SECTION II INVENTORY AND ANALYSIS

A. OVERVIEW

Nestled in the historic Mid-Hudson Valley, adjacent to the magnificent river that gives the valley its name and character, the western portion of the Town of Rhinebeck is of unique natural and manmade beauty. This natural beauty has been admired for centuries and has inspired many from all walks of life to settle here and leave their stamp upon the landscape. These ranged from Dutch farmers and businessmen who built sturdy farmhouses to financial magnates who oversaw the construction of large riverfront estates with landscaped gardens designed in the romantic style.

The attractiveness of the juxtaposition of the active farms together with the open and wooded areas, the interest and beauty of the historic buildings -- particularly residences in the areas of Rhinecliff hamlet and the large estates paralleling the River -- as well as views of the majestic Hudson River itself and west bank, including vistas of the Catskill Mountains, have long been recognized as worthy of preservation.

Historically, the Town of Rhinebeck has been a rural area intermixed with more intensive residential and commercial activity focused in and around the Village of Rhinebeck. Farms devoted to vegetable and fruit growing, wholesale flower production, the raising of cattle and milk production, and horse farms are important features in the economic life of the Town. In addition, the visual and scenic appeal of these farms provides a sense of desirable openness and well-being to residents, business people and tourists.

In the past, the Town was on the periphery of areas where major development had occurred. While the Kingston-Rhinecliff Bridge brought increasing numbers of people through the Town of Rhinebeck, growth in the Town was relatively slow. Economic activity fueled by the emergence of IBM in Kingston, Poughkeepsie and Southern Dutchess County, caused residential and commercial growth to be centered there but some "spillover" effect obviously was felt within the Town of Rhinebeck.

The Town of Rhinebeck's largest population increase occurred in the decade between 1970 and 1980 when the number of residents in the Town grew by approximately 25 percent. The rate of growth had been about 23 percent in the 1960 to 1970 decade and much smaller in the preceding decades. The combined population of the Town and Village of Rhinebeck in 1980 was 7,062.

			Change		Change
			1960-1970		1970-1980
	<u>1960</u>	<u>1970</u>	Percent	<u>1980</u>	Percent
Total Town Population	4,612	5,658	22.7	7,062	24.8
Unincorporated Town	2,519	3,322	31.9	4,520	36.1
Village of Rhinebeck	2,093	2,336	11.6	2,542	8.8

As shown, during this 20-year period the growth in the unincorporated portion of the Town was even more substantial. From 1960 to 1970, the unincorporated Town population increased about 32%, and from 1970 to 1980 more than 36%.

Since 1980 the pace of growth in population has slowed considerably, at least in part due to a nation-wide trend in decrease in average household size but perhaps even more so due to an increase in the number of persons who have a second residence in Rhinebeck, generally a weekend home, while maintaining their principal residence and being counted by the U.S. Census Bureau elsewhere.

Overall growth within the Town during the 20-year period, 1980 to 2000, was approximately 10.0 percent, with an increase of approximately 21 percent from 2,542 persons to 3,077 persons occurring within the Village of Rhinebeck and an increase of less than 4 percent from 4,520 persons to 4,686 persons occurring within the unincorporated portion of the Town, i.e. those lands outside the Village. On-going build-out of The Gardens, a 255-unit multi-family townhouse development within the Local Waterfront Revitalization Area (LWRA) and in the unincorporated portion of the Town, will in itself cause a significant change in this trend when the 2010 Census occurs.

			Change		Change
			1979-1990		1990-2000
	<u>1980</u>	<u>1990</u>	Percent	<u>2000</u>	Percent
Total Town Population	7,062	7,558	7.0	7,763	2.7
Unincorporated Town	4,520	4,833	6.9	4,686	(3.0)
Village of Rhinebeck	2,542	2,725	7.2	3,077	12.9

While not all projects discussed have come to fruition, Rhinebeck has been experiencing development pressures throughout the past few decades. These development pressures have included proposed projects on both sides of the River that could directly or indirectly impact local residents.

More than fifteen hundred units of conventional subdivision and large scale residential development proposals (e.g. Weingarten, Creed and The Gardens) have come before the Town Board and Planning Board in the past two decades and some, like The Gardens, are now in construction. Also of concern throughout the period have been several other large parcels of land in Rhinebeck that may be subject to development pressures, e.g. a Dutchess County ash landfill site which had once been proposed within the southern waterfront area of the Town which could have significant impacts on the Town's ground and surface waters and scenic resources, and the expanded programming at the County Fairground that has continued to attract increasing numbers of visitors. A major planning issue is the effect of these pressures on the large river estates in visual terms, as well as with regard to access.

Town residents and officials have repeatedly voiced concern about plans for proposed projects in the area which they feel could be detrimental to Rhinebeck from environmental and scenic points of view. A couple of decades ago these included a proposed coal port in the Kingston area; a Hudson River water skimming project; a proposed Con Edison power plant on the Dutchess / Columbia

County border; and toxic waste disposal areas. Today, such issues as potential Metropolitan Transit Authority (MTA) expansion within the waterfront area of the Town or alternatively the establishment of rail passenger service on the west bank of the Hudson, The Landing at Kingston and Ulster project across the Hudson on the Tilcon Site in Kingston, the St. Lawrence Cement project, also on the west bank of the Hudson and north of the Dutchess / Columbia County line, and potential transmission corridor improvements are considered significant by the Town.

Fortunately, Rhinebeck has a rich history of people, citizens and officials caring about their community. Since the 1970's, several groups have been formed, studies have been undertaken, and efforts have been made to preserve and enhance the natural and man-made environments of Rhinebeck. The Town has also worked with adjacent communities in the Mid-Hudson Valley to respond in a coordinated manner to development pressures and threats to the area's scenic, historic and environmental resources.

The initial preparation of this Local Waterfront Revitalization Program in the late 1980's and its completion today represent a major planning and policy initiative consistent with the Town's status today like all of its neighboring communities as a member of the Hudson River Valley Greenway and a Hudson River Valley Greenway Compact community. More specifically, the Rhinebeck LWRP through its policies, proposed land and water uses, and proposed projects incorporates the five basic criteria identified as the basis for attaining the goal of a Hudson River Valley Greenway Compact community, namely commitments to natural and cultural resource protection, regional planning, economic development, public access and heritage environmental education.

The following portion of Section II is composed of various inventory subsections relating to current conditions within the Town and an analysis of issues or areas of concern, problems and opportunities. Some of the issues presented are of a general nature and others express more specific concerns.

B. EXISTING LAND USE

See Map 2, "Existing Land Use".

The Town's LWRA, extending more than seven miles north to south (with more than eight miles of shoreline) and varying from three-quarters to two and three-quarters miles east to west, is a rural and estate area to the west of the commercial and higher density residential area centered in the Village of Rhinebeck. The hamlet of Rhinecliff, a historic landing area, provides a second, but smaller, commercial and high density residential focus. The Village and hamlet are well-defined in comparison with the less intensely developed rural and open space areas surrounding them.

1. Agriculture

Agricultural lands are located throughout the LWRA. Agriculture has represented the predominant land use historically in the LWRA and remains significant to the Town as an important economic resource for the community and as an important visual resource for both residents and visitors.

Currently, the primary agricultural activities in the Town are fruit, vegetable, nursery stock and wholesale flower production, a dairy farm, cattle breeding operation and numerous horse farms. Timber and firewood harvesting is also ongoing.

Many of the farms within the LWRA have been included within the State agricultural districting program (see Map 10, "Summary of Major Development Considerations"). In this program, enrolled farmers grossing over \$10,000 income from agricultural activity are able to benefit from reduced land assessments, and thereby a reduction in taxes, in return for a multi-year (at least eight year) commitment to remaining in farming. In addition, some owners of horse farms have been able to obtain tax benefits from horse breeding.

2. Higher Density Residential

Residential uses, including homes on relatively small lots, (generally less than one-half acre) and apartment and town house development are located primarily within the hamlet of Rhinecliff, as well as long the Route 308 corridor. There is also a scattering of homes north of the Village along Route 9. The Village and hamlet areas are quite clearly defined because of the extent of relatively undeveloped (i.e., agricultural, vacant, wooded or wetland) areas surrounding them.

3. Rural/Estate Residential

The Rural/Estate Residential category consists of large estates lining the River, generally west of River Road and Mill Road. While the Land Use Map shows the location of the house and accessory building(s) and some surrounding land in the residential designation, but the major portion of the estate properties is shown as vacant or agricultural. Scattered houses away from the Village and hamlet, but along major roads, are also included in this category.

4. Commercial

Commercial uses in the waterfront area are found within the hamlet of Rhinecliff. In addition, a few commercial sites are located south of the Village along Route 9, along Route 308, north of Rhinecliff and at the intersection of Hook Road and Old Post Road.

5. Industrial

Industrial activity is limited in terms of light manufacturing to several small uses in the Hook Road area of the Town.

6. Utilities and Communications

Sites in the utilities category include the water treatment plant on Slate Dock Road, the sewage treatment plants on Astor Drive and at Vanderburgh Cove, a property located on Morton Road used for a radio transmission tower, and the cable television tower and accessory facilities on Tator Hill Road.

7. Transportation

Included in this category are the Rhinecliff train station and the Town Landing at Rhinecliff (a portion of the Town Landing is also listed under "Recreation") as well as the Town Highway Department facility and a private bus garage on Rhinecliff Road.

8. Recreation

Recreation uses located within the waterfront area include the Town Recreation Center and Park, the adjacent and recently-acquired Rhineson property which is presently being planned for park expansion, the Town Landing at Rhinecliff (a portion of which is also included in the Transportation category), Ferncliff Forest, the Southland Foundation and Wilderstein properties and the Town's portion of a 25-mile bike / hike trail.

9. Public/Semi-Public

Several properties throughout the waterfront area of the Town, or on nearby lands, are shown in the public/semi-public designation. These include the aforementioned Town Highway Department garage, churches and church-related operations, cemeteries, libraries, the area hospital and nursing homes.

10. Vacant

More than fifty percent of the land in the waterfront area of the Town is considered vacant, i.e., without an identified active use. The vacant areas include wooded, wetland and brush areas. These vacant, wooded and wetland areas serve as an important visual resource complementing the agricultural areas, the historic structures and the beauty and open space setting provided by the Hudson River. In addition, they serve an important ecological function in providing watershed areas and habitats and breeding areas for plants, fish and wildlife. Maintained in their natural state, the bush, wooded and wetland areas serve to assist in flood and erosion control, air quality amelioration and noise absorption.

11. Water-Dependent Uses

At this time, the primary publicly available site for water-related use is the Town Landing in Rhinecliff, which the Town is improving to enhance water-dependent uses and which is presently used by cruise boats, recreational fishermen, boaters (including ice boaters) and by commercial shad fishermen. Fishermen also utilize the shores of the Hudson River throughout the waterfront area and to a lesser extent Crystal Lake in the Village of Rhinebeck and outside the LWRA.

Fishermen with and/or without specific permission fish off the shores of the Landsman Kill and other streams at a variety of locations and enter the areas primarily across private property. Moreover, fishermen and duck hunters enter the Astor Cove and Vanderburgh Cove area under similar conditions.

Property owners of landing sites included in the inventory subsection on Coastal Access Points may launch or dock boats at those locations for private recreational use, but these activities are generally limited by the need to cross the railroad tracks at grade level at most locations. There are no retail commercial or industrial uses located adjacent to the River.

12. Water-Enhanced Uses

All properties not dependent on the water, but located adjacent to, and with views of, the Hudson River or any of its tributaries can be considered water-enhanced uses. The largest percentage of land adjacent to the River remains in estate properties. Most of the estates are currently in residential use; however, some are or have historically been in institutional uses, such as Ferncliff Nursing Home, the former Holy Cross School property and Linwood Sisters of St. Ursula. In addition, some commercial enterprises in Rhinecliff, including restaurants, an inn and small offices, could be considered water-enhanced, but at this point these businesses do not capitalize as extensively as they might on their riverfront views. Other activities, such as picnicking at the Town Dock, also are enhanced by waterfront location and views.

