharptown Road and along Sharptown Road to Lang Road.

The Greenway Committee identified seven areas as the most scenic in the Town of Stuyvesant and mapped these areas for meeting participants. Participants were asked to indicate which three of these locations were most important as scenic viewpoints or areas. The following were considered the four most scenic areas (numbers in parentheses are the percentage of participants who judged that area as one of the three most scenic areas):

1. Route 9J approximately 1 mile north of Stuyvesant Landing with views of the Hudson River, Catskills, and Albany (77%)
2. Ridge Road between Schoolhouse Road and Tuczynski Road with views of the Catskills, farm landscapes, and the Berkshires (62%)
3. Sharptown Road approximately 1/4 mile south of Rte 26A with views of farm landscapes, the Catskills, and the Berkshires (57%)
4. Stuyvesant Falls Bridge area with views up and down Kinderhook Creek (53%)

Other areas suggested by participants as especially scenic (in addition to those identified by the Greenway Committee) included: Eichybush flats, the Hollow Road waterfall, and Riverview Street in Stuyvesant Landing.

Guiding Land-Use Principles for Natural and Cultural Resources

The Greenway Committee formulated several land-use principles related to natural and cultural resources, based on the goals outlined at the beginning of this section, to guide them in developing the land-use map and definitions for the Town Comprehensive Plan. These principles are as follows:

- Allow the least dense development in the most sensitive natural areas.
- Protect the historic resources that add to the local heritage and the Town's identity.
- Consider planning techniques that preserve the scenic character of the Town's rural roadways. Concentrate residential development to portions of scenic roadways that are less visually important.

Summary of Recommended Actions

The proposed land uses in the Comprehensive Plan support the planning goals related to natural and cultural resources set forward at the beginning of this section. To further advance these goals, the Stuyvesant Greenway Committee recommends several actions that are summarized below. (See "Recommended Actions" in Section 2 for a complete description of each action.)

1. Pursue funding and technical assistance to identify and map ground water resources (aquifers).
2. Prioritize historic resources for protection and develop plans for assuring their preservation.
 - Pursue funding for improving historic resources in the Town.
 - Continue to document the Town's history and heritage.
 - Consider the desirability of creating one or more Town-level historic districts and determine their boundaries.
3. Link the Town's many historic resources, especially those along the waterfronts, to a tourism development program. For example:
 - Continue Historic Stuyvesant Day as a Town event.
 - Consider developing historic walks, historic driving tours, and other similar activities that capitalize on the Town's historic resources to promote tourism.
4. Continue to pursue the purchase and renovation of the old railroad station at Stuyvesant Landing.
5. Develop a plan for protecting scenic views in the Town and for promoting public enjoyment of these views. For example:
 - Create and promote scenic walking or driving tours.
 - Consider voluntary guidelines to promote preservation of scenic views.
 - Determine the feasibility of establishing a local scenic byway program along Route 9J and other roads in the Town.
6. Develop a plan and pursue funding for a system of trails linking accessible natural areas, historic resources, scenic viewpoints, and other recreational areas. Prime areas to consider for trails include:
 - The unused Conrail railbed north of Stuyvesant Landing.
 - The OGS land along the Hudson River between Nutten Hook and Stuyvesant Landing.
 - The unused utility right of way (old "trolley line").
 - Kinderhook Creek and other creek beds.

6. Economic Development

Goals

Establish and/or enhance opportunities for residential, commercial, industrial and tourism-related economic development that favor the residents' quality of life.

- Guide residential development that retains the Town's quality of life, preserves open space, allows for the efficient use of existing or proposed Town services and provides a range of housing opportunities for all citizens.
- Meet recognized local commercial needs with appropriate development of the highest quality.
- Encourage development of home businesses in the Town that are compatible with the local residential character.
- Accommodate the development of appropriate light industry (e.g., research facilities, office parks, warehouses, light manufacturing) on appropriate land, while conserving agricultural and fragile natural areas.
- Promote local tourism programs associated with the history and use of the hamlets and the agricultural community while minimizing detrimental impacts to the Town's rural character.

Overview

Agriculture and a few small-scale businesses and manufacturers are the main components of the Town's economy. The Plan envisions strengthening the local economy by diversifying business activity in the Town and by concentrating these activities in and around the hamlets along the major roadways (e.g., Routes 9). Guiding new development to these locations will also protect the Town's rural character and help reduce the costs of constructing and operating a central water and sewer systems. The Town should consider developing tools to ensure that any new land uses maintain or enhance the character of the hamlets. The list of compatible types of new development should also be further refined.

Small-scale retail stores and services that meet the day-to-day needs of residents are recommended for the hamlet center. These are referred to as Hamlet Commercial uses and may include day-care centers, small food stores, bakeries, card shops, hair

salons, and photocopy services. Medium-scale Highway Commercial uses, such as a grocery market or general merchandise store, should be located along Route 9 just north of Stuyvesant Falls. Directing medium-scale commercial enterprises into this area will reinforce the hamlet and Route 9 as an activity center for the Town and will be compatible with the recommended nearby land uses.

Small-scale businesses that provide places for visitors to spend money in Town are also envisioned. Within the hamlets, Tourism Commercial uses should be focused on the waterfront areas as indicated on the land use map. Potential waterfront tourism businesses include bed and breakfasts, marinas, cafes, tackle shops, restaurants, antique shops, retreat centers and the like. These businesses fit the character of the hamlet and many have a connection to waterfronts. They can also serve the recreational needs of local residents, provide local employment and increase the tax base.

Other recommended types of hamlet development include cottage industries, community services (e.g., churches, college satellite campuses, recreational facilities) and light industrial facilities. Light industries are those that generally will not be objectionable because they do not generate excessive noise, truck traffic, fumes, or other nuisances. They should have a minimal negative impact on any neighbors or on the natural environment. Some examples of light industries include professional offices and small manufacturing firms such as Melo. Particular thought should be given to adopting local land-use tools, such as special-use permit provisions, that will protect natural resources from potential impacts by such facilities.

Small service industries, such as a machine shop or equipment repair shop, are a recommended type of development in Stuyvesant Landing off Sharptown Road. This area is also recommended for medium-density residences. Particular attention should be given by the Town to adopting local land-use tools that protect this residential character.

Hamlets

The Town's pastoral landscape is punctuated by two rural hamlets, Stuyvesant Falls and Stuyvesant Landing. These areas have a broad mix of uses and are easily recognized by residents and visitors as the centers of activity in the Town.

The Plan recommends that the majority of new residential, commercial, civic and other compatible development be guided into the hamlets. A concentration of mixed land uses within the hamlets will:

- maintain a tight-knit community feeling;
- keep the hamlets as identifiable Town centers;
- minimize sprawl and conversion of farmland;
- allow for more effective infrastructure investment (such as water and sewer systems); and
- generate less traffic.

Housing density in the hamlets is generally one unit per acre, which is the most intense allowable density under the current Zoning Ordinance. This density is referred to as Medium Density Residential on the proposed land-use map. Some undeveloped areas surrounding the existing hamlets are recommended for inclusion in the hamlets at the same density. This will help to accommodate growth and allow for efficient use of Town services, while preserving farmland and protecting natural and scenic areas.

The range of housing types in the hamlets should be broadened to improve the affordability of housing. The Plan encourages a limited amount of higher density housing in Stuyvesant Landing than is currently allowed, depending on the ability of soils to adequately treat sanitary wastes. These housing choices may take the form of single-family homes on lots as small as one-half or three-quarters of an acre. Options may also include paired homes (two units with a common wall) or small apartment houses. Such multi-family housing should be designed to be similar in scale and character to surrounding residences. The savings associated with smaller lots and common walls can be passed on to home buyers and renters. This type of development is referred to as High Density Residential on the land-use map.

Stuyvesant has several smaller concentrations of residential development that resemble the hamlets. One is Newton Hook, which is historic in character and should serve as an additional target area for future low-density residential development. Sunnyside is another concentration of development that is recommended for low-density residential and small-scale commercial development.

Summary of Public Meeting Survey

As noted in earlier sections, a public meeting was held on October 24, 1994, to discuss the Comprehensive Plan being prepared by the Stuyvesant Greenway Committee. Those in attendance answered a survey that included questions related to economic development and land use (among other topics). Results of the pertinent portions of the survey are summarized below. (A copy of the survey questionnaire with a complete tally of the results can be found in Appendix G.)

It was pointed out that agriculture is the dominant land use in the Town of Stuyvesant and takes up approximately two-thirds of the land in the Town. Residential and related community buildings take up a much smaller proportion of total land area, and commercial/industrial uses account for even less.

