Appendix A: Inventory and Analysis of Resources

Summary of Current Conditions and Trends

Environmental Resources

A full analysis and mapping of environmental resources was conducted to identify unique and critical environmental features within Town. A close look at the maps depicting these resources, illustrates the environmental constraints on future land use. The Town of Rensselaerville has many pristine environments, open spaces, and unspoiled views that are highly valued by the residents. Environmental protection, along with preservation of the rural character of the Town was a paramount desire of residents.

Major environmental features in the Town of Rensselaerville include:

Wetlands: NYS DEC regulated (over 12.4 acres) and federal regulated (all others). These are scattered throughout the Town, but especially in the northwestern corner of town and along streams. There are 374 acres of NYS DEC regulated wetlands in the Town and 600 acres of other wetlands regulated by the federal government. In addition, there are 320 acres of open water, of which some may be part of wetlands.

Streams and stream valleys: Streams and stream valleys: The Town has a network of relatively undeveloped valleys occupied by streams and creeks. Water quality in general remains very good in these creeks. They support a diversity of important wildlife and wildlife habitats. Many of these have designated floodplains and associated riparian wetlands. They are particularly valued for their use by wildlife as travel corridors that funnel Hudson valley and Catskill mountain migrants into our town thereby facilitating distribution throughout Rensselaerville and into Partridge Run Wildlife Management Area.

Steep Slopes: There are three major areas where steep slopes (15% or greater) are prevalent. These are along the Ten-mile Creek south of the hamlet of Rensselaerville, along County Route 353 in the northwestern portion of Town south of Crystal Lake, and on both sides of Route 145 from the Town boundary past Preston Hollow. Steep slopes are important wildlife habitats, tend to remain undeveloped, and have high risks for erosion and sedimentation resulting from slope disturbances.

Soils with limitations for building and/or use of septic systems: In general, the soils found in Town tend to have moderate to severe

limitations for building and septic systems due to shallowness or wetness.

Groundwater: Most water wells in areas found in the valleys and along streams use local bedrock formations with average well yield of 15.1 gallons per minute (gpm) and a median yield of wells at 7.5 gpm. However, 20% yield at least 20 gpm. In the areas of Town with the highest elevations, median yields are 6 gpm and the rest of the Town (see Map in Appendix D) has a median well yield of 8 gpm. In general, the bedrock in Town yields adequate amounts of water for domestic purposes. Nevertheless, there are some areas where documented well yields are less than 5 gpm – mostly situated between the hamlets of Rensselaerville and Medusa near Hale Road and County Route 360.

Water quality data indicates that the majority of bedrock water wells in Rensselaerville have elevated levels of iron (above the maximum contaminant level). The study found that about 10% of wells have elevated chloride.

A majority of the Town has groundwater recharge rates of between 6 and 9 inches per year. Along the valleys and streams, recharge rates are higher (15 to 17 inches per year) and several locations have very low recharge rates (3 to 6 inches per year). Areas with low recharge rates are located in the upper northeastern corner of Town near and around the hamlet of Rensselaerville. In general, groundwater discharges in low-laying areas in valleys and near streams. Discharge areas are typically where the water table is at or near the surface.

The groundwater study evaluated the capacity of the land to supply domestic water supplies. Recommended lot sizes to accommodate water needs range from 2 acres (in the valleys) to 7 acres (near the hamlet of Rensselaerville where water capacity is low). Lot sizes of 3 to 5 acres was found to be acceptable in a majority of Town to supply domestic water supplies and to generate enough groundwater recharge to safely dilute onsite wastewater effluent to acceptable levels.

Surface Water: A surface water study was conducted and the general conclusion is that the quality of the surface water in Rensselaerville is good with the possible exception of the bathing area at Myosotis Lake. There, bacteria levels were sometimes above acceptable limits for a public bathing area. Chloride levels are slightly elevated in Ten-Mile Creek, Crystal Lake, and Sikule Pond and warrant monitoring as development continues in the Town's watersheds. The source of the chloride is probably road salt.

Land Use and Build-Out

Using the 2006 GIS data developed from the Town of Rensselaerville Real Property Tax Information, an analysis of land uses was conducted. Land uses that dominate the Town by acreage include residential, vacant, agriculture, and Wild, Forested, Conservation Lands and Public Parks. There is very little commercial, industrial or community service uses in Town. Agricultural uses are dominated by livestock farms, followed by crop farms. Recreational residences (a year-round residence over 10 acres with recreational uses on it), followed by single family residential, agricultural residences (primarily residential with some agricultural uses on parcel), rural estates (luxurious residences on parcels over 10 acres), and mobile homes are the predominant land uses by acreage in Town. By the number of parcels, 2006 tax records indicated there were 649 single family home parcels, 185 recreational residences, 119 seasonal home parcels, 105 mobile home parcels, and 43 rural estate parcels. Multi-family dwelling units are quite rare in the Town of Renssealerville.

About 1% or 24 parcels of land in Town is used for commercial purposes. The most common commercial use classification was dining establishments (12) followed by storage and distribution, multi-purpose buildings, and auto services. There are three industrially classified uses in town: Two of which are mining. Twenty-six parcels have community service classifications. Cemeteries (7), religious uses (7) and government facilities (4) make up the majority of community service parcels, but education classes, of which there are three parcels, have the most acreage in this category (320 acres). Most of the land classified as vacant is considered to be residential vacant land (vacant lots located in residential areas).

For Wild, Forested, Conservation Lands and Public Park lands, there are 21 private and 12 public parcels of land in this category. Public lands comprise 1,732 acres or 4.48% of the land area in the Town and private lands comprise 1,581 acres, or 4.09% of the land.

A build-out analysis was undertaken to estimate the amount of development that can possibly occur if all developable land in the Town is built according to the Town's current land use regulations. This build-out analysis applies the current Town of Rensselaerville land use regulations, considers environmental constraints that would limit development in certain areas, and calculates the total residential density allowed at full buildout of the Town.

The results show that there is a potential for 3,553 new residences in Town at full build-out. This would add about 8,633 new persons (based on Census persons per household data). Of the four hamlets, Potter Hollow has the most potential (331 new homes), followed by Rensselaerville (290), Medusa (216) and Preston Hollow (50). Of the residential districts, the A/RR has the highest allowable density and there is a calculated potential of 2,273 new residences in that district. The RC1 district has the potential for 65 new homes, the RC-2 district has the potential for 200, and the R-3 district has the potential for 128 new homes. This growth potential, based on existing zoning regulations must be compared to the vision and goals of the Town of Rensselaerville to determine if that rate of potential growth is compatible with the desires of the Town. Please see Volume II for the full analysis.

Economic Conditions

In order for the Town of Rensselaerville to remain attractive to those residents operating a home based internet business and those commuting to nearby jobs in proximate urban areas, it must continue to provide rural amenities sufficient to offset travel time and costs. The Town's rural character, recreation opportunities, history and scenic beauty will therefore continue to play a large role in the local economy.

Other important factors in understanding economic development and devising strategies for growth is identifying the available labor force, existing business, potential jobs, consumer spending patterns, and supply and demand. These components are integral to business attraction, business retention, and economic sustainability.

Labor Force, Household Income, and Existing Business

The Town of Rensselaerville has an economy that is primarily dependent on the larger job markets of the surrounding region. The Town lacks any major employers, and no single type of commercial activity is dominant in the Town. Existing businesses generally occur on relatively small lots within or near established hamlets. Although the town is rural by nature, a small percentage of residents have agriculture as a sole income source. Few opportunities currently exist within the town for full-time, high-income employment. Residents commute to neighboring towns and cities for employment, traveling a half hour to an hour each way. The following are highlights of the Town of Rensselaerville labor force according to Census 2000:

- The town labor force consists of 956 residents out of a potential 1,517 workers, indicating a participation percentage of 63%.

- The highest percentage of workers in the Town of Rensselaerville was employed in Management/Professional positions (36.1%). The lowest percentage of workers was employed in the Farming/Fishing/Forestry category (1.0%).

- A considerably higher percentage of workers within the town are self-employed (9.0%), compared to Albany County (5.0%).

- The town's portion of government workers (27.4%) is relatively consistent with those of Albany County, Greene County and Columbia County.

- A considerably higher percentage of town workers were engaged in the areas of Construction, Manufacturing, Transportation/Warehousing/Utilities, and Professional/Scientific/Management/Administration than in Albany County. Conversely, a considerably lower percentage of town workers were engaged in Retail Trade; Information; Finance/Insurance/Real Estate/Rental/Leasing; Educational/Health/Social Services; Arts/ Entertainment/ Recreation/ Accommodations / Food Services and Public Administration.

- The overall time taken by Town residents to travel to and from work between 1990 and 2000 increased. In 1990, about 41.1% of commuters took less than 20 minutes to travel to work. This percentage decreased to 29.7% in 2000. In 1990, the average travel time to work for Town residents was 26.9 minutes compared to 36.1 minutes in 2000.

- The median household income in the town was only slightly lower than in Albany County, but higher than in the nearby counties of Greene and Columbia. A significantly higher percentage of town households were within the $50,000-74,999 income range (24.8%), than in Albany (20%), Columbia (21%) and Greene (18.3%) Counties.

- The 2000 Census also showed that there were a smaller percentage of Rensselaerville families living below the poverty level in 2000, than in Albany, Columbia and Greene Counties. The Median Household Income for the Town is estimated to be $50,170 in

2006, and is projected to be $56,775 by 2011, a projected increase of 34% from the year 2000.

Consumer Spending Patterns

Throughout the public participation process, residents indicated that the variety of retail goods and services offered by businesses in the Town is insufficient to meet their needs. In addition, it has been noted that residents of the Town frequently travel to acquire retail goods and professional services in either the Albany or Greenville market areas.

In an effort to identify how residents might be underserved locally by various types of businesses, and in order to learn about the spending patterns of Rensselaerville residents, a Retail Goods and Services Expenditure report was obtained from ESRI Business Analyst Online (BAO). Business Analyst Online (BAO) provides reports and maps to businesses to help them understand the lifestyle and buying behaviors of the households in a particular market in order and to find optimal sites for new store locations. BAO uses data from the U.S. Bureau of Labor Statistics' (BLS) Consumer Expenditure Surveys to identify baseline-spending patterns. The following are important highlights from this report:

- The Spending Potential Index (SPI) is a household-based measurement that represents the amount of money people spend for a product or service relative to a National average of 100. The SPI figures are not meant to represent annual expenditures made within the town but they represent the potential total annual expenditures of town residents as might be spent both within and outside the town. The SPI for Rensselaerville shows that for every $1 spent by nationally on retail goods and services, Rensselaerville residents spend between $0.31 and $1.44.

- Of all the categories listed in the Town's expenditure ranking, there are many areas where Town residents spend above, equivalent, or close to the national averages (100 SPI). The top retail goods and services categories by expenditures for Rensselaerville residents are Health (at 109), Insurance (at 105), Transportation (at 104), Home (at 93) and Entertainment and Recreation (at 93), Food at Home, including meat, poultry, fish, and eggs (at 98), Dairy Products (at 96), Snacks and Other Food at Home (at 96), Nonalcoholic Beverages at Home (at 99), Eyeglasses and Contact Lenses (at 98), Utilities, Fuel and Public Services (at 96),

Housekeeping Supplies (at 97), and Vehicle Insurance (at 96). The lowest of all categories in the Town is Telephones and Accessories (at 31) and Footwear (at 33) with Town residents spending far lower than national averages on these items.

Supply and Demand

A Retail Market Place Profile for the Town of Rensselaerville was done to compare the supply of retail sales available in the Town to the demand. The following are important highlights from this report:

- According to the Retail Market Place Profile, Town retailers in the "Used Merchandise" category are attracting shoppers from outside the Town, and are thus experiencing a "Surplus".

- There are many retailers that are not represented within the Town and the analysis shows that the Town is losing $22,181,106 in potential revenue to other towns or metropolitan areas.

The Town has a variety of local economic development resources available to existing and future business owners. The Town has a skilled work force; however most residents currently commute to other towns and cities for work, and often bring their business to other towns and cities along the way.

Throughout the public outreach process, residents expressed the desire for more local retail shopping opportunities and services for every day needs. Residents also expressed a general dissatisfaction with the lack of local employment opportunities.

Demographics, Housing and Population

- Rensselaerville's population has 'aged' dramatically, indicated by a seven-year rise in its median age between 1990 and 2000.

- Rensselaerville has a significantly older population than the county and state, though comparable to other rural communities in the region.

- As most upstate communities have experienced for decades, seniors (over 75 years) left the Town at noticeable rates.

- As most upstate rural communities experienced for the 1990's young adults (20-30 years old) left the Town at a very high rate, lowering the total population.

- Some 'active' adults (35-65 years) appear to be entering as new residents, but with few total children. The volume of these new residents did not offset the loss of young adults. This inflow has accelerated the aging of the population.

- Rensselaerville's ratio of dependents (young and old) to wage earners will climb sharply (from 66 to 93 dependents / 100 wage earners) with more seniors and fewer youths between 2015 and 2025 unless migration patterns change significantly and the Town retains more young adults in the future.

- Home ownership has become affordable for over half of current Town households.

- Rensselaerville has a very high share of seasonal housing stock.

- Rensselaerville does not have a very diverse housing stock with only 5% multi-family units, and all recent construction has been in the form of single-family homes.

- A high rate of new construction is not needed to serve current Town residents or their descendants (beyond replacement of old housing stock).

- Rensselaerville's existing resident population will not maintain its current numbers by birth rates, and any future growth in total population will be attributable to new residents.

- New construction building permits have been issued at the average rate of 48 new units every five years since 1987 and 40 new units every five years since 2000.

- Current rates of new development exceeds future demand even that from expected regional growth pressure:

    1) By 2040 the Capital District Regional Planning Commission's (CDRPC) expects status quo growth induced development to be 150 (max. 250) new households, equal to a rate of 19 (max. 31) new housing units every 5 years.

Infrastructure

Water

The Town has three central water supply systems, the Rensselaerville Water District, the Camp Cass water supply system and the Rensselaerville Institute water supply system. The Rensselaerville Water District is municipally owned and operated, the Camp Cass water supply system is owned and operated by New York State and the Rensselaerville Institute water supply system is privately owned and operated.

According to the "Annual Water Supply Statement & Consumer Confidence Report" for the year 2005, the Rensselaerville Water District serves 82 residences and places of business, serving approximately 150 to 200 people in the Hamlet of Rensselaerville depending on the season. The District is served by a surface water system that obtains water from Myosotis Lake. The properties served by the Rensselaerville Water District are located along Route 85, (Delaware Tpke.) Methodist Hill Road, Albany Hill Road CR 361 and County Route 351. Not all property owners residing within the Hamlet are served by public water, many are still dependent upon private drinking water wells.

The water system pressure is by gravity and currently consists of a sedimentation chamber, slow sand filter, chlorination system and a 50,000-gallon concrete storage tank.
The system of water mains is in good condition, although the shallow depth of water lines serving some homes causes occasional freeze problems during periods of extremely cold weather.

At peak usage times of the year, the water system experiences a loss in pressure as the level in the storage tank is drawn down, and the slow sand filter is unable to replenish the storage tank quickly enough.

The capacity of the sand filter is 18,500 GPD, according to a decision document of the New York State Water Power and Control Commission. Water quantity supplied by the system is from 12,000 to 18,000 gallons per day (GPD). In order to allow for any additional hook-ups into the drinking water system, the Town will have to make major investments to improve the capacity of the sand filtration and to increase storage capacity as well as repair and stabilize the impoundment structure at the water system intake located below Myosotis Lake, which serves as the water storage reservoir for the drinking water system.

Sewer

There are approximately 65 homes and businesses connected to the Hamlet of Rensselaerville sewer system. The sewer district serves properties located on Albany Hill Road (County Route 361), Methodist Hill Road, Delaware Turnpike (NYS Route 85), Pond Hill Road and County Route 351.

The sewer plant consists of three levels of treatment, primary, secondary and tertiary. The treatment plant is currently able to handle only about 29,000 gallons of wastewater per day and is at capacity, with no ability for future expansion without major capitol improvements. Other than the limited Hamlet sewer district, there are presently no other sanitary sewer systems in the Town of Rensselaerville. Currently there are a number of residences and businesses that are served by private septic systems which are permitted by the Albany County Department of Health.

Transportation

Residents of the Town of Rensselaerville are dependent upon the functionality of the surface transportation system, which includes roads, bridges, sidewalks, and trails to maintain economic well-being and quality of life. A well-planned and designed surface transportation system should be visually and environmentally friendly as well as safe and accommodating to pedestrians and drivers.

The transportation network within the Town is comprised of State, County and Local roads. There are 83 miles of Town roads, of which about 50% are paved, 2.5 miles of seasonal Town roads which are not plowed in the winter, 45 miles of paved county roads, and 10 miles of State roads.

The Town is served by three State roads: NYS Routes 85, 145 and 81. These major transportation corridors carry commercial, commuter and local traffic to and from the neighboring communities and employment centers located throughout the region. Traffic volumes on State Routes 85 and 145 are generally higher than on all other roads in the Town, however the capacity of these State roads is many times greater than current traffic volumes. County roads also carry thousands of vehicles and passengers on a daily basis. County roads such as Route 351 and 352 experience heavy traffic volumes during the work week as residents travel to and from the hamlets of Medusa and Preston Hollow.

Transportation and traffic related issues in the Town have increased over the years. During the development of the Comprehensive Plan, several meetings were held with the public, where workshop participants expressed concern regarding speed limit adherence and enforcement, truck traffic, and roadway conditions and maintenance. These sentiments were also reflected in the Residential Survey. The majority of survey respondents favor improvement of State, County and Local roads, although residents do not wish to see an increased number of State highways developed in the Town and wish to maintain rural standards for the local roads that carry low traffic volumes.

Parks and Recreation

The Town owns a ten-acre park located at the junction of County Route 351 and Albany Hill Road in the hamlet of Rensselaerville as well as a park in Preston Hollow. The town supports public recreational programs at these parks and at a park in the hamlet of Medusa owned by the Medusa Volunteer Fire Company.

In addition, large parcels of land are available for recreation activities such as hiking, fishing, hunting, picnicking, cross-country skiing, snowmobiling, etc. There are 18 streams, lakes and ponds that are used recreationally for fishing, swimming, boating, nature study and other uses.

The Huyck Preserve offers areas for recreation to residents of the Town and surrounding communities. A beach on Myosotis Lake is open in the summer to residents of the hamlet of Rensselaerville and those living within a two-mile radius. There are approximately 2,260 acres of state-owned forestland in the northwestern portion of the Town of Rensselaerville. Partridge Run Wildlife Management Area is located in the Town of Berne and borders the Town of Rensselaerville to the north. This area offers recreational opportunity for the residents of the Town.

Though there are ample opportunities for the Town residents to participate in passive recreational activities (e.g., bird-watching, hiking, fishing), few active recreational opportunities exist (e.g., ball fields, playgrounds). Participants in the Town survey and workshops indicated that additional recreational facilities were needed and desired.

Historic Resources

The Town of Rensselaerville is rich in both historic and archaeological resources. Historic buildings and archaeological sites occur throughout

the Town with the largest concentration of historic buildings in the hamlet of Rensselaerville. Lesser concentrations occur in the hamlets of Preston Hollow, Medusa, and Potter Hollow and along Route 81 in the vicinity of Cooksburg. In addition, approximately 125 sites of historic or potentially historic structures are dispersed throughout the entire Town.

A. Environmental Resources

1. Geologic Setting

The Town of Rensselaerville is located on the Helderberg Plateau in southwestern Albany County. The Plateau, also referred to as the Helderberg Hills, is the extreme northeastern extension of the Appalachian Uplands physiographic province. There are 39,596 acres of land within the Town. The Catskill Mountains rise approximately 10-20 miles south of the Town. The Helderberg Escarpment, located 10 miles northeast of the Town, is the extreme northeastern limit of the Helderberg Hills, and represents the boundary between the Appalachian Uplands and the Hudson-Mohawk Lowlands physiographic provinces. The escarpment drops 1,000 feet to the Hudson Valley floor in the vicinity of the John Boyd Thatcher State Park, approximately 12 miles northeast of the hamlet of Rensselaerville.

The Helderberg Plateau represents a peneplain which was once a continuous plain extending across the present-day Hudson Valley and gradually sloping upward toward the present-day Catskill Mountains. The peneplain is interspersed with occasional monad-nocks, or residual hills usually related to outcrops of more resistant rock. The tops of hills such as Countryman Hill, Wolf Hill, and Sunset Hill near the escarpment are generally 1700 to 1,800 feet mean sea level (msl). The hills in the Rensselaerville area are generally 2,000 feet msl (Goldring, 1935).

Rensselaerville's topography exhibits considerable relief. Elevations range from 2,160 feet msl in the vicinity of Triangle Lake in the extreme northern portion to 700 feet msl in the Tenmile Creek Valley, in the extreme southern portion of the Town.

The majority of the Town is drained by the Catskill Creek which flows southeast across the southwestern corner of the Town to the Hudson River. The central area of the Town is composed of a series of north-south valleys which all drain south to the Catskill Creek. The northwest and northeast corners of the Town drain northwest to the Schoharie Creek and then to the Mohawk River.

The hills throughout the Town have shapes and trends related to bedrock features, as well as the erosional influence of glaciers. While bedrock joints are generally parallel to the trend of the hills, glaciation modified the hills in the general direction of ice flow. The north-south orientation of hills in the northern and central portions of the Town reflects this influence of ice flow (Fleischer, undated).

a. Bedrock Geology (See Map 1)

The bedrock of Rensselaerville was formed approximately 370-390 million years ago during the Middle Devonian period. With the beginning of the Middle Devonian, present-day Rensselaerville was covered by a warm, shallow sea. During this time, a mountain-building episode was taking place to the north. This period of deformation and uplift, known as the Acadian Orogeny, was centered in New England and the Canadian Maritime Provinces.

During the Acadian Orogeny tremendous quantities of mud, silt, sand, and gravel were eroded from the Acadian Mountains and deposited into the inland sea forming the Catskill Delta. The bedrock of Rensselaerville is derived from the earliest deposits into the inland sea.

As these sediments accumulated, their weight compressed underlying sediments. Ground water percolating through the sediments dissolved minerals and re-deposited them as cements, thereby turning silts and sands into siltstones and sandstones, and sand and gravel mixtures into conglomerates. Erosional dissection of the flat-lying sandstones and shales of the region and subsequent glaciation formed the present-day landscape of Rensselaerville. Sedimentary bedding in the Edmund N. Huyck Preserve dips towards the southwest approximately 120 feet in elevation over a distance of one mile, at approximately a 2% slope (Fleischer, undated).

The Town of Rensselaerville is underlain by Middle Devonian sandstones and shales of the Hamilton Group. One of the best exposures of the "Hamilton beds" within the Town is located in the gorge at Rensselaerville Falls. Lithologic variations, sedimentary structures and bedding characteristics are evident in this portion of the Town and provide clues to the area's depositional environment.

The oldest bedrock in the Town is the Mount Marion formation. The Mount Marion consists of marine, fossiliferous, thin-bedded sandstones interbedded with dark bluish to greenish shales. The sandstones split along the bedding planes into flagstone slabs one to three inches thick. Maximum thickness of the formation is 1,400 feet (Arnow, 1949).

Above the Mount Marion is the Ashokan formation, consisting of non-marine, non-fossiliferous sandstones which contain interbedded olive shales weathering red or brown. Maximum thickness of the formation is 350 feet (Arnow, 1949).

The Kiskatom formation lies above the Ashokan. The Kiskatom consists of non-marine, fossiliferous, alternating beds of red, green, or gray sandstones with interbedded red and green shales. Maximum thickness of the formation is 1,000 feet (Arnow, 1949).

A few small shale quarries are located in the Town. These mines generally provide local markets with fill material and road mettle. The largest mine is a 25-acre shale pit located on Kenyon Road in the central portion of the Town. Another 3-acre shale pit is located on Albany County Route 352, 1/2 mile northwest of the hamlet of Medusa.

Bedrock is exposed generally within three feet of the surface throughout approximately 10% of the Town. Through the remainder of the Town, bedrock is covered by surficial deposits as discussed below.

b. Surficial Geology (See Map 2)

Three types of glacial material are found in the Town: 1) glacial till (unstratified drift); 2) ice-contact deposits such as kames, eskers, kame terraces, kame deltas, and kame moraines; and 3) outwash. Glacial till is an unsorted mixture of clays, silts, sands, and angular rock deposited directly by the advancing and receding Wisconsin glacier. Ice-contact deposits were formed by running water along a progressively northward-receding ice margin. Outwash consists of sand and gravel deposited by melt water streams in front of the margin of the receding ice.

During the last Ice Age, the Town of Rensselaerville area was covered by a continental ice sheet. As the climate warmed, the ice sheet became stagnant, began to melt, and deposited till throughout most of the present-day Town. Ice flowing over bedrock hills deposited thicker amounts of till on the lee side of these hills. Such features, referred to as “till shadows”, occur on the southern side of many hills in the Town of Rensselaerville area (Fleischer, undated).

In some instances, till partially blocked glacial drainage ways. These “till plugs” frequently served as temporary dams, behind which short-lived lakes formed. The dams eventually failed and the lakes emptied. Today upstream from each plug, the valley floor widens and is covered by fine lacustrine sediments (Fleischer, undated). An example of this is found in the narrow valley adjacent to Albany County Route six about one half mile northwest of Shoefelt Corners. A till dam has blocked the valley and a large wetland has formed in the lacustrine plain immediately upstream from the plug.

As the glacier continued to melt, water tunneled beneath and adjacent to the ice mass. These streams deposited sand and gravel beneath and adjacent to the glacier. Kames, kame terraces, eskers, kame moraines, and kame deltas are the present-day landforms associated with these ice-contact deposits.

Ice-contact deposits are generally found in those portions of the Town adjacent to glacial stream valleys. Kames, kame terraces, and eskers are located on portions of the valley walls adjacent to Tenmile Creek, Lake Creek and Catskill Creek. Kame moraines are found along portions of Squirmer Valley and near the hamlet of Shoefelt Corners in the northeast portion of the Town.

Melt water from the ice sheet transported large amounts of sand and gravel and deposited it as outwash on the valley floor downstream from the retreating glacier. Outwash sand and gravel is generally found in the Catskill Creek, Fox Creek, Lake Creek, Tenmile Creek, Eightmile Creek, and Squirmer Valleys.

2. Water Resources (Maps 3, 3a, and 3b)

a. Groundwater Resources (See Maps in Appendix D)

The New York Rural Water Association conducted a groundwater study for the Town of Rensselaerville (See Appendix D). This study details a comprehensive evaluation of they hydrogeologic setting of the Town. In addition to evaluating bedrock and unconsolidated aquifer wells, the report studied public water supply wells, ground water recharge and discharge areas, groundwater contamination, and offers a variety of recommendations that are incorporated into the strategies of this comprehensive plan. A summary of that work is as follows:

Bedrock Wells.

Most water wells in areas found in the valleys and along streams use local bedrock formations with average well yield of 15.1 gallons per minute (gpm) and a median yield of wells at 7.5 gpm. However, 20% yield at least 20 gpm. In the areas of Town with the highest elevations, the Moscow formation has a median yield of 6 gpm and the rest of the Town (see Map in Appendix D) has a median well yield of 8 gpm. In general, the bedrock in Town yields adequate amounts of water for domestic purposes. Nevertheless, there are some areas where documented well yields are less than 5 gpm – mostly situated between the hamlets of Rensselaerville and Medusa near Hale Road and County Route 360.

Water quality data indicates that the majority of bedrock water wells in Rensselaerville have elevated levels of iron (above the maximum contaminant level). The study found that about 10% of wells have elevated chloride.

Unconsolidated Aquifers

Other wells are located in areas of sand and gravel (unconsolidated aquifers) and the median yield in Town of these wells is 12 gpm. Little data exists on the water quality from these types of wells.

There are three businesses having wells that are regulated as a transient non-community water system including K+D West Winds, Hilltown Café and the Rensselaerville Institute. These are water systems that do not regularly serve at least 25 of the same people over six months per year.

A majority of the Town has groundwater recharge rates between 6 and 9 inches per year. Along the valleys and streams, recharge rates are higher (15 to 17 inches per year) and several locations have low recharge rates (3 to 6 inches per year). Areas with low recharge rates are located in the upper northeastern corner of Town near and around the hamlet of Rensselaerville. In general, groundwater discharges in low-lying areas in valleys and near streams. Discharge areas are typically where the water table is at or near the surface.

The groundwater study evaluated the capacity of the land to supply domestic water supplies. See recommendations for full details. Recommended lot sizes to accommodate water needs range from 2 acres (in the valleys) to 7 acres (near the hamlet of Rensselaerville where water capacity is low). Lot sizes of 3 to 5 acres was found to be acceptable in a majority of Town to supply domestic water supplies and to generate enough groundwater recharge to safely dilute onsite wastewater effluent to acceptable levels. See Maps in Appendix D which shows locations in Town currently having minimum lot sizes less than recommended for water supply.

b. Wetlands (See Map 3)

There are fifteen state-regulated freshwater wetlands located partially or entirely within the Town of Rensselaerville. A sixteenth wetland has been identified as being eligible for regulation and NYSDEC proposes to amend its Freshwater Wetlands Maps to reflect this addition. Total wetland area of the sixteen wetlands identified for regulation in the Town is

approximately 450 acres (Map 3). To be protected under the New York State Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law (ECL)), a wetland must be at lease 12.4 acres in size or be designated as a wetland of unusual local importance. The Act was adopted in 1975 to preserve, protect and conserve freshwater wetlands and the benefits derived from them. Any activity impinging upon or otherwise substantially affecting a regulated wetland or its adjacent area (100-foot boundary around wetland) requires a Freshwater Wetlands Permit pursuant to ECL Article 24. These activities include draining, dredging, filling, placing of obstructions, or introducing any form of pollution. Many agricultural activities involving wetlands are exempt from permitting.