13. Analysis of Existing Land Use

<u>a.</u> Preservation of the Rural/Low Density Qualities of the Town

Preservation of agriculture within the waterfront area of the Town is important from an economic perspective, as well as a means of protecting open space and scenic resources. In order to insure the continuation of an important element in the Town's economy and to preserve the rural qualities of the Town, it is important to have viable agricultural activities. Currently, the agricultural district program (preferential assessment) provides some financial relief to farmland owners and farmers in the Town.

Several Rhinebeck farm owners have renewed or joined the County Agricultural District, signing up for a multi-year commitment to agricultural activities. As land values increase, taxes on agricultural land rise and pressure for residential and/or commercial development increases, it may become more and more difficult to keep land in agricultural uses. Rollback penalties, which are part of the agricultural districting program, may serve as a limitation, but not an absolute deterrent to development. In the recent past, some newer agricultural activities in the waterfront area, such as raising horses, appear to be adding other positive dimensions to the viability of agriculture in the Town.

The rural/low density appearance and qualities of the Town are also being threatened by increasing proposals for development on estates and large parcels of land. How, when and where the parcels are developed, how much land will be preserved for agriculture and/or open space, how development is sited on a property relative to road frontage and preservation of natural features, and whether an agricultural and/or open space greenbelt will be maintained around the Village core, will all affect the rural open space appearance and qualities of the Town. The use of conservation easements is being employed as another prime method of preserving active agricultural land. The Winnakee Land Trust and other not-for-profit agencies are working to acquire conservation easements on land in the Town's waterfront area. Possible financing support for this effort may be available through the Dutchess County Bond Fund, from the NYS Hudson River Valley Greenway or in the form of matching funds from the NYS Department of Agriculture and Markets under their farmland preservation initiatives.

<u>b.</u> Preservation of Scenic and Historic Structures and Scenic Views

It is desirable to maintain the scenic and historic qualities of the estates as they are viewed from major roads and from the River, or from the western shore of the Hudson River. Thus, preservation and restoration of existing historic structures, e.g., Wilderstein, siting of development relative to roads and to River frontage, and preservation of natural features along the roads and the riverside must be important planning considerations.

c. Preservation of Village Core Focus

While there has been historically a significant difference in the level of development within the Village and in the coastal areas of the Town, the distinction between the more rural and Village/hamlet areas has become difficult to maintain.

Increased pressure for residential development in the Town and at the boundaries of the Village and Town will make it necessary to take deliberate steps to maintain the rural open appearance of the Town and to continue the concentration of more intense uses in or near the Village. An issue of concern to Village and Town residents, as evident during on-going 2003-2005 discussions led by the Town's Comprehensive Plan Committee, is how to maintain, over time, those greenbelts of agriculture and open space that currently substantially surround the Village of Rhinebeck and the hamlet of Rhinecliff.

Pressure for commercial sprawl also exists and it is desirable to continue with the Village as the primary center and Rhinecliff as the secondary center of social, cultural, recreational and commercial activity, with only limited commercial activity in other portions of the Town's waterfront area.

d. Water-Dependent and Water-Enhanced Uses

At this time, water-dependent uses are limited (see also discussion under Coastal Access Points). Future proposals for development of estate properties and/or landing sites by public or private interests may include plans for water-enhanced or water-dependent uses. An important consideration is retaining, enhancing and creating, wherever possible, water-dependent uses such as marinas, fishing stations, launching ramps; a related consideration is maintaining, enhancing and/or creating public access to and use of the new facilities.

C. ZONING

The below discussion of "Zoning" is based on the Town's Zoning Law, as adopted in 1989 and based upon the Town's then-current Comprehensive Plan. The Town's Comprehensive Plan is currently being updated, with adoption by the Town Board anticipated during 2007. The Comprehensive Plan Committee made recommendations for amendments to the Zoning Law to reflect even more strongly the land use policies discussed in Section III of this LWRP. The zoning changes reinforce the protection of agricultural land and scenic and historic resources. The former five-acre zones were recommended to be increased to ten- and twenty-acre zones that promote cluster developments. The hamlet and former one-acre zoned areas were recommended for Traditional Neighborhood Design compatible with hamlet-scaled development of grid streets and small lots.

See Map 3, "Zoning".

1. Residential

The majority of the land in the waterfront area of the Town is zoned Residential 5-Acre (R5A) District, a classification "intended to allow limited development in rural areas at a density that, if appropriately sited, including through the encouragement of cluster development, will help preserve the sense of openness in the Town's scenic and agricultural areas and respect the environmental sensitivity and aesthetic qualities of these lands". The R5A District generally requires five acres per single-family or two-family dwelling and covers all Riverfront areas of the Town except the hamlet of Rhinecliff and its immediate environs.

One and two-family dwellings and associated accessory uses and structures are permitted by right in the R5A District, as well as agricultural and conservation uses including stables. The special permit uses requiring approval by the Planning Board reflect a wide variety of uses such as elderly residential development, educational and/or institutional uses, hospitals, nursing homes, alternate care facilities, and offices, conference centers, and land-extensive recreational facilities that are suitable for large lot, low-density areas and that might serve as appropriate adaptive re-use possibilities for the large estates within this District. Permitted waterfront uses include marinas, boat clubs, docks and boat ramps.

The Residential 3-Acre (R3A) District, a low-density residential classification where the minimum lot area for a single-family or two-family dwelling is three acres, is found within that portion of the LWRA on the east side of NYS Route 9 in areas both north and south of the Village of Rhinebeck. The permitted uses in this District are the same as in the R5A District, but the authorized density is slightly higher. Additional special permit uses within the R3A District include but are not limited to fairgrounds, hotels and motels, extractive operations including soil mining, and public or franchise utility stations or structures.

The second most predominant zoning district in the local waterfront revitalization area is Residential 1-Acre (R1A) District, a classification "intended to allow more concentrated, medium density residential development near the Village of Rhinebeck and where potentially served by municipal central water and common sewage facilities" and wherein "clustering is encouraged ... to preserve significant open spaces and foster pedestrian and bikeway linkages between residential neighborhoods and the business, service and recreational facilities located near the Village center".

The R1A District permits single-family or two-family dwellings on minimum one-acre lots in the hamlet of Rhinecliff and on land adjacent to the Village of Rhinebeck, including areas along Rhinecliff Road and Old Post Roads, as well as an area east of Route 9 (south of the Village), and authorizes multi-family residential development by special use permit. The number of permitted and special permit uses, while including residential and agricultural uses, is somewhat more restrictive in this District, reflecting a more densely populated area where some of the special permit uses which require large parcels of the R5A and R3A would not be appropriate. As in the case of the R5A District, the earlier-cited waterfront uses are permitted.

Clustering of residential development is both permitted and encouraged in any of the above three districts, R5A, R3A or R1A, with subdivision and/or site plan approval required from the Town Planning Board.

2. Commercial

Commercial zoning is limited within the Town's LWRA.

A small area of Highway Business Park (HBP) District land lies between Hook Road and Route 9G, while a small zone of Gateway (G) District is adjacent to Route 9 south of the Village. A variety of general uses, business and service uses, and commercial uses, including both retail and wholesale activities, are authorized either by right or special use permit

within the HBP District. The Gateway District is far more restrictive in its authorization of "small-scale professional, administrative and related office uses at the southern approach or gateway to the Village of Rhinebeck".

In addition, an area of about two square blocks in the hamlet of Rhinecliff has been designated as Rhinecliff Business (RB) District. This District permits a variety of retail commercial and office uses, as well as hotel and tourist home uses which could be appropriate to this small central business area. In the words of the Zoning Law, the RB District "is intended to allow small-scale commercial uses to service the local needs of the Rhinecliff hamlet".

3. Land Conservation

The Town's Land Conservation (LC) District "is intended to provide for conservation, open space and limited recreational use of the Town's most ecologically-sensitive lands, including those most closely related to the principal watercourses throughout the Town". The LC District includes Ferncliff Forest, a wooded area that has been recognized as necessary for preservation, and land on both sides of the Mudder Kill, which rises out of the Snyder Swamp area in the northern part of the Town. Also included in this District are lands extending 75 feet from the mean high water mark on either side of NYSDEC-classified streams. This District has been designed to protect environmentally sensitive and flood-prone areas and permits very limited uses, generally recreational or nature-oriented, with minimal site improvement or structures required.

The LC District is complemented by a Flood-Fringe Overlay (FF-O) District implementing the FEMA program and a more recently adopted Water Resource Protection Overlay (WRP-O) District providing both for additional protection of stream corridors and wetland buffers and for protection of groundwater aquifers.

4. Planned Development

The Planned Residential Development Overlay (PRD-O) District "encompasses those lands described within the Town Comprehensive Plan as areas with strong potential for provision of municipal water and sewer service through a cooperative private and public development program".

Among the early recommendations of the present Master Plan Committee is a proposal for the Town Board's adoption of a Zoning Code amendment eliminating the PRD-O District.

5. Analysis of Zoning

The zoning classification of lands and related provisions for clustering throughout the Town's LWRA have been designed to protect the rural and open space qualities and environmental features of this area, to provide for a range of densities suitable for a variety

of housing types and for limited commercial development where appropriate. Maintenance of large-lot zoning in the western portion of the Town also serves to aid in protection and enhancement of scenic and historic areas, of ground water supplies and, to some extent, agricultural areas. Authorization for water-dependent recreational uses is also provided within the framework of the R5A and R1A Districts.

In addition, the R1A and Rhinecliff Business Districts correspond to a more dense residential development pattern and a small concentration of commercial activity within the hamlet of Rhinecliff. While some additional areas along the highway corridors of the Town to the north of the Village (and outside the LWRA) have been zoned for highway business activities and office and research park uses, partially reflecting the presence of the Kingston-Rhinecliff Bridge, generally the Town Plan and zoning regulations reflect a desire to maintain and build upon the vitality of the traditional Village and hamlet centers and avoid commercial sprawl.

D. ENVIRONMENTAL FEATURES

See Map 4, "Natural Resources Inventory".

1. Geology, Soils and Topography

Bedrock in the waterfront area of the Town is Austin Glen graywacke and shale. The Austin Glen formation consists of coarse, dark gray sandstone or fine-grained conglomerate composed of firmly cemented rounded fragments. The cliffs that rise 50 to 100 feet above the railroad at Rhinecliff and the Sturgeon Point Cliffs are shale, however, most of the small outcrops of bedrock are sandstone. Elevations generally range from mean tide level to 50 to 200 feet, but the summit of Mt. Rutsen located in Ferncliff Forest, the highest point in the waterfront area, is 350 feet above mean tide level.

Most of the waterfront area consists of clay soils with a high water table which necessitates limitations on allowable development densities without the provision of central sewer and water supply systems (See Map 10, "Summary of Major Development Considerations"). Soil materials are also comprised of glacial till, lake clay and terrace sand, as well as recent deposits of alluvium, tidal marsh sediments and fill. Many of the soils in the Town are suitable for various types of agriculture (see Map 4, "Natural Resources Inventory"). Hudson soils, including clay and sand, tend to intermix near the River where they form sloping bluffs which are subject to erosion or slumping and sliding. Alluvium, or stream deposited silt, is found in Snyder Swamp. Also, fill has been utilized to form the railroad beds.