Considering the character and life style of the Town, participants were asked how much change, if any, they would like to see in the proportions of each of the above categories of land use. The results were as follows:

Agriculture	Residential	Commercial/industrial
More 42%	More 44%	More 77%
Same 56%	Same 56%	Same 19%
Less 2%	Less 0%	Less 4%

Participants were also asked to indicate which forms of economic development they felt held the most promise for boosting the Town's economy. The rankings of development types are shown below (numbers indicate the percentage of participants who considered that category of development to be one of the four most promising types of development for the Town):

- | | |
|------------------------------------|-----|
| 1. Farming/ agricultural industry | 86% |
| 2. Cottage industry | 73% |
| 3. Light industry | 67% |
| 4. Local commercial retail | 57% |
| 5. Light tourism | 49% |
| 6. Residential | 35% |
| 7. Heavy industry | 14% |
| 8. Office parks | 12% |
| 9. Large commercial (plazas, etc.) | 2% |

Guiding Land-Use Principles for Economic Development

The Greenway Committee formulated several land-use principles related to economic development, based on the goals outlined at the beginning of this section, to guide them in developing the land-use map and definitions for the Town Comprehensive Plan. These principles are as follows:

Hamlets

- Look for ways to strengthen the pattern of traditional hamlets by guiding the majority of new compatible development into those areas.
- Consider a land-use plan that maximizes the financial feasibility of providing public water and sewer service to the hamlet areas.

Residential

- Encourage a wide range of housing types in the Town that meet appropriate standards to improve the affordability of housing.
- Establish a location and density of housing that conforms with provisions for community facilities and services, reflects environmental suitabilities and limitations, and preserves quality of life.
- Consider restricting residential development in areas where it may conflict with the Town's goals for its waterfront, agricultural and conservation areas.

Commercial

- Consider appropriate locations for encouraging commercial development related to the tourism resources of the Town, including the historic character, the agricultural landscape, the waterfronts and scenic views.
- Focus tourism commercial uses on the waterfront.
- Locate new commercial development at existing commercial centers or new mixed-use developments that conserve the rural landscape and avoid strip development and scattered businesses.
- Promote attractive commercial development in harmony with the character of the Town's neighborhoods.

Industrial

- Given their underutilization for industrial activity, consider other appropriate uses for the areas along the Hudson River that are currently zoned as industrial. Consider other, more suitable locations for industrial activity.
- Promote the geographic concentration of office/industrial development and avoid scattered single-building construction.

Hamlet Subareas: Recommended Character and Uses

To envision how the hamlet areas in the Town could be developed in keeping with the goals of the Comprehensive Plan, the Greenway Committee defined the character and uses it preferred in three subareas common to the Town's hamlets. The definitions are as follows.

1. Hamlet Core

Character:	Walkable Mix of uses High density Visible activity Uniform character Civic functions Basic services Center of hamlet	Uses: Neighborhood Commercial Tourism Development High density residential
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2. Side Streets

Character:	Medium/high density Residential neighborhood character Direct connection to core Quiet streets	Uses: Home occupations Detached residential
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3. Fringe Area

Character:	Short drive or bicycle from core area Defines edge of hamlet	Uses: Light industrial Commercial Medium density residential
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Hamlet Uses

The following examples more clearly define some of the Committee's recommended uses for the hamlet sub-areas.

1. Neighborhood Commercial

- Barber shop
- Cafe
- Small food store
- Bakery
- Doctor's office
- Day care center
- Book store
- Auto service garage

2. Tourism Development

- Outfitters (creek and river)
- B & B's
- Dinner theater
- Antique shops
- Sport shops
- Retreat center

3. Light Industrial/Office/Community Service

- College satellite facilities
- Machine shops
- Offices
- Ag processing
- Cottage industries

4. Residential

- High density
- Single/detached
- Owner occupied

Highway Commercial Recommendations

The Greenway Committee looked at what type of highway commercial development it preferred in the Stuyvesant Falls vicinity. Based upon the following factors,

Convenience,
Land use,
Visual Impact,
Infrastructure Impact, and
Taxes and Economic Return,

the Committee members considered the following types of commercial activities and voted on those they would prefer for the Town.

	yes	no
Small scale eg., Chatham Drug Store	86%	14%
Medium scale eg., Kinderhook (old Grand Union) Plaza	71%	29%
Large scale eg., Greenport Walmart Plaza	0%	100%

The following areas were voted on by committee members to determine what areas along Route 9 they thought were appropriate for locating highway commercial uses.

Unrestricted along Route 9	29%
Sunnyside area	57%
Just north of Falls area, east side of Rte 9	36%

Summary of Recommended Actions

The proposed land uses in the Comprehensive Plan support the planning goals related to economic development that are set forward at the beginning of this section. To further advance these goals, the Stuyvesant Greenway Committee recommends several actions that are summarized below. (See "Recommended Actions" in Section 2 for a complete description of each action.)

1. Develop a plan to attract to the Town businesses that are compatible with the Town's character and with the comprehensive land-use plan.
2. Encourage development of home businesses (cottage industries) in the Town that are compatible with the character of the Town.
3. Promote and provide initiatives for the establishment of local tourism programs that capitalize on scenic and cultural resources.
4. Begin a feasibility study for the development of additional infrastructure for the hamlets of Stuyvesant Falls and Stuyvesant Landing.

Appendices

Appendix A

Final Analysis Report

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NATURAL HERITAGE SITE RANKINGS Appendix A

1. INTRODUCTION

Overview

A number of steps have been completed in the process of creating a Comprehensive Plan for the Town. The first stage involved the formulation of the plan's goals and objectives. The Town Board in Stuyvesant began this stage by forming a Town Greenway Committee. The Greenway Committee includes four subcommittees focused on the five planning areas listed below:

- Agriculture
- Conservation/Historic Preservation
Waterfront
- Economic Development
Community Facilities

Each of the subcommittees developed a set of Directives and Actions to guide the planning process. Then, the Greenway Committee as a whole refined and approved the work of the subcommittees.

The second stage involves inventorying and analyzing community resources. The purpose of the inventory was to identify the resources of the Town in the five major planning areas designated by the Greenway Committee. This inventory has now been completed.

Next, the resources identified in the inventory will be analyzed. The analysis will be done in three steps. First, the consultant will describe the major features related to each land-use activity and the relationship of the Town's Zoning Map to these features. The purpose of this step is to develop information that will help with the Alternatives Analysis and Overlay Analysis described below.

In the second step, hypothetical land-use scenarios will be created based on the issues raised during the first step. These scenarios will maximize the protection or promotion of each land use, including agriculture, conservation, historic, scenic, residential, tourism-related, commercial, and industrial activities. The Directives and Actions prepared by the Greenway Committee also will be used *as* a guide to create these scenarios. The product of this *Alternatives Analysis* will be a series of maps prepared on the geographic information system (GIS).

As the third step, the land-use scenarios will be overlaid on the GIS to identify areas where multiple demands occur. The overlays will also be analyzed to identify areas where the preference or rationale for one particular land-use is clear. These will be the areas where no conflicts

between potential land uses occur. The results of this *Overlay Analysis* will be documented in a report to be prepared by students at SUNY Albany.

The Greenway Committee will determine the preferred land-use in areas where multiple demands occur. This preferred set of "land-use" recommendations will be the basis of the Comprehensive Plan. Once the land-use recommendations are crafted, the Committee should identify the tools or steps that will be taken to implement the preferred land-use plan.

Summary

This report is organized according to the major planning areas identified by the Greenway Committee. The overall objective was to develop information that would be useful during the Alternatives and Overlay Analyses. The major features present within the Town were summarized for each of the planning areas. These resources are the likely areas that require protection or that can be used to achieve the Town's goals. The Directives and Actions developed by the Greenway Committee were then reviewed to determine which land-use scenarios should be developed and tested during the Alternatives Analysis. The issues for each planning area that should be considered during the Alternatives Analysis are highlighted in bold.

2. CONSERVATION

The natural resources of the Town of Stuyvesant offer many opportunities for advancing the goals defined for the Comprehensive Plan. Specifically, wetlands, species habitats, surface waters and other natural features identified in the inventory occur in many areas of the Town, but are concentrated along the Hudson River waterfront and along the stream corridors. These resources currently provide the community with a sense of natural character, an amenity that is often sought by people when looking for places to visit and live.