Of the fifteen regulated wetlands in the Town, none are designated as Class I wetlands, seven are designated as Class II wetlands, eight are designated at Class III wetlands and none are designated as Class IV wetlands. An additional Class II wetland in the Town is proposed to be regulated by the state upon finalization of the amendment to the Freshwater Wetlands Maps. Class I wetlands are considered the most valuable wetlands, providing the most functions and benefits, and Class IV wetlands provide the least functions and benefits of the regulated wetlands. There are smaller, unregulated wetlands scattered throughout the Town which provide benefits similar to those of the regulated wetlands.

Wetlands are made up of many different cover types, including wet meadow, emergent marsh, shrub swamp, deciduous forested swamp, coniferous forested swamp, floating and submergent vegetation, and wetland open water. The dominant cover types in the wetlands in the Town of Rensselaerville are emergent marsh, shrub swamp and deciduous forested swamp. The emergent marsh cover type is dominated by such herbaceous plants as cattails, joe-pye-weed, boneset, blue vervain, jewelweed, wetland sedges and grasses, arrowhead, pondweed, bulrushes, and burreeds. The shrub swamp cover type consists of such woody plants as speckled alder, arrowwood, willow, viburnums, meadowsweet and red-osier dogwood. The dominant tree species in the deciduous forested swamp is red maple, with lesser components of American elm, red ash and willow. Many of the wetlands in Town are comprised of more than one cover type, providing diversity and varying benefits.

d. Streams (See Map 3)

Description of streams in the Town of Rensselaerville and their characteristics are found throughout this Appendix and on Map 3.

e. Lakes, Watersheds, and other surface water bodies (See Maps 3b, 3c and 3d)

1. Lakes: Four major lakes exist in the Town of Rensselaerville: Myosotis, Crystal, and Triangle lakes, and Sikule Pond. Of these, Myosotis Lake is the largest. As with streams, these water bodies are described in more detail in other sections of this Appendix.

2. Watersheds: Almost the entire Town is within the Upper Catskill Creek watershed. A small portion in the northeastern corner and north of the hamlet of Rensselaerville is within the Fox Creek watershed. Watersheds can be broken down further into subwatersheds. Several subwatersheds exist including that for Crystal Lake, Triangle Lake, Myosotis Lake, and Sikule Pond, as well as for Potter Hollow, Fox Creek, Lake Creek, Eight-mile Creek, Little Schoharie Creek, Switzkill Creek, Ten-mile Creek, and Catskill Creek. More detailed information on Triangle and Crystal Lake is as follows:

TRIANGLE LAKE

According to 2006 records from the Town of Rensselaerville Assessor's Office, Triangle Lake currently has a total of 42 parcels of land within its' watershed. There are 18 year-round residences, 7 seasonal residences, 17 vacant parcels of land and one (1) parcel land owned by the telephone company (recorded as NYNEX) within the lakes' watershed. (See Watershed Maps 3b and 3c).

All of these homes have individual septic systems and most have private drinking water wells but some may use the lake for their drinking water supply. The parcels within the watershed range from ¼ acre in size to 161 acres. According to the groundwater study for the Town of Rensselaerville conducted by the New York Rural Water Association (NYRWA) during the summer of 2006, (See Appendix D), in order for these properties to supply on-site groundwater needs and adequately dilute effluent introduced from the site's septic system, parcels should be

at least five (5) acres in size. Current zoning requires a minimum lot size of 10 acres.

CRYSTAL LAKE

According to 2006 records from the Town of Rensselaerville Assessor's Office Crystal Lake currently has a total of 101 parcels of land within its' watershed. There are 16 parcels assessed as year-round residences, 52 parcels assessed as seasonal residences, 31 parcels assessed as vacant land, one (1) parcel assessed as a public service (telephone facility), and one (1) parcel of land assessed as a public park. (See Watershed Maps 3b and 3c as well as Map 17)

According to a local source, there are 89 homes around the lake of which there are 7 fulltime residents. Of the 89 homes, approximately 73 are used by their owners on a seasonal basis, 4 homes that are seasonal rentals, and the remaining 5 homes are in the possession of owners who own more than one home but only reside in one.

All of the homes have individual septic systems and most have private drinking water wells but some may use the lake for their drinking water supply. The parcels within the watershed range from 1,725 square feet to 27 acres. There are seasonal residences that are as small as 5,227 square feet. According to the groundwater study for the Town of Rensselaerville conducted by the New York Rural Water Association (NYRWA) (See Appendix D), in order for these properties to supply on-site groundwater needs and adequately dilute effluent introduced from the site's septic system, parcels should be at least five (5) acres in size. Current zoning requires a minimum lot size of 10 acres, well above the suggested minimum of this study, however this does not solve the issue with the pre-existing non-conforming lots.

The soils in this area are formed in tight glacial tills which have the potential for surface break-through due to slow percolation. Due to the close proximity of septic systems to the lake, the high density of homes, and the small size of many of the parcels, there is a potential for contamination of the lake with sewage effluent. This, in turn, could cause bacteriological contamination or algae blooms due to nutrient loading. Fortunately, most of the homes surrounding the lake are currently seasonal, which greatly reduces the annual sewage loadings on the soil systems. If, however, many homes in the area were winterized and the year-round population increased, the potential for septic problems would rise.

3. Surface Water Quality Analysis, 2006

In order to determine the level of surface water quality in the Town, in September 2006 water samples were taken from different lakes, ponds and streams throughout the Town. Appendix E details the results of this analysis.

To determine the current quality of surface water in the Town biological and chemical tests were performed on the 7 sources shown including Catskill Creek, Crystal Lake, Myosotis Lake, Sikule Pond, Tenmile Creek, Triangle Lake, and Lincoln Pond. The tests performed were fecal coliform, nitrate, reactive phosphorus, chloride and conductivity. With the exception of conductivity, the tests provide evidence of human impact. Fecal coliform is present in all animal feces and would indicate possible farm manure runoff or septic system leakage. Phosphorus and nitrogen are also indicators of farm manure runoff and septic leakage. They are also indicators of fertilizer runoff. Chloride is mainly an indicator of road salt runoff. Conductivity is a general test that indicates the presence of dissolved ions (charged particles) that can be both man-made and naturally occurring. It is useful in detecting sources of pollution in streams and is illustrated in the study of the Catskill Creek found in Section 2. It also provides a check on the chloride levels since an increase in chloride should be reflected by an increase in conductivity.

The results indicate that surface water quality in Rensselaerville is good. The levels of phosphorus and nitrate were below detection limits and indicate that human impact upon the watershed is not significant. Chloride levels were also low. Since the major source of chloride is probably road salt, it was interesting to note that the lowest level was found in Lincoln Pond where the watershed is not impacted by roads. The highest levels found were around 30 mg/l in the Ten Mile, Crystal Lake and Sikule Pond (Section 1). Higher levels were found in the three tributaries of the Ten Mile (Section 5). These tributaries are bordered by heavily salted roads. At this point, the levels found are not a problem but warrant monitoring as the Town may increase salting in response to increased development.

The potential for human impact is presently greatest along the Catskill Creek as is flows through the hamlet of Preston Hollow. If significant pollution were occurring from human activity such as seepage from leach fields, marked elevations in conductivity should be evident. Conductivity values were determined for several locations along the Catskill Creek and two tributaries. The results of this study show a gradual increase in

conductivity as the Catskill Creek flows south over a distance of several miles.

During the summer bathing season, monthly samples for total coliform bacteria are taken at the beach area of Myosotis Lake. The results show that bacteria levels are reaching higher levels in recent years. During the summer of 2005 the July levels indicated that bathing was possibly not safe. The reason for this is unknown but could be due to an increase in bathers or the presence of Canadian Geese. A similar spike was not noted in 2006.

A one-year study on ions, including chloride, calcium, magnesium and sodium was done on Tenmile Creek as a student Masters thesis. It provides valuable baseline data for the Tenmile Creek Watershed. This study showed that increased chloride levels are related to road salting.

An additional study was done to evaluate macroinvertebrates. This type of study is a way to assess water quality by looking at the organisms in the water. The results reflect the chemical quality of the water. The results indicate that the Tenmile Creek is non-impacted (excellent quality) and the Catskill Creek is slightly impacted (good to excellent quality). The study also found an improvement in water quality from 1997 when the NYSDEC last sampled these waterways. This apparent improvement may be directly related to the construction of a sewage treatment facility for the Hamlet of Rensselaerville in 2003.

Finally, a 2005 study evaluated the mercury levels in four species of fish from Crystal Lake. The results of this effort are consistent with existing data from NYSDEC which indicates that most fish in New York State contain detectable levels of mercury. The current advisory level is 1.0 ppm for fish.

The general conclusion from all of the above studies is that the quality of the surface water in Rensselaerville is good with the possible exception of the bathing area at Myosotis Lake where bacteria levels were sometimes above acceptable limits for a public bathing area. Chloride levels are slightly elevated and warrant monitoring as development continues in the Town's watersheds. The source of the chloride is probably road salt.

3. Soils, Slope and Topography (See Maps 4 and 5)

Soil characteristics constitute the single greatest determinant of the suitability of any area for utilization by man, be it for forestry,

agriculture, or the siting of structures. Characteristics of soils which influence their use include slope, texture, depth to water table, water infiltration rate, stability and erodibility. The Town's soils are divided into three general types, depending upon the basic material or "parent" material from which they were derived. The three primary parent materials are recent alluvium (modern floodplain deposits near streams), glacial till (an unsorted mix of boulders, gravel, sand and clay) and stratified drift (water-sorted sand and gravel deposits of various types dating from the last ice age).

Till soils occupy the largest area of the Town, covering most upland areas and steep slopes. These soils may have a variety of developmental constraints including poor percolation (for septic systems), shallow depth, high groundwater, instability on slopes and excessive stoniness. Till soils can be utilized for development but generally only with extra expense and trouble.

Soils developed in stratified drift are scattered throughout the Town but are most common near Rensselaerville (hamlet), Medusa, and in the major stream valleys. These soils are generally better for all uses: agriculture, basements, foundations, and septic systems. Constraints may include shallow depth to groundwater, excessive percolation for septic systems, and potential for flooding if located in floodplain areas. Most existing areas of concentrated population in the Town are located on soils developed in stratified drift.

In general, the best soils in the Town for residential, commercial, and industrial development are those derived from glacial outwash and recent alluvium. The best soils include Chenango gravelly silt loam, Unadilla silt loam and Valois soils. Marginal soils in the Town include Howard gravelly silt loam, Riverhead fine sandy loam, Colonie loamy fine sand, and Lackawanna gravelly silt loam. The majority of good and marginal soils are located on outwash gravels and ice-contact deposits in the southeastern portion of the Town and in outwash and alluvial deposits in stream valleys throughout the remainder of the Town. Steeply sloped areas and soils formed in glacial till generally received the poorest rating of suitability for development.

Slope is also a major determinant of a site's suitability for development. Factors such as ease of access, stability and erodibility are greatly influenced by slope alone. Potential development sites are much more likely to occur in areas of low slope than high slope. The Albany County Health Department, for instance, will not approve a septic system leach field in areas over 10% slope. Map 4 shows the major slope categories in

the Town. Categories were chosen to be consistent with generally accepted slope classes: 0-8%, 8-15% and over 15%. A large part of the area in the RC-2 district has slopes over 15%. Districts recommended for higher density development contain a higher percentage of 0-8% and 8-15% slopes, where good development sites are more likely to occur. Topography is shown in Map 5.

4. Natural Resources

a. Vegetation

Vegetation communities in the Town of Rensselaerville are influenced by a variety of factors, including land uses, soil conditions, topography and hydrology. Much of the forested areas within the Town have resulted from succession after agricultural land abandonment, after timber harvesting and/or from reforestation efforts. Inaccessible areas have been left relatively undisturbed and support more mature forest. There are also areas of wetland, shrub land and old field throughout the Town. Each vegetation community within the Town provides a variety of benefits and functions. The vegetation communities within the Town are discussed in general terms to provide an understanding of the values and functions of these resources so that this factor may be properly considered in planning decisions.

Forest types found within the Town include those in the northern hardwood association, hemlock-hardwood association, and northern coniferous stands. The northern hardwood association is dominated by sugar maple and American beech with lesser components of gray birch, red maple, eastern hemlock, white ash, black cherry, American basswood, northern red oak, eastern white pine, ironwood and American elm. The hemlock-hardwood association is a mixed forest type with eastern hemlock and northern hardwood species. The northern coniferous forests include stands predominated by eastern white pine as well as reforestation areas planted with coniferous species suitable for northern climates. Examples of coniferous tree species in the plantations are Norway spruce, red pine, eastern white pine, Scotch pine and white spruce.

The soil, aspect of slope, and climate of the Helderberg Plateau, influence the plant community composition. In hilly terrain such as the Helderberg Plateau, topography has a great influence on microclimate, which in turn influences species composition. Northeast aspects and lower slopes have cooler, moister microclimates and support tree species such as eastern

hemlock and American beech. Southwest aspects and upper slopes and ridges have drier, warmer sites able to support tree species such as sugar maple, white ash and northern red oak.

Agricultural land abandonment results in “old field” succession. After agricultural land is abandoned, the area is invaded by pioneer herbaceous species, which gradually succeed into a perennial herbaceous/woody-plant community. Approximately ten to twenty years after agricultural land abandonment, shrubs and young trees become dominant to form a shrub land community. Old-field conifer species (generally eastern white pine) later obtain dominance in the shrub land community and forms a young coniferous forest. The conifer tree species become mixed with mid-tolerant hardwood species, such as birches, cherries and aspens. The coniferous forest succeeds into a coniferous-deciduous mixed forest and eventually into a deciduous forest. This type of succession is common throughout the region and is found in varying stages within the Town.

There are 3,325 acres of wild, forested and conservation lands in the Town. Of those, 1,732 are state-owned forest lands (Maps 6 and 7 show forested and preserved woodland parcels). These lands, concentrated mostly in the northwestern section of Town, are managed by the New York State Department of Environmental Conservation (NYSDEC) Bureau of State and Private Forestry and are made up of natural stands and plantations. The natural stands are predominantly northern hardwood and hemlock-hardwood compositions, and the plantations are comprised of Norway spruce, red pine, red pine-spruce mix, and other coniferous tree species. NYSDEC manages the land for multiple uses, including saw timber, wildlife habitat, recreation and watershed protection.

The Edmund Niles Huyck Preserve and Biological Research Station is located in the northeastern section of the Town within the upper watershed of Tenmile Creek (Map 7). The Huyck Preserve encompasses 1,870 acres of diverse vegetation communities. The majority of the Preserve is successional hardwood forest. Other communities and water systems in the Preserve include mature forests, fields, wetlands, intermittent and permanent streams, and two lakes (Lincoln Pond and Myosotis Lake). The Huyck Preserve is managed for research, education, recreation, watershed protection, wildlife habitat and aesthetics.

The northwestern section of the Town is mostly forested, with natural stands of predominantly northern hardwoods, along with scattered stands of mixed forest types (deciduous-coniferous). Additionally, there are plantations of northern coniferous stands in the state reforestation areas and natural coniferous stands along the Cheese Hill Creeks. Parcels

of agricultural land (cropland and pasture) and wetlands are inter-mixed with the large tracts of upland forest. There are 10 wetlands in this section of Town which are presently regulated by NYSDEC and numerous smaller wetlands that are regulated by the federal government.

Though natural forested stands predominate the northeastern section of the Town, this area supports more active agricultural land than does the northwestern section. The forestland in this area is predominantly mixed forest types, with some stands of deciduous or coniferous woods. The forests in this section of Town, excluding the Huyck Preserve to the north, are often broken up by active and abandoned agricultural land, resulting in smaller tracts of forest than in the northwestern section. There are four wetlands in this section of Town which are presently regulated by the state.

The southeastern section of the Town supports the highest proportion of agricultural land, with some of the agricultural areas being fairly expansive. There are natural stands of mixed deciduous and coniferous woods in the area, particularly along the stream corridors and on steeper slopes, along with planted coniferous stands in the southernmost areas. Three wetlands in the southeastern section of Town are presently regulated by NYSDEC.

The southwestern section of the Town is composed of large forested tracts of land mixed with large agricultural fields. The forested stands are mostly mixed forest types and natural coniferous stands, with some deciduous tracts. The land is forested mostly along the stream corridors and on steeper slopes. There are some areas of “old field” intermixed with the forest-lands and active agricultural lands. There are presently no state-regulated wetlands in this section of Town.

The abundant forested areas within the Town furnish numerous benefits, including: providing suitable habitat and movement corridors for a variety of wildlife species; maintaining desired water quality for trout streams by providing canopy cover to shade the streams and stabilizing the stream banks to reduce erosion and turbidity; providing soil stability to reduce erosion, particularly on areas of steep slopes; providing a source of recreation opportunities and commercial income (e.g., timber harvesting); increasing the aesthetic value and maintain the rural character of the Town; protecting watershed areas and serve as water recharge areas. The open and shrubby vegetated areas within the Town offer benefits similar to those of the forests, including wildlife habitat, soil stability, aesthetics and recreation, as well as providing open areas for views and vistas. The wetlands in the Town (both regulated and unregulated) provide many

functions and benefits for the public and environment. Wetlands are areas of great natural productivity, hydrological utility, and environmental diversity, providing natural flood control, improved water quality, recharge of aquifers, flow stabilization of streams, and habitat for fish and wildlife resources. They also contribute to the production of agricultural products and timber, and provide recreational, scientific and aesthetic resources to the Town and public.

The upland forested areas within the Town of Rensselaerville are abundant and often vast. The steep slopes and narrow valleys in the Town are mostly forested, as are most of the floodplains and some of the more level areas. As previously discussed, these forested areas are valuable to the public and the environment by providing water quality protection, soil stability, wildlife habitat, research and education potential, aesthetic value, recreational and commercial opportunities. The forested areas found on steep slopes, along stream valleys, in floodplains, or on areas with shallow soils have limitations for any form of development. The level, well-drained sites in the Town which presently support forested land have few limitations for development, though some of the values provided by the forestlands would be compromised if the land was developed. The large forested tracts (e.g., in the northwestern and western sections of Town, the Huyck Preserve and the state-reforestation areas) provide habitat which is limited in the eastern area of New York State. This habitat is essential for large home-range wildlife species to exist in the area. The value of this habitat should be a consideration in planning for development in the Town.

The open and shrub land vegetated areas within the Town are generally areas which were disturbed by man through agriculture or timber harvesting. These areas serve to create diverse wildlife habitat, stabilize the soil to reduce erosion, provide recreational opportunities, maintain the rural character of the land, and provide scenic views and vistas. These open and shrub land areas are generally on gentler slopes with soils which are better able to support development.

The wetland areas in the Town are poor candidates for development due to their environmental constraints, such as poorly-drained soils, and their numerous benefits to the public and the environment. These benefits include: flood and stormwater control, surface and groundwater protection, erosion control, pollution treatment and nutrient cycling, fish and wildlife habitat, public use and recreation, education and scientific research, open space and natural beauty. Development within wetlands will result in the reduction or total loss of all or some of these benefits and functions.

b. Wildlife

Habitats

Wildlife population characteristics are dependent upon available habitat. There are various vegetation communities throughout the Town of Rensselaerville providing a variety of habitats to support a fairly diverse concentration of wildlife species. Though some wildlife species are associated with particular vegetation communities, most species require a variety of plant communities to meet all their life-sustaining requirements. These needs include food, cover, water, reproductive needs and other special considerations. For example, the white-tailed deer prefers openings and edges of deciduous and mixed forest as well as brushy fields for food and cover, together with mature stands of conifers for winter shelter. The northern harrier uses various wetland and upland habitats for breeding, as well as open country such as fields, marshes and meadows for hunting.

In the Town, wildlife habitat is available in old fields/scrublands; upland forests including northern coniferous forests, northern hardwood forests and mixed forests; wetlands; floodplains; rivers and streams; lakes; and ponds. Each habitat type provides certain needs for particular wildlife species and a juxtaposition of various habitat types creates an environment suitable for a diverse assemblage of wildlife species. The existing wildlife habitats in the Town are discussed in general terms to illustrate the diversity of habitat available in Town and the values provided by each habitat type.

Old field and shrub land habitats result from disturbance to the existing vegetation community. Disturbance to a vegetation community affects the wildlife habitat by altering the successional trend and the resultant plant species composition. Disturbance to an area can be caused by humans, such as by timber harvesting or agricultural land abandonment, or by nature, such as by fire, wind, or disease. “Pioneer” herbaceous and woody plant species invade these disturbed areas and provide suitable food, cover and nesting sites for a variety of birds, mammals, reptiles and amphibians. Grasses and flowering plants provide preferred foods for grazers such as white-tailed deer, and seeds and fruit are available for many birds and mammals. The openness of this habitat attracts aerial predators, such as hawks and owls, and displaying birds such as American woodcocks. Brush piles from logging activity provide nest sites for rabbits, mice, voles and other small mammals and birds. Many wildlife species utilize these openings because they provide sun and warmth.

The forested areas in the Town include coniferous, deciduous and mixed forests. There are planted and natural conifer stands in the Town. Norway spruce is the prevalent tree species in the planted stands, and eastern white pine is the dominant conifer in the natural stands. The canopy cover in the coniferous forests is dense, allowing little sunlight to penetrate. The lack of light, together with the thick duff layer of needles accumulated on the forest floor make it difficult for ground plants and shrubs to become established. The lack of stratification for foraging and nesting, together with the lack of plant species diversity for wildlife food, result in less variety of wildlife utilizing the coniferous forest habitat. The coniferous forest stands in the Town do, however, provide unique habitat for certain wildlife species. Many birds and mammals forage on needle-eating insects. Other wildlife species, such as red squirrels, mice and voles, feed on seeds from the cones. In turn, owls and hawks prey on the small seed-eating mammals, and porcupines feed on the inner bark of the conifers. The large tracts of coniferous forests in the Town provide unique habitat for large home-range species including black bear, bobcat, and pileated woodpecker. The dense evergreen canopy of the coniferous forest offers winter refuge to white-tailed deer. NYSDEC has mapped a deer concentration area in the southwestern portion of the Town in the vicinity of the state reforestation area near Cheese Hill and along Catskill Creek. Deer will congregate in the winter in areas with dense coniferous canopy cover which provides protection from wind and snow cover.

The dominant overstory tree species in the northern hardwood forest are sugar maple on the warmer sites and American beech and eastern hemlock on the cooler sites. The canopy cover is fairly dense, creating a moist, shaded forest floor. The forest is made up of an overstory layer, as well as an understory and ground layer resulting in vertical stratification beneficial for varied wildlife. The seeds, nuts and cones of the various trees provide food for such species as tufted titmouse, ruffed grouse, wild turkey, eastern chipmunk, gray squirrel and porcupine. The smaller shrubs in the understory bear fruits that are valuable for birds and mammals in both summer and winter. Hollow logs as well as dead standing trees provide shelter for cavity-dwelling birds and mammals. The insects boring these decaying snags provide food for such birds as the yellow-bellied sapsucker, white-breasted nuthatch and other woodpeckers. Woodland hawks, such as the broad-winged and sharp-shinned hawks, nest in the northern hardwood forests, and white-tailed deer are fairly abundant in this habitat type.

Wetlands are transition areas between uplands and aquatic habitats. There are many types of wetlands, including wet meadow, emergent marsh, deciduous forested swamp, coniferous forested swamp, shrub

swamp, floating and submergent vegetation, and wetland open water. Though each cover type provides different benefits, wetlands are one of the most valuable habitats for wildlife by providing grounds for breeding, nesting, feeding, resting, cover and water for many forms of wildlife. Many species of wildlife depend upon wetlands for part of their life cycle, including many of those species identified as endangered, threatened and special concern in New York State. Wetland areas in the Town provide suitable habitat for such species as beaver, muskrat, mink, river otter, fisher, American woodcock, wood duck, mallard, great blue heron, sora rail, northern harrier, and osprey, as well as numerous reptile and amphibian species. Two special concern amphibian species recorded in the Town which utilize the wetland habitat are the Jefferson salamander and spotted salamander.

Streams and lakes provide water sources for wildlife and habitat for fish. Many of the streams in Town which are shaded by vegetative cover provide habitat suitable for trout survival (labeled C[T] or habitat suitable for trout spawning (labeled C[TS]. NYSDEC requires a stream protection permit, pursuant to Article 15 of the Environmental Conservation Law (ECL), for any activity which would change, modify or disturb the stream bed or bank of any protected stream (Class C[T] or higher). The classification of streams should be determined for all developments proposing to cause disturbance to a stream bed or bank in order to determine if a permit is required.

Wildlife Inventories

The New York State Breeding Bird Atlas recorded a total of 125 bird species between 1980 and 1985 which may breed in the Town of Rensselaerville. Of these 125 species, there was one threatened bird species (red-shouldered hawk) and four special concern species (eastern bluebird, grasshopper sparrow, Cooper's hawk, and vesper sparrow) recorded as potential breeders in the Town. In addition, there were three relatively uncommon bird species recorded (pied-billed grebe, red crossbill, and prothonotary warbler). Other notable winter resident and migrant bird species, such as osprey, bald eagle, common loon, black tern, northern raven and a variety of other songbirds and raptors, utilize the various habitats in the Town.

New York State conducted an update of the Breeding Bird Atlas between 2000 and 2005. In the most recent count, 109 species were identified as potentially breeding in the Town. Of these, one was a threatened species (Northern Harrier), four special concern species (grasshopper sparrow, sharp-shinned hawk, northern goshawk, and osprey), eight were listed as

game species, and the remainder was listed as protected migratory bird species. In 2000 to 2005, the bald eagle, loon, black tern, pied-billed grebe, red crossbill, and prothonotary warbler were not identified as being in any of the survey blocks within the Town of Rensselaerville.

The United States Fish and Wildlife Service sponsors an annual breeding bird survey throughout the United States. This survey is done through a uniform census along 25 mile routes. One Breeding Bird Survey Route passes through the southern half of Rensselaerville and has had data recorded for many years. Although not the entire route is within the Town of Rensselaerville, the bird species found along this route are characteristic of the area. One hundred twelve different bird species have been identified through this census. Some of these species are different than those identified through the New York State Atlas. Additions include the broad-winged hawk, ring-necked pheasant, horned lark, northern roughed-winged swallow, cliff swallow, blue-gray gnatcatcher, pine warbler, Henslow's sparrow, orchard oriole, and pine siskin.

The New York State Department of Environmental Conservation also conducts an atlas of reptiles and amphibians. Data collected for the Town include the following identified species, among them three listed as species of special concern by the State:

Blue-spotted Salamander (SC)
Bullfrog
Common Garter Snake
Common Snapping Turtle
Eastern American Toad
Eastern Milk Snake
Eastern Painted Turtle
Gray Treefrog
Green Frog
Jefferson Salamander (SC)
Northern Brown Snake
Northern Copperhead
Northern Leopard Frog
Northern Redback Salamander
Northern Ringneck Snake
Northern Spring Peeper
Northern Spring Salamander
Northern Two-lined Salamander
Northern Water Snake
Pickerel Frog
Red-spotted Newt

Spotted Salamander
Wood Frog
Wood Turtle (SC)

NYNHP has no records for Rensselaerville with precise locations. The precise locations of the following records are unknown, as is the present status of these species in Rensselaerville.

	COMMON NAME	SCIENTIFIC NAME	NY STATE LISTING	NY STATE RANK*
Bird	Pied-billed Grebe	*Podilymbus podiceps*	Threatened	S3

Reported during first NYS Breeding Bird Atlas in 1984 as confirmed breeding from survey Block 5669B. This block includes Medusa and the southeastern portion of Rensselaeville and portions of adjacent towns; however, the precise location of the birds observed in 1984 is not known. Pied-billed grebes were not reported from this block during the second NYS Breeding Bird Atlas from 2000-2005.

Plant	False Hop Sedge	*Carex lupuliformis*	Rare	S2

Collected in 1957 from "along a rill and marsh in south meadow" in Rensselaerville.

Plant	Blunt-lobe Grape Fern	*Botrychium oneidense*	Endangered	S2S3

Collected from "Rensselaerville" on an unknown date.

* Rarity in NYS as ranked by NY Natural Heritage Program on a 1 to 5 scale:
S1 = Critically imperiled; S2 = Imperiled; S3 = Rare or uncommon;
S4 = Abundant and apparently secure; S5 = Demonstrably abundant and secure;
SH = Historical records only; no recent information available.

The New York Natural Heritage Program keeps a database of critical species and habitats. The following information is what is on file for the Town of Rensselaerville:

The diversity of wildlife habitat within the Town provides good hunting and trapping opportunities to its residents and visitors. Game species harvested in the area include white-tailed deer, fisher, coyote, black bear, bobcat, wild turkey, ruffed grouse, varying hare, cottontail rabbit, American woodcock, gray squirrel, various waterfowl including black ducks, mallards and wood ducks, raccoon, muskrat, beaver, mink and fox.

The interspersion of a variety of vegetated habitats creates diversity valuable to wildlife. Because most wildlife depend on a variety of habitat types to meet their daily needs, it is best to maintain a diverse landscape.

Ideally, this landscape should include areas of mature and successional forests, deciduous and coniferous, broken by patches of clearings and openings, and sources of water. Wetlands within the Town provide sources of water as well as unique wildlife habitat. Though habitat diversity is necessary to support a variety of wildlife, some wildlife species in the Town, such as black bear, bobcat, pileated woodpecker, depend upon the existence of large tracts of forested land for survival. The large forested tracts of land in the western part of the Town of Rensselaerville and in the Huyck Preserve are valuable habitats for these uncommon wildlife species. Vegetated canopy cover over stream corridors serves as suitable wildlife corridors for movement, as well as to maintain the water quality (e.g., cool water temperature, low turbidity) suitable for fish habitat.