2. Groundwater

The Village of Rhinebeck and portions of the hamlet of Rhinecliff, adjacent areas along Route 308, including the on-going multi-family development known as The Gardens at Rhinebeck, and a small section of River Road to the Ferncliff Nursing Home are serviced with public water from the Rhinebeck Village system, which utilizes water from the Hudson River. The bulk of the Town relies on groundwater from individual wells. Most of the waterfront area is composed of thick glacial till and lacustrine silt and clay surficial aquifers. The till has a low recharge capability and the silt and clay recharge rate is even lower; both have yield rates that are similarly low. In addition, densities for any uses relying on septic systems must be low to avoid negative impact on groundwater, since it takes a relatively long time to dilute effects of any pollutants.* A few portions of the waterfront area have sand and gravel aquifers that are more productive in terms of yield. The bedrock aquifers are primarily shale and the average depth of wells into bedrock is over 120 feet.

* See Robert Gerber, Water Resources Study for Dutchess County, June 1982.

3. The River

The Hudson River is a 315 mile long river that flows from the Adirondack Mountains in the northern part of the State to New York City. At sea level below Troy, the River becomes tidal and navigable. Tidal freshwater, which extends from Troy south generally to Hyde Park, is available in Rhinebeck. The River, classified "A" by the NYS Department of Environmental Conservation, in fact, serves as the source for the water supply system serving the Village of Rhinebeck, the hamlet of Rhinecliff, and other properties in the vicinity. It also serves as a water source for the Port Ewen area of the Town of Esopus on the west bank.

The mid-line of the Hudson River is the western boundary of the Town. The River provides many opportunities for residents and visitors. The Hudson offers a unique and an essential open space, as well as a scenic area that is a major visual focus within the western-most portions of the Town.

The scenic attributes of the River are further discussed in the sections on historic and scenic features and scenic roads and vistas. Its presence is both overpowering and calming, and the benefits to residents of the Town are many-fold. The Hudson provides a travel way for long and short distance commercial and recreational boating and fishing. At this time, boat docking in Rhinebeck is limited, but use of the renovated Town Landing in Rhinecliff and consideration of other prospective access locations is certain to increase.

The Hudson, within the waterfront area of the Town, also provides a deep-water estuary system unique in the northeastern United States. The deep holes off Sturgeon Point serve as a winter habitat area for much of the resident population of the short-nose sturgeon (an endangered species); the River also serves as a spawning area for the American shad. Two

deep water areas within the Town portion of the River have been categorized as significant habitat areas by the New York Department of Environmental Conservation. (See below Section 10 on Significant Coastal Fish and Wildlife Habitats.)

4. Islands

Jones Island, a small private island just north of Vanderburgh Cove, is available only for private recreation purposes, but can serve as a scenic interest area and an orientation point for boaters.

5. Freshwater Wetlands Affected by Tides

See Map 5, "Coves / Freshwater – Tidal Wetland Areas".

These habitats are among the Town's most significant scenic and biological resources. The wetlands are found in the natural and railroad-impacted coves of the Town, supporting extensive and varied vegetation and animal life.

In his 1978 report <u>Hudson River East Bank Natural Areas</u>, Clermont to Norrie, Erik Kiviat, Executive Director of Hudsonia, lists the following cove areas from north to south within the Town: Mandara South Cove, Matambeson Cove, Clifton Point Cove, Astor Cove, Slate Dock Cove North, Slate Dock Cove Middle, Long Cove, Cattail Cove, Stream Cove, Suckley Cove and Vanderburgh Cove. Of the several coves in the Town, Astor Cove, Suckley Cove and Vanderburgh Cove are considered the most ecologically significant.

Mr. Kiviat indicates that whereas the Tivoli Bays cove area in the Town of Red Hook is the most significant wetland resource area between Clermont and Norrie Point, the Suckley/Vanderburgh area is rated second in importance because of its size, uniqueness and relatively unspoiled estuarine condition. Vanderburgh Cove is important to spawning and feeding fish and migrating ducks and an osprey feeding area. It is used by resting marsh wrens, herons, and egrets in late summer.

The New York State Department of State has designated the Vanderburgh Cove and Shallows as a Significant Fish and Wildlife Habitat (see Appendix B.).

The Dutchess County Environmental Management Council (EMC) has also named Astor Cove, the Vanderburgh Cove with surrounding ridges, Jones Island, Suckley Cove, and nearby shallows of the Hudson River as a Significant Natural Area. Astor Cove, a habitat which also supports extensive fish and birdlife, is particularly important because its stand of wild rice provides a valuable feeding area for ducks.

6. Freshwater Wetlands Buffer

See Map 10, "Summary of Major Development Considerations".

Extending up from the River, wooded areas with steep slopes form a framework around the wetlands. These areas are periodically cut with streams and drainage ways. Much of this area is underlain with clay or sand soils that are subject to sliding or slumping if vegetation is removed. The forested/vegetated slopes provide habitat for small animal and wildlife. There are also some portions of the buffer areas that are highlighted with cliffs and promontories, such as those found at Sturgeon Point.

7. Freshwater Wetlands/Standing Water Areas

See Map 4, "Natural Resources Inventory".

Many isolated wetlands exist throughout the waterfront area of the Town. The open water areas surrounded by varied wetland vegetation are valuable from ecological and scenic points of view. The major freshwater wetland in the Town is Snyder Swamp, a hardwood swamp with permanent standing water in parts. It provides a source for both the Mudder Kill and the Rhinebeck Kill. This extensive area of approximately 110 acres adjacent to Ferncliff Forest, is regulated under the New York State Freshwater Wetlands Act because of its extensive land area, being far greater than the threshold of 12.4 acres, and is further zoned Land Conservation (LC) District by the Town. Activities such as draining, filling, dredging and other possible alterations are not permitted in this wetland area, which is currently in private ownership and zoned for residential use. Erik Kiviat prepared an extensive study, commissioned by Hudson River Heritage Inc., on the Mudder Kill and Snyder Swamp, and the Dutchess County Environmental Management Council (EMC) designated Snyder Swamp (together with Ferncliff Forest and the Mudder Kill) as Significant Natural Areas.

The Town has over thirty freshwater wetlands protected under Article 24 of the State Environmental Conservation Law (the Freshwater Wetlands Act) in the Kingston East and Rock City series of designations in Dutchess County. Within the Town's Coastal Area there are eleven designated freshwater wetlands, and they are as follows:

KE-4 - - Class II

KE-5 - - Class II

KE-6 - - Class III

KE-7 - - Class III

KE-8 - - Class III

KE-9 - - Class III

KE-24 - - Class II

KE-26 - - Class II

KE-27 - - Class II

KE-29 - - Class II

HP-31 - - Class I

These designated wetlands are indicated on a NYS Freshwater Wetlands Map that was promulgated on July 15, 1987 pursuant to Article 24.

Refer to LWRP Appendix E for the location of the above designated freshwater wetlands on the NYS Freshwater Wetlands Map.

8. Streams

Two primary streams, the Landsman Kill and the Rhinebeck Kill, join and flow across the waterfront area of the Town and drain southwest into Vanderburgh Cove and then into the Hudson. The Landsman Kill is stocked with fish and provides recreational fishing for anglers of all ages. These two streams merge at the millpond located on Mill Road. The Fallsburg Creek also drains into Vanderburgh Cove. In the northern portion of the waterfront area, the Mudder Kill flows in a northerly direction from Snyder Swamp and reaches the Hudson River within the Town of Red Hook. As noted above, the Mudder Kill, together with Ferncliff Forest and Snyder Swamp have been designated as Significant Natural Areas by the Dutchess County Environmental Management Council.

The Town Conservation Advisory Council developed and has carried out a program to monitor the quantity and the quality of the Rhinebeck Kill and Landsman Kill. The portion of the Landsman Kill between the Millpond and Vanderburgh Cove has been classified "C" by the Department of Environmental Conservation, indicating that the Kill is "suitable for fishing and all other uses except as a source of water supply for drinking, culinary or food processing purposes and primary contact recreation." The remaining portions of the Landsman Kill in the area (except Crystal Lake), the Fallsburg Creek, the Rhinebeck Kill and the Mudder Kill are designated "D" waters, which indicates that these waters are suitable for "secondary contact recreation, [and]... will not support the propagation of fish, but must be suitable for fish survival." Crystal Lake is classified "B" which indicates that the waters should be usable for swimming. In addition, Crystal Lake must meet the "B(T)" water quality standards which further indicates that dissolved oxygen levels should be appropriate for trout waters.

The Town has requested that DEC upgrade the classification of the following major streams in order to maintain or improve water quality: the Landsman Kill from the Millpond to its source to "B(T)," the Rhinebeck Kill to "C(T)", the Fallsburg Creek to "C(T)" and the Mudder Kill to "C".

9. Forested Areas

Many stands of mature hardwood trees are dispersed throughout the Town. The most significant area is Ferncliff Forest, which has extensive deciduous stands with scattered white pine and groves of hemlock. This area has been set aside as a preserve with limited recreational uses, such as hiking trails and picnic and camping sites. Mt. Rutsen, within

Ferncliff Forest, is the highest point of land in the waterfront area. The observation tower on the mountain is in a state of disrepair; the securing of funds for the rehabilitation or reconstruction of the tower would be desirable but may not be an attainable objective. Also within Ferncliff Forest, Mt. Rutsen Pond, a semi-natural pond, drains into nearby Snyder Swamp. A management plan for the 192 acre Ferncliff Forest area is currently in preparation by a not-for-profit group, Ferncliff Forest Preserve, Inc., which has taken over responsibility for the property after more than 20 years of management by the Town Rotary Club. Ferncliff Forest has been zoned for Land Conservation, which limits development of the site.

As mentioned above, Ferncliff Forest has been designated together with Snyder Swamp and the Mudder Kill, as a Significant Natural Area by the Dutchess County Environmental Management Council.

10. Significant Fish and Wildlife Habitats (see Appendix B)

Four of the thirty-nine Significant Coastal Fish and Wildlife Habitats within the Hudson Region lie within or adjacent to the Rhinebeck LWRA. These important habitats were designated by the Department of State Division of Coastal Resources.

Vanderburgh Cove and Shallows. Vanderburgh Cove and Shallows is located a. on the east side of the Hudson River, approximately four miles south of the Village of Rhinebeck, in the Towns of Rhinebeck and Hyde Park, Dutchess County (7.5' Quadrangles: Kingston East, N.Y.; and Hyde Park, N.Y.). Vanderburgh Cove is an approximate 100 acre, shallow, (less than 10 feet deep at mean low water), tidal, freshwater bay, separated from the open river by the Conrail tracks and land. The cove is connected by hydrology to the River via two bridges under the railroad tracks, and contains dense beds of water chestnut, wild celery, Eurasian water milfoil, pickerel weed, and yellow pond lily. Emergent marsh vegetation (e.g., river bulrush and cattail) is present only around the margin of Vanderburgh Cove. Outside of the railroad is an approximate 1,000 foot wide extension of the shallow water area in Vanderburgh Cove, encompassing approximately 300 acres. The latter area is predominantly sub-tidal, with a silt substrate and beds of aquatic vegetation. These shallows are located adjacent to a natural deepwater channel in the Hudson River, so the area is not subject to habitat disturbance from periodic maintenance dredging. The land area bordering Vanderburgh Cove and Shallows is predominantly deciduous forest on moderate to steep slopes. However, since the 1970's, new residential development has been increasing in adjacent areas.

Vanderburgh Cove and Shallows is one of the largest contiguous areas of shallow, freshwater, sub-tidal flats in Dutchess County. Areas such as this are extremely valuable fish and wildlife habitats. However, the importance of this area is limited somewhat by its small size relative to similar habitats

elsewhere in the Hudson River, and possibly by the abundance of water chestnut within Vanderburgh Cove. Suckley Cove is a high quality portion of the habitat, with minimal human disturbance.