Major Features

Surface Water Resources

The major surface waters of the Town of Stuyvesant include the Hudson River and the Kinderhook Creek. These are extensively discussed in Chapter 4 of the Inventory Report. In addition, several smaller tributaries of these major systems exist throughout the Town. These include the following:

- Schodack Creek - Class C
 Mill Creek - Class C and Class C (T)
- Stuyvesant Brook - Class C (T)
- Muitzes Kill - Class C (T)
- Mud Creek -Class C
 Allen's Creek - Class C

Stream classifications are explained in the Inventory Report. The parenthetical T and TS classification designate trout waters and trout-spawning streams, respectively. Article 15 of Title 5 of the Environmental Conservation Law (ECL) sets forth the policy of New York State regarding the protection of state waters. All streams classified as either AA, A, B (with or without the (T) or (TS) parenthetical) and C(T) streams are protected under State Law. Regulated activities include any alteration or excavation of the bed or banks of a protected waterway, or any excavation or fill in a protected body of water or watercourse. Permits are required for projects that occur in or along protected streams.

Since all Stuyvesant streams are Class C streams, they cannot be used for drinking water. However, these streams affect the quality of the Town's groundwater, which is the primary water supply for residents. As a source of groundwater recharge, these streams are an important water supply resource and should be protected.

The Class C stream segments without (T) or (TS) classifications are not protected under the New York State Environmental Conservation Law. Therefore, the protection of these segments is under the control of the Town. The Town's principal tool for protecting streams is its Conservation Zoning District. Except for Allen's Creek and Mud Creek, the main stems of these streams are zoned under the Conservation District Portions of headwaters of these streams are typically included in the Agricultural and Rural Residential Zoning Districts. The Town can help to protect these streams and groundwater quality by extending the Conservation Zoning District to include these areas.

These six waterways have the potential to be used for recreational purposes. Due to the shallow depth of these streams, the recreational boating opportunities are limited to small craft such as canoes and kayaks. In some cases, the streams may be used for swimming or fishing. However, residents have noted that there is not much fishing or swimming available due to limited access.

There is also the potential for the development of stream corridor trails that could connect with major trail systems along the Hudson River and the Kinderhook Creek. By improving access to these streams through a greenway or trail system, there is a potential for expanding sportfishing in the segments of the streams that carry the (f) and (TS) parenthetical in their classifications. These stream segments are potentially suited for trout habitat and trout propagation.

Groundwater Resources

Groundwater is contained in underground formations called aquifers. Aquifers may be composed of consolidated rocks or unconsolidated gravels and sand. Both of these types of formations occur in the Town.

Three consolidated rock formations comprise the subsurface geology in the Town of Stuyvesant. The Nassau formation is characterized by reddish and greenish shale interbedded with quartzites. It yields water from fractures in the rock, with wells producing an average of 8 gallons per minute. The Schodack formation consists of thin-bedded limestones, shales and calcereous quartz. Wells in the Schodack formation yield an average of 5 gallons of water per minute, making the formation a somewhat poor source for large amounts of water. The Normanskill formation is a black or gray shale with interbedded layers of grit and black siliceous white-weathering chert. It is the most productive of the three principle water-bearing bedrock formations, with yields averaging about 100 gallons per minute. Typically, groundwater from these bedrock formations has low mineral content and does not require softening. But residents have noted that there is an abundance of sulphur water and hard water in the Town.

Wells that tap into unconsolidated surficial deposits such as outwash and alluvium also yield large quantities of groundwater suitable for domestic uses. Outwash and alluvial soils are situated along the major surface water bodies, such as the Hudson River and the Kinderhook Creek. The permeability of these soils is high, making them important recharge areas for groundwater aquifers.

Development on these outwash and alluvial soils can pose potential threats to groundwater. For example, the Knickerbocker series, which is highly permeable and typically contains a large amount of water for domestic uses, provides little filtering of surface water as it travels downward to the water table. Other soils with high potential for groundwater contamination due to inadequate filtering include Occum loam, Georgia, Fredon, Walpole and Linlithgo, all of which occur along the Hudson River and the Kinderhook Creek. The detailed soils maps from the Soil Survey of Columbia County provide information on the locations of these soils. Many of these sensitive areas are protected by the Town's Conservation Zoning District

Wetlands

There are a number of state-designated wetlands within the Town. These are freshwater wetlands larger than 12.5 acres in area that have been delineated by the New York State Department of Environmental Conservation (NYS DEC).

These areas should not be considered suitable for development. Wetlands influence the quantity and quality of water and are important habitat for fish and wildlife. As such, they should be protected. The Town can help to protect these resources by designating wetlands under the Conservation Zoning District.

The largest of these wetlands extends most of the length of the Hudson River waterfront in the Town. As a result, much of this waterfront is constrained for recreational development. However, there are six small areas of the waterfront where state-designated wetlands do not exist. These areas are potential waterfront development sites that should be examined in the Alternatives Analysis for Waterfront Resources.

There are also four freshwater wetlands located adjacent to stream corridors within the Town. These include the wetlands along the Kinderhook Creek, Mill Creek, Muitzes Kill and Mud Creek. There also is an isolated wetland east of Stuyvesant Falls that is not associated with a stream corridor.

Natural Hazard Areas

Natural areas hazardous for development in the Town of Stuyvesant include areas that lie within the 100-year floodplain and areas with excessively steep slopes. The extent of these natural hazard areas is illustrated on the Conservation Resources Composite Map. The majority of these areas are included in the Conservation Zoning District.

Development within the floodplain increases the likelihood of periodic flooding of homes and businesses. This can risk lives and property. It can also interfere with the free flow of water and require expensive flood control devices. Consequently, residential and commercial development should be guided away from the 100-year floodplain. This can be accomplished, in part, by including the floodplain within the Conservation or Agricultural Zoning Districts.

Disturbance of steep slopes can result in the loss of slope and soil stability as well as increased soil erosion. In turn, this lowers downstream water quality due to sedimentation. It can also increase the rate and volume of stormwater runoff in streams, resulting in flooding. In addition, steep slope disturbances can diminish the Town's scenic character.

DEC Natural Heritage Sites

The DEC Natural Heritage Program is an important tool for the protection of designated Natural Heritage Sites. These sites are particularly sensitive to damage by development. Together with the Significant Habitats Database, also maintained by the DEC, these databases contain all known locations of rare and endangered plant and animal species in Stuyvesant. Proposed actions subject to review under any federal or state laws, such as new highways or dam projects, are evaluated to determine any impacts they might have on the Natural Heritage Sites. In this manner, the DEC protects these habitats from destruction. Adverse impacts include any actions that threaten habitat viability, especially excavation and filling on or near designated Natural Heritage Sites.

The majority of these sites within the Town are located along the Hudson River waterfront. Many are located within the DEC-designated wetlands and are protected by that agency's regulations. Those sites that are located outside of DEC-designated wetlands can be protected, in part, by inclusion within the Conservation Zoning District.

Conservation Zoning

The majority of the natural features in the Town are located along major stream corridors. Correspondingly, many of these natural resources are protected by Conservation Zoning.

These include wetlands, unconsolidated aquifers, portions of the floodplain and some Natural Heritage Sites. The Conservation Zoning District requires a minimum lot size of 10 acres per principal building. This provision has helped maintain the rural character of the landscape. The Town's cluster provisions allow smaller lots down to 1 acre in size to be created, provided the overall density of cluster development does not exceed the 10 acre per unit average density. Uses allowed in the district include agriculture, forestry, public and private recreational facilities, single- family dwellings and nurseries. The extent to which the Town's major conservation features are protected under the Town's Conservation District should be examined in the Alternatives Analysis.

Greenway System

The creation of a physical greenway system of recreation and wildlife corridors between publicly accessible natural areas, important historic resources, the hamlets, and future development is a key goal of the Town. The concentration of natural resources along the Town's stream corridors are likely to provide the greatest opportunity to create this greenway system.

Specifically, there are three tributaries that drain into the Hudson River. Greenways along any of these three streams have the potential to be linked to the proposed Hudson River Trail.

The Schodack Creek, which is the northernmost tributary, is a stream that runs from the Hudson River to the western boundary of the Town. Residents have noted that the condition of the creek and its wetlands has deteriorated in recent years. The Schodack Creek offers an opportunity to link the Hudson River Trail to small ponds and other natural areas well into the Town of Kinderhook.

Similarly, the Mill Creek, which eventually branches into the Stuyvesant Brook, has the potential to become part of a trail network. This creek has extensive wetlands near its mouth at the Hudson, and also cuts across agricultural land. It winds through the Town, coming very close to Route 26A, and extends into the Town of Kinderhook.

One other small stream, the Mud Creek, is located at the southern end of the Town, running from just south of Nutten Hook eastward towards the vicinity of Sunnyside. This creek also has small wetland areas immediately adjacent to its main channel. Due to its proximity to Nutten Hook, it should also be considered as a potential route for an upland link. The Alternatives Analysis should consider ways to maximize the potential use of these features to create a greenway system along the stream corridors.