As discussed in the vegetation section, forested habitats on steep slopes, shallow soils, poorly-drained soils or steep stream valleys would poorly accommodate development. These forested areas are valuable to wildlife, particularly those forests existing in large contiguous tracts or along stream channels, for food, cover, breeding, movement and other life-sustaining needs. If development occurs on suitable upland forested sites, forested land should be preserved in contiguous tracts to maintain the benefits to wildlife. Vegetation along stream corridors should be preserved along the stream banks for wildlife movement and protection of fish habitat.

The open fields and shrub land communities are generally better suited to support development because they tend to be located on more level sites with well-drained, deeper soils. These sites provide suitable habitat for a variety of wildlife and create diverse landscape valuable for diversity in wildlife species. If development occurs on these sites, efforts should be made to preserve as much natural vegetation on the site as practicable.

Wetlands, which have severe environmental constraints for development, provide very valuable habitat for wildlife and are essential to a variety of wildlife species, including many which are endangered, threatened or special concern species in the state. Development in wetlands, including those not regulated by the state, should be avoided.

5. Open Spaces

a. Views and Vistas (See Map 8)

The hill and valley terrain characteristic of the Town of Rensselaerville affords many scenic views and vistas. The interspersion of large tracts of

forested land with expanses of agricultural fields increases the number of available viewsheds. Through the use of aerial photography and field surveys, views and vistas were identified which exhibit common features that define their unique character. Although many of the visual features of each of these areas are unique, many characteristics overlap, and blend with one another throughout the landscape.

The primary visual character of the Town is rural with a modest amount of active farming. Older, inactive farm fields are found throughout the Town. These have succeeded, over time, into "old fields", and scrublands.

Large portions of the Town in the northwest and west are dense woodlands covering areas of rugged, steep terrain. This land is characterized by a lack of man-made structures, dense coniferous tree stands, and mixed hardwood forest.

The northern third of the Town is generally characterized by dense, generally young forest resulting from farmland abandonment. The terrain is rolling with comparatively low relief and few views and vistas.

The central portion of Town is characterized by a series of broad north-south valleys, an abundance of active or recently abandoned farmland. As a result, the area has numerous open views of field and forest to the east, west and south. The Catskill Mountains to the south form a general and often dramatic backdrop to the pastoral character of this area.

A lake district occurs in the extreme northwest portion of the Town. This area is characterized by seasonal homes surrounding the lakes with a backdrop of hills surrounding the larger region.

The hamlets are the most "visually" developed areas within the Town. All of the hamlets are characterized by concentrations of man-made structures of both architectural and historical importance.

Numerous scenic views and vistas occur throughout the Town as well as individual visual features. The locations of these sites are found on Map 8. This map includes the following locations:

Route	Distance(Miles)	View (Direction)
353 beginning at 359	1.3 to 1.5 1.8 to 2.2	S, N, S
359 beginning at Kenyon Rd.	0.3 to 0.5 0.5 to 0.9	S, SW N,NE
358 beginning at 359	0 to 1.2	S,W,E

Route	Distance(Miles)	View (Direction)
	1.5 to 2.4	S,W,E
Kenyon Rd. beginning at 352	0.1 to 0.5 0.5 to 1.9	S, E E
Travis Hill Rd. beginning at 359	0.9 to 1.2 1.3 to 1.8 2.7 to 5.0	S,W,E S,W,E S,W,E
Cheese Hill beginning at 145	0.1 to 0.6 1.5 to 2.0 2.2 to 2.9	S,W S S, E
360 beginning at 359	0.5 to 1.1 1.4 to 2.6 2.6 to 3.6	S,E,W S,E,W
357 east beginning at 360	0 to 0.3	S, SE, SW
Edwards Hill beginning at 145	0.3 to 1.4	S, E
Fish Rd. beginning at Edwards Hill Rd.	0 to 0.9	S, E
81 east to county line	0.3 to 1.3	E, SE
362 east from county line	0 to 1.9 mi	S, E

The following are other sites that should be preserved as part of the aesthetic element of the Town's natural resources:

1. Norland Falls: Waterfalls along the stream running through land presently owned by Walton and Helen Norlund – located between Willsey and Rugg Roads off Route #351.

2. The view of the Catskill Mountains from Willsey Road across open fields on the west side presently owned by Hubert and Clare Leber.

3. Travis Hill Rd.

4. Cheese Hill Rd., overlooking farmland of Catskill Creek Valley & forested hillside south of Catskill Creek.

5. Scutt Rd., overlooking the Catskill Mountains to the South and Southwest.

6. Kropp Hill, overlooking the Catskill Mountains to the South and Southwest, the Berkshire Mts. to the east, the Green Mts. to the northeast, and the Adirondacks to the north.

7. County Road 12 west of County Road 10, overlooking the Catskills.

8. Rt. 353 between Littner & Bryan Roads, with views of Massachusetts, Vermont, & nearby valleys

b. Open Space Resources (See Map 9)

The following Environmental Site Reports (formerly Appendix B in the old plan) describe some of the major environmental and open space features of the Town. These sites are by no means all of the environmentally important sites in the Town. They should be viewed as examples of the variety and extent of such sites in Rensselaerville.

SITE 1: CATSKILL CREEK, near the park in Preston Hollow.

This permanent stream is the largest in the Town of Rensselaerville. The 100-year floodplain extends for about 200 yards on the northeast side of the stream. Most of this broad floodplain is cultivated, although a narrow belt of forest separates the agricultural land from the stream. The southwest side of the stream consists of a forested bank with shale outcrops on a slope of 15 to 40 degrees. The floodplain immediately bordering the stream is dominated by basswood, sycamore, and red oak that grow in a gravel substrate. Other floodplain trees that are locally common upstream and downstream include box elder, willow, and cottonwood. Houses and farm buildings are scattered along Rt. 145 about one every 1/8 to 1/4 mile. Just downstream is the Village of Preston Hollow, with a dense concentration of houses and other buildings. There has been minimum development in Preston Hollow and along the stream. Traffic on Rt. 145 can be heard almost constantly. The park, with its ball fields and picnic area, is used fairly heavily in warm weather. The views upstream and downstream are pretty. There is trout-fishing here. The floodplain forest is an important corridor for a great variety of wildlife. Migratory songbirds use this area very heavily in the spring and fall. 100 and 200 year floods have cause scouring of clay banks causing water to discolor after heavy rains. Logging has increased above Preston Hollow.

The soil and water quality would be vulnerable to any of these practices: logging (especially clear-cutting) the steep southwest bank or the forested edge of the floodplain; agricultural fertilizers and pesticides;

construction of ditches or new roads on the bank or the floodplain; and increased runoff from paving.

SITE 2: TENMILE CREEK, from Rensselaerville to Medusa to Town Boundary with Durham

This permanent stream is the second largest in the Town and the largest of the north-south tributaries of Catskill Creek. The watershed of Tenmile Creek upstream from the Village of Rensselaerville, including Myosotis Lake and Lincoln Pond, is largely owned by the Edmund Niles Huyck Preserve. Maps, management plans, and various environmental reports of the Huyck Preserve constitute a separate category (G) of the Natural Resources Protection Plan. As the Tenmile Creek flows south from the Village of Rensselaerville it rapidly becomes isolated from the Village because of the steep, forested slopes. Little human activity can be seen or heard. Most of the area is a mixed forest (dominated by hemlock, white pine, sugar maple, red oak) with some development of wetlands and floodplains. Occasional large trees (diameter >2 feet) are found, as well as a variety of wildflowers, such as jewelweed, trillium, forget-me-not, columbine, dogtooth violets, wild strawberry, and tansey. Much of the east side of the stream is overshadowed by forested banks with occasional shale outcrops on slopes up to 50 degrees. A large mudslide on this bank dramatically demonstrates the vulnerability of these steep slopes to erosion. No houses or farm buildings are found along the stream. As the stream nears McCulloch Cross Road, agricultural land joins the floodplain on the east side. This habitat is more vulnerable to disturbance than that upstream because of the flatter land and greater accessibility provided by the road. Lovely views may be enjoyed upstream and downstream along the entire course of the stream. The sense of isolation one feels here is remarkable considering the proximity of roads and human habitation.

From McCulloch Cross Road to Medusa, the stream often has a narrow floodplain on one side (usually the west) and steep banks on the other. Nearly all of this section is second growth forest, much of which is nearing maturity. Until the Village of Medusa is reached, there is only a single house within 200 feet of the stream, this being near the Fishing Access area on Rt. 357. The growing forests, which are mainly a result of abandonment of agricultural lands, maintain a more uniform water flow and cooler water temperatures in Tenmile Creek. Because of this, both brown and rainbow trout reproduce naturally here, and the area is not as susceptible to flooding as in the past. Downstream from Medusa, the Tenmile Creek valley remains fairly similar, being mostly forested and having good water quality that supports a healthy population of trout.

Eightmile Creek enters Tenmile Creek about 1/2 mile south of Medusa. The northern portion of the Eightmile Creek valley is pasture, while the southern portion is mostly forested. During dry periods in the summer, parts of Eightmile Creek cease to flow above ground and the water becomes very warm. The forests along the southern bank are crucial for maintaining a wildlife corridor between the Catskill region and some large tracts of undeveloped land drained by Eightmile Creek on the border of the Towns of Rensselaerville and Westerlo.

Aside from being an area of great beauty, the forests along Tenmile Creek provide important habitats for a great variety of wildlife. The stream itself is popular for trout fishing. As with the other major stream valleys, the soil, water, and aesthetic qualities of Tenmile Creek are vulnerable to any of these practices: logging (especially clear-cutting) the steep banks or the forested edges of floodplain; construction of ditches, roads, or paved areas on the banks or floodplains; housing developments that would eliminate the solitude and disrupt the movements of plants and animals.

SITE 3: SQUIRMER VALLEY

Squirmer Valley is about one mile wide. It runs north to south for about 3.5 miles between Rts. 358 and 360, and an additional 2.5 miles between Seibert Road and Niles/Gerard Road. The stream appears to be unnamed and is referred to as Squirmer Stream. This permanent stream empties into Catskill Creek in the Village of Oak Hill, less than one mile south of the southern boundary of the Town. Throughout its length the stream is bordered by hardwood-hemlock forests and plantations that vary in east-west extent. Much of the valley is hunted and trapped. There are trout in the stream. For descriptive purposes the stream was divided into three sections that roughly correspond to different types of human uses.

The northernmost section of the valley is relatively undeveloped with a few houses near the roads on the east and west ridges overlooking the valley. Kellie Road bisects the valley about halfway down this section. Ten new subdivisions have been established along Kelly Road with four new homes being built on three of them in 2006. Eight of these subdivisions are on a former dairy farm. The stream in this section is small (about 2 feet wide and clear). The forests are secondary but nearing maturity with large and old trees (>100 years). There are a few primitive camps along the stream near Kellie Road. The forest on either side of the stream occupies about half the valley while abandoned fields occupy the outer 1/4 of the valley on either side. A wetland shown on the topographic map could not be located. It appears that there are houses were the wetland

was. The floodplain is poorly developed in most of the upper portions of the stream.

The middle third of the Squirmer Valley begins approximately at the northern boundary of the Lewisdale Farm, which dominates this section of the Valley. The Lewisdale Farm is the last active dairy farm along this stream. A former horse farm has been converted to a Christmas tree Farm. The stream is larger here (3 to 4 feet across) and the forests are narrower on either side of the stream. Much of the land consists of agricultural fields (crops, hay, pasture), although there is also a coniferous plantation or two. This section continues as farmland south of Rt. 352. Sheep and cattle are grazed on the western slopes of the valley while the eastern slope is more heavily wooded.

The lower third of the valley is more rural than the middle section. The stream becomes larger (4 to 5 feet across). One horse farm on Sayre Road straddles the stream. South of here the forests appear to occupy much of the valley until it leaves the Town just north of Oak Hill. There are extensive areas of conifer plantations that are nearing harvestable size. At the lowermost western portion of the valley several tributaries drain the area between and around Fish Road.

The Squirmer Valley represents the kind of rural character that makes Rensselaerville what it is today. There are many open fields along the roads on either side of the valley that if developed would negatively affect this rural character. The valley represents a large (approximately 6 square miles) semi-natural area with a central core of about 2 square miles along the stream that now is entirely forested. This region is critical habitat for the resident wildlife of the Helderberg Plateau, as well as being an important corridor for the natural movements of plants and animals. Such corridors will become increasing important for long-term movements induced by climatic changes or other disturbances.

SITE 4: FOX CREEK, from Preston Hollow to 3/4 mile upstream

This permanent stream empties into Catskill Creek at Preston Hollow. The broad 100-year floodplain at its mouth contains an archaeological site of undetermined importance. Much of this floodplain is covered with houses, other buildings, and yards, although a narrow belt of trees occurs right along the stream. On both sides of Fox Creek, regardless of floodplain development, there is usually a forested bank on slopes of 10 to 20 degrees. Upstream from Preston Hollow, the narrow floodplain immediately bordering the stream is dominated by basswood, willow, sycamore, and cottonwood that grow in a deep gravel substrate. This

second-growth floodplain forest is barely continuous with that of Catskill Creek because of the development of Preston Hollow. Houses and other buildings are scattered along Fox Creek about one every 100 yards. Some of these seem to be seasonal homes. The views upstream and downstream are very beautiful. A pair of Louisiana Water thrushes was nesting under a bank along the stream. There is some trout-fishing in Fox Creek. The floodplain forest is an important corridor for a great variety of wildlife. Because the deep, bouldery gravel along the stream is very prone to erosion during times of high stream flow, any logging, ditches, new roads, or buildings should be kept well away from the stream. Like other streams in Rensselaerville, heavy rains have caused water discoloration from scouring of clay stream banks. Some logging has occurred, but overall there has been limited development along this stream.

SITE 5. POTTER HOLLOW WATERSHED, from its sources to Catskill Creek

This permanent stream consists of three primary tributaries (unnamed). The two legs of the north tributary begin on Scott Patent Hill and fall south at the very rapid average rate of 570 feet per mile, joining the main tributary between Bates Hollow and Potter Hollow. The south tributary begins just east of Steenburg Mountain along the Greene Co./Schoharie Co. border, southwest of the Town of Rensselaerville. It falls an average of 180 feet per mile to the northeast, joining the main stream just east of Potter Hollow. This junction has recently moved upstream about 200 yards as a result of the 1987 flood. The main branch of the stream begins in the Town of Broome and falls east at an average rate of 110 feet per mile through Bates Hollow, where it is joined by two smaller streams. It continues to Potter Hollow, falling at a rate of 80 feet per mile; and finally empties into Catskill Creek along a broad floodplain in Cooksburg, an area of great archaeological potential.

Both the north and south tributaries are characterized by steep, mostly forested banks with little or no floodplains. The main stream has a small floodplain below Bates Hollow, generally widening through Potter Hollow and on to Cooksburg. All three streams have mainly a cobble and boulder streambed with occasional outcrops of shale. Potter Hollow and Cooksburg have fairly dense concentrations of houses and other buildings, while Bates Hollow has a small cluster of houses. Outside of these three hamlets, the main land-use here is low-density residential, with 30 to 40% of properties being camps or second homes. Only one farm appears to be a commercial operation, although there are a number of “second-income” or “recreational” farm operations. Since 1987, Smith Road has at least three new homes, and additional homes and

subdivision activity can be seen up from Route 145 toward Potter Hollow and along Edwards Hill Road.

The primary vegetation type is deciduous and mixed forest, with a scattering of evergreen plantations. There are a few stands of hemlock at higher elevations. Much of the land is brushy; every stage of forest succession can be found. The remaining open land is either hayfield, pasture, or lawn. Several very nice views can be had from Scott Patent Road (Rt. 362), Knowles Road, and Manorkill Road (Rt. 354). The floodplain forest is an important corridor for wildlife, particularly since this watershed, unlike the other major tributaries of Catskill Creek in the Town of Rensselaerville, drains the Catskill Mountains rather than the Helderberg Plateau.

SITE 6: SPRUCE PLANTATION IN RENSSELAERVILLE STATE FOREST, just southeast of the intersection of Rt. 353 and Cheese Hill Road

This is a plantation of spruce trees approximately 66 years old. This particular plot covers about 15 acres, with many similar or larger plots in the general vicinity. The land consists of shale bedrock and shallow soil, with a 5 to 10 degree, south-facing slope. The region is sparsely inhabited (the nearest house is 1/4 mile away) and the forest does not seem to have much current human use other than nature study and the occasional limb-pruning of the spruce trees. The tall evergreens are visually pleasing from afar. Their primary environmental value, other than watershed protection and providing wildlife corridors, is a unique set of birds that nests commonly in these plantations but is absent or very rare elsewhere in the Town: red-breasted nuthatch, golden-crowned kinglet, ruby-crowned kinglet, pine warbler, blackburnian warbler, white-throated sparrow, and northern junco. Logging and fire are the primary threats to this habitat. All plantations are even age management and the stands will eventually be clearcut and either replanted or allowed to revert to natural stands of hardwoods.

SITE 7: MIXED FIELDS AND SECOND GROWTH, on Travis Hill Road, about 2.5 miles north of Preston Hollow

This is an area of about 30 acres, on both sides of Travis Hill Road, which consists of hayfields, pastures, shrubby abandoned fields, hedgerows, and small patches of second growth forest. There are other areas on Travis Hill Road and Cheese Hill Road with similar mixtures of habitats. The land faces east at a slope of about 2 to 5 degrees, affording beautiful views of the Catskill Mountains and Fox Creek valley. Houses are scattered along the road about one every 1/8 mile. The primary uses of

this land are residential, farming (especially hay and pasture), nature study, hunting, and aesthetics (enjoying the beautiful scenery). The primary environmental feature is the great variety of habitats within such a small area, resulting in a great diversity of wildlife. This area is prime habitat for deer, fox, and rabbits, as well as a large number of nesting birds. During a half hour of watching and listening from the road, the following species of birds were found here: red-tailed hawk, marsh hawk, kestrel, killdeer, kingbird, barn swallow, catbird, robin, crow, blue jay, chickadee, yellow warbler, prairie warbler, yellowthroat, meadowlark, bobolink, grackle, red-winged blackbird, Baltimore oriole, field sparrow, and song sparrow. Maintenance of the diverse habitats and wildlife depends primarily upon the continuation of agriculture and restricting the number of new houses. Since 1987, new homes and subdivisions have occurred in this area.

SITE 8: SIKULE POND, 1 mile north of Medusa

Also known as Frost Swamp, this lake and marsh make up a wetland 50.7 acres in size. The outlet of Sikule Pond feeds a major tributary of Tenmile Creek, which is about 300 yards west of the pond. The land surrounding the wetland is a mixture of fields and second growth. There are three houses (two permanent, one seasonal) within sight of the wetland. Primary uses of Sikule Pond are fishing, wildlife observation, trapping, and hunting. North Road runs immediately adjacent Sikule Pond at the outlet, where there are two small areas for cars to park. As a result, this is the most heavily fished water body in the Town of Rensselaerville, as well as one of the most popular areas for nature study. Many people stop along the road here to observe beaver, muskrats, painted turtles, and a great variety of birdlife (described below). Sikule Pond is the most important locality in the Town for migratory waterfowl (geese and ducks). Every Spring and Fall, one can observe these types of migratory birds: loons, grebes, Canada geese, at least 10 species of ducks (mallards, black ducks, green winged teal, blue-winged teal, wood ducks, and ring-necked ducks are the most common), great blue herons, green herons, osprey, shorebirds (killdeer, snipe, woodcock, sandpipers, yellowlegs), three species of gulls, kingfishers, and five species of swallows. Some of these birds also nest at Sikule Pond during the early summer. The osprey is an especially noteworthy migrant because this species was nearly extinct in the Hudson Valley. Since the banning of DDT in the early 1970's, ospreys have become more common. Sikule Pond is their most heavily used wetland in the Town.

Sikule Pond is now the heaviest fished water in the Town and is also the most popular wildlife viewing area. Fish present in the pond include

bass, bluegill, pickerel, perch, crappie, and bullheads. The pond is also a stop-over point for migrating eagles, ospreys and swans.

SITE 9: ROUTE 85 MARSH, 1 mile north of Rensselaerville, near Shoefelt Corners

This wetland of about 30 acres is unique within the Town of Rensselaerville in that it is part of the Switzkill Creek system (ultimately flowing into Schoharie Creek and the Mohawk River) rather than the Catskill Creek system. This wetland was a lake during the ice age, dammed by a gravel dam deposited by the glaciers. For the past 10,000 years it has been a wetland (open marsh surrounded by a wooded swamp), with the water level maintained primarily by beaver activity. (A map made in 1787 also describes this area as "the beaver dam".) There are several houses within 200 yards of the wetland along Gifford Hollow Road and Rt. 85, which crosses the wetland near its southwestern edge. In spite of this, the main area of marsh is relatively undisturbed, with very little fishing, hunting, or trapping compared with Sikule Pond. Nature study is confined to observations from the pull-off on Rt. 85.

The Route 85 Marsh is an important stopover point for migratory waterfowl, including grebes, geese, at least six species of ducks, great blue herons, green herons, and the rare great egret. Kingfishers and swallows are common here. This wetland also supports the Town's only known nesting area for sora rails and the largest nesting concentration of swamp sparrows. Aside from the beavers already mentioned, muskrats, otters, and mink live in and at the edge of this wetland. Every August, the northwestern margin of this wetland becomes one of Rensselaerville's most beautiful spots as the leaves of the numerous red maple trees turn a brilliant scarlet. Because of their saturated root systems, these trees are unable to maintain their leaves as long as most red maples.

SITE 10: THE NORTHWEST CORNER OF THE TOWN (all land west of Wood and Bryan Roads and north of County Route 353; roughly within a 2 mile radius of Triangle and Crystal Lakes)

Population density in this area of Town is still low and the location with the least development. Since 1987, many fields have become overgrown and scrub forest and wetlands predominate. This part of the Town drains into Hauversville Stream, which empties into Catskill Creek in Livingstonville, Schoharie Co. The highest elevations in the Town are found here (up to 2160 feet), with virtually the entire region above 1900 feet elevation. Along with the Route 85 Marsh (described above) and the Huyck Preserve (described in section G) immediately to the east, these

northern portions of the Town are dominated by glacial landforms that typically are more gentle than the steeply cut stream valleys that dominate the southern two-thirds of the Town. The "Northwest Corner" supports large wetlands, most of which are maintained by beavers. Surrounding the wetlands are a variety of fields (open and shrubby) and forests (second-growth and mature; deciduous, mixed, and conifer plantations). The human population is very low and is clustered mainly near Triangle and Crystal Lakes. The shallow soils and shale bedrock are poorly suited for agriculture or for septic systems. Pollution from sewage is a current problem at Triangle and Crystal Lakes because of the many houses near the edges of these lakes.

The higher elevations of the Northwest Corner provide beautiful views of the Catskill Mountains to the south and the Huyck Preserve to the east. The low human density (outside of Triangle and Crystal Lakes) and the mixture of fields, forests, and wetlands make this area well suited for hunting (deer, small game), which along with fishing and nature study, is a popular activity here. This area is made even more attractive environmentally because of the very large natural areas on its borders, namely the 2000 acre Huyck Preserve to the east and the 5000 acre Partridge Run State Wildlife Management Area to the north. Such very large areas are needed to sustain the populations of large predators, such as bear, bobcats, and fishers, which are uncommon or absent in Albany County outside of the Towns of Rensselaerville and Berne.

SITE 11 – The Edmund Niles Huyck Preserve and the watershed of Myosotis Lake

The E. N. Huyck Preserve was incorporated in Albany in 1931 in order ". . . to preserve the natural beauty of the Rensselaerville Falls, Myosotis Lake, Lincoln Pond and the land around . . ., to increase the general knowledge and love of nature, particularly that of trees and wildlife, by maintaining a demonstration of reforestation and forest culture, and by providing means for increasing and protecting the birds, wild animals and fish within the boundaries of said land." In 1960 following the death of Mrs. E. N. Huyck, and as she bequeathed, the E. N. Huyck Foundation was established ". . . to promote research, scientific study and education in any and all kinds of fauna and flora, either directly or through individuals or organizations qualified to undertake such work." The Biological Research Station of the preserve was organized in 1938 and has been active ever since.

The uniqueness of the Edmund Niles Huyck Preserve and its Biological Research Station are its size and long-term research record. The Preserve is now 1870 acres and since 1937, 175 researchers have conducted 250 projects and published over 180 scientific papers. Because the fauna and flora of the Preserve have been catalogued since 1937 and for many taxonomic categories these catalogues have been updated periodically, this data base can be used to evaluate changes that may be occurring due to environmental disturbances such as climatic variations, pollution, and species introductions.

The original land included some 500 acres that have been undisturbed since about 1890. Since 1931 another 1370 acres have been added. The Preserve is located in the northeastern corner of the Town and is within the upper watershed of the Ten-Mile Creek. Ten-Mile Creek has been impounded since about 1800 in two locations on the Preserve to form Myosotis Lake (100 acres) and Lincoln Pond (10 ha). Most of the land of the preserve is part of the watershed of Myosotis Lake, the drinking water supply for the hamlet of Rensselaerville. The preserve represents about one-third of the watershed of Myosotis Lake. The remaining two-thirds are in private or the state's hands.

Located on the Preserve are a number of biological communities including hardwood stands ranging in age from a few years to over two centuries, almost pure and mature hemlock stands, pine and spruce plantations, clear-cut areas, fields going through secondary succession, meadows, a bog, beaver ponds, intermittent and permanent streams, two lakes and a waterfall. Unique and/or rare and endangered species and species of special concern in New York that have been or are now found on the preserve include the bald eagle, red-shouldered hawk, northern harrier, osprey, Jefferson's salamander, spotted salamander, loon, Cooper's hawk, black tern, night hawk, raven, eastern bluebird, Henslow's sparrow, grass-hopper sparrow, and vesper sparrow. Other large vertebrates that have recently returned to the Helderberg Plateau and that have been observed on the preserve are the black bear, bobcat, river otter, and fisher. All of these species require large tracks of undeveloped land. The quantity of land maintained by the preserve is not sufficiently large to maintain populations of most of these animals. They exist here because of the undeveloped nature of the lands surrounding the preserve.

The preserve is also an important piece of the corridor for short- and long-term migration of animals and plants from the Catskill Plateau to the more natural areas of the Helderberg Plateau (i.e., the Ten Mile Creek, Huyck Preserve, and the Partridge Run Game Management Area.

The preserve, like the entire Town, sits on the Helderberg Plateau, the bedrocks of which are a series of Silurian and Devonian limestone, sandstone and shales. The composition of the bedrocks and the thickness of the overlying soils determine in part the soils ability to hold water and to neutralize incoming acidic deposition and other forms of human pollution. Thin soils are poorer at these tasks than thicker soils.

Most of fossil and living taxa are represented in the Preserve's reference collection and lists of the species of many kinds of plants and animals that occur on the preserve have been gathered over the last 50 years. The Preserve's hydrology includes three permanent streams, one of which (Ten-Mile Creek) flows into Lincoln Pond. Lincoln pond drains into Ten-Mile Creek and then into Myosotis Lake. Hagaman Creek also empties in Myosotis Lake. There are a least fifty intermittent streams that flows during snow melt and heavy showers.

Site 12. Cool Ravine off Rivenburg Road. The top of the ravine and slope composed mostly of large hemlocks appears to be a year-round stream where the temperature drops ten or more degrees from the top to the bottom. A cool ravine has steep, high, rocky walls flanking a rocky perennial or intermittent stream at the ravine bottom. The ravine walls are commonly forested with a mixture of hardwoods and conifers, usually hemlock. Cool ravines support some plants and animals of more northern affinities. Due to their steep, rocky slopes, some ravines have not been logged or built on. The rushing water, waterfalls, and rocky, wild slopes, are aesthetically inviting, especially in hot weather. At least four fern species, three moss species, numerous types of lichen, six mushroom/fungi species, many bird species, coyote and bear sign have been found in this ravine. There is a proliferation of jack-in-the-pulpit at the ravine bottom. Local residents have noted major erosion on snowmobile trails from ATVs in the summer, resulting in silt run-off into stream.

Site 13. Nordland Falls. Nordland falls is a true waterfall, located on an unnamed permanent stream that arises from a pond in the town of Westerlo. The stream enters Rensselaerville on our eastern border, and passes through two wetlands before crossing route 351. After a short distance it enters the Nordland property. The stream is entrenched in shale bedrock both above and below the falls with very steep stream banks surrounding the area of the falls.

Norland falls is a two-stage waterfall, not a cascade like Rensselaerville falls. It has plunge pools at the foot of each drop. It can be reached by a path from Rugg Road due north that follows what appears to be an old

farm road that crosses the stream immediately above or upstream of the falls. The former bridge across the stream is no longer intact but the well-made stone bridge abutments are intact and confine the stream above the falls.

The area is quite isolated from traffic noise and when the stream is running full, the sound of water roaring over the falls can be heard well before reaching the stream.

Nordland falls is relatively unspoiled by former settlement activity and remote enough from present development to be considered secluded. Hemlocks shade the stream and the rock stream banks are covered with mosses, sedges and ferns adapted to secure a hold in the cracks and crevices of the highly eroded Devonian shale. This is an outstanding natural feature many residents of our town do not know exists. It presents an opportunity for public protection that may soon be precluded by private development.

B. Land Use

1. Land Use Analysis (See Map 7)

Using the 2006 GIS data developed from the Town of Rensselaerville Real Property Tax Information, an analysis of land uses was conducted. This analysis shows the breakdown of the various land uses in Town as defined by their property classifications as determined by the Tax Assessor. This map corresponds to Map 7 (Property Class). *It is recognized that some of the actual land uses in each category may be different from that recorded by the tax assessment and property coding process. This is especially noted in the agricultural property classes as discussed below.*

The tables and charts below calculate the number of parcels, acres and percent of total land base for each type of land use in Town using the property tax classes as defined by New York State. These definitions are as follows:

Agriculture: Agricultural vacant land, livestock, field crops, truck crops, orchard crops, nursery and greenhouse, specialty farms, fish and game preserves.