Vanderburgh Cove and Shallows is a productive littoral area located near the lowest reaches of shallow freshwater in the Hudson River, which is a critical area for many fish species. The shallow, sub-tidal beds provide spawning, nursery, and feeding habitats for anadromous species such as striped bass, American shad, and white perch, and for a variety of resident freshwater species, such as largemouth bass, carp, brown bullhead, yellow perch, and shiners. The Landsman Kill and Fallsburg Creek also attract spawning runs of smelt, alewife, and blue-back herring, although the extent of reproduction has not been documented. Concentrations of spawning anadromous fish generally occur in the area between mid-March and July, with substantial numbers of young fish remaining well into the fall (October-November). Vanderburgh Cove and Shallows may also serve as a feeding area for populations of short-nose sturgeon wintering in the adjacent deepwater channel. The abundant fisheries resources in Vanderburgh Cove and Shallows provide valuable opportunities for recreational (and possibly commercial) fishing, attracting anglers from throughout

Dutchess County. Fishing pressure is generally concentrated near the tributary stream mouths and at railroad bridges.

b. <u>Kingston Deepwater Habitat</u>. The Kingston Deepwater Habitat encompasses a sixmile stretch of the Hudson River extending approximately from the City of Kingston in Ulster County and the hamlet of Rhinecliff in Dutchess County south to the southern boundary of the Margaret Lewis Norrie State Park in Dutchess County. The area is located in the Towns of Rhinebeck and Hyde Park in Dutchess County and the Town of Esopus in Ulster County (U.S.G.S. 7.5' Quadrangles: Hyde Park, N.Y. and Kingston East, N.Y.). The significant habitat area is a nearly continuous river bottom trench, where water depths of 50 feet or greater occur.

The Kingston Deepwater Habitat is the northern-most extensive section of deepwater habitat in the Hudson River. Deepwater estuaries such as this are rare in the eastern United States and the Hudson River is the only river in New York State that contains these ecosystems.

Deep water areas trap pockets of denser saline water, providing wintering habitat for short-nose sturgeon and supporting a diversity of marine species in the Hudson River. Recent fisheries investigations of the Hudson River in this area indicate spawning, as well as wintering of sturgeon in the Kingston Deepwater Habitat area. This area is also significant since it is largely responsible for the abundance of marine species upriver (the northern range limit for many in New York), especially during periods of low freshwater flows (summer). The majority of both Atlantic and

short-nose sturgeon taken for age-growth analysis during the 1936 biological survey came from Rhinecliff and Port Ewen. During the spring spawning run of shad, commercial drift netting takes place in the area.

c. The Flats. The Flats is located in the middle of the Hudson River, roughly between the hamlet of Barrytown and the City of Kingston, in the Town of Ulster and City of Kingston, Ulster County, and the Towns of Red Hook and Rhinebeck, Dutchess County (7.5' Quadrangle: Kingston East, N.Y.). The fish and wildlife habitat is an approximate four and one-half mile long underwater ridge, most of which is shallow (less than 10 feet deep at mean low water), fresh-water, inter-tidal mud flats, and sub-tidal aquatic beds (predominantly wild celery and Eurasian water milfoil). The Flats is bordered to the west by the Hudson River navigation channel, resulting in potential habitat disturbance from periodic maintenance dredging.

The Flats is one of the largest contiguous areas of shallow, freshwater, tidal flats in the Hudson River. Areas such as this are extremely valuable fish and wildlife habitats, and are not found in other coastal regions of New York State.

The Flats is one of the primary Hudson River spawning grounds for American shad. Between mid-March and June, adult shad concentrate between Kingston and Coxsackie, and spawning occurs primarily on extensive flats, shoals, sandbars, and shallow areas near the mouths of tributary creeks. These fish may move into adjacent deeper areas while tidal currents are strong. Reproduction by shad in the Flats area supports much of the commercial gillnet fishery for this species on the Hudson River, which is one of the largest such fisheries in the U.S. The importance of the Flats is highlighted by the fact that it is the only area on the Hudson where commercial fishing is prohibited during the shad spawning period. The Flats also serves as spawning, nursery, and feeding habitat for striped bass, white perch, and various resident freshwater species. Concentrations of the early developmental stages of several anadromous species occur in this area.

Short-nose sturgeon and Atlantic sturgeon may also use the area to feed (especially during slack water in late spring and summer), or as a resting area during river-wide movements, or as a slightly preferable habitat when water temperatures are warmer than in adjacent deeper waters (i.e., in early spring and fall). High catches of short-nose sturgeon occur in channels adjoining the Flats, particularly on the east side. The abundant fisheries resources in this area provide an excellent recreational fishery, attracting anglers from nearby portions of Ulster and Dutchess Counties.

Significant concentrations of waterfowl also occur in The Flats area. Dense growths of wild celery provide valuable feeding areas for many species of

ducks, and are especially important during spring (March-April) and fall (mid-September-- early December) migrations. Concentrations of diving ducks, such as redhead, canvasback, common goldeneye, and mergansers, are regularly found out in the Flats. During calm weather, this open river area is also used by dabbling ducks, including mallard, black duck and blue-winged teal, and provides a refuge from hunting pressure in shoreline areas.

Adjacent to, but outside of the Town of Rhinebeck, is the Rondout Creek Significant Coastal Fish and Wildlife Habitat, located along the westerly shore of the Hudson River. It lies near the confluence of Rondout Creek and the Hudson River within the City of Kingston and the Town of Esopus.

Each of the three (3) Significant Fish and Wildlife Habitats located within the Town of Rhinebeck is more fully described within LWRP Appendix B.

11. Flood and Erosion Hazard Areas

See Map 10, "Summary of Major Development Considerations".

The flood hazard areas within the Town, as displayed in the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), include the cove areas along the Hudson, as well as areas surrounding the Rhinebeck Kill, the Landsman Kill and the Fallsburg Creek, all draining southwestward toward the River. In the northern part of the Town, Snyder Swamp with waters flowing into the Mudder Kill is also delineated as a flood hazard area.

Stream bank erosion from tidal action or navigation on the Hudson is not considered a serious problem at this time. The fact that the railroad has elevated the tracks along the River and maintains its rail bed lessens tidal erosion impacts on other areas. The steep slopes along much of the river bank, however, are subject to slides and need to be protected, especially the area near Suckley Cove, north of Jones Island, which is considered an area of critical erosion. Moreover, the surface waters need to be protected from excessive sediment loading and siltation.

12. Air Quality

Air quality in the waterfront area of Rhinebeck has been classified as Level II as defined by Title 6 Part 272.3 NYCRR, which is used for areas of "predominantly single and two-family residences, small farms and limited commercial services and industrial development." While there are no monitoring stations either within or adjacent to the Town of Rhinebeck, the nearest being in Millbrook, it is known the Mid-Hudson Region of which Rhinebeck is a part has become in recent years a non-attainment area for ozone and also experiences more isolated instances of particulate concentrations in excess of accepted standards.

13. Analysis of Environmental Features

a. <u>Protection of Ground and Surface Water</u>. It is important to protect the Town ground and surface waters against pollution from a variety of residential, commercial and industrial sources. These include contamination and runoff from inadequate septic systems, road salting and the use of herbicides, pesticides and/or fertilizers by farmers, home gardeners and railroad maintenance crews. Any negative impacts on streams tend to affect the cove and ultimately the River as well.

Of particular concern more than fifteen years ago was a Dutchess County ash landfill site proposed for the southern portion of the coastal area, on the Southlands Foundation tract just west of Route 9. Such a use could have been detrimental to groundwater, as well as to the Fallsburg Creek, the Landsman Kill and to Vanderburgh Cove, in addition to causing the loss of an outstanding equestrian facility.

Moreover, since the Hudson River serves as a source of drinking water for some communities, including the Village of Rhinebeck water system, as well as an important ecological habitat, all efforts to protect and improve the quality of the water should be encouraged and activities which could threaten the quality of the water should be discouraged.

The NYS Department of Environmental Conservation is responsible for classification of streams in the State. Rhinebeck has previously requested and will continue to request reclassification, or upgrading, of streams in the Town -- particularly the Landsman Kill, Rhinebeck Kill, Mudder Kill and Fallsburg Creek -- to attempt to improve the water quality of these streams and, in the case of Landsman Kill, to derive further protection under the NYS Stream Protection Act (ECL Article 15).

b. <u>Protection of Environmentally Sensitive Areas</u>. Environmentally sensitive areas of the Town need to be retained and protected from alteration and pollution.

Among the Town's most valuable natural resources are the tidal coves and wetlands, particularly the Astor Cove and the Vanderburgh and Suckley Cove areas, which are being threatened to some extent by various development factors including pollution of streams (e.g., by runoff from road maintenance practices and agricultural uses, but particularly by railroad maintenance practices). The railroad practices historically included: (1) the spraying of the railroad bed and surrounding area with herbicides to limit the growth of vegetation near the tracks, a practice which may kill plant life in the cove wetland areas and threaten fish, animals and bird life and habitats, and

(2) scattering of old railroad ties permeated with crossote or other wood preservatives that can both add chemicals to the coves which can harm plant, fish and animal life within the cove and can block water passing through areas under railroad bridges (thus interfering with tidal flow), which also affects plant, fish and wildlife in the cove areas.

The freshwater wetland/standing water areas of the Town, especially the large Snyder Swamp area, also need to be protected against pollution and encroachment or alteration -- as do the several creeks and forested areas of the Town. Snyder Swamp, while regulated under the NYS Freshwater Wetlands Act, may be under some future pressure, particularly along its outer edges, since the property is entirely in privately hands and zoned for residential use.

Erik Kiviat, Executive Director of Hudsonia, in his 1978 and 1982 report on <u>The Mudder Kill and Snyder Swamp</u>, recommended that an integrated stewardship should be considered for Ferncliff Forest and Snyder Swamp because of a continuation of vegetation species, an inter-relationship between water and drainage systems, extensive wildlife use (including the significant cerulean warbler population) -- all of which tie the two areas together ecologically.

c. <u>Impact Assessments for Significant Habitat Areas</u>. Impact assessments are essential in dealing with the following significant habitat areas either within or adjacent to the Rhinebeck LWRA:

Vanderburgh Cove and Shallows - Any activity that would substantially degrade water quality in Vanderburgh Cove and Shallows could affect the biological productivity of this area. All species of fish and wildlife may be adversely affected by water pollution, such as chemical contamination (including food chain effects), oil spills, excessive turbidity or sedimentation, and waste disposal. Continued efforts should be made to improve water quality in the Hudson River, which is primarily dependent upon controlling discharges from combined sewer overflows, industrial point sources, and ships. Application of herbicides or insecticides along the railroad right-of-way or adjacent uplands may result in adverse impacts on the fish and wildlife resources of the area. Alteration of tidal fluctuations in Vanderburgh Cove and Shallows could have significant impacts on fish and wildlife; increased tidal exchange may improve habitat quality in the cove. During the early 1980's, a railroad bridge opening to the cove was made smaller, and this may have had detrimental effects. Disruption of natural plant communities or benthos in the area could reduce its value as a fish and wildlife habitat, although control of water chestnut may be desirable or necessary to maintain certain species. Any physical disturbance of the habitat, through dredging or filling (including dredge spoil disposal), would result in a direct loss of valuable habitat area; any dredging activities needed to maintain the existing channel should be scheduled in mid to late summer to minimize potential impacts on most aquatic organisms and migratory birds. Thermal discharges,

depending on time of year, may have variable effects on use of the area by aquatic species and survival is often directly affected by water temperature. Installation and operation of water intakes could have significant impacts on fish concentrations through impingement of juveniles and adults, or entrainment of eggs and larval stages. Significant human encroachment into adjacent areas may limit use of Vanderburgh and Suckley Coves by certain species, but potential impacts may be mitigated somewhat by controlling soil erosion and discharges of polluted runoff. Existing areas of natural vegetation bordering Vanderburgh Cove and Shallows should be maintained for their value as cover, perch sites, and buffer zones. Enhancement of public access to increase compatible human uses of fish and wildlife resources in the area may be desirable.