3. AGRICULTURE

Major Features

Physical Attributes

The Town of Stuyvesant has been generously endowed with agricultural resources. The Town is characteristic of the entire Hudson Valley, in that the soils are rich, deep, and vary slightly in composition, which allows for diversity in the types of agricultural products that can be supported. The Soil Conservation Service soils survey identifies 28 prime agricultural soils in Columbia County, 20 of which occur throughout the Town. The total acreage of prime agricultural soils in the Town is approximately 4,400 acres or 26% of the total acreage of the Town.

Agricultural Land-Use

Although some agricultural land on the fringes of the developed areas has been lost, agriculture still remains the primary use of land within the Town. Based on the Existing Land-Use Map produced by the Hudson River Valley Greenway Communities Council (Greenway Council), it is estimated that approximately 7,400 acres of land is classified as agricultural by the New York State Board of Equalization and Assessment. This represents about 43% of the total land area of the Town. There is approximately 13,400 acres (78%) of the Town included within Agricultural Districts 2 and 5. Data regarding the amount of farmland that is not currently in production are not available.

Farmland is spread throughout the entire Town, with notable concentrations in the northeast corner of the Town and along its eastern border with Kinderhook. There is also a significant amount of active agriculture in the vicinity of Stuyvesant Falls. The area between the northwest corner of the Town and Stuyvesant Landing seems to possess a greater proportion of vacant agricultural land than the remainder of the Town.

Types of Operations

The predominant form of agriculture in the Town is dairying. Other less-prevalent farming activities include production of livestock, tree fruits (apple orchards), corn, and hay.

There is a downward trend in the dairying industry in Columbia County. The decrease in dairying throughout Columbia County has made way for new agricultural activities. Where cows once

grazed, they have been replaced by other forms of livestock such as sheep and goats. Former pasturelands have also been replaced by orchards for the production of apples and other tree fruits. The extent to which this trend is occurring in the Town should be examined as part of the survey of farm operators being conducted by the Agriculture Subcommittee.

Soil Suitability for Agriculture

Soil conditions affect the economic viability of farming and land-use patterns within the Town. As a result, information about soils can be used to help determine where farmland should be preserved or where demands for other land uses are likely to occur. For example, it is possible for agriculture to occur anywhere that does not have a building, road or some other form of surface improvement upon it. However, the market price of a product directly dictates how much money can be spent on the production of a potato, an ear of corn or a gallon of milk. Therefore, the lower the market price of the product, the less money can be spent for irrigation, erosion control and other management practices.

The Alternatives Analysis should consider an agricultural scenario based on soil conditions and the Town's Agricultural Zoning District. The "farmland protection alternative" should assume that farmers are economically capable of using land that is best suited for production under normal market conditions. In the case of Stuyvesant, this means that the areas that should be considered for protection are those that have slopes of less than 15% and contain the soil types suitable for crop production. This scenario would also likely include all undeveloped areas that contain prime agriculture soil.

The Agricultural Zoning District is the Town's principal existing tool for preserving farmland. Approximately 6700 acres are included within this district. This district allows for primarily agricultural and related uses, and requires a minimum lot size of 5 acres. A number of uses are allowed by special permit, including recreational and extractive uses. The district was designed to preserve the critical mass of farmland in the town, while permitting other uses of land which do not interfere with agriculture. The Agriculture Subcommittee should consider whether key areas of prime agricultural soils or active farmland are included within the district.

The Subcommittee should also consider how the location of prime soils influences land-use patterns. Ironically, prime agricultural land is also the best land for development. This is due to its relatively level topography, coupled with soils that provide adequate drainage and easy excavation. Development pressure plays a key role in determining how long an area will remain in agriculture.

Much of the prime soil in the Town is still in agricultural use. However, many undeveloped areas in and adjacent to Stuyvesant Landing and Stuyvesant Falls contain prime agricultural soils. These areas are owned for residential uses. Given the soil and zoning conditions, there is a likelihood that this land will be removed from agriculture permanently. The Overlay Analysis should consider the conflicting demands by agriculture and development in the perimeter of the hamlets.

Prime agricultural land on the fringes of these two areas is almost wholly encompassed by Columbia County's Agricultural Districts Two and Five. This will help slow the rate of conversion of this land to new residential uses. Farms included within these districts are subject to a lower level of taxation than a property outside of the district. The Town Assessor estimates that the farm owners within the Town saved nearly 9 million dollars in 1993 through differential assessments. But, if housing markets continue to grow in NYS, there is a potential for property owners in these areas to remove themselves from the Agricultural Districts Program in order to subdivide their land. Therefore, the Town's Agricultural Zoning District is helpful for preserving farmland.

Abandoned Farmland

Throughout the Town, there are several large tracts of vacant agricultural land that have been taken out of production or abandoned permanently. As farmland is abandoned it may be converted to other uses, such as residential development. In the Town, U.S. Census data from the years 1970, 1980 and 1990 show that in the period between 1970 and 1980, 233 new structures were built, many of them on converted farmland. In the next decade, development slowed significantly, with only 89 new structures being added. This slowdown has provided the Town with the chance to plan for the protection of abandoned farmland.

Fluctuations in the market for agricultural products, as well as discontinued production on poor soils, have contributed to the abandonment of farmland. Perhaps the most important factor is the aging of farm owners over the last decade. The 1970 Town of Stuyvesant Comprehensive Plan noted that the average age of farmers at that time was 51. As farmers have moved into retirement, many have not been able to pass on the family business to their children, who have taken up jobs outside of the community. This problem has been compounded by the relatively low incomes earned by farm owners and the availability of more lucrative career opportunities. When farmland has come up for sale in the Town, few farmers have had the opportunity to expand their acreage due to financial limitations.

There is an opportunity for farmers to reclaim abandoned farmland, since most of it has not been subdivided and re-sold for residential purposes. The Town can help to preserve this farmland by including it within the Agriculture Zoning District. In addition, the Agriculture and Economic Development Subcommittees should consider strategies that would promote the agricultural use of abandoned farmland during the development of their recommendations.

4. WATERFRONT

Major Features

There are two major features common to the Hudson River and Kinderhook Creek waterfronts in the Town. The first major feature is the presence of cultural and historic resources in waterfront areas. These resources are clustered mostly within the two hamlets located along the waterfronts. In many communities, historic sites and districts provide the setting for strong waterfront revitalization programs. In the Town of Stuyvesant, historic areas such as the Stuyvesant Mills District could become the focus of a renewed effort at waterfront revitalization centered on the Town's historic resources. Residents have a strong desire to protect and enhance historical sites and structures along the waterfront areas.

The natural features of the waterfront along both the Hudson River and the Kinderhook Creek are also quite significant. Increasingly, residents of the Hudson Valley are beginning to understand the unique natural character of the Hudson River, its tributaries (such as the Kinderhook Creek) and the tidal and freshwater wetlands. The Hudson River is tidal from the Atlantic to Troy, NY, making its shoreline unique in many ways. The constant ebb and flow of the tides works to erode some areas of shoreline, while filling in others. The Hudson River Valley provides habitats for a significant number of species, including migratory birds that depend on the presence of these water features.

Zoning

The waterfronts along the Hudson River and Kinderhook are included in a number of zoning districts. The extent and approximate location of each district are summarized below.

Agricultural District

One area along the Hudson River is included within the Agricultural Zoning District. T area is south of Stuyvesant Landing and west of the railroad, extending from Lang Road south to Sharptown Road.

Conservation District

The Conservation Zoning District, which encompasses a part of the Hudson River and Kinderhook Creek waterfronts, has helped maintain open space along and visual access to these waterways. Nearly 1,475 acres of land on the Hudson River waterfront are included in this district. The minimum lot size in the Conservation District is 10 acres per principal building. The Town's cluster housing provisions allow smaller lots down to 1 acre in size to be created, provided the overall density of development does not exceed the density of a traditional subdivision that can be accommodated in this zone.

Industrial District

Two areas along the Hudson River waterfront are designated as Industrial Zoning Districts, one in Nutten Hook and the other north of Stuyvesant Landing near Poolsburg. A smaller industrial zone exists in the vicinity of Stuyvesant Falls along the Kinderhook Creek. These areas have a minimum lot size requirement of 5 acres per principal building. The Subcommittee should consider the role of waterfront areas included within the Industrial District since the district is not designed to promote water-dependent industrial uses.