Residential: One, two, three family year-round residences, rural residences with acreage (year round with 10+ acres of land), rural estate

(> 5 acres of land with luxurious residence), seasonal (not constructed for year round occupancy), mobile home, and multiple residence.

Vacant: Residential vacant land, rural vacant (abandoned agricultural or residential land > 10 acres in size), commercial vacant, public utility vacant lands.

Commercial: Living accommodations (hotel, motel, apartments, camps, etc.), dining, motor vehicle services, storage, warehouse, distribution services, retail services, banks and office buildings, miscellaneous services, multipurpose buildings.

Community Services: Education, religious, welfare, health, government, protection, correctional, cultural and recreational facilities.

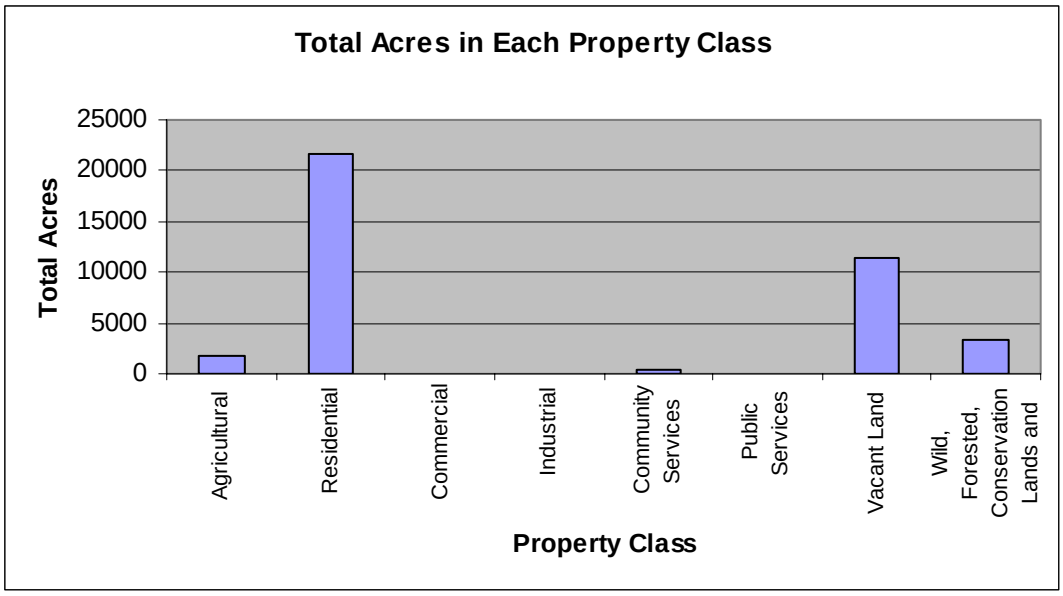
Industrial: Manufacturing and processing, mining, oil wells, pipelines.

Public Services: Water services, communication, transportation, waste disposal, electric and gas, television facilities.

Wild, Forested, Conservation Land and Public Parks: Forest land under Sections 480 and 480-a, private hunting and fishing clubs, State-owned forest lands, public parks, taxable State-owned conservation easements, other recreational facilities.

All Property Classes, Acreage, and Percentage of Town.

Property Class	Number of Parcels	Total Acres	Percent of Land Area
Agricultural	20	1,712	4.42%
Residential	1,147	21,746	56.21%
Commercial	24	39	0.10%
Industrial	3	95	0.25%
Community Services	26	412	1.07%
Public Services	2	1	0.003%
Vacant Land	656	11,359	29.36%
Wild, Forested, Conservation Lands and Public Parks	35	3,325	8.59%
Grand Total	1,913	38,689	100.00%

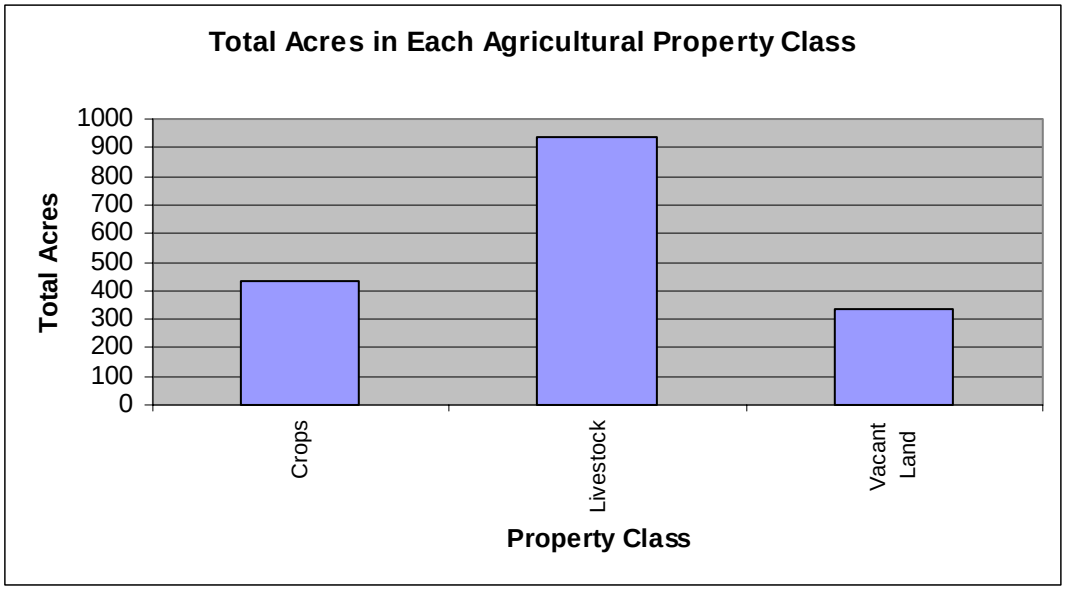


Agriculture

Breakdown of Agricultural Property Classes

Agricultural Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Crops	4	435	1%
Livestock	9	938	2%
Vacant Land	7	339	1%
Agricultural Total	20	1,712	4.42%

In the fall of 2006, the Land Use Committee conducted a field survey of agricultural land uses in the Town. This effort identified a substantial number of lands in active agricultural use that are not reflected in this property tax information. Please see Map 10 for a more complete mapping and identification of agricultural lands in Rensselaerville.



Other Information on Agricultural Land Uses

Although the New York State Department of Agriculture and Markets compiles U.S. Bureau of the Census Agricultural Census data for counties within New York State, no source was available for agricultural statistics specifically for the Town of Rensselaerville. Locations of NYS Certified Agricultural Districts appear on Map 10. Selected information concerning dairy farms in the Town of Rensselaerville was available from the Cooperative Extension Association of Albany County.

AGRICULTURAL STATISTICS – ALBANY COUNTY

	1964	1974	1982	1987	2005
Number of Farms	767	448	510	460	460
Land in Farms (acres)	120,745	75,242	82,788	67,754	68,000
Average Size of Farms (acres)	157	168	162	147	143
Farms by Size					
1 – 9 acres	52	–	29	44	NA*
10 – 49 acres	125	–	122	111	NA*
50 – 179 acres	360	–	219	193	NA*
180 – 499 acres	204	–	115	96	NA*
500 – 999 acres	23	–	19	13	NA*
1000 + acres	3	–	6	3	NA*
Farms	722	427	485	440	NA*
Acres	66,995	44,897	50,082	41,137	NA*

Source: U.S. Bureau of the Census, Census of Agriculture
*This information was not available for 2005

According to the 2002 US Agriculture Census, the following information was recorded for farms (defined by the Census as any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year) in Rensselaerville, Medusa and Preston Hollow zip codes:

	# farms	# farms 1 to 49 acres	# farms 50 to 999 acres	# farms earning less than $50,000	# farms earning $50,000 to $249,999	Farms with Full Owners	Principal Operator Living On Farm
Medusa	26	*	23	21	5	16	26
Rensselaerville	20	5	15	19	*	10	10
Preston Hollow	17	*	13	16	*	10	15

* Data withheld for categories with one to four farms.

The USDA defines *prime farmland* as lands best suited to food, feed, forage, fiber and oilseed crops. It may be cultivated land, pasture, woodland, or other land, but it is not urban or built-up land or water areas. These soils produce the highest yields with minimal inputs of energy and economic resources, and farming those results in the least damage to the environment, (Soil Survey, pg. 107) The Town of Rensselaerville has scattered areas of prime farmland throughout the

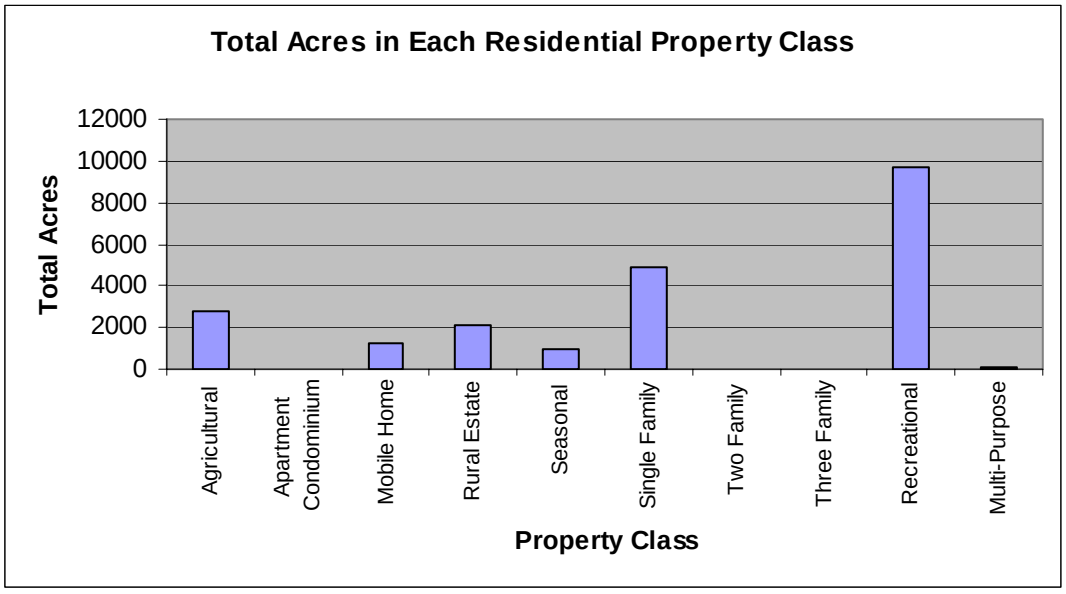
Town with the greatest concentration of prime farmland along the Eastern edge of the Town running north to south (See Map 11).

A significant amount of land in the Town consists of soils of statewide importance. These are soils that are nearly prime, and are capable of producing high yield crops when managed properly. These soils can also support various types of agricultural activity.

Residential

Breakdown of Residential Property Classes (Defined on Pages 48 and 49)

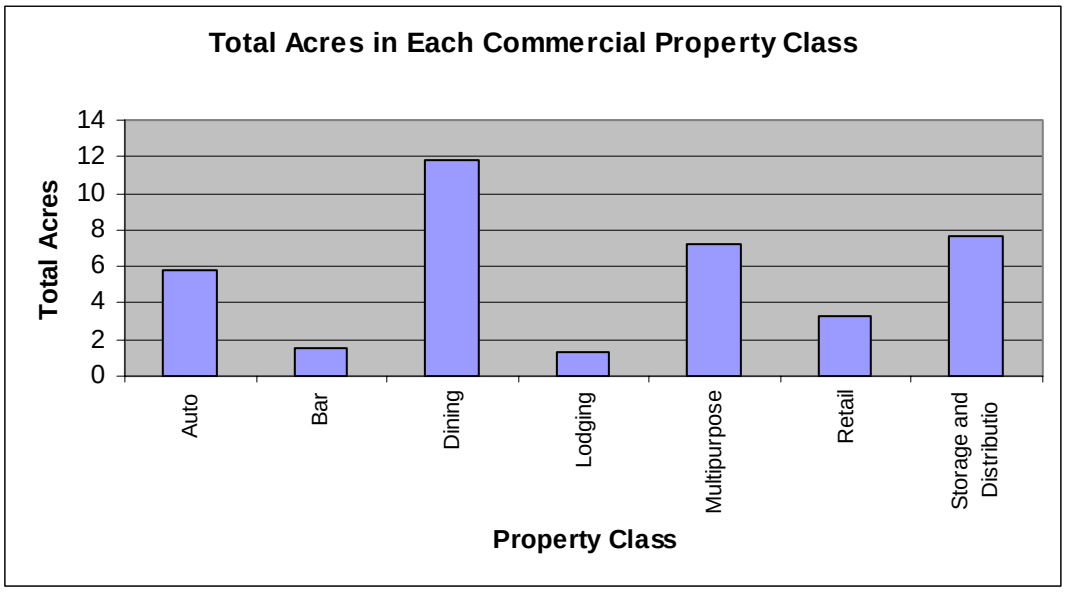
Residential Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Agricultural	29	2,762	7.14%
Apartment Condominium	3	3	0.01%
Mobile Home	105	1,264	3.27%
Rural Estate	43	2,111	5.46%
Seasonal	119	937	2.42%
Single Family	649	4,932	12.75%
Two Family	8	12	0.03%
Three Family	2	3	0.01%
Recreational	185	9,672	25.00%
Multi-Purpose	4	50	0.13%
Residential Total	1147	21,746	56.21%



Commercial and Industrial

Breakdown of Commercial Property Classes

Commercial Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Auto	4	6	0.01%
Bar	1	2	0.00%
Dining	1	12	0.03%
Lodging	2	1	0.00%
Multipurpose	11	7	0.02%
Retail	2	3	0.01%
Storage and Distribution	3	8	0.02%
Commercial Total	24	39	0.10%



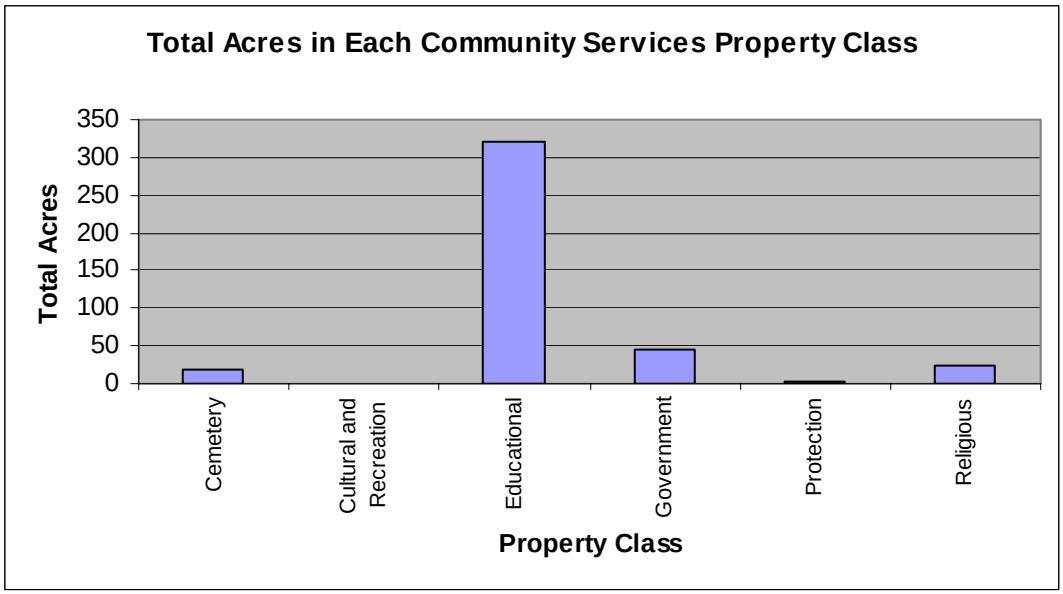
Breakdown of Industrial Property Classes

Industrial Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Manufacturing	1	0	<0.01%
Mining	2	94	0.24%
Industrial Total	3	95	0.25%

Community Services and Public Services

Breakdown of Community Services Property Classes

Community Services Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Cemetery	7	20	0.05%
Cultural and Recreation	2	1	0.00%
Educational	3	320	0.83%
Government	4	44	0.11%
Protection	3	3	0.01%
Religious	7	24	0.06%
Community Services Total	26	412	1.07%



Breakdown of Public Services Property Classes

Public Services Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Transportation	1	0	0.0003%
Communication	1	1	0.0024%
Public Services Total	2	1	0.0026%

Vacant and Wild, Forested, Conservation Lands

Breakdown of Vacant Land Property Classes

Vacant Land Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Agricultural	4	43	0.11%
Other	5	17	0.05%
Residential	628	10,707	27.67%
Rural	14	531	1.37%
Rural Estate	2	37	0.10%
Commercial	3	24	0.06%
Vacant Land Total	656	11,359	29.36%

Breakdown of Wild, Forested, Conservation Property Classes

Wild, Forested, Conservation Lands and Public Parks Sub-class	Number of Parcels	Total Acres	Percent of Land Area
Government Owned	12	1,732	4.48%
Private	21	1,581	4.09%
Public Park	2	12	0.03%
Wild, Forested, Conservation Lands and Public Parks Total	35	3,325	8.59%

2. Current Zoning in Rensselaerville

The current Town of Rensselaerville Zoning Law splits the Town into five districts as follows and shown on Map 12a:

H – Hamlets: This designation is established for the hamlets of Rensselaerville, Medusa, Preston Hollow, and Potters Hollow. Within the hamlet of Rensselaerville, both state and federally designated historic districts exist, although these do not constitute a local zoning district. A variety of residential, general, and business uses are allowed in the H district. Development densities are allowed at .5 acres minimum lot size for one-family dwellings, 1 acre for two-family dwellings, 1.5 acres for multiple-family dwellings, and 1 acre for non-residential uses. Road frontage varies depending on whether the property is on a county or State road (100' to 200') or a private/Town road (80' to 150').

A/RR – Agricultural/Rural Residential: This district is the largest zoning district in Town and covers the central to eastern portions of Town. Development density for all uses, residential and non-residential is at a 5 acre minimum lot size. Road frontage requirements are the same regardless of the road and are 250' except for non-residential uses which require 300'. Uses allowed in the A/RR district are almost exactly the same as in the Hamlet district except that individual mobile homes are permitted and townhouses are permitted with a special use permit. Other larger uses are allowed in this district with a special use permit, but not the Hamlet district and include campgrounds, slaughterhouse, excavation, sawmill, and truck terminal.

RC-1 – Resource Conservation 1: This district is located in the north-central portion of town to the north and east of the hamlet of Rensselaerville. The RC-1 district requires a 15 acre minimum lot size with 300 feet of road frontage. Residential and general uses allowed in this district are similar to the H and A/RR district but most business uses are prohibited. Bed and Breakfast inns, religious institutions, small product retail, and roadside stands are the only allowed business uses in this district.

RC-2 – Resource Conservation 2: This district has the same acreage and road frontage requirements as the RC1 district. It is located primarily in the western portions of Town and covers many of those areas having significant environmental features such as steep slopes. Land uses in this district are very similar to that allowed in RC-1 except it allows the following uses: golf course, indoor recreation, nursery/garden shop, personal service shop, restaurant, commercial school, tavern, theater, and wholesale outlets. RC-2 also allows manufacturing, excavation, printing and publishing, sawmill and warehousing.

RC-3 – Resource Conservation 3: This district is located in the northwestern portion of Renssealerville and encompasses Crystal and Triangle lakes. This district establishes development densities for all uses with a 10 acre minimum lot size and 300' of road frontage. The uses allowed in this district are similar to that of the RC-1 district.

Zoning also establishes several special districts and standards including:

Water Resource Protection Overlay: This is designed to protect water quality through the limitation of uses and activities which are deemed more likely to negatively impact water quality. See Map 22.

Cluster Development: Zoning authorizes the Planning Board to require use of cluster development where it finds that certain conditions exist in a way that conventional (non-clustered) development would impair the conservation of the environment or preservation of neighborhood character.

The first part of this Plan details a variety of strategies that recommend changing or augmenting these districts and regulations in order to help the Town of Rensselaerville meet the goals as established in this Plan.

3. Build Out Analysis (See Maps 12 – 15)

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

1. Identify areas that already have residential development and therefore would not allow new development
2. Identify properties subject to conservation easements, or are owned by government entities not likely to allow development
3. Identify areas in the Town having environmental constraints that would not support new residential development
4. Calculate the amount of new residential development allowed by Rensselaerville's current land use regulations in the remaining undeveloped areas of the Town.

These steps are outlined in greater detail on the following pages. A geographic information system (GIS) software program was used to conduct the analysis. In essence, the analysis calculates the total land base of the Town, subtracts all lands having environmental constraints and completely built areas, and then applies the various development rules to calculate the number of allowable new residences. For purposes of this analysis, the buildout assumes that all new development would be single-family homes. Rensselaerville zoning allows for two-family dwellings on the same size lot as a single-family home. However, it was assumed that this would be the exception, rather than the rule. Note that the results of all of these calculations are only estimates. The GIS layers

used are not exact replicas of what is actually found in the real world, only representations of what is there. The processing of the data also introduces a certain amount of error, and can increase the inaccuracy of the data layers. The only way to get an accurate count of allowed residential uses on a particular property is to do an on-site survey of existing conditions.
The buildout starts with the Tax Parcel data obtained from Albany County Real Property Tax Department. Other GIS layers were also used, such as roads, water features, wetlands, soils, and topography. Extra information is added to the parcel data layer throughout the process.

The first step is to identify the existing uses for each parcel. Existing residential uses are identified by using the Property Class code found in the table accompanying the GIS parcel layer. Generally, any property with a property class code in the 200 range is a residential use. Some commercial uses, such as mobile home parks and apartment buildings are also essentially residential uses, and considered as such for purposes of the Buildout calculations. These are shown on the Existing Residential Use map using a small green dot placed on the parcel. The dot does not indicate the exact location of the building on the property; it only indicates there is a residential building on it. 1,153 dwelling units were identified using the GIS parcel layer.

The zoning layer determines the allowed density in each district. A column in the attribute table carries the minimum lot size for (See Map 12a) each zoning district.

Zoning District	Minimum Lot Size
Hamlet	0.5 acre
Agricultural/Rural Residential	5 acres
Resource Conservation-1	15 acres
Resource Conservation-2	15 acres
Resource Conservation-3	10 acres

The “fully built” parcels are identified by using the Property Class code found in the table accompanying the GIS parcel layer, calculating the total area of the parcel, and comparing it with the minimum lot size required in the district where the parcel is located. For example, an existing residence on a 7 acre parcel in the Town’s Agricultural/Rural Residential (A/RR) district is designated as fully built. The property cannot be subdivided into two conforming 5 acre lots. Further inspection using the Aerial Photographs identified more parcels that were developed in a way that would not allow further subdivision. Houses placed in the middle of a large lot would be one example. Some intensively developed non-residential uses were also removed. State owned lands, cemeteries, and

churches are also removed after inspection of the aerial photos. What's left after subtracting the fully built parcels is a layer showing the buildable parcels in the municipality; those that can potentially be further subdivided and/or built upon.

The next step is to identify any environmental features that would prevent development. Two categories of constraints are usually identified. Absolute constraints, such as open water and streams, wetlands and flood plains are considered Major Environmental Constraints. Other areas such as the land within 100 feet of the water and wetland features, and slopes over 15% were included in a second constraints layer. These constraint layers are merged into a new layer, and used as a sort of "cookie-cutter", removing these constraints from the already identified buildable parcels.

The result of all of these operations is a layer showing the developable area within the buildable parcels found in the Town. This is the layer the final computations are made on. The formula used is:

((Remaining developable area x 0.85) / Minimum Lot Size) – Any Existing Residential Uses

The 0.85 multiplication factor is used to allow room for new roads, and any other infrastructure needs. The Zoning Density will vary according to the district each parcel is located in. Parcels that span districts are split along the district boundary into separate parcels. This final calculation gives the potential buildout for the entire municipality based on current zoning regulations.

Results of the Buildout Calculations

District	Existing Residences	Potential New Residences	Total Residences at Build-out	Percent Increase from Existing to Total Potential
Rensselaerville Hamlet	82	290	372	353.6%
Medusa Hamlet	61	216	277	354%
Potter Hollow Hamlet	53	331	384	625%
Preston Hollow Hamlet	75	50	125	66.6%

A/RR District	610	2,273	2883	373%
RC-1 District	40	65	105	163%
RC-2 District	106	200	306	94.3%
RC-3 District	126	128	254	102%
Totals	**1,153**	**3,553**	**4706**	**308%**

Using population data from the 2000 US Census, the following population is associated with this growth:

2.43 persons per household = 8,633 additional persons at full build out.

C. Demographic Profile

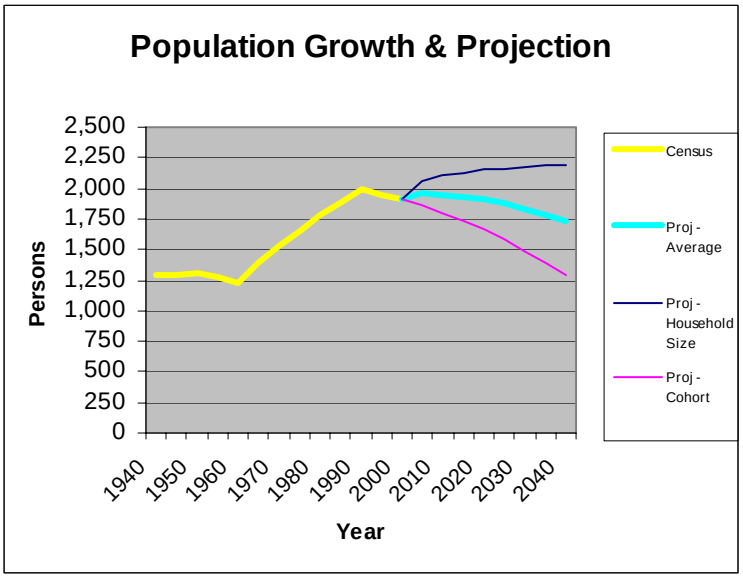
1. Population

a. Growth

According to the US Census, the Town of Rensselaerville had a total 2000 population of 1,915 persons. The Town's population held steady around 1,300 through the 1940's and 1950's with significant (-6%) drop to 1,232 persons in 1960. The Town then grew strongly and steadily by about 758 persons (62%) from 1960 to a high mark of 1,990 people in 1990. As of the most recent census, population has declined (-4%) again.

Chart 1 below plots historic census data along with the results of two projection methods (described in the subsequent paragraph), representing a high and low population scenario for the Town. Both of these methods are considered more accurate than basing future estimates on 'straight line' graph trends. A third set of data, averaging the results of both methods is also plotted. These methods do not take as much account for regionally induced growth as a result of sprawl and are intended to provide a picture of expected changes based on the existing resident population and current trends.

Chart 1: Town of Rensselaerville Population Growth & Projection



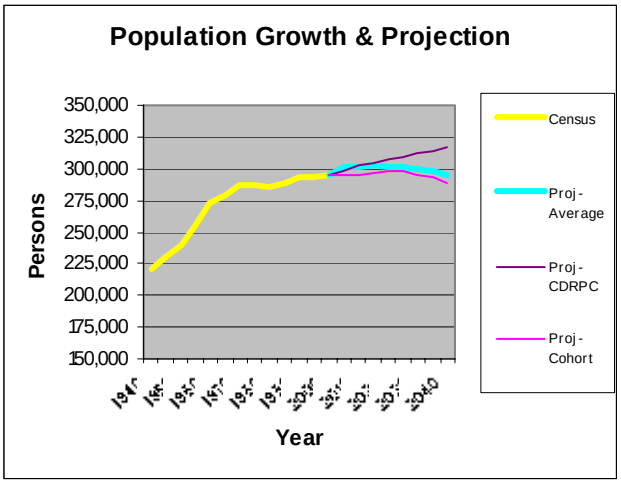
Two well-established methods were used to estimate the future population in the Town of Rensselaerville. The cohort-component method of projection uses the existing population to project the future size of the population based on current life expectancy, fertility and an estimate of migration trends between census periods.
The 'household size' method uses the (declining) state trend of average household size to determine the future population by estimating the future number of households and dividing that value by the predicted average household size in that year and subtracting the estimated population in group quarters. The expected number of households in future years is based upon the current growth trend of housing units (augmented by building permit data) in the community along with an allowance for an average rate of market vacancy.

The future population values derived from the two methods present two basic scenarios for the growth of the Town. The 'household size' method predicts a renewed rise in population based on the past rate of creation of new housing units (plus building permits - detailed in table 6) to a level of 2,193 persons in 2040. The cohort-component method indicates that the aging of the Town's population and outward migration (by seniors and young adults) will lead to a substantially lower population level of 1,675 people in the next 35 years.

The more reliable averaged projection of the two methods predicts a roughly level population over the next 35 years, with out-migration balanced by with new sprawl-induced households. By 2020 the population would be slightly (4% rise from 2000) higher, 1,992 persons falling again to 1,934 persons by 2040. Table 4 includes population projection values from the Capital District Regional Planning Commission as well as the 'average' projection data discussed above and shown as the blue, 'best estimate' line on chart 1.

In comparison, Albany County grew steadily through the 1950's and 1960's but the rate slowed to a 1% increase every 5 years between 1970 and 2000. Unlike Rensselaerville, Albany County grew, though very slightly (0.7%), during the recent census period of the 1990's. The CDRPC projection predicts a steady but small (roughly 2.5% every 10 years) rise to a total county population of 316,197 persons by 2040.

Chart 2: County of Albany Population Growth & Projection



Many regional development/promotion agencies hope that new migrants will be attracted to Albany County and the region (owing to the presence of state government, local universities, tech valley initiatives, and the area quality of life). If attracted in sufficient numbers, they could help offset the large-scale demographic impact from the expected departure of large numbers of boom generation members as they enter their senior years. This scenario for moderate/status quo growth is depicted through the CDRPC Projection trend line in Chart 2 above and further discussed in the regional growth scenarios section.