<u>Kingston Deepwater Habitat</u>. Activities that would affect the water quality, temperature, turbidity or freshwater to saline distribution in the deep water portions of the River may adversely impact on the estuarine community. Major reduction in overall depths within the deep water trench may also have adverse effects on the sturgeon spawning, wintering, and continued use of the habitat. Deposition of dredged material or natural sediments, especially if contaminated, may degrade the quality of this unusual area.

The Flats. Any activity that would substantially degrade water quality in the Flats could affect the biological productivity of this area. All species of fish and wildlife may be adversely affected by water pollution, such as chemical contamination (including food chain effects), oil spills, excessive turbidity or sedimentation, and waste disposal. Continued efforts should be made to improve water quality in the Hudson River, which is primarily dependent upon controlling discharges from combined sewer overflows, industrial point sources, and ships. Oil and other hazardous substance spills are an especially significant threat to this area, because the biological activity of tidal flats is concentrated at the soil surface, much of which may be directly exposed to these pollutants. Disruption of plant communities or benthos in the area through dredging or filling (including dredge spoil disposal), could reduce its value as a fish and wildlife habitat, no new navigation channels should be cut through the area. Thermal discharges, depending on time of year, may have variable effects on use of the area by aquatic species; shad spawning activities and survival are directly affected by water temperature. Installation and operation of water intakes could have significant impacts on fish populations in the area, through impingement of juvenile and adult fish, or entrainment of eggs and larval stages.

Rondout Creek Habitat. As in the case of the three Significant Coastal Fish and Wildlife Habitats within the Rhinebeck LWRA, any activity that would substantially degrade water quality in the Rondout Creek or near its confluence with the Hudson River could affect the biological productivity of this area which lies on the westerly shore of the Hudson opposite Rhinebeck.

- d. Flood and Erosion Prevention and Control. Many portions of the Town, primarily along the creeks, are subject to flooding, and other portions of the Town, particularly along the Hudson shore, are subject to erosion. Development of large estates along the riverfront, use of land for agricultural purposes, and the availability of sufficient amounts of vacant, more easily buildable land, as well as limited development pressures, all have helped to preserve the bulk of such flood and erosion-prone areas in their natural state. However, as further development is proposed, the issue of preservation of natural features to avoid flood and erosion hazards needs to be considered. In particular, development must be set back from streams and bluff areas and maintenance of natural vegetation in these areas must be required. In addition, local and State officials, owners and would-be owners of waterfront property (including proprietors of the railroad) should bear in mind that the mean level of the Hudson River and its tidewater bays, coves and tributaries is subject to change. Scientists have estimated that due to both accelerating glacial melt and to the subsidence of coastal lands, the mean river level in this area has risen approximately one foot during the past century, and it is expected that, during the next century, it will rise three to five feet.
- e. <u>Analysis of Air Quality</u>. Because of the rural character of Rhinebeck, the air quality has for the most part remained satisfactory though, as cited, the Mid-Hudson Region has become in recent years a non-attainment area for ozone. Any proposed industrial activity that could negatively impact air quality must be avoided.

E. RECREATION AND OPEN SPACE AREAS

1. Recreation and Open Space Sites

A variety of recreation and open space areas are important elements of the waterfront, as well as components in the everyday lives of Rhinebeck residents and assets for visitors to the area. These areas provide opportunities for passive and active recreation and provide desirable undeveloped, naturally landscaped settings for visual appeal and environmental protection. They are needed by young and old, able-bodied, as well as handicapped persons.

It was felt that to best assess recreational needs in the waterfront area, it was desirable to determine the availability of recreation and open space areas in the whole Town as part of the LWRP preparation. The recreation and open space areas available throughout the Town and Village were subsequently inventoried (a full listing and an overlay map of Recreation and Open Space is available in the Planning Board Office of Town Hall). On this inventory, those areas designated as public refer to sites where ownership is public or semi-public and access is available without permission or fee. Sites listed in the private category are privately owned and public access is not always available. These latter sites, therefore, represent open space and limited recreation resources.

Generally, the recreation areas can be further classified as active or passive recreation areas. The active recreation areas contain facilities such as basketball courts, tennis courts, soccer, field hockey, softball and other playing fields, and boat docking and launching facilities. These include Town, Village, and school-owned sites.

The open space and passive recreation areas are generally utilized for visual appeal and for less organized/non-facility oriented activities, such as hiking, utilizing nature trails or bird watching. Included within the passive recreation/open space areas of the Town are Ferncliff Forest, the Wilderstein property, the Rhineson property recently acquired by the Town and Village, cemeteries, the Southlands Foundation property and other farmland properties included within the agricultural district program and small subdivision parkland properties which were never developed for active use.

In addition, an extensive trail network is maintained throughout the Town on private and public lands by equestrian and snowmobile organizations. Bicycle routes, as planned by the Winnakee Land Trust and adopted by the Town Board, have been designated throughout the LWRA including along River, Morton and Mill Roads and along Route 308 between the Village of Rhinebeck and Rhinecliff. The Town is exploring various locations for expanding a public bikeway/trail system, including utilization of portions of the abandoned Central New England railroad bed which extends in a northeasterly direction from the hamlet of Rhinecliff. All of this activity is consistent with the regional objective of developing within the LWRA key sections of a continuous north-south Hudson River Greenway Trail with direct linkages to Red Hook, Hyde Park and the Village of Rhinebeck.

Wetland and flood-prone areas of the Town adjacent to the River and creeks are also included in the open space category. They serve important ecological and scenic functions and need to be preserved in their natural state to avoid flooding and erosion hazard problems. The creeks and cove areas are used for recreational fishing and the Vanderburgh Cove area is also sometimes utilized for duck hunting.

Use of coastal access points for recreational purposes is discussed below.

2. Analysis of Recreation and Open Space Opportunities

The Town currently has several recreation sites, including different types of facilities (see inventory chart in appendix); however, the need for certain types of public sites and facilities remains. Some of the issues facing Rhinebeck residents and officials are: how to gain additional access points to the River and/or its tributaries for water-related recreation activities; where and how to provide for expanded recreation activities; where and how to provide an expanded recreation parking area at the Town Recreation Park, located on the south side of Rhinecliff Road at the Town/Village boundary and additional ball fields for Town-wide use; how to provide a Town-owned ball field in Rhinecliff; and how and where to create a public trail system that could be used by hikers, bicyclists, horseback riders and cross country skiers.

The recent acquisition by the Town and Village of the Rhineson property provides a location for focusing the Town's effort to expand its recreational facilities, with an on-going master planning process underway to define the type and timing of improvements to be undertaken there. Consideration also continues to be given to acquiring easements for a pedestrian trail from the Village of Rhinebeck to Wilderstein and the Town Dock, and it is anticipated that at some future time, the lawns, woods, cove, and river access at Wilderstein will be more available to the public for low intensity recreational uses. Morton Landing, adjacent to Wilderstein, has been deeded to Wilderstein Preservation, Inc.

The need for maintaining open space is also very great. Some of the issues involved with protection of open space areas are included under discussions of agricultural areas and environmentally sensitive natural areas. The appearance of the Town, as well as protection of natural features, requires attention to preservation of significant portions of these open space areas now devoted to agriculture, creek beds, wetlands or as part of wooded or brush land areas. The major issue involved with open space areas is how to protect them in their entirety, where desirable or necessary, and/or how to minimize negative impacts of some development proposed within current open space areas.

F. COASTAL ACCESS POINTS

1. Coastal Access Sites

See Map 6, "Coastal Access Points".

The coastal access points, or points of access to the Hudson River, represent outstanding short and long range recreational and open space assets for the Town of Rhinebeck. They are treated separately from the other recreation and open space areas because of their importance to waterfront planning in the Town.

In recent years, the Hudson River itself has played a relatively minor role in the life of the Town, primarily because of the limited public access to the River. The railroad tracks along the shoreline have severely limited safe access to the River for commercial and recreational activities. In addition, the presence of the large estates bordering the Rhinebeck shore (except at Rhinecliff) restricted enjoyment of the vistas of the River and significantly limit utilization of land near the River to a very few individuals and groups.

The historic Town Landing at Rhinecliff has provided the only major public access to Rhinebeck's Hudson River shore since the construction of the railroad. The first ferry service on the Hudson River was conducted at Rhinecliff and ferry service to Kingston was available until the late 1950's.

Revitalization of the site was begun in 1979 with the reconstruction of the landing and launch sites. Steel bulkhead was initially installed in the northern and central portions of the

site and fill was added to create a recreation area. A boat ramp was then created and areas were set aside for temporary mooring of boats. Efforts have continued to improve the dock and provide expanded parking in order to enhance this major recreation area of the Town. Additional work has been undertaken to add bulkhead to stabilize the southern portions of the site and to add equipment and landscaping in the seating/picnic area to create opportunities for enjoying the scenic vistas. Related maintenance and upgrading is a perpetual project, The Clearwater, a Hudson River education ship, has utilized the dock for promotion of the environmental protection, preservation and enhancement of the Hudson River, as has Fireboat Harvey, and other vessels including tour boats use the site. They will be encouraged to continue use of the dock to stimulate tourism and economic activity in the Town. Limited pedestrian ferry service was initiated in 1985 between Kingston and Rhinecliff but has since been terminated. Restoration of this service would be desirable; an exploratory committee is meeting at this time to consider restoration of this service and expansion to include other location(s), including Tivoli.

The desirability of there being additional locations for public access to the River has long been recognized and remains under study by the Town Dock Committee. As part of the preparation of the LWRP and as depicted on Map 6, an inventory was undertaken of all properties, dock sites, landing and points in the Town that currently or historically have provided River access. Preliminary analysis has been undertaken to determine: (1) which, if any, of the inventoried sites might provide opportunities for future public access, and (2) some of the advantages and disadvantages of specific sites. At this time, only the Rhinecliff Dock area is usable for direct public access to the River; however, Long and Slate Docks, Wilderstein and Vanderburgh Cove offer possibilities for access which the Town would like to facilitate and study further.

2. Analysis of Coastal Access Opportunities

Several factors have limited public access to the River for the last century. A primary factor has been the development of the railroad along the shore-line of the Town and the policies and practices of railroad management which have severely restricted public and private access to the River. Higher speed train traffic has limited what were once considered usable grade crossings and bridges over the tracks and are now in various stages of disrepair. The Town of Rhinebeck and the NYS Department of Transportation (NYSDOT) have recently restored the pedestrian and vehicular bridges which lead to the Town Dock. The only other overhead crossing presently allowing access to the River in Rhinebeck is a crossing on the private estate, the Meadows (Leacote). There is strong public interest in seeing the existing overhead crossings preserved and maintained, and new ones installed at Slate Dock and at Morton's Dock.

A further issue, also particularly timely because of continuing concern over the future status of railroad holdings, is the future of land holdings beyond the minimal road bed requirements. The railroad owns many parcels which once gave the public some access to the water -- e.g., Long Dock and Slate Dock, which are of significance as possible future

public access sites. Additionally, the Central New England railroad bed from its terminus in Rhinecliff to the Red Hook Town line is an important link in creating a public trail system.

Another factor limiting access has been the pattern of the large estate development along all parts of the Town's riverfront (except in Rhinecliff), which has restricted access to all but a small minority of Town residents. As estates are rehabilitated, renovated or possibly subdivided, it will be important to examine the inventoried access points to determine how access can be enhanced or increased, e.g., how can the land west of the railroad tracks which now forms, or subsequently will form, a part of Wilderstein best be utilized.

While the Town Landing at Rhinecliff remains the Town's only public access, it is important that this area continue to be improved to include a variety of recreational and transportation opportunities for residents and visitors. The Town needs to continue efforts to secure restored and expanded ferry service and consider the issue of increasing opportunities, if appropriate, for commercial fishing and boating interests and excursion boat dockage.

G. HISTORIC AND SCENIC FEATURES

See Map 7, "Mid-Hudson Historic Shorelands Scenic Area".