There are two alternatives to address this situation. The first is to amend the district language to promote water-dependent uses. This would be appropriate if the Town is seeking to promote water-dependent industry along the waterfront. The second is to change the zoning in these areas to other districts. This would be appropriate if the Town is seeking to encourage other uses along the waterfront or to encourage industrial development in other areas of the town.

Residential Uses

In the Town of Stuyvesant, existing land use controls and limited development pressure have combined to channel the development of new residential uses in the waterfront into the Rural Residential (RR) and Medium Density Residential (MDR) Districts. These districts are roughly

Rural Residential District - Approximately 940 acres of land in the waterfront is designated as RR. These areas contact the waterfront along the Hudson River in the south around Nutten Hook, to the north of Stuyvesant Landing and at the extreme northern boundary of the town. These areas provide for limited residential development based on a 2 acre minimum lot size per principal building.

Medium Density Residential District - The Town's MDR zones are located primarily in the settled areas of the town, including Stuyvesant Landing and Stuyvesant Falls, along the Hudson River and Kinderhook Creek waterfronts respectively. The shoreline in Stuyvesant Landing is almost entirely included in this zoning district. However, the shoreline in Stuyvesant Falls is designated under the Conservation District.

The MDR District allows a minimum lot size of 1 acre per principal building. The district is typically designated in areas that are considered the best areas for new growth in the Town of Stuyvesant, due to their high density of development and suitability of soils, slopes and adequate drainage characteristics. Throughout these areas, commercial uses are mixed with residential to provide residents with day-to-day services. Currently, about 878 acres of land in the waterfront area are zoned MDR.

The Waterfront Subcommittee should consider the role of the MDR District along the shoreline in Stuyvesant Landing. An alternative approach may be to reserve this area for recreation access or water-dependent uses rather than residential development. Special consideration should be given to zoning west of the railroad.

Access

The Town has approximately 9.4 miles of waterfront along the Hudson River. However, physical access to places where residents and visitors can actually touch the water is very limited. Currently, points for access to the Hudson River by automobile, biking or walking include the fire dock and beach areas at Stuyvesant Landing. There is also public access to the river at Nutten Hook. Boats can only be launched on the river at the informal boat launch at the Stuyvesant Landing fire dock area. Members are permitted to launch boats at the private Newton Hook Boat Club. However, two boat launches are proposed for Nutten Hook, including a car-top and a trailered boat launch.

Despite the length of the Town's Hudson River Waterfront, creating additional access to the River and enjoying its resources is challenging. This is due largely to the significant impact of the railroad along the Hudson River. The railroad has made access to the Hudson River, particularly by vehicle, difficult and potentially dangerous.

Property that is relatively free of sensitive environmental features is fairly rare along the Hudson River waterfront in the Town. While these environmental features, such as wetlands, Natural Heritage Sites, floodplains and significant tidal habitat, are extremely valuable, they present constraints to waterfront access.

The primary areas that are relatively free of sensitive natural resources include the areas at Stuyvesant Landing that already provide access, a portion of Nutten Hook and the property immediately north of Nutten Hook. Nutten Hook is already in public ownership, and there are plans to provide public access at this location.

The waterfront at Stuyvesant Landing offers an excellent opportunity for promoting waterfront tourism and public access. However, this area is zoned for residential use, which may preclude these objectives. In order to promote waterfront tourism and access at these locations, potential amendments to the Zoning Map should be considered during the Alternatives Analysis.

The Waterfront Subcommittee should examine the opportunities and constraints for recreational use of the property immediately to the north of Nutten Hook. This property is currently zoned Agricultural. The Alternatives Analysis should consider rezoning this area to promote waterfront access and tourism. The analysis should consider the feasibility of accessing the sites from Nutten Hook or other existing rail crossings.

The Town can use the significant natural resources to its benefit by linking access points, natural areas, historic resources and scenic areas along the proposed Hudson River Trail. In this manner, people will be attracted to explore this area. Once the trail is established in the Town and connected to other riverside communities, tourism is likely to increase, since the Greenway and the Hudson River Trail are being promoted both statewide and nationally.

Access to Kinderhook Creek is also an important issue. There are several emerging opportunities that should be implemented by the Town. The first, which is already underway by the Town, is the leasing of the "Sandbar" from Chemetron. This will provide public access to the east side of the creek north of the bridge. The Town plans to develop a small swimming and picnicking facility at this location.

A second major opportunity is to develop a trail system which links the Sandbar, the bridge, the overlook of the upper falls, and the Milk Pond. The Overlook is owned by the Town and the Milk Pond is owned by the Stuyvesant Falls Fire District.

A long-term opportunity may exist on the Niagara Mohawk Power Corporation property which is located south of the bridge. This site provides places to view closely portions of the Kinderhook Creek below the lower falls. The Alternatives Analysis should consider whether this property, which is currently zoned MDR, should be rezoned as Conservation since it is largely within the floodplain and possesses steep slopes. In addition, the Town should pursue permanent access to or ownership of this property.

An additional opportunity to promote commercial activity within Stuyvesant Falls may exist along the Kinderhook Creek. While this will not provide physical access to the creek, it can attract visitors to the area. Accordingly, the Alternatives Analysis should consider the feasibility of rezoning the area west of the creek and Chemetron for commercial use. Development of a public overlook of the lower falls should be encouraged.

Hudson River Trail

Another major goal of the Town is linking key natural, scenic, cultural and recreational features along its waterways. Although the Town of Stuyvesant has 115.6 acres of waterfront parkland, it has no formal linear trails to link them together. This can be done through the development of a multi-use trail, referred to as the Hudson River Trail. The major opportunities related to this waterfront trail system are discussed below.

The Hudson River Trail can begin by building on the natural resources that occur on the waterfront, such as DEC Natural Heritage Sites, the Mill Creek Wetlands and the Hudson River floodplain. This will offer visitors a diverse and interesting set of natural components to experience when using the trail. In addition, the trail will be able to link natural areas together with other resources, such as historic buildings and scenic areas.

An example of this is found in the HRNERR which is an excellent example of how the many faces of the waterfront overlap. Although the primary function of the HRNERR is to promote and enhance the natural and ecological face of the Hudson River waterfront, it also contains some important historic structures. The Pinkowski House is a 19th-century residence at the site that is eligible for State and National Register listing. Also, a large 19th-century barn and four outbuildings associated with the Pinkowski House are located at the site and are eligible for inclusion on the State and National Registers of Historic Places. Nutten Hook is also home to the R. and W. Scott Ice House, which was one of the largest independently owned ice houses on the Hudson River. It is currently on the State and National Registers.

The primary opportunity for creating a trail system along the Hudson River is the abandoned railroad line located along the central portion of the waterfront. Many communities have converted the linear corridors into bicycle and hiking trails which are also used for recreation in the winter. In this manner the legacy of the railroad era has provided communities with excellent opportunities to enhance their recreational facilities and expand public access to the waterfront. The Waterfront Subcommittee should identify potential linkages of the Hudson River Trail to the abandoned railway.

5. ECONOMIC DEVELOPMENT

Major Features

Commerce

One of the primary objectives pertaining to economic development is the management of commercial activities within the Town. At this time, there are very few commercial and industrial enterprises in the Town of Stuyvesant. They are located primarily in or near the two hamlets of Stuyvesant Falls and Stuyvesant Landing, with only 2 commercial enterprises near Sunnyside and one in the vicinity of Nutten Hook (which is not currently in operation). There is no strip development in the Town except at Sunnyside and there is a noticeable lack of any commercial establishments in the north half of the Town.

Industry

There are only three industrial enterprises in the Town. One is Chemetron, located in the hamlet of Stuyvesant Falls. A second industrial enterprise, north of Stuyvesant Falls near Sunnyside, is Bioforce of America, Ltd., which may be considered an agriculturally-related industry. The third industrial facility in the Town is located north of Stuyvesant Landing near Poolsburg, and is known as Melo Bags. There is also a junkyard located on Running Creek Farm Road. These industrial enterprises are spread across the Town and with, the exception of Chemetron, are located away from major population concentrations.

Residences

An adequate supply of affordable housing is an important part of the Town's economic development strategy. There were 878 housing units in 1990 according to U.S. Bureau of Census data. Of these, 588 were owner-occupied, 202 were renter-occupied and 88 were vacant. This is an increase of 62 housing units since 1980. Of these new units, almost all were renter-occupied. The number of owner-occupied units remained fairly constant.

Commercial Development

The Alternatives Analysis should consider where commercial development should occur. Currently, most commercial activities occur within the hamlets, which is consistent with the

Town's goals for commercial retail development Routes 9, 9J and County Route 26A seem to hold the best opportunities for new roadside development within the hamlets. These are the most heavily travelled roads by both residents and visitors to the community.