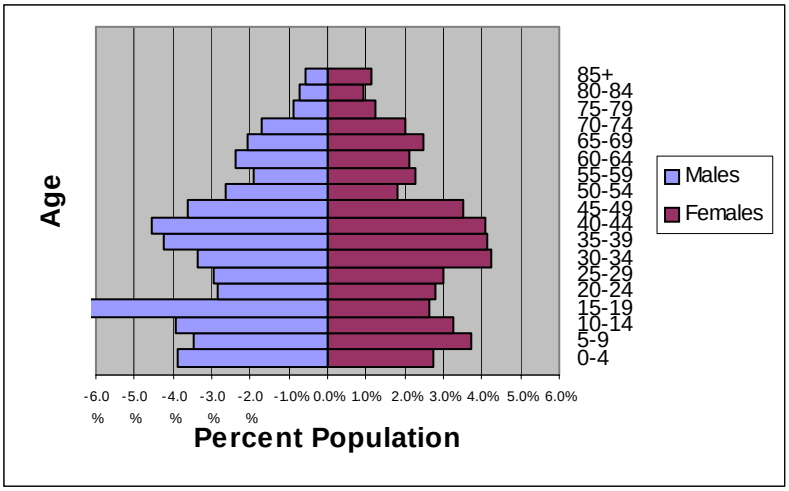
Net migration rates into Upstate NY are generally negative, and the recent growth rate in the Capital District as a whole is low. The region is also losing its young adults at high rates, particularly in rural areas. It seems

likely that any positive impact from pro-growth initiatives will merely allow the region and its communities to maintain current population levels as represented by the 'averaged' trend line in Chart 2.

b. Age Structure

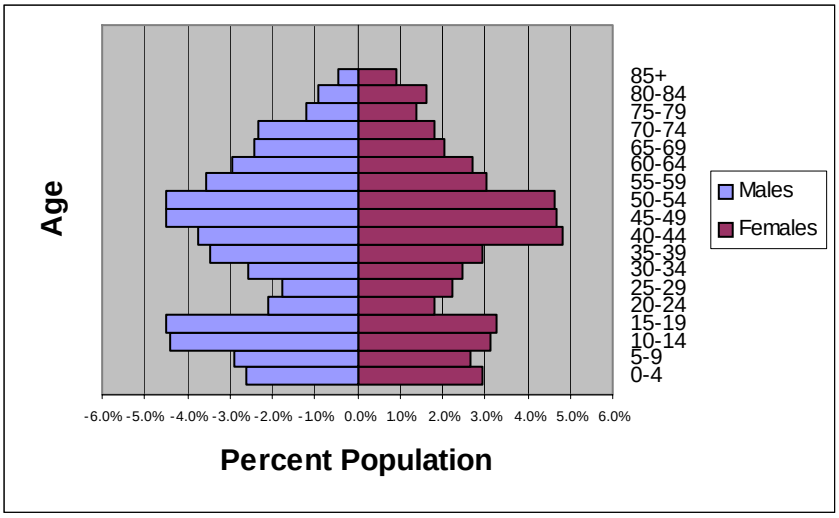
As can be seen in the population pyramid diagrams below (which group the population by sex and age into 5-year cohorts and represents the size of each of these cohorts by their percent share of the total population) below the Town of Rensselaerville experienced significant recent changes in the age composition of the population. These trends echo some general trends shared in many rural communities statewide.

Chart 3: Town of Rensselaerville Population Age Structure - 1990



One unusual feature of the population pyramid is the long finger found for the 15-19 male cohort in 1990 (and also in 2000). This is caused by the presence of the Cass Residential Center in the Town. This facility's residents represent a 'stable' population with individuals rotating in and out of the Town, so it was excluded and corrected for in the projections so that it did not affect the future 'growth' of the Town, but is still represented as a 'feature' in each projected population.

Chart 4: Town of Rensselaerville Population Age Structure - 2000



The Town's significant demographic trends include the aging of the 'Baby Boomers', which is shown by the upward shift/rise of the central bulge in the population diagram toward the older age values. The Boomer generation usually comprises the largest bulk of any community's population in the U.S. This group is now spread out roughly between the ages of 45 and 60 in Rensselaerville as seen in the charts.

There is also a prominent 'waist' toward the lower portion of the year 2000 pyramid. This constriction is much narrower than it normally would be due to normal mortality in that age group over 10 years. The 'waist' therefore represents a large out-migration of young adults between 20 and 30 years of age from Rensselaerville. This exodus of young adults has been observed in many other trend and demographic studies of upstate NY. These young adults not only removed themselves from the future population, but also took their 'reproductive potential', reducing the expected future number of births.

Another notable feature of the population chart is that the baby boomer 'bulge' grew in size as a proportion of the population as the cohorts aged. This indicates an slight influx of 'active adults' of early or near retirement age roughly between the ages of 55 and 65, moving into the Town and adding to the size of the older portion of the Town's population.

Combined with the aging of the baby boomers, this trend has led to a sharp rise of nearly 7 years in the Town's median age from 35.6 in 1990 to 42.5 in 2000. As this bubble in the population continues to rise

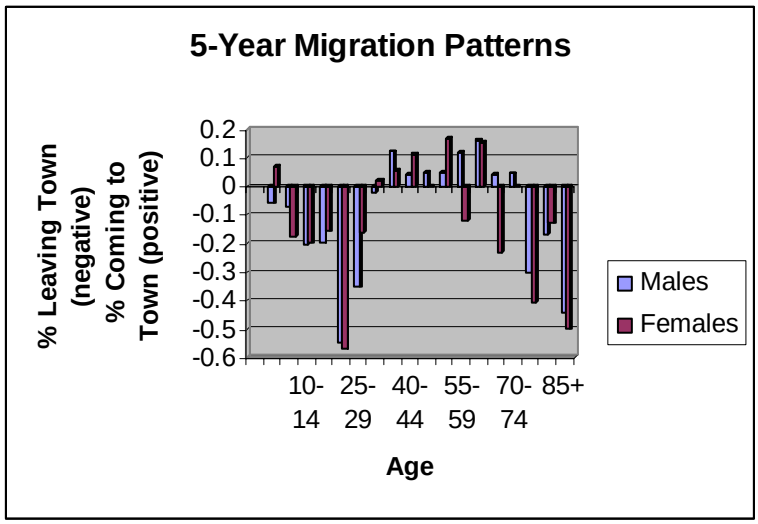
toward the top, the median age of the Town's population will continue to increase.

The top of the population pyramid in both 1990 and 2000 is slightly narrower than one would normally expect, indicating residents in age brackets above 75 years of age are also leaving the community. This corresponds with the well-established trend for older/senior residents in New York to depart their community of residence for warmer climes, to seek more support by living with relatives, or to enter special care facilities.

A final general trend indicated by the change in the shape of the Town's population pyramids during the 1990's is that the exodus of young adults and seniors was not only offset by an influx of 'active adults', but also by an in-migration of a number of adults between the ages of 35 and 50 years of age (with more females than males). It is noteworthy that the profile of the migration estimate does not indicate that there is a corresponding influx of adolescent children, so it appears these new adult residents were not typically families with children, or if some of them were, the out-migration of young adults (including teenagers) was at such a high level as to crowd out evidence of new youths migrating with their parents to Rensselaerville.

Chart 5 below graphically demonstrates the migration trends in the Town of Rensselaerville between the 1990 and 2000 Census years. The estimated migration seen in each age group is indicated as a percentage of the total migration (in or out). Bars on the negative side represent people leaving town and those on the positive side represent new residents. The relative size of each 'bar' indicates the size of the impact of each age group's trend on the total growth or decline of the population.

Chart 5: Town of Rensselaerville Migration Impact By Age Cohort– 1990 to 2000



The size of the out-migration bars in the young adult age groups indicates that this trend was the dominant factor in the recent decline in the Town's population. If this trend continues as strongly with successive generations, the population of the community will certainly decline, though it is possible that young adults will be drawn back to this and other rural communities they left in the 1990's when they are old enough to raise their own families.

A comparison of population pyramids was done for the Towns of Rensselaerville, Berne, Durham, and Albany County. It is notable that while Albany County's population pyramid shape does not change radically over 40 years, the smaller communities show evidence of pronounced migration effects on their age structure, particularly the loss of young adults indicated by the constricted 'waist' that develops in 2000. The Town of Durham shows a less distortion in the pyramid shape over time due to a more balanced migration pattern with the loss of some young adults 20-25 years old more than offset by robust level of new residents from 30-60 years old. The pyramid shape reflects this by becoming more evenly thick through the middle in contrast to the other rural communities that are not experiencing as much in migration.

c. Population Density

The Town of Rensselaerville encompasses 62 square miles or 40,000 acres. In 1980 there were approximately 29 people per square mile, or 61 acres for every household within the Town (see Table 1, Population Density). In 2000, there were 779 households or about 51 acres per

household. Although the population density has increased over time, the current density still represents an extremely sparse level of settlement.

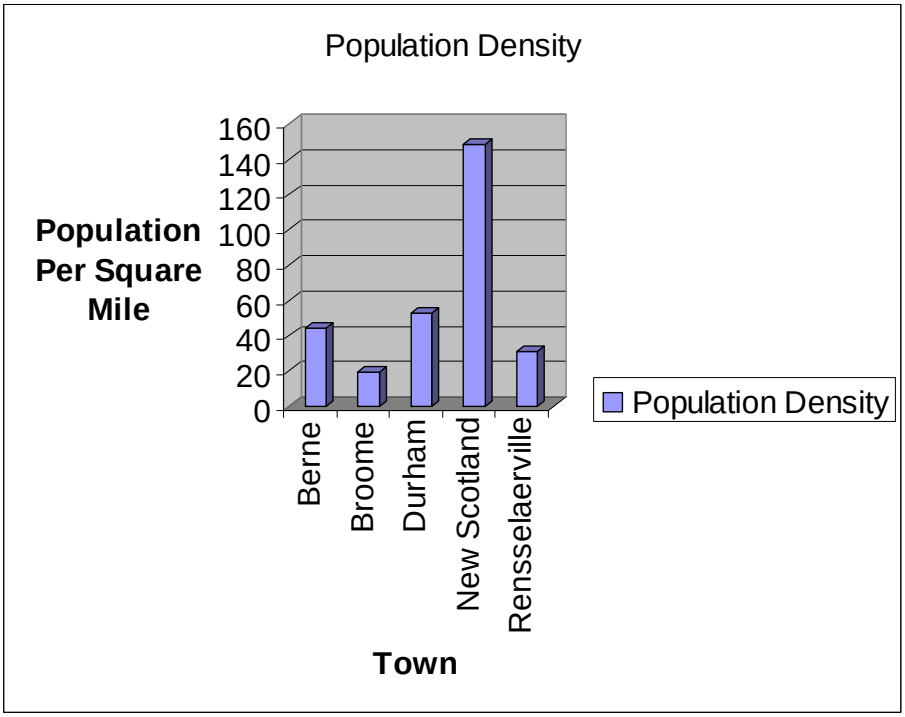
Areas of concentrated population occur primarily in and around the Town hamlets, with the largest concentration in the hamlet of Rensselaerville. Lesser areas of concentration occur along the Town's major roadways.

Table 1: POPULATION DENSITY

Year	Population	People Per Square Mile	Persons Per Household	Acres Per Household
1960	1,232	19.9	3.26	105
1970	1,531	24.7	3.08	80
1980	1,780	28.7	2.74	61
1990	1,990	32.1	2.63	55
2000	1,915	30.9	2.43	51

The following chart shows comparison of population densities.

Comparison of Population Densities.



2. Regional Growth Scenarios

The population analysis in the previous section examined the growth the Town of Rensselaerville could expect based on expected births, deaths and migration flows of current residents. During the 1990's much of Upstate NY declined or held steady in population, while undeveloped land continued to be converted for new housing at high rates. This 'sprawl without growth' was driven by a general migration to the suburbs by families at the expense of traditional urban centers, declining household sizes due to a rise in families with single householders, and rising affluence enabling more households to build second homes in rural/countryside areas where traditional agricultural economies are declining.

In the Capital District only Saratoga County experienced strong population growth between the 1990 and 2000 census counts. Albany County grew slightly, while the populations of Schenectady and Rensselaer Counties declined. All the counties in the region, however, experienced a growth in households and housing units. Growth occurred primarily in a few booming areas such as southern Saratoga County, Niskayuna, East / North Greenbush, Colonie, Guilderland, and Bethlehem. Most rural communities in Albany such as Rensselaerville dipped slightly in population, but there was still new housing construction in these

regions as the sprawl trend leading to less concentration in existing areas of density continued.
If Albany County's growth rate had been more robust, it is likely that despite the out-migration of young adults and seniors, that the number of households and housing units in Rensselaerville would have risen. This trend toward lower average population densities throughout the region is not likely to diminish in the future. Despite its population decline, 48 new units of housing were built in the Town between 2000 and 2005. If the county had grown at a rate closer to that of the nation as a whole it is likely that even more new housing would have been built.

State and regional efforts to develop a high-tech sector in the Capital District, if successful at bringing in many new high-paying jobs could draw even more new residents to the region than the 1990s. The presence of state government and several academic institutions give the regional job market a stable foundation. Even if the boom generations retire at a high rate and young adults continue leave the area at a high rate, the population is not likely to experience a decline so long as these jobs remain here. New residents will be drawn from less stable and declining upstate regions or in the form of recent immigrants to fill these jobs. Therefore, a renewed strong population growth in Albany County will likely lead to increased pressure for new development in Rensselaerville.

The Capital District Regional Planning Commission's (CDRPC) expectation of 'status quo' growth for the Town of Rensselaerville is included in the population projections already discussed above in Table 4. CDRPC expects most new growth to flow to areas of existing density because of the presence of growth-friendly infrastructure such as large municipal sewer and water systems. But rural areas such as Rensselaerville would expect to receive a share of the expansion, unless some form of growth controls were enacted in the community.

CDRPC anticipates that by 2040 there could be 200 new residents in Rensselaerville. This is based on a projected regional growth rate of about 3% per decade (90,000 new residents by 2040), which fits Albany's historic trends for growth and job creation. 200 new residents would mean 151 new households and housing units in the Town. With 48 new structures built in only the past 5 years, however, Rensselaerville is creating housing at a rate that will far exceed any likely regional growth pressure by 2040. It may be the case that although there is not strong growth pressure in the community, current development rules in Town of Rensselaerville serve as a 'path of least resistance' encouraging

speculative development, or disproportionately drawing builders of second and retirement homes from around the region.

If the Tech Valley initiative is very successful, growth in the region could more closely matches the expected growth of the U.S. as a whole. This would lead to the possible, but less likely 'hyper growth' scenario explored in the CDRPC's report, Effects of Alternative Development Scenarios in the Capital District. The hyper growth scenario predicts 300,000 new residents in the region based on a growth rate of about 8% per decade. Creation of 160,000 new jobs would have to happen in order to employ this population at the same current rate.

The impacts of this scenario for Rensselaerville would be 1,850 new residents. With an average household size of 2.28 this new population level would generate 800 new households in the community, almost double the current number. Even if all the current vacant and seasonal housing stock were converted to all-year housing, 400 new units would be needed by 2040 to absorb these new households. This growth scenario is unlikely to happen given the long and steady decline in the upstate economy. While it very well may stabilize or grow more strongly than in the recent past, it is unrealistic to expect that the region's population and economy will grow at a rate comparable to the United States as a whole.

The CDRPC report argues that the region will experience a decline in overall quality of life due to loss of open space, gridlock from higher traffic volumes as well as and higher household costs from rising property taxes to build and maintain new roads and rising gasoline prices. It encourages the adoption of measures throughout the region to restrict sprawl growth such as preservation of open space and agricultural lands, transfer of development rights, and limited investment in growth-friendly infrastructure (sewer, water, and roads) appropriate to the existing scale of communities. This will help 'focus' growth to currently developed and urbanized areas.

Table 2: Selected Rensselaerville Demographic Characteristics (1980 – 2000)

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Population and Age				
Total Population	1,780	1,990	1,915	-3.8%

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Median Age	33.8	35.6	42.5	+6.9
Households and Families				
Number of Households	632	734	779	6.1%
Families	NA	526	527	0.8%
Married Couple Families	NA	452	432	-4.4%
Female Householder, No Male	NA	48	59	22.9%
Average Household size	2.74	2.63	2.43	-7.6%
Housing Characteristics				
Median Year Structure Built	NA	1952	1956	+4.0
Number of Dwelling Units	1,082	1,213	1,187	-2.1%
Housing Tenure				
# Owner-occupied	NA	613	653	6.5%
# Renter-occupied	NA	121	126	4.1%
# Vacant - Seasonal	NA	360	333	-7.5%
# Vacant – Other	NA	119	75	-37.0%
Units in Structure				
Single Family Units	81.2%	77.2%	81.8%	+4.6
2 Or More Units	9.4%	18.1%	13.1%	-5.0
Mobile Home or Trailer	9.3%	18.1%	13.1%	-5.0
Median Gross Rent	NA	$411	$508	23.6%
Rental Budget Index (pref. >1)		1.8	2.1	+0.3
Median Home Value	NA	$85,800	$92,900	5.9%
Home Cost Index (pref. <2)		2.9	2.1	-0.8
Residency for Past 5 Years				
Lived in same house	NA	64.4%	71.9%	+7.6

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Lived in other house, same county	NA	12.9%	13.8%	+0.9
Lived in other county, same state	NA	17.8%	13.3%	-4.4
Lived in other state	NA	3.9%	2.8%	-1.2
Lived in other country	NA	1.1%	0.9%	-0.1

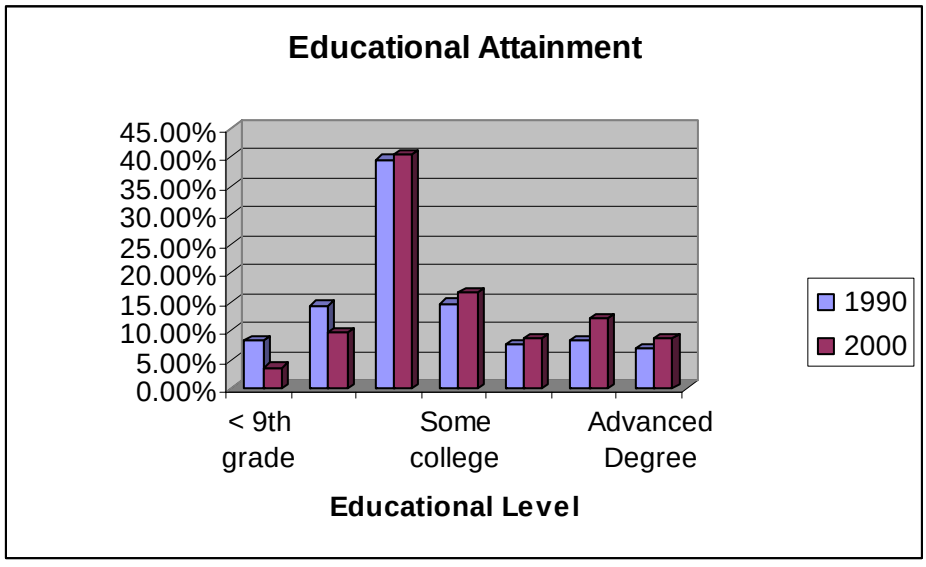
Source: United States Census Bureau, Census from 1980, 1990, and 2000

Table 3: Selected Rensselaerville Demographic Characteristics (1980-2000)

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Location of Work				
Same Town	NA	229	186	-18.8%
Same county	NA	538	543	0.9%
Different county	NA	334	349	4.5%
Different state	NA	11	6	-45.5%
Average time commuting (minutes)		28.4	36.1	+7.7
Labor Force				
Size of labor force	676	949	956	0.7%
Labor force participation rate	49.5%	62.0%	63.0%	+1.0
Unemployment rate	11.8%	5.5%	4.4%	-1.0
Female share of labor force	36.0%	42.1%	44.1%	+2.0
Educational Attainment				
< 9th grade	NA	8.4%	3.7%	-4.7
Attended HS - incomplete	NA	14.3%	9.6%	-4.6
Attended HS – diploma / GED	NA	39.6%	40.5%	+1.0
Some college	NA	14.7%	16.6%	+1.9
Associates Degree	NA	7.6%	8.7%	+1.1
Bachelor's Degree	NA	8.4%	12.1%	+3.7
Advanced Degree	NA	7.0%	8.7%	+1.7
Income				
Median Household Income	NA	$30,033	$42,391	41.1%
Median Family Income	$15,839	$33,895	$51,607	52.3%

Subject	1980	1990	2000	Percent Change or Shift 1990-2000
Per Capita Income	NA	$12,960	$20,921	61.4%
Share of Households:				
With self-employment income	NA	20.5%	17.0%	-0.7
With Social Security Income	NA	31.8%	32.1%	+0.3
With Public Assistance Income	NA	3.0%	1.5%	-1.5
With Retirement Income	NA	19.4%	21.9%	+2.5
Share of seniors below poverty level	NA	3.7%	3.4%	-0.2
Share of families below poverty level	NA	3.6%	2.8%	-0.7
Share of individuals below poverty level	NA	6.5%	5.2%	-1.3

Source: United States Census Bureau, Census from 1980, 1990 and 2000.



3. Households

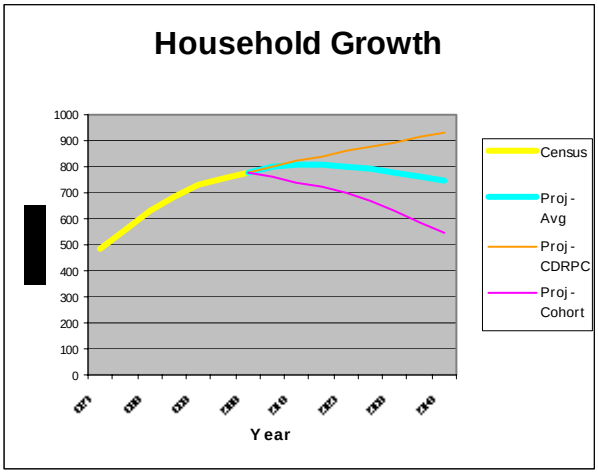
The number of households in Rensselaerville rose steadily from 1960 to 2000 due to a combination of increased population and declining average household size, though the rate of growth has halved from the high rate

of about 30% more households per decade in the 1980's and 1990's. As of the 2000 Census, the Town had 779 households.

During the past decade, the number of families held nearly constant at 527 families in 2000, while the number of married couple families declined by 20 families (4.4%) to 432. This represents a decline in the share of 4% and 6% of all households respectively for both families and married couple households. The number of single-female headed (with no male present) households increased by 22% to 59 families, increasing their share of all households from 6.5% to 7.6%. This shift in traditional domestic arrangements follows current lifestyle trends.

If out-migration from the Town continues at the recent rate without a mitigating rise in new residents, the declining average household size coupled with a decline in the current population due to aging will result in a lower number of households over the next 30 years. The 'averaged' projection discussed above (shown in Chart 8) predicts a fairly constant number (around 800 with a high of 806) of households around, followed by a slight drop to 743 households by 2040. The CDRPC's projections, which assume constant housing growth and no strong out-migration, predict 930 households by 2040.

Chart 8: Projected Rensselaerville Household Growth 1990-2040



The average household size decreased from 2.74 to 2.43 between 1980 and 2000. In 1970 and years prior the value was above 3.08 persons per household. The Capital District Regional Planning Commission expects the value to continue to drop along with lifestyle trends for smaller households to a value of 2.28 by the year 2040.

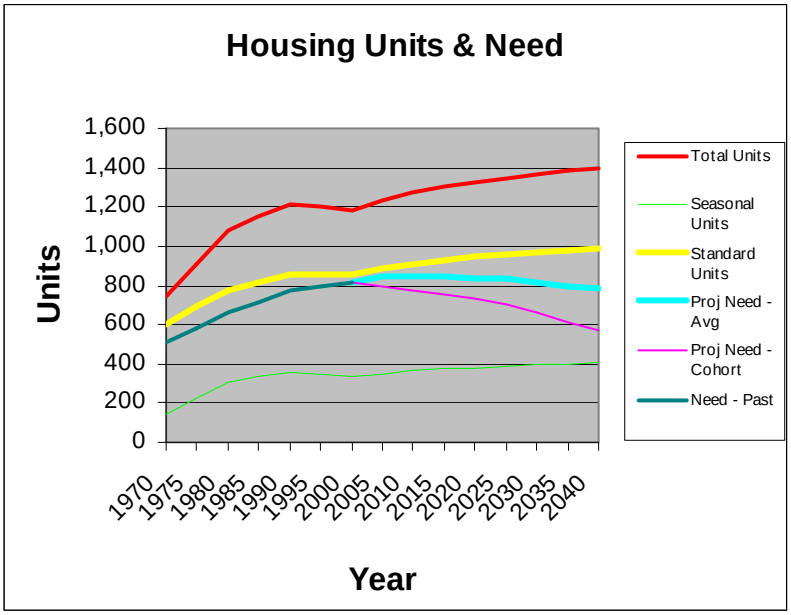
4. Housing

a. Housing Types

Chart 9 below depicts the historic and projected growth in the number of dwelling units. The total number of units less the number seasonal/recreational units yields the number of 'standard' dwelling units capable of absorbing new households (indicated by the yellow trend line, second from top). By adding a reasonable buffer of 5% market vacancy to the projected number of households in any year provides an estimate of housing needed (indicated by the blue trend line, third from the top).

The graph indicates that the rate of new housing availability has kept pace with expected demand through 2000, however projecting the trends out to 2040 using the 'averaged' model shows that the current rate of new housing will create a surplus of dwelling units due to population decline. If the high out-migration trend continues in Rensselaerville, the predicted housing 'surplus' will be even larger. The chart indicates that the Town will not need significantly more than its current stock of dwelling units to meet a moderate/reasonable future growth scenario that even if the current flow of residents out of the community continues. The data suggest no need to accelerate the development of new land to accommodate current residents.

Chart 9: Projected Growth In Housing Stock and Projected Need 1990-2040



The strong rise in households in Rensselaerville despite an apparent decline in total dwelling units in the Town was apparently made possible by a surge of conversions of housing units classified as 'vacant - for seasonal/recreational use' or 'vacant - other' into standard dwelling units. The total number of vacant units dropped from 479 in 1990 to 408 in 2000. During the same period, the share of owner-occupied units rose by 5% or 40 more units. The number (123 units) and share (10%) of renter-occupied units held roughly constant. Charts 13 and 14 below graphically represent these shifts in tenure among occupied housing units.

Chart 13: Housing Tenure 2000

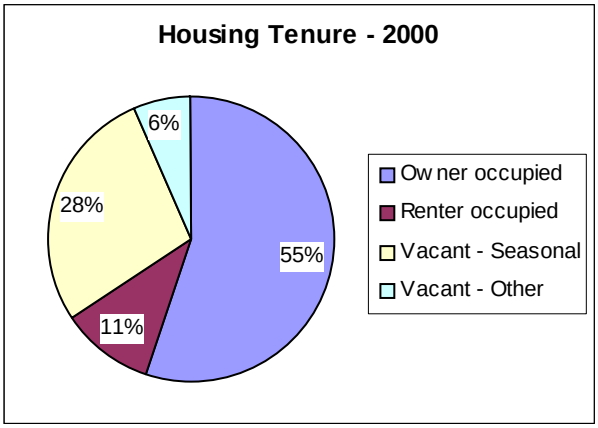
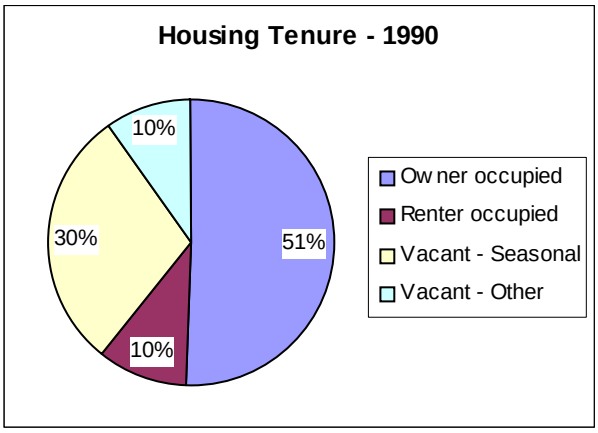


Chart 14: Housing Tenure 1990



The rate of new residents entering the Town fell between 1990 and 2000 indicated by an 8% increase in the share of all people residing in their current location between 6-30 years and a corresponding 8% rise in the share of all persons living in the same house for the past five years.

Some new construction has occurred, lowering the median year built for all structures by 4 years to a more recent 1956.

The Town has a high share of single-family dwelling units with only 5% of its units in the form of multi-family structures (mostly duplexes). This may limit options for lower-income households as well as young adults. About 55% of rental occupancies are in single-family units indicating that this housing type is fairly open to renters. Very few owner-occupants live in multi-family units.

As of 2000, over 40% of both renters and owners lived in structures built before 1939 with slightly more renters in these oldest units. The newest units built after 1990 appear to be unavailable to all but a few renters. Charts 15 and 16 illustrate the shifts in structure ages between the 1990 and 2000 census.