The beauty and value of Rhinebeck's historic and scenic assets cannot be overstated. The uniquely attractive visual character of the Town results from the combined impact of natural and manmade settings.

The historic and scenic features that have inspired both residents and visitors for centuries are set amidst the majesty of the Hudson River and the adjacent land forms such as the Catskill Mountains, coastal bluffs, forests, and wetlands, together with riverfront estates with their architecturally interesting structures and expansive landscaped grounds. The riverfront estate areas have been complemented by village-scale historic residential and commercial development in the Village of Rhinebeck and Rhinecliff and by the rural historic structures and attractive farm fields.

Beginning in the 1970's several significant steps have been taken to officially recognize the historic and scenic features of the Town and surrounding areas and to make efforts to enhance and preserve the natural and manmade environments. Some of the major steps that were undertaken are listed briefly below and further description of groups formulated, actions taken and studies completed presented where otherwise pertinent within this LWRP.

The Hudson River Shorelands Task Force was established in 1976 with representatives from Hyde Park, Rhinebeck, Red Hook and Tivoli to act as a liaison between private property holders, the relevant State and Federal agencies, institutional property owners and local government officials. Funding through private

grants was obtained to gather additional data to continue documentation of the scenic and historic features of the area and to develop plans to aid in restoration and maintenance, as well as to protect the visual environment. Working with local government, State and Federal regulatory agencies and private interests, the Task Force (now reconstituted as The Winnakee Land Trust) strives to interpret the unique environment for the benefit of the Historic Districts, the Scenic District and the region as a whole.

- The Mid-Hudson Historic Shorelands Scenic District, so designated, includes not only the Sixteen Mile Historic District (discussed below) and the Clermont Historic District, but also the River landings and pastoral lands connecting the River and the major State road paralleling the River.
- A Management Plan for the Scenic District was completed in 1983 and endorsed by the communities in the District. Moreover, since the scenic quality of the District is greatly enhanced by views across the Hudson River, the Management Plan included a description of the Scenic Zone which encompasses the river frontage extending 2,000 feet west of the high tide line (see Map 7). Thus, portions of the Towns of Esopus, Kingston, Ulster and Saugerties, the City of Kingston and Village of Saugerties in Ulster County and the Town of Catskill in Greene County are considered part of the viewscape communities in the Scenic District. Sections of the City of Kingston and Towns of Ulster and of Esopus are notably directly across the Hudson River from Rhinebeck.

1. Architectural Sites, Structures and Features

Discussion of Architectural Sites, Structures and Features

See Map 8, "Estates within the Coastal Area".

1

In 1979 the Sixteen Mile Historic District¹ was surveyed by Hudson River Heritage, Inc., in an effort to document historic sites and facilitate the preservation of the area's riverfront estate properties. Buildings within this historic district encompassing the riverfront estate areas of the Towns of Clermont, Red Hook, Rhinebeck and Hyde Park were placed on the National Register of Historic Places; in the Town of Rhinebeck, the Sixteen Mile Historic District area was generally west of River Road, Morton Road and Mill Road, but excludes the hamlet of Rhinecliff, except for the train station and land between tracks and the River. The estates, wholly or partially incorporated within the District, include (from north to south) Mandara (Steen Valetje), Orlot (Ravenswood), The Meadows (Leacote), Valeur

This District was later expanded and re-named the Twenty Mile Historic District.

(Marienruh), Ferncliff, Ankony, Ellerslie, Wilderstein, Wildercliff, Wyndcliffe (Linden Grove), Whispering Pines and Linwood (Sisters of St. Ursula).²

These magnificent estates were built along the Hudson's eastern banks in the eighteenth, nineteenth and early twentieth centuries, representing the architectural and social history of the times. They included the residences of New York's wealthy families, from the early patentees and landlords to the later financiers.

Complementing these carefully designed estates are a number of excellent examples of sturdy Dutch or Palatine architecture, representing the early settlers of the area. Many unusual and interesting design features are found in these stone houses.

Individually, most of these estate residences would meet the National Register criteria as distinctive architectural specimens, and many assume additional importance from the roles that their occupants played in State and national history. However, the special significance of the area is derived from its location along the Hudson River. The views of the River and the Catskill Mountains add a scenic dimension which rivals and enhances its historic and architectural importance.

Beginning in 1980, surveying and documentation of important historic structures throughout the unincorporated areas of the Town, including the hamlet of Rhinecliff, were undertaken. A Town of Rhinebeck Multi-Resource Area Historic District was formulated and entries were nominated by the New York State Historic Preservation Officer for inclusion on the National Register of Historic Places. See "Summary of Major Development Considerations", Map 10, for locations of Multi-Resource Historic District Sites and the Sixteen Mile Historic District.

Later, in 1990, Hudson River Heritage undertook the task of elevating the Twenty Mile Historic District to National Landmark status. The District was expanded both eastward, including within the Town of Rhinebeck, and to include hamlet areas such as Rhinecliff and as such is one of the largest historic districts in the nation.

Most of the buildings in these historic districts are in quite good condition; however, as the inventories of historic buildings were completed, structures (particularly those of public interest) that were in need of repair were noted. Over the past few years, steps have been planned and/or taken to upgrade several properties. Among the most prominent properties that are currently being restored are: Wilderstein, a riverfront estate being renovated by a not-for-profit preservation group; the former Valeur, now Marienruh, another riverfront estate which is undergoing continuing renovation by private interests; and The Meadows, where a new mansion has replaced one destroyed in 1977, and the grounds, farm buildings, and fields have been rehabilitated. Furthermore, the Rhinecliff Railroad Station has been

Grasmere, Elmwood, Fox Hollow and Glenburne are estates that are included in the coastal area (on Map 8), but are not located within the Historic District.

renovated by Amtrak, and improvements to the Kip-Beekman-Hermance property, site of one of Rhinebeck's earliest residences is under the care of the Rhinebeck Historical Society.

Analysis of Architectural Sites, Structures and Features

Residents of the Town are interested in, and concerned about, the preservation of historic structures, sites, landscapes and other features. As mentioned above, many steps have already been taken in designating historic structures, sites, and districts. At this time and for the future, community (public and private) efforts must focus on restoration, preservation and enhancement of existing historic sites, structures, landscapes and other features such as stone walls and street trees, and on creation of opportunities for adaptive re-use of historic structures. An issue that arises in regard to historic properties is the means and extent of providing information to the public regarding the characteristics and location of the site. Moreover, the issue of gaining full or limited public access to historic properties also needs to be considered. Some properties may be open to the public on a regular basis, some may be available only on occasional specific non-profit or commercial tours, others may be viewed as a result of their commercial or institutional re-use, while the remaining properties are strictly private and inaccessible to the public.

Another area of concern is the encouragement of development that is compatible with existing historic development and discouragement of development that is incompatible. It is important that new development in the Town be compatible with existing development especially in terms of scale, proportion, and color. Such new development need not be architecturally identical to existing structures, but it should not present a discordant appearance to heretofore-developed areas or to more open rural settings and estate environments -- especially as seen from public roads, adjacent properties, or the Hudson River.

2. Landscape Distinction

Discussion of Landscape Distinction

The Mid-Hudson Historic Shorelands Scenic District Management Plan highlights four categories of landscape distinction that contribute to the scenic character of the Town: (1) Estate Landscape and Grounds, (2) Pastoral Countryside, (3) Parkland, and (4) Landscape Appurtenances, including stone walls and tree-lined roads. A discussion of parkland can be found above in the subsection on Recreation and Open Space Areas.

The Hudson River estates within the Town have been noted not only for their architectural interest but also for the significance and interest of their landscaped grounds. The Historic Shorelands Scenic District Management Plan indicates that there are thirteen estates in the Town that are important "for their common design themes and date of construction as identified in the American Romantic Landscape Style," i.e. primarily during the period 1820 to 1880. These include those previously mentioned in the discussion of the Sixteen Mile

Historic District (from north to south): Mandara (Steen Valetje), Orlot (Ravenswood), The Meadows (Leacote), Valeur (Marienruh), Ferncliff, Ankony, Ellerslie, Wilderstein, Wildercliff, Wyndcliffe (Linden Grove), Whispering Pines, and Linwood. Additional properties within the coastal area should be considered in this context, including Elmwood, Grasmere, Foxhollow (Linden Hill), and Glenburn. Landscape designers represented include, among many other prominent personages, Louis Ehlers, Frederick Olmstead and Calvert Vaux.

The pastoral countryside refers to a combination or interweaving of visual components familiar in the rural areas of the Town; wooded areas, pastures, cropland, orchards and vineyards, irregularly placed residences and farmsteads. Within the pastoral countryside, several properties have been included in an agricultural district under the New York State Agricultural and Markets Law, which helps to encourage the protection and maintenance of substantial areas of the Town in agricultural/open space use. (See earlier discussion of agriculture under "Existing Land Use".) To encourage sound forest management practices, a complementary Forest Tax Law provision of the State Environmental Conservation Law (the "Fisher Forest Tax Act") is also available to qualifying landowners making appropriate forestry and conservation use, including selective cutting and reforestation activities, of their lands.

Analysis of Landscape Distinction

The need and value of protecting and restoring estate grounds to maintain and enhance the scenic beauty of the Town needs to be addressed. The landscape planning, as well as the architectural design of the major structures, is important from a historic point of view, but they are also very important as they contribute to the visual amenities of the Town. The design of estate grounds should not be overlooked in any plans to restore and renovate existing estates and/or plans to further develop or subdivide properties.

3. Stone Walls

Discussion of Stone Walls

Of the landscape appurtenances mentioned in the Mid-Hudson Historic Shorelands Scenic District Management Plan, stone walls were determined to be the most significant. These stone walls, fronting on many of the estates, have great value as historic and scenic resources. They are representative of an earlier period in the history of the Town when labor was relatively inexpensive, personal pride in one's work was high and the quality of craftsmanship was important. The walls at Steen Valetje, Ferncliff and Linwood, and along River and Mill Roads, are prime examples of walls of quite elaborate construction, with dressed and coursed facings of tooled stone, heavy granite capstones, and gently cambered rear faces designed to retain soil pressures. Found throughout the coastal area are dry-laid schist walls; both lining the roads and dividing farm fields. These form a picturesque contrast with their more formal counterparts, giving a pleasantly rustic character to the landscape.

Analysis of Stone Walls

While techniques for protection and repair of the walls are known and have been outlined in the 1980 <u>Stone Walls</u> report by Hudson River Heritage, many people are not cognizant of the value of the walls; the process for repair is costly and few are trained to do the repairs.

Prime concern is for the protection, repair and maintenance of the formal stone walls lining roads near the River. Many are in disrepair, and others are threatened by road maintenance and modification techniques. Salt, used to de-ice roads, can lead to disintegration of the mortar used in the wall construction. Poor drainage systems, road widening and repaving will lead to a weakening or destruction of these walls. The dry-laid schist walls experience the same impacts, but because of a lesser cost factor, have a greater potential for repair. In 1984 - 1985, walls at the Town Community Center and the adjoining property to the west were privately restored. In the same year, the Town Highway Department replaced several feet of stone wall remains during road realignment. These are examples of community interest just outside the waterfront area that can serve as inspiration for similar efforts. Hudson River Heritage, Inc. attempted a number of years ago a pilot program for the repair of walls on River Road in Rhinebeck. Plans included an in-depth inventory of all the walls, workshops for the lay person to learn how to repair walls, and an effort to find funding, which will allow some repair to be done.

4. Stone Bridges and Culverts

Scattered throughout the LWRA, i.e. on River, Ryan, Morton and South Mill Roads, are historic stone culverts and bridges. These represent a craftsmanship which should be preserved and maintained.