Zoning can be used to encourage commercial development inside of the hamlets. In addition to impairing the Town's rural character, commercial uses which locate outside of the hamlets can spur the development of new residential uses nearby, encroaching on agricultural land.

Commercial uses allowed in the zoning ordinance should be in the form of neighborhood type stores. These include a variety of local services, including groceries, repair shops, hardware stores, hair cutting salons and video stores. Conversely, large-scale stores, large parking lots and excessive lighting would not be in keeping with the rural character of the Town.

Agriculturally related business can also be developed in a compatible manner within the Town. This could be encouraged by simply identifying areas, particularly within the hamlets, which could be used for businesses such as feed stores, hardware stores, tractor sales and service shops and other similar businesses. The Alternatives Analysis should consider where the Zoning Map could be amended accordingly.

Commercial uses are allowed in the Planned Commercial District (PCD). This district is unlike other zoning districts in that it is a "floating zone", which must be established in specific locations by amendment to the Zoning Ordinance. The Zoning Ordinance states that PCD's can be established on a minimum of 9 acres of land along the south side of County Route 26A, west of the junctions of Route 26A and Gypsy Rock Road and west up to the junction of Route 26A with Sharptown Road. This area is outside of the hamlets.

Industrial Development

Currently, there are three areas that are zoned Industrial, two located along the Hudson River waterfront (Poolsburg and south of Nutten Hook) and one in Stuyvesant Falls (Chemtron). Only a small portion of the industrially zoned property in Poolsburg is used for industrial activity (Melo). There is no industrial activity in the Industrial District south of Nutten Hook. Given their underutilization for industrial activity, the Alternatives Analysis should consider other appropriate uses and zoning districts for these areas. Other, more appropriate locations for industrial activity should also be considered.

Properly located, small-scale manufacturing and light industrial uses can be harmonious with the Town's rural character. Special emphasis should be given to locations within the hamlets. This strategy will help to preserve the Town's rural and pastoral character. It will also place homes

and jobs within walking or biking distance of each other, thereby reducing residents' dependence on automobiles. In turn, this will make the Town more affordable to its residents.

Cottage industries, or home occupations as they are also called, are becoming increasingly important in economic development. Small enterprises, such as mail order businesses, home assembly enterprises and handicrafts, are becoming more widespread in rural areas. The extent to which cottage industries can be encouraged in the Town of Stuyvesant will depend on the needs of local entrepreneurs. The Town can support these cottage industries by allowing these uses under the allowable use lists in the Zoning Ordinance.

Small-scale and professional offices, such as real estate and law offices, also can be a means of economic development in rural communities. These activities do not require extensive infrastructure improvements in order to locate in a community. Offices might be attracted to the Town due to improvements in communications and information transfer technology. Routine office work no longer has to be performed in urban or suburban office buildings. Instead, office work can be done in rural areas, where land rent is cheaper. The general area which offers the best potential for such development is within the hamlets. However, the Town's PCD district would need to be amended to accommodate this use.

The Industrial District lists offices, public facilities, accessory uses, solar energy systems and single-family dwellings as allowable uses. Uses allowed by special permit include manufacturing, essential services, research and testing laboratories, two-family dwellings, multiple-family dwellings and temporary sawmills. Since there is very little land in the Town zoned Industrial the Town should consider reserving these areas for industrial activities. This can be accomplished by amending the Zoning Ordinance to remove residential uses from the list of allowable uses.

Tourism

Another opportunity for economic development is tourism. It can benefit the community in a number of ways, such as an increase in the number of small retail businesses in the vicinity of Stuyvesant Landing and Stuyvesant Falls. Visitors to the area would bring in tourist dollars, and create new jobs for local residents.

Tourism in the Town will most likely be related to day-use or day-trip activities. Several factors can be capitalized on to draw visitors to the community. The waterfronts along the Hudson River and the Kinderhook, hamlets, farming, historic resources and scenic resources are all building blocks for attracting people to the town. One of the Town's challenges is to encourage the development of activities that allow people to spend money here. The Alternatives Analysis should consider appropriate locations for encouraging commercial development related to

these tourism resources. The Greenway Committee should also consider the appropriate types of uses related to the tourism resources. For example, uses along the waterfront might include marinas, bait shops, boat supplies and restaurants.

Another challenge is to preserve the patterns of development that draw people to the Town. Consequently, the Alternatives Analysis should look for ways to strengthen the pattern of traditional hamlets. It should also consider zoning techniques which preserve the scenic character of the Town's rural roadways outside of the hamlets. For example, it may be desirable to change areas of the MDR District along rural roadways to the Agricultural District. It may also be desirable to rezone areas in the Rural Residential District which are predominantly used for agriculture to the Agricultural Zoning District.

Housing

The Town has expressed a need to make housing more affordable. There is a predominance of single-family homes in the Town, as is typical of rural communities throughout New York State. However, the relatively low number of multi-family homes in the Town is also significant. Data provided by the Greenway Council identifies approximately 20 multi-family structures in the Town. Multi-family housing is a useful way to provide affordable, rental housing. There also seems to be an imbalance between single-family homes and more affordable types of owner-occupied housing (e.g., townhomes and duplexes). The need for a wider range of housing types is indicated by demographic trends that occurred during the 1980s.

The population of the Town in 1990 was 2,178 persons, whereas the population in 1980 was 2,216 individuals. Thus the population showed a decrease of 38 persons. While the population declined, the number of households in the Town increased.

Simultaneously, household size decreased from 3.01 persons per household (occupied unit) in 1980 to 2.76 persons per household in 1990. This is because there are fewer children per household than in the previous "baby boom" generation. It also reflects the fact that there are more single-parent households than before. Nationally, about 20 percent of all households are headed by a single parent. Of this group, 80 percent are headed by females. This trend is important in terms of providing affordable housing, since females typically earn less income than their male counterparts. It is important to note that smaller families may not need traditional owner-occupied, detached single-family housing.

Like other communities nationwide, Stuyvesant's population is aging. In 1980, the median age was 30.4 years. In 1990, it was 35.3 years. This increase of nearly 5 years suggests two things. First, the "baby boomers" are aging. Second, there has been a decline in the number of young

people that reside in the Town. For example, in 1980, 796 residents (36%) were under the age of 21. In 1990, only 673 residents (30%) were under this age. Older residents typically do not have children living at home. In addition, older residents typically earn less income following retirement than during employment. These factors will likely increase the demand for smaller and less expensive forms of housing.

While households were decreasing in size and increasing in age, the cost of housing increased tremendously. In Stuyvesant, the median value of owner-occupied housing rose from \$38,400 in 1980 to \$97,400 in 1990. Unless the median household income of the Town's residents increased at a corresponding pace, housing has probably become less affordable in the Town.

With some changes, the Town can use its Zoning Ordinance to increase the supply of affordable housing. The simplest and most importance step is to direct new development into or near the hamlets. Development on smaller lots can occur here while still maintaining the Town's rural character. The Alternatives Analysis should consider a scenario which encourages this pattern of residential development.

There is ample land in the Town for new homes. About 5,316 acres of land in the Town is zoned for either Medium Density Residential or Rural Residential uses. This accounts for nearly 21.7% of the total land area of the Town. There is little chance that the Town will need this much land for new residential uses in the foreseeable future. Therefore, the Alternatives Analysis should also consider restricting residential development in areas where it may conflict with the Town's goals for its waterfront, agricultural and conservation areas. This strategy will help to encourage residential development within or near the hamlets, where development is likely to be more affordable (i.e., occur on smaller lots).

In addition to changes in the Zoning Map, the Town can amend the list of allowable uses in its residential districts to allow apartments, townhomes and duplexes. Properly designed, these types of structures can easily fit the Town's rural and historic character. (Note: Guidelines for accomplishing this objective are available in "Rural by Design" by Randall Arendt, published by the American Planning Association).

6. HISTORIC RESOURCES

Major Features

The Town of Stuyvesant has an abundance of historic resources, many of which are already listed on the National and State Registers of Historic Places. Currently, there is only one historic site, the Slutsky House, for which listing status is pending. The remaining sites included in the inventory are sites with potential local significance.

The nearly 250 potentially significant local sites included in this inventory were chosen because of this historical context, architectural style and overall contribution to the historic character of the Town. It is evident that this list needs to be refined. This refinement will be difficult, if not impossible, for the Town Greenway Committee to accomplish by themselves.

The Town should obtain the assistance of a knowledgeable professional, such as an architectural historian from the NYS Office of Parks, Recreation and Historic Preservation. A person with an intricate knowledge of architectural history would be able to identify those historic buildings included in the inventory that may be eligible for inclusion in a historic district, or as individual sites that could be added to the National and State Registers.