Chart 15: Housing Age 2000

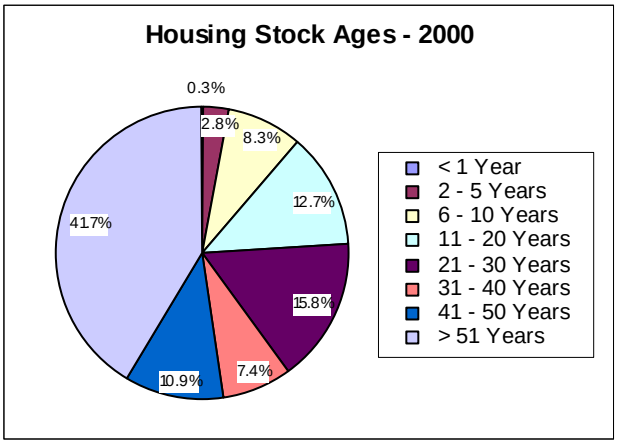
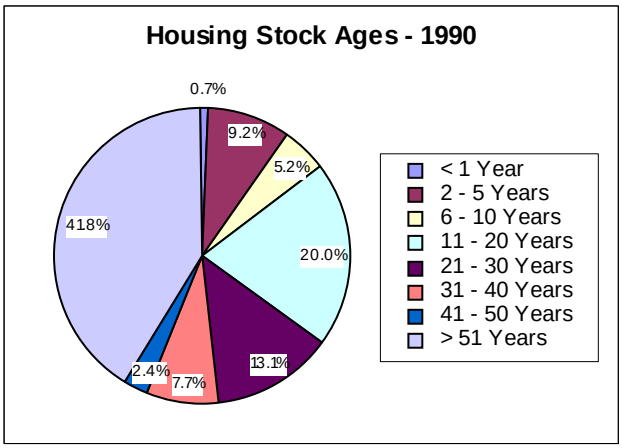


Chart 16: Housing Age 1990

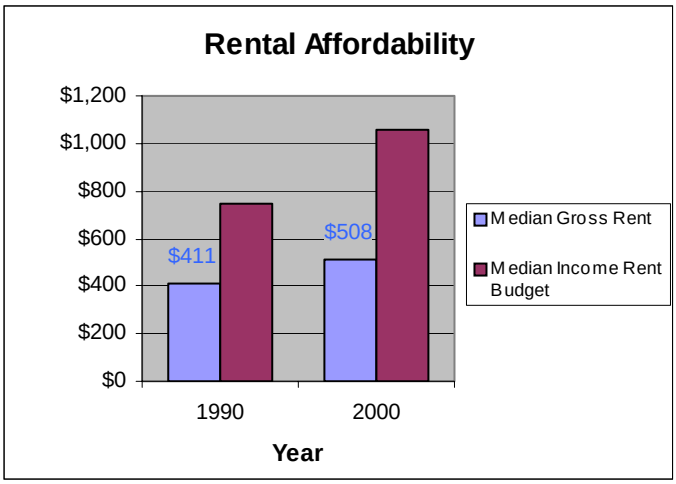


b. Housing Affordability

There are several ways to determine if housing is generally affordable in a community. One method is to determine the "rental index." This index shows the maximum gross rent a given household can afford. Affordable rental housing is generally considered to be no more than 30% of a household's monthly income. The average monthly rental rate in Rensselaerville in 2000 was $508. The median household income was $42,391. This divides to $3,532 of monthly income. Thirty percent of this is $1,060, which means that the average household could afford $1,060 per month in rent.

This figure is much higher than the average monthly rent with just over a 2.1 ratio. Thus, rentals in 2000 were affordable in Rensselaerville. Chart 17 below graphically demonstrates the surplus rental budget available to the median income household. This surplus indicates that renting is affordable to many households.

Chart 17: Comparison of Median Gross Rent with Monthly Rental Budget for a Median Income

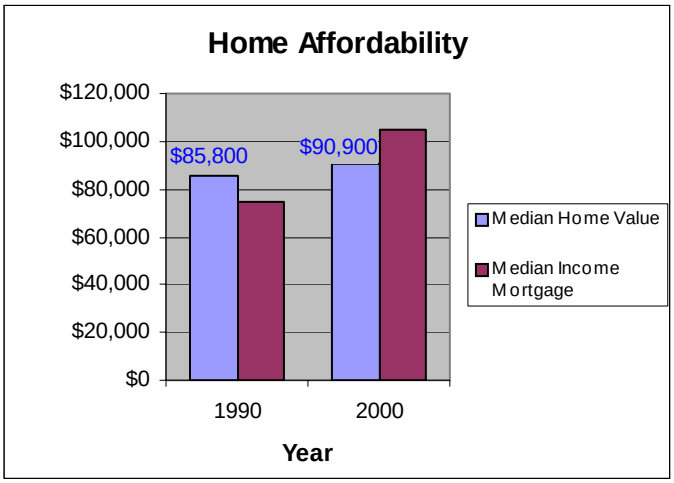


A method to determine housing affordability for homes is to look at the ratio between the median value of a single-family house and median household income. Nationally, a ratio of 2 or less is considered to be affordable. The affordability ratio for Rensselaerville in 2000 was $90,900 (median value of homes) divided by $42,391 (median household income), or 2.1. This figure is only slightly above the desired ratio of two and indicates that a great many families in Rensselaerville would find purchasing a home affordable.

Finally, the purchase price multiplier also gives an indication of affordability. This looks at the maximum mortgage approval amount likely to be given to potential homebuyers. This is usually about 2.25 times annual income. The calculation below shows this multiplier plus a 10% down payment. The result is the amount of money that would be able to be afforded for a mortgage by the median income household:
2.25 X $42,391 = $95,380 → $104,918 x 10% down = $104,918

Thus, median households would be able to afford a $104,918 dollar house. Since the median value of a house in the area was only $90,900, more than half of the Town's households would find purchasing a home affordable. Chart 18 graphically represents the relationship. While the median home value increased by only 6%, the median household income rose by a greater 41% putting the median cost home within reach.

Chart 18: Comparison of Median Home Value With the Mortgage for a Median Income



5. Community Comparison of Demographics

Table 4: Actual Population Change - Comparison with Other Municipalities

Municipality	1980 Census	1990 Census	2000 Census	1980-1990 % Change	1990-2000 % Change
Town of Rensselaerville*	**1,780**	**1,990**	**1,915**	**11.8%**	**-3.8%**
Town of Berne*	2,532	3,053	2,846	20.6%	-6.8%
Town of Broome**	761	926	947	21.7%	2.3%
Town of Durham**	2,283	2,324	2,592	1.8%	11.5%
Town of New Scotland*	8,976	9,139	8,626	1.8%	-5.6%
Albany County*	285,909	292,594	294,565	2.3%	0.7%

*Census and projection data source: Capital District Regional Planning Commission (based on expected share of projected regional growth)
**U.S. Census Data with cohort component method projection (with 1990-2000 migration estimates) averaged with projection based on housing unit growth and average household size trends

Table 5: Projected Population Change - Comparison with Other Municipalities

Municipality	2010 Projected	2020 Projected	2000-2020 % Change	2030 Projected	2040 Projected	2020-2040 % Change
Town of Rensselaerville*	**1,986**	**2,047**	**6.9%**	**2,107**	**2,165**	**5.8%**
Town of Rensselaerville * **	**1,905**	**1,853**	**-3.2%**	**1,772**	**1,673**	**-9.7%**
Town of Berne*	2,811	2,794	-1.8%	2,796	2,808	0.5%
Town of Broome**	1,001	1,031	8.9%	1,051	1,059	2.7%
Town of Durham**	2,861	2,999	15.7%	3,077	3,091	3.1%
Town of New Scotland*	8,700	8,798	2.0%	8,925	9,079	3.2%
Albany County*	302,162	307,201	4.3%	311,707	316,197	2.9%

*Capital District Regional Planning Commission (based on housing growth and household size)
**Census data projection (based on housing growth and household size)

***Census Data projection (based on housing growth, household size, population age structure, and migration)

Table 6: Demographic Comparison of Area Municipalities

Community Characteristic	**Rensselaerville**	Berne	Broome	Durham	New Scotland	Albany County
Percent population change (1990 – 2000)	**-3.8%**	-6.8%	2.3%	11.5%	-5.6%	0.7%
Median Age (2000)	**42.5**	39.6	43.6	42.5	41.1	36.8
Change In Median Age (1990-2000)	**6.9 yrs**	5.9 yrs	3.3 yrs	5.8 yrs	5.4 yrs	2.9 yrs
Percent population aged over 65 years (2000)	**15.2%**	12.0%	18.5%	17.5%	13.2%	14.5%
Percent population aged over 65 years (2020)	**23.1%**	18.7%	22.5%	23.1%	19.1%	16.6%
Percent population of school age (2000)	**17.7%**	18.9%	16.4%	17.7%	18.8%	17.6%
Percent increase in housing units (1990 – 2000)	**-2.1%**	0.9%	9.9%	10.0%	3.1%	4.6%
Percent increase in # households (1990 – 2000)	**6.1%**	-0.3%	6.0%	20.2%	2.6%	4.0%

Community Characteristic	**Rensselaerville**	Berne	Broome	Durham	New Scotland	Albany County
Median household income (2000)	**$42,391**	$47,174	$32,368	$34,282	$58,956	$42,935
Percent of population below poverty line (2000)	**5.2%**	5.3%	8.4%	11.3%	4.1%	10.1%
Median gross rent / month (2000)	**$508**	$490	$467	$468	$628	$611
Median value of home (2000)	**$90,900**	$93,800	$68,300	$94,100	$122,800	$116,300
Percent of housing stock in single-family units (2000)	**81.8%**	86.1%	73.9%	76.4%	82.3%	53.8%
Percent of housing stock in multi-family units (2000)	**5.1%**	4.8%	1.8%	5.8%	13.7%	44.5%
Percent of housing stock in mobile homes (2000)	**13.1%**	9.0%	24.3%	17.8%	3.9%	1.7%
Percent of housing stock vacant (2000)	**34.4%**	20.6%	46.9%	36.3%	3.7%	7.3%
Percent of housing stock for seasonal use (2000)	**28.1%**	15.6%	41.5%	27.6%	0.4%	0.9%

*Census and projection data source: U.S. Census

Tables 4, 5, and 6 above compare demographics of the Town of Rensselaerville with the Towns of Berne, Durham, Broome, and New Scotland as well as Albany County. These comparisons enable a quick appraisal of Rensselaerville's demographic qualities relative to other regional communities.

Table 4 compares the population totals and growth rates from past census years. Among the comparison Towns, Rensselaerville is most

comparable to Berne in total size at around 2/3 of Berne's population. Berne's population was roughly 1,000 persons larger than Rensselaerville in each census year. Broome's population by contrast was about half that of Rensselaerville. New Scotland's population was nearly 5 times that of Rensselaerville in each period. New Scotland comprises about 3% of Albany County's population. Rensselaerville in contrast only holds about 0.7% of the total Albany County population. This share held relatively stable between the 1980 and 2000 census.

Growth between census periods among the comparison communities varied somewhat, though all experienced population gains in the 1980s. Albany County grew by 3% in this period and Durham and New Scotland had a similar (2%) rate of change. Broome and Berne grew at the very high rate of 20% during the 1980's. Rensselaerville grew at a robust rate of 12% during the same decade, putting it roughly in the middle of the comparison communities. In the 1990s, Broome, Durham, and Albany County grew while the other communities declined in population. Durham was the only community to grow strongly at 11%, while Albany County barely grew (0.7%) and Broome grew slowly (2%). Rensselaerville's -4% rate of decline was similar to but slightly less than that of Berne (-6.8%) and New Scotland (-5.6%).

The projected populations in Table 5 were calculated using trends of housing unit growth and average household size to estimate future values. This method tends to yield values that would be considered the 'highest expected', based solely on local trends. The Capital District Regional Planning Commission data puts Rensselaerville in the middle of the group's growth rates with a value of 7% between 2000 and 2020, which would be about double the rate for Albany County in the same period. During these two decades, Berne is expected to decline by 2%, Durham is expected to grow at nearly double (16%) Rensselaerville's rate and Broome will grow at a similar (9%) rate.

Between 2020 and 2040 the Town is predicted to be the fastest growing of the group with a 5.8% rate. This would be about double the projected rate for all of the other areas (about 3%) except Berne, which would barely (0.5%) grow over the two decades.

Among the municipal areas compared in Table 6, The Town of Rensselaerville generally had the most in common with the Town of Berne, though there were many areas of departure. Rensselaerville had a slightly higher share of its population above 65 years in both 2000 and the projection to 2020, while Berne had a slightly higher share of its population at school age. Both Rensselaerville and Berne's median age

rose by about 7 years, over twice the increase experienced by Albany County.

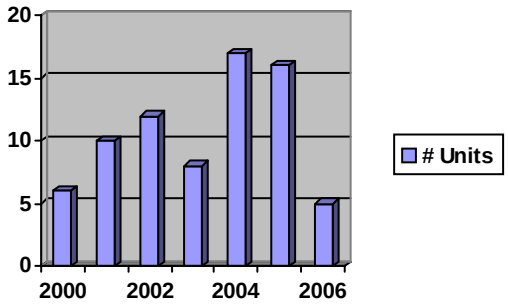
Median Household Income was similar for Rensselaerville, Berne, and Albany County at around $42,000 (in 2000), while Broome and Durham values were about $10,000 lower and New Scotland about $15,000 higher. Rensselaerville, Berne, and New Scotland all had roughly the same low poverty rates (about 5%) in 2000 while Durham, Broome, and Albany County had similarly grouped rates (about 10%).

Rensselaerville has about twice the share (28%) of its housing units in the vacant-for seasonal use category than Berne. This was about the same share in Durham, but 10% less than Broome. New Scotland and Albany had less than 1% of their housing stock in the category. Mobile homes comprised about 10% of the housing stock in Rensselaerville and Berne. This share was higher (about 20%) in Durham and Broome, but lower (about 3%) in New Scotland and Albany.

Rensselaerville was the only municipality to decline in total housing units, though Berne's increase was less than 1%. Durham and Broome both increased their housing stock by about 10% in the period. While losing housing units, Rensselaerville gained households at about the same rate (6%) as Broome while Berne declined slightly in households. During the same period of the 1990, Durham had a tremendous gain (20%) in households.

Rensselaerville, Berne, and Durham had 2000 home values around $90,000, which was higher than Broome at $67,000 and lower than New Scotland and Albany County around $120,000. Median Gross Rents were similar in among all the areas except New Scotland and Albany County, which had values about $100 higher.

Chart 18: Building Permits Issued 1985-2005 (Data From Town Building Inspector)



There were a total of 74 building permits issued for new homes in Town between 2000 and 2006, as shown above.

Table 7: Age and Percent of Population for Rensselaerville

Age Group	1980 Census		1990 Census		2000 Census		2010 Projected		2020 Projected		2030 Projected		2040 Projected	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
0-4	119	6.7	132	6.6	106	5.5	109	5.5	113	5.5	123	5.8	130	6.0
5-9	124	7.0	143	7.2	106	5.5	103	5.2	107	5.2	117	5.6	124	5.7
10-14	172	9.7	143	7.2	144	7.5	126	6.3	133	6.5	145	6.9	156	7.2
15-19	170	9.6	175	8.8	149	7.8	135	6.8	135	6.6	147	7.0	158	7.3
20-24	106	6.0	113	5.7	75	3.9	90	4.5	83	4.1	94	4.5	100	4.6
25-34	252	14.2	270	13.6	173	9.0	186	9.4	194	9.5	204	9.7	219	10.1
35-44	202	11.3	338	17.0	286	14.9	217	10.9	240	11.7	265	12.6	274	12.7
45-54	154	8.7	231	11.6	351	18.3	312	15.7	237	11.6	262	12.4	289	13.3
55-64	199	11.2	172	8.6	234	12.2	374	18.8	332	16.2	252	12.0	279	12.9
65-74	167	9.4	164	8.2	165	8.6	209	10.5	334	16.3	296	14.0	225	10.4
75+	115	6.5	109	5.5	126	6.6	125	6.3	139	6.8	202	9.6	211	9.7
Total	1,780		1,990		1,915		1,986		2,047		2,107		2,165	

*Capital District Regional Planning Commission (based on housing growth and household size)

D. Economic Conditions

1. Labor Force and Occupations

The Town of Rensselaerville has an economy that is primarily dependent on the larger economies of the surrounding area. Although the Town is rural by nature, a small percentage of residents have farming as a sole income source. Few opportunities currently exist within the Town for full-time, high-paying employment. Residents commute to neighboring Towns and cities for employment, traveling a half hour to an hour each way.

As shown in Table 8, Labor Force, the Town labor force was a total of 956 residents, out of a potential 1,517 workers, indicating a participation percentage of 63% according to the 2000 Census. Albany and Columbia counties have similar percentages of population in the labor force at 65.8% and 62% respectively, with Greene County showing the lowest percentage at 56.6%.

The female labor force accounted for 26.6% of the total civilian labor force in the Town in 2000. This figure is considerably lower than Albany County (29.9%), as well as Columbia County (27.7%), but is higher than Greene County (25.5%).

Table 9, Occupation Groups, compares the Town's breakdown of occupation groups with that of the county. According to Census 2000, the highest percentage of workers in the Town of Rensselaerville in 2000 was employed in Management/Professional positions (36.1%). The lowest percentage of workers was employed in the Farming/Fishing/Forestry category (1.0%). Compared to the county, a higher percentage of Town workers were employed in Construction/Extraction/Maintenance (13.9%) and Production/Transportation/Material Moving (14.3%) positions. Lower percentages of Town residents were employed in Services and Sales/Office and Administrative Support occupations than at the county level.

Table 10, Class of Workers, shows the different classes of employed persons for the Town of Rensselaerville, and Albany, Greene and Columbia Counties. Private wage and salary workers make up a slightly lower percentage of the Town's employed workers than in any of the three counties. A considerably higher percentage of workers within the Town are self-employed (9.0%) than in Albany County (5.0%). The Town's portion of government workers (27.4%) is relatively consistent with those of the three counties.

Table 8: LABOR FORCE, 2000

	Town of Rensselaerville	Albany County	Greene County	Columbia County
Total population 16 years and over	1,517	235,932	38,448	49,953
Total in labor force	956	155,220	21,769	30,952
% in labor force	63.0	65.8	56.6	62.0
Civilian Employed	914	144,480	20,355	29,587
Civilian Unemployed	42	10,459	1,330	1,329
In Armed Forces	0	281	84	36
% female employed in civilian labor force	26.6	29.9	25.5	27.7
% male employed in civilian labor force	33.7	31.3	27.5	31.5

Source: Census 2000 Summary Profile, Town of Rensselaerville, Albany County, Greene County, and Columbia County, ESRI Business Analyst Online.

Table 9 OCCUPATION GROUPS, 2000

	Town of Rensselaerville		County of Albany	
	No.	%	No.	%
Management/Professional	330	36.1	61,112	42.3
Services	110	12.0	20,106	13.9
Sales/Office and Admin Support	207	22.6	41,701	28.9
Farming/Fishing/Forestry	9	1.0	168	.1
Construction/Extraction/Maintenance	127	13.9	8,945	6.2
Production/Transportation/Material Moving	131	14.3	12,448	8.6
	914	100.0	144,480	100.0

Source: Census 2000 Summary Profile, Town of Rensselaerville and Albany County, ESRI Business Analyst Online.

Table 10 CLASS OF WORKERS, 2000 (by percentage)

	Town of Rensselaerville	Albany County	Greene County	Columbia County
Private wage and salary workers	63.3	67.0	67.7	69.5
Government workers	27.4	27.9	22.6	19.3
Self-employed workers	9.0	5.0	9.3	10.8
Unpaid family workers	0.3	0.1	0.4	0.4

Source: Census 2000 Summary Profile, Town of Rensselaerville, Albany County, Greene County, and Columbia County, ESRI Business Analyst Online.

Table 11, Industry Groups, gives the number and percentage of employed persons for different industries for the Town of Rensselaerville and Albany County. A considerably higher percentage of Town workers in 2000 were engaged in the areas of Construction, Manufacturing, Transportation/Warehousing/Utilities, and Professional/Scientific/Management/Administration than in Albany County. Conversely, a considerably lower percentage of Town workers were engaged in Retail Trade; Information; Finance/Insurance/Real Estate/Rental/Leasing; Educational/Health/Social Services; Arts/Entertainment/Recreation/Accommodations/Food Services and Public Administration. A general lack of retail establishments, banking, schools, health services and other public service organizations within the Town would account for the lower percentages of workers in these Industrial Groups.

Table 11. INDUSTRY GROUPS, 2000

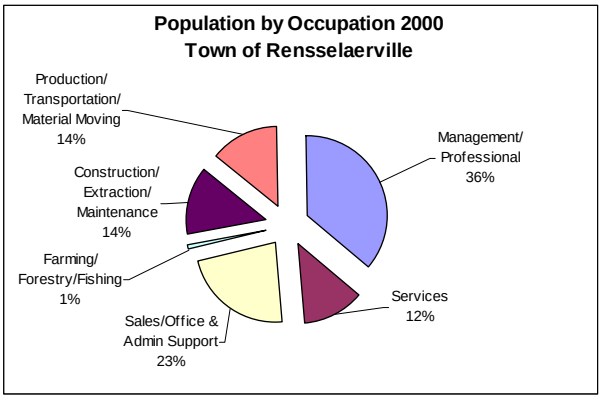
	Town of Rensselaerville		County of Albany	
	No.	%	No.	%
Agriculture/Forestry/Fishing/Hunting/Mining	18	2.0	415	0.3
Construction	99	10.8	6,413	4.4
Manufacturing	88	9.6	8,229	5.7
Wholesale trade	22	2.4	3,719	2.6

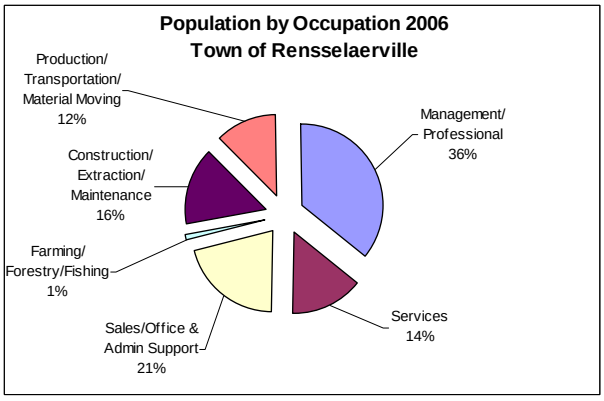
	Town of Rensselaerville		County of Albany	
	No.	%	No.	%
Retail trade	69	7.5	15,069	10.4
	60	6.6	6,252	4.3
Transportation/Warehousing/ Utilities Information	14	1.5	4,356	3.0
Finance/Insurance/Real Estate/Rental/Leasing	66	7.2	11,565	8.0
Professional/Scientific/Mgmt/ Admin/Waste Mgmt Services	85	9.3	12,808	8.9
Educational/Health/Social Services	190	20.8	35,963	24.9
Arts/Entertainment/Recreation /Accommodations/Food Services	57	6.2	10,330	7.1
Other Services	55	6.0	7,219	5.0
Public Administration	91	10.0	22,142	15.3
Total Employment	914	100	144,480	100

Source: Census 2000 Summary Profile, Town of Rensselaerville and Albany County, ESRI Business Analyst Online.

Analyses of resident occupation trends will help identify segments of the economy that have potential for growth or for decline. The following analysis uses data from the 2000 Census Population and Housing, and ESRI forecasts for 2006, which profiles the occupation types among the working residents in the Town of Rensselaerville in 2000 and 2006.

Chart 19. POPULATION BY OCCUPATION 2000 – 2006



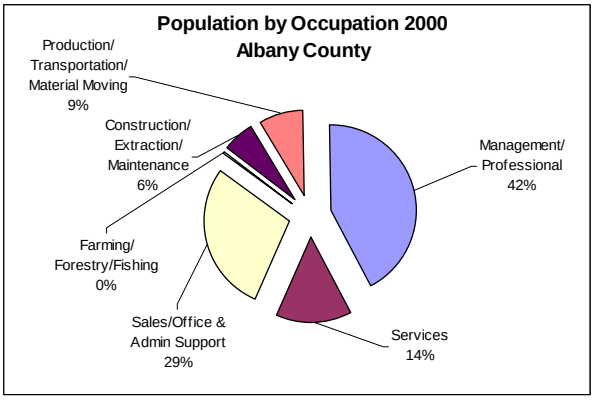


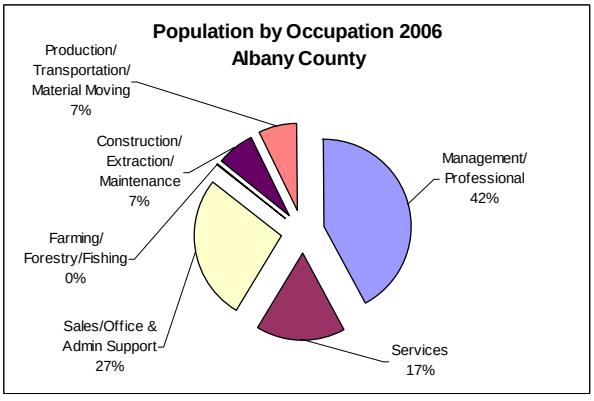
Source: Town of Rensselaerville and Albany County, ESRI Business Analyst Online, 2006 estimates. Estimates are only available in percentages.

Chart 19 above compares and illustrates the occupation types among residents in the Town of Rensselaerville in 2000 and 2006. In 2000, the Town's top two occupation types were in the Management/Professional (36%) sector and the Sales/Office & Administrative Support (23.0%) sector. In 2006, similar trends are seen within the Management/Professional sector (36%) but the Sales/Office & Administrative Support sector (21.0%) witnessed a slight decrease. In 2000, the Services sector and the Construction/Extraction/Maintenance sector were 12% and 14%, respectively. Both these sectors increased to 14% and 16% respectively in 2006. During the same period, Rensselaerville experienced a slight decrease in occupations in the Production/Transportation/Material-Moving sector from 14 % in 2000 to 12% in 2006.

Chart 20 below compares and illustrates the occupation types among residents of Albany County in 2000 and 2006. In 2000, similar to the Town of Rensselaerville, the County's top two occupation types were in the Management/Professional sector (42%) and the Sales/Office & Administrative Support (29%) sector. In 2006, this trend continues with the Management/Professional sector (42%) and the Sales/Office & Administrative Support (27%) as the two top occupation types in the County.

Chart 20. ALBANY COUNTY POPULATION BY OCCUPATION 2000 – 2006





Source: Town of Rensselaerville and Albany County, ESRI Business Analyst Online, 2006 estimates. Estimates are only available in percentages.

In 2000, the Services sector and the Construction/Extraction/Maintenance sector were 14% and 6%, respectively. Both the sectors increased to 17%

and 7% respectively in 2006. During the same period, Albany County experienced a slight decrease in jobs within the Production/Transportation/Material-Moving sector from 9 % in 2000 to 7% in 2006.

Table 11 below compares the time taken by Town residents to travel to and from work between 1990 and 2000. As indicated in Table 13, between 1990 and 2000, overall commuter times increased. In 1990, about 41.1% of commuters took less than 20 minutes to travel to work. This percentage decreased to 29.7% in 2000. In 1990, about 7.4% of commuters took between 20 to 24 minutes. This figure decreased slightly to 7.2% in 2000.

In 1990, about 88.5% of commuters took less than an hour to commute to work as compared to 81.8% in 2000. In 1990, only 6.5% of commuters took more than an hour to travel to work as compared to 13.0% in 2000. In 1990, the average travel time to work for Town residents was 26.9 minutes compared to 36.1 minutes in 2000. The number of people working from home also increased slightly between 1990 and 2000 by 0.1%

Table 11. TRAVEL TIME TO WORK 1990 – 2000 (For Town Workers 16 +)

Workers 16+	**1990 Percentage**	**2000 Percentage**
Did not Work at Home	94.9%	94.8%
Less than 5 minutes	4.7%	4.5%
5 to 9 minutes	8.3%	4.7%
10 to 19 minutes	28.1%	20.5%
20 to 24 minutes	7.4%	7.2%
25 to 34 minutes	13.2%	12.2%
35 to 44 minutes	9.0%	11.4%
45 to 59 minutes	17.8%	21.3%
60 to 89 minutes	6.0%	8.7%
90 or more minutes	0.5%	4.3%
Worked at Home	5.1%	5.2%
Total	100.0%	100.0%
Average Travel Time to Work (in minutes)	**26.9**	**36.1**

Source: U.S. Bureau of the Census, 1990 and 2000 Census, ESRI

2. Income of Households

Table 12 gives the 2000 income levels for households in the Town and Albany, Greene and Columbia Counties. The table indicates that the median household income in the Town was only slightly lower than in Albany County, and higher than in the other two counties according to the 2000 Census. A significantly higher percentage of Town households were within the $50,000-74,999 income range (24.8%), than in Albany (20%), Columbia (21%) and Greene (18.3%) counties. A significantly lower percentage of Town families was in the under $10,000 range (5.8%) in comparison to Albany (9.3) Columbia (7.5%) and Greene (10.7%) counties. The 2000 Census also showed that there were less Rensselaerville families living below the poverty level in 2000, than in Albany, Columbia and Greene Counties.