5. Street Trees

Discussion of Street Trees

Large old trees, many planted in the mid-to-late 1800's, contribute to the scenic beauty of Rhinebeck. They are found lining Town streets and roads, as well as on riverfront estates. Prime examples are the maples on Astor Drive and River Road and along the driveway at The Meadows (Leacote). Currently, many of these fine old trees are indistinguishable, as the surrounding land has been poorly maintained. A second prime example is the locusts bordering the former Grasmere property on Mill Road and Route 9. These are of significant historic value, since such a planting was made by Janet Livingston Montgomery in honor of her husband, General Richard Montgomery, during the Revolutionary War. Many have been destroyed.

Analysis of Street Trees

Unfortunately, it takes a long time to grow a large tree, but a short time to destroy such a valuable asset. The issues of how to best protect and maximize the life of existing large trees and implementing a sound tree planting program need to be addressed. The problem of safety and sight-distance causes a conflict between those concerns and consideration of aesthetic or historic quality. Healthy trees have had to be removed in order to relieve these concerns. Trees are subject to damage through lack of care and pruning, indiscriminate removal, inappropriate pruning in efforts to clear utility lines and rights-of-way, inadequate consideration during site planning, destroying of root systems during development and runoff of salt from the roads during the winter, as well as disease and other natural causes. Any tree-management/planting program should address these issues and should include a cooperative arrangement between the public sector and the utility companies.

6. Scenic Roads and Scenic Vistas

Discussion of Scenic Roads and Scenic Vistas

In 1981, following provisions of Article 49 of the Environmental Conservation Law, the State Legislature empowered the DEC to designate scenic highways and develop programs for their preservation and enhancement and to undertake a study regarding the "protection and enhancement" of certain roadways in the Hudson River Valley. The Heritage Task Force for the Hudson River Valley, Inc. established by the DEC in 1980, was given responsibility to advise the Department on the preparation of the study. These roadways were considered important cultural and scenic features in the landscape, providing visual and physical access to the Hudson River. Preserving and enhancing the appearance of the roadway and surrounding areas, as well as providing opportunities for better viewing of scenic vistas, were among the goals of the Scenic Roads Program. This program was designed to create a greater public awareness of the importance of scenic resources and to recommend preservation and enhancement measures. It is expected to promote the tourism economy as well.

Several scenic roads providing outstanding scenery, views to the River and mountains and access to historical, cultural and recreational facilities were outlined for the Town in the Scenic Roads Program, Volume I, prepared for the Heritage Task Force in 1983. The Rhinebeck Town Board subsequently recommended revisions to the original list of roads presented and has determined that the following roads (from south to north) should be named the official scenic roads for the Town:

- a. NY Route 9 from the Hyde Park/Rhinebeck town line to the intersection with South Mill Road:
- b. South Mill Road from the intersection with U.S. Route 9 to the intersection with Morton Road; *

- c. Morton Road from the intersection with South Mill Road to the intersection with Kelly Street; *
- d. Mill Road from the intersection with Morton Road north to the intersection with U.S. Route 9: *
- e. Kelly Street from the intersection with Morton Road to the intersection with NY Route 308;
- f. Charles Street from the intersection with Kelly Street to the intersection with NY Route 308;
- g. NY Route 308 from the intersection with Charles Street to the intersection with U.S. Route 9:
- h. River Road from the intersection with NY Route 308 to the Red Hook/Rhinebeck town line; *
- i. NY Route 199 from the Dutchess/Ulster County line on the Kingston/Rhinecliff Bridge to the intersection with NY Route 9G;
- j. U.S. Route 9 from the intersection with South Mill Road to the intersection with Montgomery Street in the Village of Rhinebeck;
- k. Astor Drive from the intersection with River Road to the intersection with Montgomery Street in the Village of Rhinebeck;
- 1. Montgomery Street from the intersection with Route 9 to the intersection with Old Post Road on the Town/Village line;
- m. Mt. Rutsen Road from the intersection with Old Post Road (just north of the Village of Rhinebeck) to the intersection with River Road;
- n. Old Post Road from the intersection with Montgomery Street to the intersection with Route 9G; and
- o. NY Route 9G from the intersection with Old Post Road in the Town of Rhinebeck to the Rhinebeck/Red Hook town line.
- * Named as Scenic Roads by the New York State Department of Environmental Conservation.
 - In 1992, the State Legislature enacted the New York} State Department of Transportation's Scenic Byways Program to coordinate State activities relative to the scenic, historic, and recreational values of New York State's scenic roads and to take advantage of federal

funding. When the NYS Scenic Byways Program was created, DEC-designated (Article 49) Scenic Roads automatically became Scenic Byways.

In addition to the above mentioned land-based roads, the Hudson River (the east channel of which is within Rhinebeck's boundaries) may be considered the Town's greatest scenic highway or travel way. The Hudson offers splendid landward views for boaters of the historic estates and natural areas within the LWRA. In a less dramatic and more confined way, the railroad corridor provides another and different view of the Town's waterfront.

Although considered within the context of scenic roads, scenic vistas merit special attention and treatment. The term "scenic vistas" is used to refer to those locations or vantage points where sights of some broad expanse of unique and outstanding beauty are apparent. Generally, the vantage point for such a vista is elevated from the surrounding area to increase the extent of the view, and identified scenic vistas of primary interest are those readily available along a major road. The extent of the vista may change depending on the season of the year and the amount of foliage.

As part of the preparation of the LWRP, scenic vistas of great interest were identified (See Map 4, "Natural Resources Inventory"). The majority of those vistas identified in Rhinebeck included views of the Hudson River and Catskill Mountains. Other views are of River tributaries, wetland areas near the River, or agricultural and open space areas. Most of the vistas are located along the "scenic roads" of the Town, but one of the major vantage points is at the top of Ferncliff Forest, where an observation tower is currently in a state of disrepair. In addition, extended views from the Kingston-Rhinecliff Bridge and the Hudson River of Atalanta (former Mandara) and Orlot estates make these areas critical scenic resources.

Analysis of Scenic Roads and Vistas

It is widely recognized that the scenic roads and vistas provide valuable resources for residents and visitors to Rhinebeck. However, full appreciation of the scenic roads and vistas is not possible since many of the views are not easily enjoyed by residents and tourists for a variety of reasons including the following: (1) the scenic view areas are not marked, so that locating them may be a problem; (2) pulling off the road and parking to enjoy any vistas is difficult in most places; (3) overgrown trees and brush may obscure known views and/or (4) utility lines may negatively impact on otherwise scenic areas.

A series of major issues and considerations for the preservation and enhancement of these areas are:

a. Protection and enhancement of the scenic values of land areas on both sides of a given scenic road including treatment of vegetation, permitting development that is compatible with the natural and man-made environment and discouraging

incompatible development, management of physical elements such as guide rails and utility poles within road rights-of-way, protection of historic and attractive features, such as stone walls and older street trees.

- b. Creation of pull-off and parking areas to improve the appreciation of scenic roads and scenic vistas.
- c. Removal or minimizing of elements that tend to detract from scenic roads and vistas, such as inappropriately placed utility poles and wires, visually incompatible structures, and excess foliage, oftentimes of invasive vegetation, that may limit appreciation of vistas.
- d. Protection of natural vegetation while creating vistas in order to minimize erosion of clay banks.

7. Scenic Areas of Statewide Significance

The Rhinebeck LWRA is located wholly within the Estates District and Esopus Lloyd District Scenic Areas of Statewide Significance (SASS) which consists of the Hudson River and its eastern shorelands extending from north to south for a distance of approximately 27 miles in the Towns of Germantown and Clermont, Columbia County, and in the Towns of Red Hook, Rhinebeck and Hyde Park and the Villages of Tivoli and Rhinebeck in Dutchess County.

The Estates District SASS consists of twenty-nine (29) subunits, including subunits 10 through 18 located in whole or in part within the Rhinebeck LWRA. As its name implies, the Estates District SASS is dominated by over twenty major and numerous minor historic estates and the Hudson River toward which they are oriented. The beauty of the region's landscape, including views of the Hudson and the distant Catskill Mountains, has been celebrated for generations, most notably in the paintings of the Hudson River School, the first indigenous art movement in the United States.

The Estates District SASS is of statewide aesthetic significance by virtue of the combined aesthetic values of landscape character, uniqueness, public accessibility and public recognition. There exists in the SASS unusual variety as well as unity of major components and striking contrasts between scenic elements. The SASS is generally free of discordant features. The scenic quality of the Town of Rhinebeck's waterfront has been recognized by inclusion in the Estates District (SASS), as designated by the Secretary of State on July 22, 1993. The portion of the Estates District SASS located in the Town of Rhinebeck is approximately twenty miles long, extending from the northern town boundary line with the Town of Red Hook, Dutchess County, to the south town boundary line with the Town of Hyde Park, Dutchess County. The collection of large estates set in designed landscapes, many undisturbed natural features and significant public historic sites render the Estates District SASS unique in the Hudson River coastal area, the State and the nation.

Views of the Hudson River and views to the west shore in the Town of Esopus, the Town of Ulster, and City of Kingston are afforded from various spots within the Rhinebeck Waterfront Area, including unobstructed views from the passenger trains along the entire Town waterfront. The most expansive public views are seen from the Rhinecliff dock, train station, and adjacent areas. Other unobstructed views exist along the river at private estates. Some areas provide views of the Kingston-Rhinecliff Bridge and exceptional views of the City of Kingston at Kingston Point Park and the Rondout Creek. The Hudson River can been glimpsed from certain spots along the town's historic roads where trees have been cleared for farms and homes. The River is more visible during late fall, early spring, and winter.

Many of the finest scenic features of the Rhinebeck Waterfront Area are best appreciated from the River or the opposite shore in the Town of Esopus and the Town of Ulster and City of Kingston. The Town of Rhinebeck's coastline can be described as bucolic when seen from this advantage. From the River or the western shore one can see the small developed area at Rhinecliff and adjacent waterfront roads lined with single-family homes, many of possible historic interest. A natural escarpment and wooded bluffs rising from the River characterize the remainder of the waterfront area. Homes, estates, or farms can be seen at intervals between woodland along the top of the bluff.

The Estates District SASS is comprised of 29 subunits. The section of the Estates SASS within the Town of Rhinebeck is located within the following subunits:

- ED-10 Astor Cove
- ED-11 River Road
- ED-12 Mount Rutsen,
- ED-13 Rhinebeck Center
- ED-14 Rhinecliff Road
- ED-15 Rhinecliff
- ED-16 Rhinecliff Woods
- ED-17 Mill Road Meadows
- ED-18 Vanderburgh Cove

The scenic quality of the Estates SASS and the nine subunits within the Town of Rhinebeck are summarized below and discussed in more detail in Appendix A.

The Estates SASS is a highly scenic and valued region of the Hudson River Valley, rich in natural beauty, cultural and historical features. It is characterized by highly varied topography with steep slopes. For its whole length, the landform rises steeply as a bluff from the Hudson River to an upland area. Above the bluffs, the upland landscape is dominated by a series of knolls, ridges, and low hills that have irregular or rolling relief, with occasional flat depressions containing farm fields or surface water features, including ponds and wetlands. The rolling upland above the Hudson River is covered with a combination of mixed woodlands and clearings comprised of farms, open pasture and meadows, orchards

and vineyards and landscaped estates with formal gardens and sweeping lawns. Scattered development is situated throughout the upland above the bluffs, nestling into the woodland coverage and surrounded by the agricultural landscape.

Wooded bluffs dominate the Hudson River shoreline area. A shoreline railroad, including the rock-armored ballast on a series of man-made dikes that separates the coves from the river, presents a barrier between the town and the foreshore of the Hudson River.

Land use in the Estates SASS reflects the historic settlement pattern based on large estates that developed along the Hudson River. A rural pattern of development prevails with a mixture of orchards, fields, estates, and religious institutions occupying large parcels of land. Several historic estates are located at the top of the bluffs, establishing an historic architectural accent to the natural landscape. The stately lawns of the estates sweep toward the Hudson River. Views afforded from these vantage points are extensive. Most of the recent development has been carefully sited out of the major viewshed of the river, leaving the large historic estates as focal points.