Historic Overlay District

The Town of Stuyvesant has many significant historic resources which remain vulnerable to the pressures of development. It is important that these resources be protected because of the character they add to the landscape of the community. In many rural areas, historic buildings have been demolished to make way for newer, more functional buildings. Modern construction techniques have made it cheaper for developers to build new buildings instead of rehabilitating historic ones. As a result, historic buildings important to local heritage and sense of place are being replaced with buildings that are visually less appealing.

Many communities have created historic districts as part of their local zoning ordinances. Typically, historic districts are designed as "overlay" districts, which provide a set of regulations and guidelines in addition to the current zoning regulations which apply in industrial, residential or commercial districts. For example, an area of a community that is zoned for residential use can also have a historic overlay district superimposed on it. In this manner, the allowable land use remains residential, but designated historic residential buildings within the overlay boundary are subject to whatever regulations and guidelines are provided in the overlay district. Towns can make such regulations mandatory or voluntary.

One issue is that historic resources are spread over the entire Town. This makes the delineation of a historic district boundary somewhat difficult, since a district typically contains a high density of historic buildings and sites.

One potential strategy is to focus historic preservation efforts along the waterfront areas. The Town's historic resources, which include a diversity of homes, industrial sites and buildings, cemeteries and other structures, create very distinct historic landscapes along the waterfront hamlets. These historic resources increase the possibilities for tourism, but will not of themselves draw large numbers of visitors to the Town. Rather, they offer a backdrop to the other resources of the waterfront, enhancing the overall sense of tradition of these areas. It is in the Town's waterfront areas where historic resources offer the most opportunities that will support the Town's goals for economic development. The desirability of creating a historic overlay district and its potential extent should be assessed during the Alternatives Analysis. Special consideration should be given to the waterfront areas.

Historic Landscapes

Another approach to historic preservation in rural communities is to designate a Rural Historic Landscape, in which many sites can be nominated to the State and National Registers of Historic Places. This is typically done in rural communities because often individual buildings or sites are not significant enough to be included on the registers by themselves. A Rural Historic Landscape is defined by the U.S. Department of the Interior National Park Service (NPS) as:

"...a geographic area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features." ¹

Used as a supplement to a local historic overlay district, this technique might be useful for protecting historic resources in both the hamlets and rural areas of the community. This technique should be examined by the Conservation/Historic Resources Subcommittee.

¹ National Park Service. *National Register Bulletin #30*.

7. SCENIC RESOURCES

Major Features

The Inventory Report identifies 8 scenic viewpoints and two scenic corridors in the Town of Stuyvesant. Although these are not the only scenic areas in the town, they are deemed the most significant by the Town Greenway Committee. These scenic resources are described in detail in the Inventory Report.

Protection and Enhancement of Scenic Areas

The typical approach to managing scenic resources is a twofold strategy. The first part of this strategy is to protect scenic areas. This can be done in a variety of ways, but the most common is to delineate some form of an overlay district for scenic areas in which certain voluntary or mandatory restrictions apply. These restrictions usually relate to the height and color of buildings, density of development and even the amount of vegetative cutting that can occur in the area. The Alternatives Analysis should consider the desirability of creating a scenic district and the potential boundaries of such a district.

The second part of this strategy is to decide what forms of enhancements will be required so that residents and visitors can safely utilize these visual resources. For example, many of the scenic viewpoints identified by the inventory are along major or minor roads in the town. Stopping along these roads or parking on private property are strictly prohibited by law. The Town should examine the possibilities for road turn-outs and parking areas that could be used to enhance access to these scenic resources.

8. SEWER AND WATER FACILITIES

Major Features

Currently, the Town does not provide public sewer or water services to any areas of the Town. All residents draw their water from individual wells or surface waters. Similarly, they dispose of their sewer wastes into septic tanks and leach fields. An increased number of septic systems in a given area can pose serious threats to water quality. Where septic systems are located in alluvial soils or atop unconsolidated aquifers, the quality of water retrieved from wells in the area can suffer significantly.

New York State Health Department regulations stipulate that wells cannot be located within 100 feet of an existing or proposed septic system. These site design standards can help prevent the pollution of individual wells by private septic systems. However, these standards do not necessarily protect aquifers from the cumulative impacts of new septic systems over large areas. The effects of new development on the water supply can be mitigated by providing public sewerage service and protected public water supplies.

As the Town grows, it may become necessary to provide sewer and water services in the most densely populated areas. The reasoning behind this is essentially twofold. First, the provision of services in the hamlets will help guide development into these settled areas. In turn, this will help to protect the Town's rural character. Second, the provision of sewer services will help protect groundwater resources used for drinking water in rural areas.

Providing sewer and water services in the Town would be quite costly. While no actual studies have been done for the Town, the cost of such services often exceeds the ability of small communities to pay for them. Since there are a relatively low number of households within the potential service areas (i.e., hamlets), the costs per household could be prohibitive.

Zoning determines the pattern and density of development in the Town. It also determines the need for public water and sewer. When there are extensive areas outside the hamlets zoned for residential uses, new residents do not have to move into, or even near, the hamlet areas. This drastically reduces the likelihood that either of the hamlets will become dense enough to support the costs of new public services.

At this point in time, providing sewer and water services in the Town would be quite costly. While no actual studies have been done for the Town, the cost of such services often exceed the ability of small communities to pay for such facilities. Since there are a relatively low number of households within the service area, the costs per household can be prohibitive.

In Stuyvesant, the number of households that would be included in the rate base remains low because the growth rate in the Town has been relatively slow. In addition, the current zoning in the Town of Stuyvesant plays a crucial role in determining the density of the hamlet areas. Since there are large areas outside the hamlets zoned for medium density and rural residential uses, new residents do not have to move into, or even near, the hamlet areas. This drastically reduces the chance that either of the settled areas will become dense enough to support the costs of new public services.

It is outside the scope of this study to calculate the financial implications of providing public water and sewer service. However, the Alternatives Analysis should consider a land-use scenario that is likely to maximize the financial feasibility of providing public water and sewer service to the hamlet areas. This does not mean that the Town must or should develop such systems. It simply implies that the Town should consider the costs and benefits of public water and sewer service.

APPENDIX A

NATURAL HERITAGE SITE RANKINGS

Global Rank:

- *G1* = critically imperiled globally because of extreme rarity (5 or fewer occurrences, or very few remaining acres, or miles of stream), or especially vulnerable to extinction because of some factor of its biology.
- *G2* = Imperiled globally because of rarity (6-20 occurrences, or very few remaining acres, or miles of stream), or very vulnerable to extinction throughout its range due to other factors.
- *G3* = Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.
- *G4* = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- *G5* = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- *GH* = Historically known, with the expectation that it might be rediscovered.
- *GX* = Species believed to be extinct.
- *GU* = Status Unknown

State Rank

- *S1* = Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable.
- *S2* = Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.
- *S3* = Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
- *S4* = Apparently secure in New York State.
- *S5* = Demonstrably secure in New York State.
- *SH* = Historically known from New York State, but not seen in the past 15 years.
- *SX* = Apparently extirpated from New York State.
- *SE* = Exotic, not native to New York State.
- *SR* = State Report only, no verified specimens known from New York State.
- *SU* = Status Unknown.

Appendix B

Final Inventory Report

Appendix C

List of Maps

Appendix D

Draft Comprehensive Plan Brochure

Appendix E

Goals, Planning Directives, and Corresponding Actions

TOWN OF STUYVESANT
Waterfront Goals and Planning Directives

Main goal:

Provide for the maximum public access to the Hudson River and Kinderhook Creek waterfronts and adjacent lands, with appropriate developed recreation, while protecting the natural and historical resources important to the general health and welfare of present and future generations of residents.

Directives and Corresponding Actions:

- A. Establish specific areas as prime recreation destination/access points for various types of recreation.
 - Inventory and map existing recreational facilities along the waterfront.
 - Identify overall regional and local need for boating facilities, trails, beaches, fishing areas, viewing points, interpretive exhibits, and parks and compare with mapped inventory.
 - Identify and map public and private lands appropriate for each type of recreational activity above and coordinate with any existing land use management plans to determine potential for that use.

- B. Develop education programs that promote the waterfront and its heritage.
 - Identify existing education programs in the Town related to the waterfront.
 - Suggest potential education programs related to the waterfront.
 - Determine feasibility of establishing such education programs.