Table 12 INCOME OF HOUSEHOLDS, 2000 (By percentage of all households)

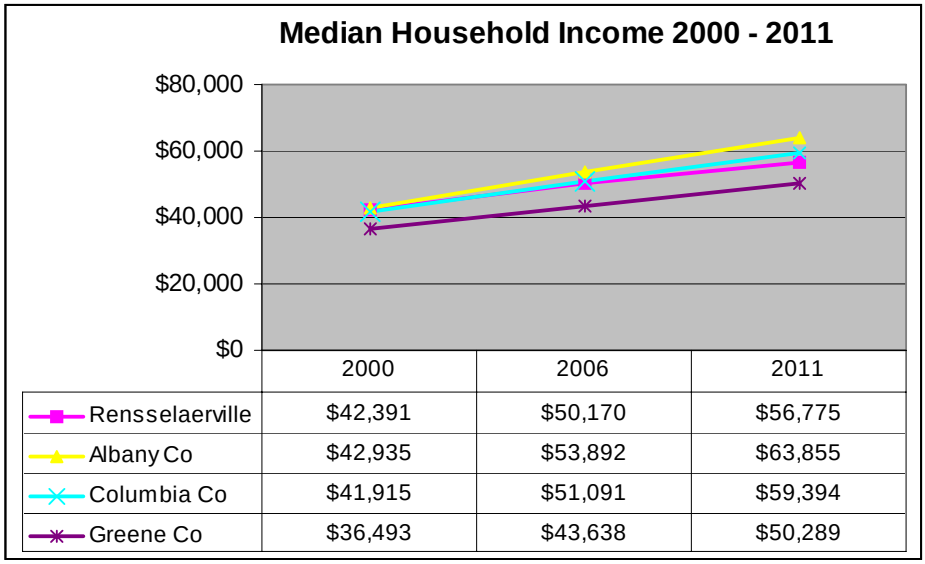
	Town of Rensselaerville	**Albany County**	**Columbia County**	**Greene County**
Total Households	**782**	**120,645**	**24,852**	**18,276**
Under $10,000	5.8	9.3	7.5	10.7
$10,000 – 14,999	6.5	6.3	6.2	7.2
$15,000 – 24,999	12.3	12.1	13.4	14.7
$25,000 – 34,999	16.6	13.0	14.1	15.2
$35,000 – 49,999	15.0	15.8	17.7	18.2
$50,000 – 74,999	24.8	20.0	21.0	18.3
$75,000 – 99,999	10.7	10.9	9.5	8.0
$100,000 – 149,999	5.1	8.3	6.4	5.1
$150-000 – 199,999	2.0	2.4	2.0	1.2
$200,000 or more	1.2	1.9	2.1	1.4
Median household income	**$42,391**	**42,935**	**41,915**	**36,493**
Percent below poverty level	2.8	7.2	6.4	8.6

Sources: 2000 Census, Profile of Selected Economic Characteristics, Town of Rensselaerville, Albany County, Columbia County, and Greene County.

The following chart shows the projected changes in Median Household Income for the Town, Albany, Columbia and Greene Counties. The Median Household Income for the Town is estimated to be $50,170 in 2006, and is projected to be $56,775 by 2011, a projected increase of

34% from the year 2000. Between 2000 and 2011, Albany County's Median Household Income is projected to increase by 48.7% and Columbia and Green County's are projected to increase by 41.7% and 31.8% respectively.

Chart 21 MEDIAN HOUSEHOLD INCOME COMPARISON 2000 – 2011



	2000	2006	2011
Rensselaerville	$42,391	$50,170	$56,775
Albany Co	$42,935	$53,892	$63,855
Columbia Co	$41,915	$51,091	$59,394
Greene Co	$36,493	$43,638	$50,289

Source: U.S. Bureau of the Census, 1990 and 2000 Census, ESRI forecasts for 2006

3. Market Conditions

a. Existing Businesses

The Land Use Committee of the Town of Rensselaerville identified the number of various types of existing businesses within the Town. Table 13 provides a breakdown of the businesses located within the Town, as identified by the committee.

Table 13 BUSINESSES IN THE TOWN OF RENSSELAERVILLE

Business Category	Number
Accommodations	3
Antiques, Collectibles, Arts & Crafts	14
Auto Repair, Sales and Services	4
Child Care, Educational Services & Books	4
Conference Centers	2

Business Category	Number
Contracting, Home Building, Home Improvements	20
Farms, Farm-related Businesses and Forestry	15
Realty, Insurance, Finance & Legal Services	9
Restaurants & specialty food sales	6
Salvage and Trash Removal	4
Welding, Fabrication and Polishing	3
Other Miscellaneous Services	14
Total	**98**

The largest business category identified in Table 13 is "Contracting, Home Building and Home Improvements", with 20 businesses. This category includes general contractors and specialty services such as, carpentry, masonry, roofing, well – drilling, excavation, driveway sealing, painting, interior design and electrical work. The second largest category is "Farm and Farm-related Businesses and Forestry". This category includes dairy and beef cow, sheep, swine and horse farms, as well as farm-related businesses such as maple sugaring, greenhouses, tree farms, logging and milling services. The third largest business category in the Town is "Antiques, Collectibles, and Arts & Crafts". This category includes antique shops, arts and specialty craft shops, antique repairs, consignment merchandise stores, art galleries and artists. The "Other Miscellaneous Services" category also had a total of 14 businesses. "Other Miscellaneous Services" include cleaning services, consulting and desktop publishing, musicians, and health and wellness centers.

The Town of Rensselaerville lacks any major employers and no single type of commercial activity is dominant in the Town. Existing businesses generally occur on relatively small lots within or near established hamlets. Throughout the public participation process, residents indicated that the variety of retail goods and services offered by businesses in the Town is insufficient to meet their needs. Residents of the Town frequently leave the Town to acquire retail goods and professional services in either the Albany or Greenville market areas.

b. Consumer Spending Patterns

Due to the presence of relatively few retail businesses in the Town of Rensselaerville, residents frequently leave the Town for a variety of goods and services. In an effort to identify how residents might be underserved locally by various types of businesses, and in order to learn about the spending patterns of Rensselaerville residents, a Retail Goods and

Services Expenditure report was obtained from ESRI Business Analyst Online (BAO). Business Analyst Online (BAO) provides reports and maps to businesses to help them understand the lifestyle and buying behaviors of the households in a particular market in order and to find optimal sites for new store locations. BAO combines Geographic Information technology with extensive demographic, consumer, and business data to deliver more than 50 reports and maps over the Web. BAO uses data from the U.S. Bureau of Labor Statistics' (BLS) Consumer Expenditure Surveys to identify baseline-spending patterns. Data from additional surveys, including the weekly Diary Survey for daily purchases and quarterly Interview Survey for general purchases, are used to refine the spending estimates. BAO integrates data from both surveys to provide a comprehensive database on all consumer expenditures.

Many communities across the country have researched consumer-spending behaviors to understand local trends. In general, consumers prefer to shop for everyday items close to home. These items include goods and services such as groceries, home cleaning supplies, personal care items, alcohol, cigarettes, automobile repair, beauty salon services, and restaurants. In contrast, consumers are willing to travel farther from home for larger ticket items such as furniture, furnishings, appliances, electronics, clothing, entertainment, automobiles, recreational vehicles and medical services. Finally, consumers are willing to take longer day trips from home in search of specialty shopping experiences that may include dining, entertainment, and recreation.

Table 14 details the spending patterns and potential for residents of the Town of Rensselaerville. The Spending Potential Index (SPI) is household-based, and represents the amount of money spent for a product or service relative to a National average of 100. Therefore, an SPI of 120 shows that average spending by local consumers is 20 percent above the national average. Analysis of this data helps businesses identify important changes and significant trends in consumer spending and buying habits in a particular market and helps identify the best areas to market specific products and services. These figures are not meant to represent annual expenditures made within the Town. Rather, the figures represent the potential total annual expenditures of Town residents as might be spent both within and outside the Town.

While local spending habits are compared to a National average, the expenditure outlays are not corrected for regional inflation. Therefore, that a given municipality spends less on specific goods or services may reflect one of several things: (1) local residents are able to obtain the desired goods or services at a cheaper cost; (2) local residents' interests

in such goods and services falls short of the National average or the goods and services are not easily available, or (3) local residents have less disposable income to spend on such items.

According to the SPI, for every $1 spent nationally on retail goods and services, Rensselaerville residents spend between $0.31 and $1.44. Of all the categories listed in the Town's expenditure ranking, there are many areas where Town residents spend equivalent to the national averages (100 SPI) or above the national average. These categories include: Satellite Dishes, Pets, Recreational Vehicles and Fees, Vehicle Loans, Nonprescription Drugs, Prescription Drugs, Maintenance and Remodeling Materials, Major Appliances, Lawn and Garden, Owners and Renters Insurance, Life/Other Insurance, Health Insurance, Smoking Products, Vehicle Purchases, Gasoline and Motor Oil.

Areas where Town residents spend close to the national averages are on Food at Home, including meat, poultry, fish, and eggs (at 98), Dairy Products (at 96), Snacks and Other Food at Home (at 96), Nonalcoholic Beverages at Home (at 99), Eyeglasses and Contact Lenses (at 98), Utilities, Fuel and Public Services (at 96), Housekeeping Supplies (at 97), and Vehicle Insurance (at 96). The lowest of all categories in the Town is Telephones and Accessories (at 31) and Footwear (at 33) with Town residents spending far lower than national averages on these items.

TABLE 14 RETAIL GOODS & SERVICES EXPENDITURES

Retail Goods & Services Categories	Spending Potential Index (S.P.I)	Average Spent Per Household	Total Spent Per Year
Apparel & Services	56	$1,532.40	$1,109,461
Men's	61	$314.14	$227,436
Women's	53	$493.73	$357,457
Children's	70	$313.33	$226,852
Footwear	33	$163.73	$118,540
Watches & Jewelry	67	$124.95	$90,463
Apparel Products & Services	83	$122.53	$88,713
Computer	77	$100.67	$145,764
Computers & Hardware for Home Use	79	$177.67	$128,631
Software & Accessories for Home Use	75	$23.66	$17,133

Retail Goods & Services Categories	Spending Potential Index (S.P.I)	Average Spent Per Household	Total Spent Per Year
Entertainment & Recreation	93	$3,086.37	$2,234,534
Fees & Admissions	67	$409.10	$296,191
Membership Fees for Clubs	72	$117.95	$85,395
Fees for Participant Sports, excl. Trips	73	$83.07	$60,144
Admission to Movie/Theatre//Ballet	63	$92.61	$67,051
Admission to Sporting Events	68	$39.03	$28,256
Fees for Recreational Lessons	60	$76.44	$55,345
TV/Video/Sound Equipment	85	$927.11	$671,231
Community Antenna or Cable Television	93	$555.30	$402,039
Color Televisions	75	$95.21	$68,935
VCRs, Video Cameras, & DVD Players	82	$32.83	$23,771
Video Cassettes & DVDs	85	$43.92	$31,799
Video Game Hardware & Software	75	$26.64	$19,286
Satellite Dishes	113	$2.48	$1,794
Rental of Video Cassettes & DVDs	73	$45.41	$32,875
Sound Equipment	72	$121.11	$87,682
Rental & Repair of TV/Sound Equip.	71	$4.21	$3,050
Pets	125	$517.51	$374,680
Toys & Games	88	$173.02	$125,267
Recreational Vehicles & Fees	144	$587.82	$425,585
Sports/Recreation/Exercise Equipment	76	$171.78	$124,370
Photo Equipment & Supplies	82	$116.52	$84,364
Reading	84	$183.49	$132,846
Food	90	$7,450.37	$5,394,067
Food at Home	95	$4,670.64	$3,381,542
Bakery & Cereal Products	94	$679.39	$491,875
Meat, Poultry, Fish, & Eggs	98	$1,262.19	$913,826
Dairy Products	96	$512.19	$370,824

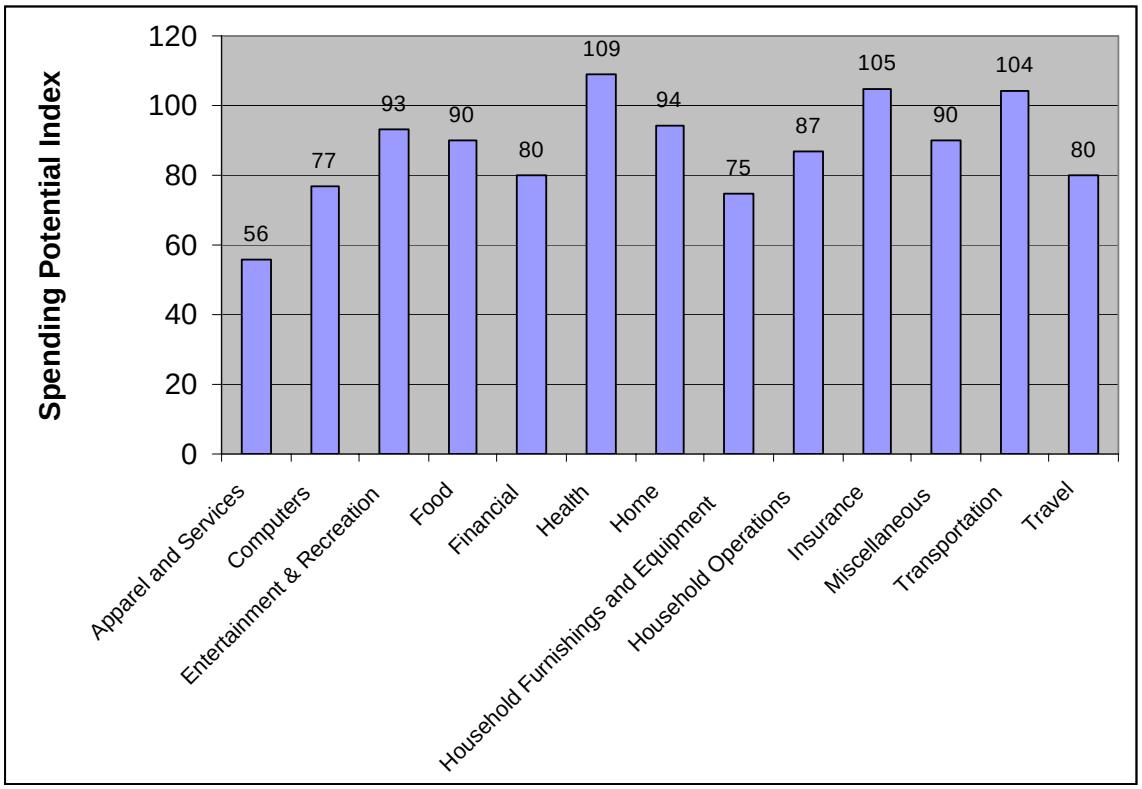
Retail Goods & Services Categories	Spending Potential Index (S.P.I)	Average Spent Per Household	Total Spent Per Year
Fruit & Vegetables	90	$771.37	$558,475
Snacks & Other Food at Home	96	$1,445.50	$1,046,542
Food Away from Home	83	$2,779.73	$2,012,525
Alcoholic Beverages	76	$435.25	$315,119
Nonalcoholic Beverages at Home	99	$419.20	$303,503
Financial	80	$4,437.00	$6,424,768
Investments	50	$2,356.50	$1,706,107
Vehicle Loans	110	$6,517.49	$4,718,661
Health	109	$305.51	$663,561
Nonprescription Drugs	102	$116.40	$84,274
Prescription Drugs	126	$715.99	$518,380
Eyeglasses & Contact Lenses	98	$84.13	$60,907
Home	94	$3,168.15	$9,174,947
Mortgage Payment & Basics	81	$6,635.81	$4,804,325
Maintenance & Remodeling Services	88	$1,564.06	$1,132,381
Maintenance & Remodeling Materials	112	$406.57	$294,354
Utilities, Fuel, & Public Services	96	$4,066.14	$2,943,887
Household Furnishings & Equipment	75	$137.61	$797,034
Household Textiles	82	$108.90	$78,847
Furniture	82	$505.12	$365,710
Floor Coverings	68	$57.30	$41,486
Major Appliances	102	$290.23	$210,124
Housewares	78	$79.73	$57,722
Small Appliances	95	$35.50	$25,699
Luggage	63	$6.50	$4,709
Telephones & Accessories	31	$17.59	$12,737
Household Operations	87	$385.02	$1,115,024
Child Care	55	$227.23	$164,511
Lawn & Garden	126	$547.68	$396,522
Moving/Storage/Freight Express	70	$36.49	$26,417

Retail Goods & Services Categories	Spending Potential Index (S.P.I)	Average Spent Per Household	Total Spent Per Year
Housekeeping Supplies	97	$728.69	$527,574
Insurance	105	$1,126.35	$3,261,921
Owners & Renters Insurance	106	$467.77	$338,665
Vehicle Insurance	96	$1,318.56	$954,640
Life/Other Insurance	105	$681.24	$493,219
Health Insurance	113	$2,037.84	$1,475,397
Miscellaneous	90	$342.53	$743,979
Personal Care Products	88	$396.78	$287,267
School Books & Supplies	72	$83.82	$60,683
Smoking Products	110	$547.00	$396,029
Transportation	104	$3,134.36	$6,807,835
Vehicle Purchases (Net Outlay)	109	$6,403.07	$4,635,822
Gasoline & Motor Oil	108	$1,992.37	$1,442,477
Vehicle Maintenance & Repairs	94	$1,007.65	$729,536
Travel	90	$268.59	$777,839
Airline Fares	72	$284.65	$206,087
Lodging on Trips	88	$349.20	$252,821
Auto/Truck/Van Rental on Trips	72	$32.83	$23,771
Food & Drink on Trips	89	$407.68	$295,160

Source: ESRI Business Analyst Online (BAO). Expenditure data are derived from the 2001, 2002 and 2003 Consumer Expenditure Surveys, Bureau of Labor Statistics. BAO forecasts for 2006 and 2011.

Chart 22: Town of Rensselaerville Spending Potential Index represents the averages of all of the major retail goods and services categories in the Town. As seen in Chart 22, the top retail goods and services categories by expenditures for Rensselaerville residents are Health (at 109), Insurance (at 105), Transportation (at 104), Home (at 93) and Entertainment and Recreation (at 93). The category with the lowest average expenditure ranking is Apparel and Services (at 56).

Chart 22: AVERAGE CONSUMER SPENDING POTENTIAL INDEX



Source: ESRI Business Analyst Online (BAO). Expenditure data are derived from the 2001, 2002 and 2003 Consumer Expenditure Surveys, Bureau of Labor Statistics. BAO forecasts for 2006 and 2011.

c. Supply and Demand

Businesses that successfully understand and respond to growing consumer demands must know where to find area demand for their products and services. A Retail Market Place Profile database is designed to help retailers analyze retail sales generated in a given area, and see if customers are traveling outside the area to shop. The Profile also highlights retail sectors that represent the area's biggest demand. Capitalizing on this information, retailers can make smarter decisions about site selection, product offerings, and more. More importantly, in the hands of the Town, this information can help Town officials make educated decisions when reviewing plans for new commercial development, and to encourage the establishment of long-term sustainable businesses in the Town.

A Retail Market Place Profile for the Town of Rensselaerville is represented on the following pages. Using data from ESRI Business

Analyst Online (BAO), this table compares the supply of retail sales available in the Town to the demand. Data for BAO's estimates of sales (supply) originated with the 1997 Census of Retail Trade from the U.S. Census Bureau. The base is updated via additional information from a variety of demographic and business databases, including InfoUSA business database, the Bureau of Economic Analysis, Current Population Survey, and NPA Data Services. Supply estimates also incorporate data from the Census Bureau's Non-employer Statistics (NES) division. Consumer spending (demand) is estimated from the Bureau of Labor Statistic's annual Consumer Expenditure Surveys, which provides consumer-spending information on households.

In comparing the supply with demand, a "Leakage/Surplus Factor" is identified. This is the difference between what a local area's residents buy and what local area retailers sell. A "Leakage" is when residents are buying more than what is sold in the area, therefore, the residents must be traveling outside the area to shop. A "Surplus" is when residents are purchasing less than the amount actually being sold in the area. This indicates local retailers are attracting shoppers from outside the area to their stores.

According to Table 15, Town of Rensselaerville retailers in the "Used Merchandise" category are attracting shoppers from outside the Town, and are thus experiencing a "Surplus". This category shows a positive percentage in the Leakage/Surplus column of Table 22. The surplus amounts to $254,655 dollars in annual sales.

There are a number of retail sectors were Town retailers are only losing small percentages of the potential demand, including, "Other Miscellaneous Store Retailers" (-8.3), "Home Furnishings Stores" (-12), and "Limited-Service Eating Places" (-52.2). These limited categories supply $481,126 to the local economy, but are losing $565,971 in potential revenue to other Towns or metropolitan areas.

Retailers that are not represented within the Town and therefore, fail to meet all of the Town residents retail demands are indicated by a (-100) in the Leakage/Surplus column of Table 15, meaning all dollars spent by Town residents in these categories are being completely leaked to other Towns or metropolitan areas. For these retail categories, the Town is losing $22,181,106 in potential revenue to other Towns or metropolitan areas.

It should be noted that ESRI Business Analyst Online (BAO) uses data from InfoUSA, a data compiler for creation of this table. As InfoUSA uses a

variety of data sources, including phonebooks, business directories, and other databases of public record, it may not include every establishment located within a community and it may not reflect recent changes in a business. In addition, reliance upon mailing addresses to identify business location may result in location misidentification.

TABLE 15. TOWN RETAIL MARKET PLACE PROFILE

NAICS Industry Category	Supply (Retail Sales)	Demand (Retail Potential)	Leakage/ Surplus Dollars ($)	Leakage/ Surplus Factor (%)
Motor Vehicle & Parts Dealers	$0	$6,360,861	-$6,360,861	-100.0
Automobile Dealers	$0	$5,456,260	-$5,456,260	-100.0
Other Motor Vehicle Dealers	$0	$496,742	-$496,742	-100.0
Auto Parts, Accessories, and Tire Stores	$0	$407,859	-$407,859	-100.0
Furniture & Home Furnishings Stores	$104,555	$491,827	-$387,272	-64.9
Furniture Stores	$0	$358,887	-$358,887	-100.0
Home Furnishings Stores	$104,555	$132,940	-$28,385	-12.0
Electronics & Appliance Stores	$0	$530,222	-$530,222	-100.0
Bldg Materials, Garden Equip. & Supply Stores	$0	$1,139,557	-$1,139,557	-100.0
Building Material & Supplies Dealers	$0	$943,789	-$943,789	-100.0
Lawn & Garden Equipment & Supplies	$0	$195,768	-$195,768	-100.0
Food & Beverage Stores	$0	$3,106,737	-$3,106,737	-100.0
Grocery Stores	$0	$2,847,381	-$2,847,381	-100.0
Specialty Food Stores	$0	$76,523	-$76,523	-100.0
Beer, Wine, & Liquor Stores	$0	$182,833	-$182,833	-100.0
Health & Personal Care Stores	$0	$1,203,079	-$1,203,079	-100.0
Gasoline Stations	$0	$2,271,347	-$2,271,347	-100.0
Clothing & Clothing Accessories Stores	$0	$703,175	-$703,175	-100.0
Clothing Stores	$0	$551,514	-$551,514	-100.0
Shoe Stores	$0	$83,790	-$83,790	-100.0

Jewelry, Luggage, & Leather Goods Stores	$0	$67,871	-$67,871	-100.0
Sporting Goods, Hobby, Book, & Music Stores	$0	$440,945	-$440,945	-100.0
Sporting Goods/Hobby/Musical Instrument	$0	$254,628	-$254,628	-100.0
Books, Periodical, & Music Stores	$0	$186,317	-$186,317	-100.0
General Merchandise Stores	$0	$2,565,527	-$2,565,527	-100.0
Department Stores (Excluding Leased)	$0	$1,084,773	-$1,084,773	-100.0
Other General Merchandise Stores	$0	$1,480,754	-$1,480,754	-100.0
Miscellaneous Store Retailers	$475,041	$708,568	-$233,527	-19.7
Florists	$0	$46,872	-$46,872	-100.0
Office Supplies, Stationery, and Gift Stores	$0	$415,328	-$415,328	-100.0
Used Merchandise Store Retailers	**$332,261**	**$77,606**	**$254,655**	**62.1**
Other Miscellaneous Store Retailers	$142,780	$168,762	-$25,982	-8.3
Nonstore Retailers	$0	$599,230	-$599,230	-100.0
Electronic Shopping and Mail-Order Houses	$0	$41,915	-$41,915	-100.0
Vending Machine Operators	$0	$140,251	-$140,251	-100.0
Direct Selling Establishments	$0	$417,064	-$417,064	-100.0
Food Service & Dinking Places	$233,791	$2,874,588	-$2,640,797	-85.0
Full-Service Restaurants	$0	$1,492,425	-$1,492,425	-100.0
Limited-Service Eating Places	$233,791	$745,395	-$511,604	-52.2
Special Food Services	$0	$198,715	-$198,715	-100.0
Dinking Places (Alcoholic Beverages)	$0	$438,053	-$438,053	-100.0

Data Note: Supply (retail sales) estimates to consumers by establishments. Sales to businesses are excluded. Demand (retail potential) represents the expected amount spent by consumers at retail establishments. Supply and demand estimates are in current dollars. The Leakage/Surplus Factor is a measure of consumer demand relative to supply, ranging from 100 (total surplus) to (-)100 (total leakage). ESRI uses the North American Industry Classification System (NAICS) to classify businesses by their primary type of economic activity. Retail establishments are classified into 27 industry groups in the Retail Trade sector, as well as four industry groups within the Food Services & Drinking Establishments subsector.

Source: Business data provide by InfoUSA, Omaha, NE Copyright 2004. All rights reserved. 2005, ESRI Forecasts

E. Municipal Resources

1. Town Organizations, Boards, and Committees

In addition to the Town Board, Planning Board, and Zoning Board of Appeals, numerous organizations and committees exist in the Town of Rensselaerville and fill an important public service, cultural, and educational role in the community. These include:

Rensselaerville

- Town of Rensselaerville Library
- Town of Rensselaerville Historical Society
- Rensselaerville Historic District Association
- Village Voices
- Edmond Niles Huyck Preserve
- The Rensselaerville Institute
- Rensselaerville Volunteer Ambulance
- Rensselaerville Volunteer Fire Company
- Woman's Batallion Woman of Trinity Church
- Presbyterian Church, Rensselaerville
- Trinity Episcopal Church, Rensselaerville
- Rensselaerville Historic District Association
- The Good Cause Club
- Conkling Hall
- Lake and Beach Committee
- Playground Committee
- Water and Sewer Committee
- Rensselaerville Cemetery Association
- Rod and Gun Club
- Hilltown Market & Natural Food Co-Op, Inc. (Member owned and operated, not conducted for profit)

Medusa

- Medusa Volunteer Fire Dept.
- 4 H Clubs
- United Church of Christ

Potter Hollow

- Potter Hollow Union Church
- Potter Hollow Rural Cemetery Committee

•Potter Hollow Schoolhouse Committee

Preston Hollow

•Preston Hollow Baptist Church
•Tri-Village Volunteer Fire Dept.
•Playground Committee

2. Municipal Budget

Tables 16 and 17 show Town expenditures by category for the years 1970, 1981, 1989 and 2001 through 2005. Highway department expenditures make up the largest proportion of Town expenditures (55% in 1989; 47% in 2005); general government the next (38% in 1989; 41% in 2005) and special districts the smallest (7% in 1989 and 12% in 2005).

As can be seen in Tables 16 and 17, expenditures for all areas of the Town budget have increased substantially between the 1980's and now. On a per category basis, the highway department showed the highest increase in expenditures between 2001 and 2005 (19%). Additional expenses have been added to the budget, as shown in Table 18: ambulance service as well as the Rensselaerville Sewer District. The Sewer District is paid for by residences within that district and not by general taxes.

Table 16 TOWN EXPENDITURE SUMMARIES FOR 1970, 1981, AND 1989 IN NOMINAL DOLLARS ($000)

CATEGORY	1970	1981	1989	1970-89 % ANNUAL INCREASE
General Fund	40.4	122.8	375.9	12.5
Highway				
Repairs and Improvements	53.5	119.9	261.4	8.7
Bridges	2.9	2.0	3.5	1.0
Machinery	26.2	56.1	73.6	5.6
Snow and Misc	29.1	94.9	174.9	9.9
Improvement Prog	10.8	72.9	38.0	6.8
Highway Subtotal	122.5	345.8	551.4	8.2
Special Districts				
Renss Water	3.2	11.9	25.0	11.4
Renss Hydrant	0.2	0.2	0.2	-

Renss Fire	3.4	11.8	13.5	7.5
Renss Light	0.7	1.3	2.2	6.2
Pres Hollow Light	0.5	1.1	1.6	6.3
Tri-Village Fire	3.4	12.3	15.9	8.5
Medusa Fire	0.3	6.3	15.0	22.9
Special Dist Subtotal	11.7	44.9	73.4	10.1
Total	174.6	513.5	1000.7	9.6

Table 17 TOWN EXPENDITURE SUMMARIES FOR 2001 through 2005 IN NOMINAL DOLLARS ($000)

CATEGORY	**2001**	**2003**	**2005**	**2001 to 2005 % Total Increase***
General Fund	852.1	801.0	908.3	6.6%
Highway				
Repairs and Improvements	464.3	489.5	554.1	19.3%
Bridges	2	2	2	0
Machinery	140	135	130	-7.1
Snow and Misc	330	299.2	343.3	4.0
Improvement Prog	--	--	--	--
Highway Subtotal	936.3	925.7	1029.4	9.9
Special Districts				
Renss Water	37.1	37.1	37.1	0
Renss Hydrant	--	--	--	
Renss Fire	45	47	48.8	8.4
Renss Light	2.8	2.8	2.8	0
Pres Hollow Light	2.1	2.5	2.5	19.0
Tri-Village Fire	44	47	48.8	11.0
Medusa Fire	36	42	47.8	32.8
Special Dist Subtotal**	167	187***	188	
Total	2793	1990	2206	

*This figure represents the total increase in expenditures between 2001 and 2005, not on an annual increase basis.
**In 2002, the Rensselaerville Sewer District was formed. Initial expenditures were $834,172 followed by yearly expenditures of $32,900. No tax appropriations have been made for this expenditure and the cost is paid by residents within that sewer district.
***In 2002, an ambulance appropriation was initiated with $52,500. In 2005, this appropriation was $47,600.