The entire bluff area of the Town of Rhinebeck from Red Hook to Hyde Park is included as part of the Estates Scenic Area of Statewide Significance. The area has a variety of positive scenic components including historic estates, historic hamlet, and farmland which are unified by landform. The contrast between the wooded bluffs and the open cultivated landscape of the farmland is marked and dominates the subunit. The rolling upland hills beyond the bluffs are a patchwork of open spaces, largely maintained as woodlands and farmlands.

The historic landscape of the Subunits is comprised of estates, cultivated farms, and woodlands in a unique remnant of the 19th century land use in the Mid-Hudson region. Important National historic landscapes, landmarks, sites, and structures listed on or eligible for listing on the National Register of Historic Places make preservation of this scenic area a state issue as well as a local concern. The subunits offer full, unobstructed views of the Hudson River of five miles or more in length and broader than 180 degree. To the west, the Catskill Mountains are visible and provide a dramatic distant backdrop.

Views across the Hudson River include parts of the Esopus LLoyd District SASS, City of Kingston, and the Town of Ulster. The southern part of the Town of Rhinebeck is included in the very northern portion of the Esopus Lloyd District SASS and constitutes the middleground of its viewshed. The Esopus Lloyd District SASS extends across the Hudson River to the shoreline at Rhinebek.

The two northernmost subunits of the Esopus/Lloyd District SASS are located within the Town of Rhinebeck since the SASS includes the river and its eastern shore. The Subunits are:

- EL-1, Big Rock and Hemlock Points
- EL-2, Esopus Uplands
- EL-3, Esopus Bluffs

These Subunits (EL-1, Big Rock and Hemlock Points, EL-2, Esopus Uplands, and EL-3, Esopus Bluffs) extend to the mean high water line on the eastern shore of the Hudson River in the Town of Rhinebeck. The scenic quality of these subunits are described in Appendix A.

H. PUBLIC AND FRANCHISE UTILITIES

See Map 10, "Summary of Major Development Considerations".

Discussion of Public and Franchise Utilities

1. Water Supply

The municipal water supply system for the Village of Rhinebeck, the hamlet of Rhinecliff and properties along Route 308 and a portion of River Road currently utilizes water from the Hudson River. The treatment plant is located on a 10.7 acre site on Slate Dock Road just off Rhinecliff Road. The plant has a treatment capacity of one million gallons per day, but is operating in excess of one-half of its capacity, or about 400,000 gallons per day with peaks of approximately 800,000 gallons per day. There are some small community well systems in the southern part of the Town and some residents on South Mill Road in the southern portion of the waterfront area get water from the Hyde Park Fire and Water District, but most residents and businesses in other portions of the Town's waterfront area get their water from individual wells.

2. Sewage Treatment

Currently, only a portion of the Village of Rhinebeck is served by a public sewer system, which system also serves The Gardens multi-family residential development located within the LWRA. The Rhinebeck sewage treatment plant (STP), located on Astor Drive, has a recently-upgraded capacity of 260,000 gallons per day, but is currently treating approximately 130,000 gallons per day. Because of relatively large lot zoning in most areas of the Town, use of individual septic systems is generally an acceptable practice. In the hamlet of Rhinecliff, where residential density is greater, there are frequent problems resulting from faulty individual systems. While installation of a public sewer system in this area would be costly, there is some consideration underway of the feasibility of linking Rhinecliff to the Village sewer system or more practicably carrying out an alternative improvement.

In addition to the Village of Rhinebeck STP, there are both several institutional sewage treatment plants in the waterfront area, including Ferncliff Nursing Home, the former Ellerslie / Holy Cross School and the Springwood Campus of Daytop, as well as another municipal facility, the Vanderburgh Cove STP with a far lesser treatment capacity and sewage flow.

3. Solid Waste Disposal

At the time of initial preparation of the LWRP, the Town was operating a landfill located outside the waterfront area, off Stone Church Road and Pells Road. This landfill (in the northeastern portion of the Town) included ample land area (some 236 acres in Rhinebeck and 71 acres in Red Hook) to meet the Town's requirements but was closed as a matter of State and local policy. The facility has been replaced by a more modern Town transfer station / recycling center on a small portion of the tract.

4. Other Utilities

Electric power is provided for area residents by Central Hudson, telephone service is available from local providers, and cable television service is available for some portions of the coastal area. Where these services are currently available, they have generally utilized utility poles; however, most new development requires underground placement of utilities.

Analysis of Utilities

At this time, limited availability of public water and sewer service in the waterfront portion of the Town restricts development opportunities in this area. Generally, widespread increases in the availability of utilities does not seem desirable, since current low density zoning in most of the waterfront area appears appropriate, relative to the Town Comprehensive Plan, groundwater conditions, other environmental constraints and desirable quality of life in the area.

Use of utility poles for electric, telephone and cable vision services often results in aesthetically unpleasant situations. Poles and wires mar scenic vistas and sights along scenic roads. Wherever possible, Town officials are encouraging underground placement of utility wires, particularly in new development areas. Where this is not possible, relocation of poles and/or combining of wires to reduce the number of poles will be encouraged.

I. TRANSPORTATION

See Map 9, "Major Transportation Routes".

1. Highways, Roads and Streets / Related Traffic Conditions

Discussion of Highways, Roads and Streets / Related Traffic Conditions

The major roads in the waterfront area are the north-south oriented U.S. Route 9, within and south of the Village, and Route 308 (West Market Street-Rhinecliff Road) from Rhinebeck Village to Rhinecliff hamlet. Since parking is permitted on both of these highways, the

effective travel way is now two lanes. The intersection of Routes 9 and 308 is signalized. Route 308 has recently been resurfaced and a narrow bike path has been incorporated on the paved shoulder.

Most other roads in the waterfront area, except for residential streets, are paved two lane rural roads of varying widths with shoulders of varying widths and conditions. Some of the roads in developments are being dedicated to the municipality and others are remaining in private ownership.

Many early roads are substandard by current specifications; however, roads in the Town constructed since 1971 have been built to the Town's specifications, whether in private ownership or dedicated to the municipality by the developer. At present, only one development in the Town has private interior road systems, although there are numerous shared driveways.

Traffic flow throughout the rural areas of the waterfront area is light to moderate. U.S. Route 9 has steady traffic throughout the day, causing intermittent delays for cars entering from side roads.

Congestion has been increasing on Route 9 throughout the years as traffic has been increasing from additional residents, shoppers and tourists traveling to and through the Town. Traffic on Route 308 near the Village is also steadily increasing, but shorter waits are necessary than for Route 9. Montgomery Street, Mount Rutsen Road and River Road are also impacted by traffic since they serve as a direct route between the Village of Rhinebeck and the Kingston-Rhinecliff Bridge for commuters, tourists and those using the Amtrak Station. The intersection of Route 199 and River Road bears heavy traffic during peak hours.

At peak hours of the working day and on weekends, Routes 9 and 308 bear a heavy traffic load. At the intersection of these two roads in the Village center, cars generally may have to wait more than a single light change before moving through. In the summer months traffic increases in each of these areas.

During special events at the Dutchess County Fairgrounds, such as Fair Days in August or other special event days, traffic may be backed up on Route 9 to the north of the Village (extending outside of the coastal area) and south to Mill Road.

There is recognition that with the development of projects now under construction and the potential development that might take place on major parcels within the Town, as well as with some increased use of the Rhinebeck Town Landing, Rhinebeck's road system will be further impacted.

The Dutchess County Planning Department³ has indicated that the intersection of Routes 9 and 308, and secondarily the intersection of Route 9 and Montgomery Street (key intersections that currently experience traffic delay described above), are locations that are expected to be the most heavily impacted by future development.

Analysis of Highways, Roads and Streets / Related Traffic Conditions

In response to local concern about the issue of increasing traffic congestion in the Town, the Dutchess County Planning Department in the Rhinebeck Transportation Study, 1984, explored ways to improve the capacity of Route 9 without significantly altering the rural appearance of the area. The Department recognized that the major problem is the intersection of Routes 9 and 308 and outlined several options, including (1) removing parking from the Route 9 and Route 308 intersection approaches in order to create three-lane roads (two lanes of through traffic and one turning lane); (2) providing alternate streets upon which traffic could divert to avoid the intersection of Routes 9 and 308; and (3) encouraging and promoting alternatives to car travel, including walking and bicycling.

To this point, it has been the position of the community to continue monitoring the situation, provide readily-accessible off-street parking to the extent possible and encourage the use of alternatives to car travel.

Today and into the future the Town and the Village must continually consider what types, location and amount of development and tourist activities they wish to encourage or permit in order to attempt to limit, or lessen, impacts of traffic congestion and to avoid negative impacts on the scenic qualities, the scenic roads and the life style of Rhinebeck residents.

2. Parking

Discussion of Parking

Except in the case of the hamlet of Rhinecliff where some on-street parking exists, parking throughout the residential areas of the Town's LWRA is primarily in driveways and secondarily along the shoulders of roads. Within the hamlet of Rhinecliff, a private parking lot for use by railroad customers is available at the Rhinecliff train station and one small public lot is located in the center of the hamlet.

Analysis of Parking

Public parking in the hamlet of Rhinecliff continues to be very inadequate. Increased use of the Town Dock will place additional pressure on the available space. The Town will urge

Problems connected with impacts of proposed development were first studied by the Dutchess County Department of Planning in their Rhinebeck Transportation Study, July 1984, prepared with the assistance of the New York State Department of Transportation.

the NYS Department of Transportation and other responsible entities to expand their existing parking facilities and will carefully examine any new development proposals to ensure that adequate parking is available to accommodate the use.

3. Transportation Services

Discussion of Transportation Services

Public or private-for-hire transportation facilities in the waterfront area are limited to the following:

- The Amtrak train, which makes its first stop north of New York City to discharge passengers at the Poughkeepsie Station and stops at the Rhinecliff Station, services arrivals and departures to and from New York City and Albany (and points north and west) several times per day.
- The County Loop Bus provides service from Rhinebeck and Red Hook to Poughkeepsie via Route 9 several times daily, Monday through Friday, and less frequently on Saturday.
- An additional private bus company provides service to Poughkeepsie and points south several times daily.
- A local taxi service has a fleet of vehicles.
- A bus company located within the waterfront area contracts with the public school system to transport approximately eight hundred to one thousand children to school daily. School buses may also be chartered by groups for outings.
- An airport limousine service provides transportation to Kennedy and LaGuardia airports on multiple occasions daily.
- Emergency transportation to local hospitals is provided by fire department rescue squads in Rhinecliff and the Village of Rhinebeck and a private ambulance service.

As cited within Section II(F), "Coastal Access Points", consideration is being given to instituting ferry service, at least a seasonal "water bus" connecting Kingston, Saugerties and Tivoli, among other potential locations with the Town Dock, to coordinate with train arrivals and departures and otherwise promote tourism and recreational opportunities with the Town and its environs.

Private transportation modes, except for buses owned by area nursing homes and institutions, consist of use of automobiles, bicycles and walking.

Analysis of Transportation Services

Public transportation service seems adequate at present, but there is concern that if projected growth materializes, there will be a heavy impact of traffic on the road system and a need for community mini-bus service within Rhinebeck operating on a regular schedule to better serve the community.

Amtrak now offers commuter fares and free parking to the extent there is capacity in its lot. The round trip cost to New York City is still substantially more expensive than the cost of a round trip to New York City via MTA from Poughkeepsie, just 18 miles to the south. Because of the past inferiority of the MTA system, many train passengers preferred traveling by Amtrak in spite of the higher cost. Amtrak now has its first full pick-up and discharge stop out of New York City at Poughkeepsie, the economic hub of the County, thus alleviating the potential burdening of the road system by some from outside the community who had been traveling through the Town in order to get to the station at Rhinecliff.