- C. Preserve the scenic qualities of the waterfront areas between the Hudson River and Route 9J and along Kinderhook Creek.
 - Identify and map scenic areas along the waterfront of the Hudson River and Kinderhook Creek.
 - Determine prime scenic areas to protect.
 - Determine feasibility of establishing a local scenic byway program along Route 9J that would take into account constructing various pedestrian, bicycle, and automobile facilities to enhance the enjoyment of the scenic and other qualities of the areas adjacent to Route 9J.
 - Meet with the Village of Coxsackie to discuss cross river scenic impacts and other waterfront commonalties between the two municipalities.

- D. Protect and enhance the historical structures along the waterfront areas.
 - Identify and map historical resources that relate to the waterfront and prioritize for protection.
 - Develop incentives and pursue funding for improving historical structures.

- E. Protect and conserve important natural resource areas along the waterfront.
- Identify and map natural resource areas along the waterfront and prioritize for protection.
 - Communicate with existing natural area land managers within the Town to coordinate goals and preservation efforts.
- F. Encourage appropriate commercial development along the waterfront related to recreation, education, scenic vistas, and historical/natural interpretation.
- Identify need and existing plans for commercial development along the waterfront areas.
 - Locate key areas appropriate for potential development.
 - Assess feasibility of developing key areas while maintaining the character of the surrounding neighborhoods.
 - Review zoning ordinance and standards and make recommendations to meet new needs of waterfront communities.

TOWN OF STUYVESANT Agriculture Goals and Planning Directives

Main goal:

Maintain the agricultural fabric in Stuyvesant as the dominant land use by conserving farmlands and economically stimulating local agricultural industry.

Directives and Corresponding Actions:

- A. Protect and conserve important prime agricultural areas.
 - Define "agricultural enterprise" for the Town of Stuyvesant
 - Identify and map a hierarchy of farmland suitabilities based on soil types and prioritize for protection.
 - Identify all laws and regulations that effect the use of prime agricultural lands and recommend Town zoning and planning laws to maximize protection.

- B. Strengthen the Town's agricultural industries and support services.
 - Identify and map the agricultural related industries and support services connected with farming in Stuyvesant.
 - Determine needs of farms and agricultural industries/services.
 - Assess impact of planning and zoning on agricultural industries/services and recommend standards to support agricultural related industries and services in the Town.

- C. Maximize economic gains to farmers who work in production and/or retail agricultural enterprises.
 - Survey farmers to determine economic and land based concerns and needs.
 - Identify the cost of community services to farms and residences compared with revenues from those respective land uses and develop strategies for balancing the differences.
 - Identify and map the types of farms in Stuyvesant and solicit help from organizations that can provide technical guidance for improving and diversifying economic gain.
 - Assess availability of marketing outlets and financial services for farmers.

TOWN OF STUYVESANT
Conservation/Historic Preservation
Goals and Planning Directives

Main goal:

Protect and enhance the natural, cultural and historic resources Important to the rural character of the Town and the enrichment of its residents' lives; and provide clear greenway linkages between the most suitable of these areas and the population centers of the Town to facilitate public usage and enjoyment.

Directives and Corresponding Actions:

- A. Protect and conserve important ground and surface water resources and areas of natural and recreational importance such as trout streams, wetlands, wooded ravines, and associated wildlife habitat.
Identify and map ground and surface water resources.
- Identify and map significant natural areas.
 - Identify and compare prime recreational areas with natural areas.
- B. Discourage inappropriate development in the areas of greatest environmental value.
- Determine and prioritize for protection, areas of greatest environmental value. Compare sensitive areas to development potentials.
 - Set guidelines for development in areas of greatest environmental value.
 - Communicate with Town Boards to coordinate goals and conservation efforts.
- C. Minimize economic loss to residents due to natural hazards such as floods and erosion.
- Identify and map flood zones.
 - Investigate local reforestation programs and make recommendations to prevent erosion.
 - Communicate with existing flood and erosion control agencies to coordinate efforts.
- D. Protect and enhance the historical and scenic resources in the Town.
- Identify and map historical resources and prioritize for protection.
 - Develop incentives and pursue funding for improving historical resources.
 - Develop a townwide visual survey to determine key scenic points.
 - Map and prioritize scenic viewpoints for protection.
 - Make recommendations and pursue funding for development of scenic viewpoints
 - " Develop recommendations on how to protect scenic viewsheds.

- E. Establish a physical greenway system of recreation and wildlife corridors between publicly accessible natural areas, important historic resources, the hamlets of Stuyvesant Landing and Stuyvesant Falls, and future developments.
- Identify potential environmental, historic, and scenic areas to link in a greenway system, including the Greenway Trail.
 - Determine feasibility of establishing a local scenic byway program along Route 9J that would take into account constructing various pedestrian, bicycle, and automobile facilities to enhance the enjoyment of the scenic and other qualities of the areas adjacent to Route 9J.
 - Develop rail-trail plans for along two abandoned rail lines.

TOWN OF STUYVESANT
Economic Development
Goals and Planning Directives

Main Goal:

Establish and/or enhance economic development opportunities in the Town in the areas of residential, commercial and industrial development and local and regional tourism that favor the residents' quality of life and support the agricultural, waterfront and conservation /historic preservation goals of this comprehensive plan.

Directives and Corresponding Actions:

1. Residential

Guide residential development that retains the Town's quality of life, preserves open space, allows for the efficient use of existing or proposed town services and provides a range of housing opportunities for all citizens in keeping with demographic and economic conditions, availability of community facilities and suitabilities of land

- A. Encourage a wide range of housing types that meet appropriate standards and attract and phase development.
 - Inventory existing housing types and distribution (review census data to look at population changes, household densities and # of residences/ types when considering regional housing markets)
 - Determine need for various housing types (does the Town contain its fair share of affordable housing)
 - Research potential appropriate standards
- B. Establish a density of housing located in accordance with the provision for community facilities/services, suitabilities and limitations of environmental factors, and quality of life issues.
 - Inventory existing town services and facilities
 - Analyze positive and negative points of existing residential development
- C. Encourage use of good site planning and design practices to create interesting, useful and harmonious living environments.
 - Research existing good site planning and design practices from other communities (consider greenspace, buffers, services, sidewalks, lot widths, street widths)

2. Commercial Retail

Meet recognized local commercial needs with appropriate development of the highest quality while minimizing detrimental impacts to the Town's rural character.

- A. Establish the location of new commercial development at existing commercial centers or in new mixed use developments that conserve the rural landscape between population centers, avoids strip development and scattered businesses and avoids overzoning.
 - Inventory and analyze existing commercial entities available to the Town's residents to determine what commercial activity could occur in the Town.
- B. Promote efficient traffic circulation, pedestrian and vehicle access and parking.
- C. Promote attractive commercial development in harmony with the Town's neighborhood characters, including aesthetic considerations.

3. Cottage Industries

Encourage development of home businesses in the Town that are compatible with the local residential character and historical nature of any such homes.

- Inventory and survey existing home businesses
- Solicit input from the residents on which businesses the Town welcomes
- Determine needs for various types of services
- Research corollary commercial businesses to service cottage industries

4. Office/Industrial Parks

Accommodate limited office park development with appropriate research, office, multi-firm activities, warehouses and light industry on land appropriate from a functional point of view, while conserving agricultural and fragile natural areas important to the rural character and evaluate the significance of any tax advantages or other related revenues.

- A. Promote the geographic concentration of office/industrial park development and avoid scattered single building construction
- B. Limit the intensity and extent of development and use only land that meets stringent location principles
 - Analyze population densities, infrastructure and highway access
 - Define type/level of industrial development appropriate for the Town (consider infrastructure, environment, image, visual impacts)
 - Research potential markets for such development
 - Research and promote potential corollary commercial businesses

C. In planning and designing office/industrial parks, promote:

- comprehensive planning both beyond the periphery as well as within;
- joint action and investment both by the public agencies and private sector;
- orientation of resources toward market and transportation;
- as a focal point for transportation facilities for goods and people;
- design to insure optimum efficiency for occupant industries;
the location of on-site essential services (public and private) for industries, employees and efficient vehicular movement;
- pleasant, convenient and satisfying work conditions for employees, including the opportunity for a short commute;
- the construction and use of pedestrian paths connecting the area with residential and commercial retail areas and parks

5. Tourism

Promote and provide initiatives for the establishment of local tourism programs associated with the history and use of the two hamlets and the agriculture community while minimizing detrimental impacts to the Town's rural character.

- Research potential tourism businesses and interest points that can be used to increase tourism in the Town

Appendix F

Results of Farmer Survey

Appendix G

Survey Results from Public Meeting
of October 1994

Appendix H

Notes from Public Meeting of August 1995

Appendix I

Residential Build-Out Analysis