Table 18 TOWN REVENUE SUMMARIES FOR 1970, 1981, AND 1989 IN NOMINAL DOLLARS ($000) AND BY PERCENT OF TOTAL BUDGET

CATEGORY	1970	%	1981	%	1989	%	2006	%
Town Revenues							*	*
Property Tax	102.0	58.6	224.0	43.8	506.0	50.2		
Sales Tax	12.0	6.9	64.0	12.5	200.0	19.8		
Mortgage Tax	1.0	0.6	3.2	0.6	20.0	2.0		
Pmt in lieu of Taxes	1.0	0.6	3.0	0.6	1.5	0.1		
Per Capita State Aid	13.0	7.5	21.0	4.1	27.0	2.7		
State Highway Aid	18.0	10.3	60.5	11.8	38.0	3.8		
Fees and Fines	0.6	0.3	2.1	0.4	7.2	0.7		
Interest	0.6	0.3	6.3	1.2	5.0	0.5		
Subtotal	162.2	93.1	467.3	91.3	927.2	92.0		
Special Districts		0.0		0.0		0.0		
Water District No. 1	3.0	1.7	11.2	2.2	21.0	2.1		
Other Special Dist.	9.0	5.2	33.5	6.5	55.0	5.5		
(Fire, Light, Hydrant)		0.0		0.0		0.0		
Unexpended Balance	0.0	0.0		0.0	5.0	0.5		
Subtotal	12.0	6.9	44.7	8.7	81.0	8.0		
TOTAL	174.2	100.0	512.0	100.0	1008.2	100.0		

**Editors Note: This data will be completed prior to final adoption of plan*

Table 19: 2000 to 2005 Budget

	2000		2001		2002	
	Appropriation	Amount to be raised by taxes	Appropriation	Amount to be raised by taxes	Appropriation	Amount to be raised by taxes
General Fund	$841,312.00	$187,862.00	$852,063.00	$273,113.00	$787,495.00	$318,795.00
Highway						
Repairs and Improvements	$577,993.00	$327,993.00	$464,280.00	$164,280.00	$462,186.00	$357,186.00
Bridges	$2,000.00	$2,000.00	$2,000.00	$2,000.00	-------	-------
Machinery	$140,000.00	$140,000.00	$140,000.00	$140,000.00	$85,000.00	$85,000.00
Snow & Misc	$253,400.00	$253,400.00	$333,009.00	$333,009.00	$275,212.00	$275,212.00
Special Districts						
Ren. Water	$37,085.00	-------	$37,085.00	-------	37085	-------
Ren. Hydrant	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00
Ren. Fire	$44,933.00	$44,933.00	$44,933.00	$44,933.00	$46,991.00	$46,991.00
TriV. Fire	$43,926.00	$43,926.00	$43,926.00	$43,926.00	$46,991.00	$46,991.00
Med. Fire	$35,926.00	$35,926.00	$35,926.00	$35,926.00	$41,991.00	$41,991.00
Pres Hollow Light	$2,100.00	$2,100.00	$2,100.00	$2,100.00	$2,500.00	$2,500.00
Ren. Light	$2,800.00	$2,800.00	$2,800.00	$2,800.00	$2,800.00	$2,800.00
Ren. Sewer	$477,035.00	-------	$834,172.00	-------	$32,000.00	-------
Ambulance	--------	-------	-------	-------	$52,545.00	$52,545.00
Total	**$2,458,910**	**$1,041,340**	**$2,792,694**	**$1,042,487**	**$1,873,196**	**$1,230,411**

	2003		2004		2005	
	Appropriation	Amount to be raised by taxes	Appropriation	Amount to be raised by taxes	Appropriation	Amount to be raised by taxes
General Fund	$800,985.00	$247,085.00	$839,046.00	$264,746.00	$908,266.00	$267,366.00
Highway						
Repairs and Improvements	$489,467.00	$316,637.00	$517,903.00	$299,570.00	$554,116.00	$388,283.00
Bridges	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00
Machinery	$135,000.00	$135,000.00	$135,000.00	$135,000.00	$130,000.00	$130,000.00
Snow & Misc	$299,262.00	$205,092.00	$319,217.00	$202,550.00	$343,315.00	$254,148.00
Special Districts						
Ren. Water	$37,085.00	-------	$37,085.00	-------	$37,085.00	-------
Ren. Hydrant	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00
Ren. Fire	$46,991.00	$46,991.00	$47,785.00	$47,785.00	$48,785.00	$48,785.00
TriV. Fire	$46,991.00	$46,991.00	$47,785.00	$47,785.00	$48,785.00	$48,785.00
Med. Fire	$41,991.00	$41,991.00	$42,785.00	$42,785.00	$47,785.00	$47,785.00
Pres Hollow Light	$2,500.00	$2,500.00	$2,500.00	$2,500.00	$2,500.00	$2,500.00
Ren. Light	$2,800.00	$2,800.00	$2,800.00	$2,800.00	$2,800.00	$2,800.00
Ren. Sewer	$32,000.00	-------	$32,982.00	-------	$32,982.00	-------
Ambulance	$52,545.00	$52,545.00	$55,300.00	$55,300.00	$47,545.00	$47,545.00
Total	**$1,990,017**	**$1,100,032**	**$2,082,588**	**$1,103,221**	**$2,206,364**	**$1,240,397**

3. Town sponsored programs and services

Fire Department and Ambulance*

The Town of Rensselaerville has three fire districts, each serving part of the Town and supported by a special property tax. In reality these three fire districts are not confining. The three fire companies frequently assist each other in cooperative efforts when a major emergency exists. Nevertheless, each parcel in Town is assessed to support the fire district in their area of the Town. The volunteer ambulance service is also supported by a separate charge based on property assessments but the area that supports the ambulance is the entire town.

Rensselaerville Fire Department

Description of equipment and use:

1. Pumper truck. This vehicle transports water and pumps water.

2. Tanker truck. This vehicle transports water to the pumper truck but can also pump water.

3. Brush Rescue Truck. This 4 WD vehicle is used as a quick response vehicle for grass fires, accidents, on-scene radio and lights. It is smaller and holds less water. If Jaws of Life are needed, they call for assistance from Tri-Village or Medusa Fire Departments.

Medusa Fire Department

Description of equipment and use:

1. ETA - Engine Tanker combined. This vehicle transports and pumps water.

2. Tanker truck. This vehicle transports water to the ETA tanker and can also pump water.

3. Rescue truck. This vehicle was previously an ambulance that was converted to a "utility" vehicle. This vehicle is smaller and carries miscellaneous equipment including the Jaws of Life. It is a place for people to keep warm while on an emergency call.

**Editors Note: Further Information for these topics are being updated and will be added in.*

Public Transportation

There are several transportation alternatives for residents of the Town who cannot or choose not to drive. The Capital District Transportation Authority (CDTA) provides bus service to the Town once per week on Fridays. The Route #95 bus travels westbound and eastbound and has stops at the Preston Hollow Country Store, Young's in Potter Hollow, Witbeck Auto in Cooksburg, the Medusa Post Office, the Rensselaerville Village Market, Ford Corners, New Salem (Route 85 & 85A), Voorheesville (Route 85A), Allen Street and New Scotland Avenue, South Pearl and Morton Avenue, State and Pearl Streets, Colonie Center, and the Northway Mall. The cost is only .50 cents each way.

The Town of Rensselaerville provides a Senior Van Service. Currently the van goes to Bryants Center in Greenville on Tuesdays and to the Cobleskill WalMart on Thursdays. The Town provides a paid driver for this service. The van is also available on Monday, Wednesday and Fridays to take senior citizens to doctor's appointments in the Albany Area. This service is available by appointment only and is staffed by a volunteer driver.

The Hilltown Express also services the Town of Rensselaerville. This services brings residents to medical appointments in the Albany or South Woods Complex, Atrium or Palisades in Colonie, Executive Park in Westmere, and any medical facility as far east as Elsmere and Delaware Avenue. This service is available to residents on a first come, first serve basis and provides a wheelchair service. The cost is free; however there is a suggested donation of $4.00 each way. Appointments can be accepted as early as two months in advance.

Albany County residents who are Medicaid recipients have access to the MTM Program, a Medicaid - funded non-emergency transportation service. MTM, formally known as the CDTA ACCESS Program, arranges transportation to non-emergency medical appointments Monday through Friday from 8:30 am to 3:30 pm. If a family member or a friend can drive the client to their appointment, Medicaid can reimburse the driver for gas.

In addition to the above mentioned transportation services, the Veterans Administration transports veterans to the Veterans Hospital on Hackett Boulevard for medical appointments, adult day care services and other business with the VA. The American Cancer Society also transports patients without any other means of transportation to cancer treatments and related appointments.

A variety of private medical transportation services are available to Town residents, including, but not limited to, Tendercare Transport, Allcare Transportation, Wheeler's, Albany Capitaland Ambulette Services, DJ Ambulette, Capital District Ambulance Service, Mohawk Ambulance Service and Doctors' Ambulance Service. Taxicabs are also available through Capitaland Taxi, Yellow Cab and Duffy's Taxi.
Town Newsletter

The Town Newsletter is paid for, organized, and published by Town Board once a month. It is sent to all mailboxes in Town as well as to those out-of-town residents that have requested a copy.

4. Parks and Recreation

The Town of Rensselaerville offers a variety of recreational opportunities to its residents. There are small areas of land in the Town developed as playgrounds with play equipment, picnic areas and ball courts. Large parcels of land are available for recreation activities such as hiking, fishing, hunting, picnicking, cross-country skiing, snowmobiling, etc. There are a number of water systems which are used recreationally for fishing, swimming, boating, nature study and other uses.

The Town of Rensselaerville presently provides some annual funding to three parks to assist park committees with equipment upgrades, maintenance and program.

- In the hamlet of Medusa, The Medusa Fire Company has a park located on fire company land. There is a picnic pavilion and some play equipment at the site.

- In the hamlet of Preston Hollow, the Town of Rensselaerville owns the Bayard Elsbree Memorial Park. This fourteen-acre parcel on State Route 145 is located along the Catskill Creek and consists of a picnic area with barbeque pits, pavilion with picnic tables, play equipment, a ball field and snack stand, black-topped bicycle/walk trail, basketball/tennis court, and ice rink; it is the home of Preston Hollow Little League. Upgrades to the park were made in 2005 through the generous support from private donors.

- In the hamlet of Rensselaerville, The Town of Rensselaerville owns a ten-acre parcel of land located at the junction of Medusa Road (County Route 351) and Albany Hill Road (County Route 361). This park was acquired by a deed transfer from the E.N. Huyck Preserve,

Inc. in 1996. There is a pavilion with picnic tables, ball field, play equipment and storage shed, and basketball/tennis court. The park will flood during times of heavy rain or snow melt.

The Huyck Preserve offers areas for recreation to residents of the Town and surrounding communities. A beach on Myosotis Lake is open in the summer to residents of the hamlet of Rensselaerville and those living within a two-mile radius. The Preserve maintains approximately 10 miles of trails for hiking, cross-county skiing, and snowshoeing. The Preserve also offers guided nature walks in the spring, summer and fall which local residents are welcome to attend.

There are approximately 2,260 acres of state-owned forest land in the northwestern portion of the Town of Rensselaerville. These state-owned parcels are managed mainly for timber harvesting and wildlife management, but also receive incidental recreational use. Partridge Run Wildlife Management Area is located in the Town of Berne and borders the Town of Rensselaerville to the north. This area offers recreational opportunity for the residents of the Town. There are over 7,000 acres of state-owned land in the Town or bordering the Town available for recreational use by Town residents. Recreational uses in these state-owned areas include hunting, fishing, snowmobiling, hiking, bird watching, picnicking and cross-country skiing.

There are eighteen waterways which receive the majority of the water recreational use in the Town, including nine creeks, seven lakes/ponds and two wetlands. The nine creeks include Catskill Creek, Tenmile Creek, Eightmile Creek, Squirmer Creek, Fox Creek, Potter Hollow Creek, Cheese Hill Creek East, Cheese Hill Creek West, and Hauversville Creek. The primary uses of these creeks are fishing, nature study and hiking, with the additional uses of boating, picnicking and swimming on Catskill Creek. The seven lakes/ponds include Myosotis Lake, Lincoln Pond, Crystal Lake, Triangle Lake, Echo Pond, Widland Pond and Sikule Pond. All these lakes/ponds are used for boating, fishing, nature study and hiking, with the exception of Lincoln Pond, which has no boating or fishing. Additionally, Myosotis Lake, Lincoln Pond, Crystal Lake and Triangle Lake are used for picnicking and swimming, and Widland Pond is used for picnicking. The two wetlands, Route 85 Marsh and Kohlroser Swamp, are used for fishing, nature study and hiking. Recreation on Crystal Lake and Triangle Lake is by landowners or with permission. All other water bodies are available to the public. Myosotis Lake is used as municipal water supplies.

F. Infrastructure

1. Water Supply

The Town has three central water supply systems, the Rensselaerville Water District, the Camp Cass water supply system and the Rensselaerville Institute water supply system. The Rensselaerville Water District is municipally owned and operated, the Camp Cass water supply system is owned and operated by New York State, and the Rensselaerville Institute water supply system is privately owned and operated. The majority of Town residents are not served by public water, but are dependent upon private drinking water wells. Detailed information regarding ground water quantity and well yields can be found in Appendix D, the New York Rural Water Association (NYRWA) Groundwater Study for the Town of Rensselaerville. The central water supply systems are described below:

Rensselaerville Water District No. 1: According to the "Annual Water Supply Statement & Consumer Confidence Report" for the year 2005, the Rensselaerville Water District serves 82 residences and places of business, or approximately 150 to 200 people in the Hamlet of Rensselaerville depending on the season. The Water District encompasses properties located along Route 85, (Delaware Tpke.) Methodist Hill Road, Albany Hill Road CR 361 and County Route 351. Not all property owners residing within the Hamlet are served by public water. Five (5) homes within the District are not connected to the water system as mains were never extended to them (probably due to high estimated costs to do so, resulting from their location or necessity to cross the Ten Mile Creek or deal with rock excavation). These homeowners have chosen to continue to use their private wells. Six (6) other homes within the District that could be connected to the existing system continue to be served by their private well.

The Water District's supply source is Myosotis Lake, which is located at the headwaters of Ten Mile Creek. Myosotis Lake has a surface area of 100 acres and a maximum depth of approximately 20 feet. The watershed feeding the surface water system has a total area of 7 square miles (3,350 acres), with 2,250 acres in the Town of Rensselaerville and 1,100 acres in the Town of Berne. Over one-half of the watershed area in Rensselaerville is located in the 2,000 acre Huyck Preserve. A very small portion of the watershed area in Berne is located in the Partridge Run State Wildlife Management area.

A small impoundment dam in the Ten Mile Creek, downstream of the larger Myosotis Lake dam, at the top of the Rensselaerville Waterfalls, provides water to the District system.

An underground pipe extends to the treatment storage and distribution facilities, which consist of a sedimentation chamber (underground concrete structure); a slow sand filter (in the underground concrete containment structure); a chlorination system; and a 50,000 gallon underground storage tank ("Reservoir"). According to the Chairperson of the Sewer and Water Committee, as pressure is created by gravity, at peak user times of the year, the water system has sometimes experienced a loss of pressure as the level in the storage tank drops faster than the sand filter is able to replenish it. This situation has been exacerbated if combined with temporary problems in filter operation or sudden leaks in the distribution system.

The distribution system of water mains, valves and hydrants was replaced around 1976 and is in good condition. Most house service connections (usually ¾ inch type K copper) were replaced when the new mains were installed. Occasionally, old house service pipes have been found after their failure resulted in leaks. There may be one or two older (pre 1976) plastic service pipes still in use.

The system of water mains was originally installed in 1898 when the Huyck family first facilitated the design and construction of the original water system. The filtration and storage facilities were built around 1940.

Water quantity supplied by the system is from 12,000 to 18,000 gallons per day (GPD). There are currently no water meters installed. Based on the population served by the system (180 persons), a maximum use should be 18,000 GPD using a standard consumption estimate of 100 GPD/Person. Subsequent to several water studies (15 – 20 yrs ago), the operation of the water plant and repairs to significant system leaks, the actual daily usage in 2005-2006 has been logged and is consistent with that expected for the population served.

The capacity of the sand filter is 18,500 GPD, according to a decision document of the New York State Water Power and Control Commission which granted the town approval to purchase the system in 1940. In order to allow for any additional hook-ups into the drinking water system, the Town will have to make major investments to improve the capacity of the slow sand filtration system and to increase storage capacity. Of more immediate concern, the water in the impoundment structure (small dam) in the stream at the head of the falls, was significantly damaged by

flooding on June 2006. According to town records, a preliminary review of the damage, conducted by Lamont Engineers and NYCDEC Region 4 Engineers, recommended short term emergency modifications to the by-pass channel upstream of the impoundment dam. These observers also recommended a more detailed engineering study/survey be prepared on behalf of the Town and the study should include recommendations for the design and emergency repairs to the impoundment dam/intake structure and also long-term improvements to the entire system; such a study to include assessment of means to finance recommended improvements via grants, low interest loans, etc.

The Myosotis Lake dam has also been the subject of several engineering studies in the past. An early 1990's study concluded that the dam spillway capacity was considered seriously inadequate for the probable maximum flood. A preliminary design report prepared by Clough-Harbour Associates (1987), recommended that the height of the dam be raised and widened to alleviate the potential problem. Substantial repairs to the dam were completed in the early 1990's.

According to the Surface Water Quality Data Report conducted in 2005-2006 [1] by members of the Land Use Advisory Committee with water testing provided by a certified testing laboratory, the water quality of Myosotis Lake is generally good. The lake does suffer from periodic algae blooms occurring from late summer through early winter which increases turbidity and causes odor and taste problems. The Surface Water Quality Report showed levels of phosphorus and nitrate to be below detection limits, indicating that human impact upon the watershed is not significant during most times of the year. Algae blooms are likely related to the shallowness of the lake and subsequent warm temperatures.

During the summer bathing season, when monthly samples for total coliform bacteria are taken by the Albany County Department of Health at the public beach area of Myosotis Lake, test results show that coliform bacteria levels are reaching higher levels than in recent years.[2] According to water testing taken during the summer of 2005 the July and August levels are well above the acceptable limits for safe swimming. Currently, there are very few septic systems in the present watershed and no intensive agricultural activities. The reason for this rise in bacteria levels is unknown, but could be due to an increase in bathers or the presence of

[1] See Appendix E. Surface Water Quality Data For Rensselaerville.

[2] See Appendix E.

Canada Geese. It is a not common practice to allow swimming in a public drinking water supply source.

Camp Cass: The Camp Cass water supply system is located at the Edward R. Cass Youth Camp ("Camp Cass") on Cheese Hill Road. The Camp Cass water supply system serves approximately 80 people and is maintained by New York State. Water is supplied from three existing wells that are 277, 407 and 850 feet deep. A fourth well exists on the site but has been abandoned. The system is composed of a 45,000-gallon storage tank, a chlorination system and a treatment system to remove iron and manganese.

Rensselaerville Institute: The Rensselaerville Institute has a private water and sewer system separate from the hamlet sewer and water system. The Institute has drilled several wells to serve their system. According to the groundwater study conducted by the New York Rural Water Association for the Town of Rensselaerville (See Appendix D), the drinking water system for the Institute is regulated as a transient non-community water system including because it does not regularly serve at least 25 of the same people for over six months in a year.

2. Sewer Treatment

The majority of Town residences and businesses are served by private septic systems which consist of either cesspools or septic tanks with leach fields. Only the Hamlet of Rensselaerville is currently served by a public sewer system, although there are still a number of properties within the Hamlet that are not hooked up to the sewer system. Approximately 85 homes and businesses are in the sewer district however only 65 are connected to the sewer. The limited number of homes connected is a result of a decision to reduce the number of homes to be connected in order to keep effluent from the sewer treatment facilities below 30,000 gallons per day, so as to be able to discharge into the ground and avoid more stringent, now and in the future, effluent quality standards which would apply if discharge was made directly into the Ten Mile Creek. The sewer district serves some properties located on Albany Hill Road (County Route 351), Methodist Hill Road, Delaware Turnpike (NYS Route 85), Pond Hill Road, and County Route 351. Users located across Ten Mile Creek, between the Post Office and stream are not presently served. Homes on the extreme ends of Methodist Hill Road and RT. 351 are also not served.

The sewer plant consists of three levels of treatment, primary, secondary and tertiary. In the last stage of treatment the wastewater is treated

through a ground absorption system. The treatment plant is currently permitted to handle only about 29,000 gallons of wastewater per day. Actual flows are about 12,000 gallons per day, which is consistent with the estimated population connected. Any expansion of the collection system, up to the permitted capacity could be physically accommodated subject to Albany County Health Department approval or revision to permits and to finding an acceptable financing scheme.

As previously stated, there are a number of residences and businesses in the Hamlet that are served by private septic systems. In general, the soils in the Hamlet are thick deposits of sand and gravel which are suitable for the operation of individual in-ground septic systems. Problems that have been experienced appear to be due to the small lot sizes and old age of many of the systems. In 1986, the Town requested that Albany County Health Department perform a survey of septic systems in the Hamlet of Rensselaerville. The survey reported that some leakage into the Hamlet's storm sewer system was detected and therefore effluent leakage into Ten Mile Creek was a possibility. These concerns were corrected by the construction and operation of the new collection and treatment systems.

The New York Rural Water Association (NYRWA) conducted a groundwater study for the Town of Rensselaerville during the summer of 2006, (See Appendix D). This study details a comprehensive evaluation of the hydrogeologic setting of the Town. In addition to evaluating bedrock and unconsolidated aquifer wells, the report studied public water supply wells, ground water recharge and discharge areas, groundwater contamination, and offers a variety of recommendations that are incorporated into the strategies of this comprehensive plan.

According to the above referenced report, "an individual lot must be sufficiently large enough to supply on-site groundwater needs and adequately dilute effluent introduced from the site's septic system"[3]. As depicted on a map titled Town of Rensselaerville Recommended Minimum Lot Size for Areas With Individual Wells and Septic Systems included in the NYRWA report, the minimum lot sizes for on-site sewer and wells within the Hamlet of Rensselaerville, range from 2 to 5 acres if not served by public water and sewer. In the Hamlet of Rensselaerville, current zoning allows for minimum lot sizes of 0.5 to 1 acre for properties not connected to the public water and sewer system, well under the recommended minimum lot size.

[3] New York State Rural Water Association Groundwater Study for the Town of Rensselaerville, 2006, (See Appendix D) page 20.

3. Special Districts

Two hamlets also have special districts. The hamlet of Rensselaerville has four special districts that have been established by the Town Board to provide services to the hamlet and vicinity and include a water, sewer, hydrant, and lighting districts. These districts each have their own separate boundaries. Each district is recorded on Town tax maps at Town Hall. Property owners served by these districts are charged for district services. However, not all properties within each district are provided the same level of service. For example not all properties in the water district are hooked up to the hamlet water supply and not all parcels in the sewer district are hooked to the hamlet sewer system. Different charges are assessed depending on the level of service provided. The lighting district extends far beyond the area served by public lighting and thus many parcels in the district are not charged for inclusion in the district. The rational used to establish many district boundaries is not clear or self evident. While it might be useful to have maps in this plan for each district, the complexity and expense of digitizing and printing those GIS maps precluded their inclusion in the plan.

The hamlet of Preston Hollow also has a lighting district. It runs roughly on the back side of parcels that front on route 145 extending from a starting point at the western end of the town park, east to the intersection with Edwards Hill Road.

4. Transportation and Highways

a. Roads and Traffic (See Map 18)

The Town of Rensselaerville is served by a system of Town, county, and state roads, totaling 137.8 miles. There are 83 miles of Town roads, of which about 50% are paved. There are 2.5 miles of seasonal Town roads which are not plowed in the winter. The main arterials interconnecting most parts of the Town are county roads. There are a total of 45 miles of county roads, all paved. County roads are maintained and plowed throughout the Town by the Albany County Highway Department. The Town is served by only three State Highways: Routes 85, 145 and 81, totaling ten miles. These roads serve only the northeast and southwest corners of the Town.

State Route 85, which ends in the hamlet of Rensselaerville, provides the fastest route to the Capital District. It generally follows the route of the Old Delaware Turnpike which dates to the 18th century. The right-of-way

width generally varies from 50 to 66 feet, with two 10 - foot travel lanes and shoulders ranging from 2 to 4 feet wide.

State Route 145 follows the route of the eastern branch of the Schoharie Turnpike which was established in 1807. This road has long been a major transportation route from the mid-Hudson Valley to the Schoharie Valley. The right-of-way width of Route 145 is 66 feet, with two 12 - foot travel lanes and 3 foot shoulders. Many homes and structures in the Preston Hollow area were originally built within the right-of-way of Route 145. While the state has no plans to widen this road or disturb any of these structures, future buildings should not be placed within the state highway right-of-way. The NYS Department of Transportation has designated State Route 145 as a Truck Access Highway for use by special dimension vehicles. Special dimension vehicles that are allowed to travel on this road include: 48'long semi-trailers, 53' long semi-trailers with 41' kingpin, 28.5' tandem trailers, 65' long maxi-cube, triple saddle mount, 48' long auto carriers, and 75' long stinger –steered trailers.

State Route 81 connects with Route 145 at Cooksburg and continues southeast to Greenville and Coxsackie. Route 81 became a state highway in 1930 and is a less traveled road than the two other state highways in the Town. Its right-of-way width varies, with two 10 to 12 - foot travel lanes and shoulders ranging from 2 to 6 feet wide. Only about 1.6 miles of Route 81 are located in the Town of Rensselaerville. The portion of Route 81 between its intersections with of NY Route 145 to NY 32 in the Town of Durham is also a NYS designated Truck Access Highway.

The roadway requirements contained in the Towns existing subdivision regulations are based on a model normally used in suburban or urban settings. Required pavement widths range from 18 to 50 feet. Full curbs, gutters and sidewalks are required unless waived by the planning board.

b. Traffic Volumes

Recent traffic count data (1993-2002) is available for the 13 segments of the county highway system and for the three state highways. Traffic on county roads in the Town of Rensselaerville is variable, ranging from a low of 41 average annual daily trips on County Route 12 near the Broome Town Line, to a high of 1,317 average annual daily trips on County Route 403. County routes 351 (Medusa Road), and 352 (Fox Creek Road) experience heavy traffic volumes as residents travel from the hamlets of Preston Hollow and Medusa to the hamlet of Rensselaerville to reach NYS Route 85 and the Capital District region. County Route 353

(Livingstonville Road) also experiences heavy volumes, especially between the intersections of CR Route 359 and NYS Route 85.

The weekday peak hour traffic on county roads in the Town generally occurs from 7 – 8 a.m. and from 4 – 6 p.m. These peaks are clearly associated with work trips. However, the overall peak hour traffic on most county roads occurs on either Saturday or Sunday from 10 a.m. – 2 p.m. On most county roads surveyed in the Town, this peak is slightly higher than the weekday peak. Table 28 reflects the most recent traffic counts for county highways in the Town of Rensselaerville as given by the Albany County Department of Public Works on August 21, 2006. Table 20 reflects the latest counts (2002), the previous counts for various years, and the percent growth rate. It should be noted that there is a natural variability in daily volumes. Due to this variability, actual annual growth rates may differ from the calculated growth rates shown.

Table 20 COUNTY HIGHWAY Traffic Counts

Route	**Start point**	**End point**	**Latest count**		**Previous count**		**Growth rate**
			Year	**ADT**	**Year**	**ADT**	
CR 6	NY 85	Partridge Run Rd	2001	193	1991	201	-0.4%
CR 10	CR 353	CR 12	2001	300	1991	284	0.5%
CR 10	CR 12	CR 12	2001	240	1991	219	0.9%
CR 12	CR 10	CR 10	2001	41	1990	72	-5.0%
CR 351	CR 352	CR 403	2000	669	1993	662	0.2%
	CR 403	CR 357	1993	342			
	CR 357	CR 402	1998	159	1991	159	0.0%
	CR 402	CR 361	1993	480			
	CR 361	CR 361	1998	514	1991	511	0.1%
	CR 361	NY 85	1998	1333	1991	702	9.6%
CR 352	CR 351	CR 357	2002	397	1996	524	-4.5%
	CR 357	CR 358	2001	704	1996	627	2.3%
	CR	Pearson Rd	2002	650	1991	576	1.1%

	358						
	Pearson Rd	NY 145	2002	680	1996	588	2.5%
CR 353	NY 85	CR 359	2002	1038	1996	977	1.0%
	CR 359	CR 358	1998	799	1991	463	8.1%
	CR 358	CR 10	1998	404	1993	318	4.9%
	CR 10	Schoharie Co.	1998	163	1991	202	-3.0%
CR 354	CR 362	Green Co.	2002	579	1997	628	-1.6%
CR 357	CR 351	CR 352	2002	624	1996	575	1.4%
CR 358	CR 352	Kellie Rd	1998	265	1991	142	9.3%
	Kellie Rd	CR 359	1998	128	1993	153	-3.5%
	CR 359	CR 353	1998	137	1991	208	-5.8%
CR 359	CR 353	CR 360	1998	391	1991	194	10.5%
	CR 360	CR 358	1998	151	1993	188	-4.3%
CR 360	CR 352	CR 359	1998	129	1991	228	-7.8%
CR 361	CR 351	CR 413	1998	93	1991	116	-3.1%
	CR 413	CR 351	1998	240	1991	156	6.3%
CR 403	CR 409	Marks Rd	2001	427	1991	472	-1.0%
CR 403	Marks Rd	CR 351	2001	471	1989	616	-2.2%
Marks Rd (403 spur)	Greene Co	CR 403 mainline	2001	419	1997	344	5.1%

Source: Albany County Department of Public Works, 2006

Traffic volumes on State Routes 85 and 145 are generally higher than on all other roads in the Town. Route 81 traffic is comparable to the more heavily traveled county roads. The Average Annual Daily Traffic (AADT) is the average number of cars per day in both directions averaged out over the entire year. AADT's on Routes 85 and 145 are 1,650 and 1,600

average annual daily trips respectively, as of traffic counts taken in 2004. The capacity of these State roads is many times greater than current traffic volumes.

Table 21 shows historic and current traffic counts for Routes 81, 85 and 145. Since the late 1980s, traffic volumes have gradually increased for Routes 81 and 85, and the volumes for Route 145 has been unstable ranging from a low of 1,136 AADT in 1989 to a high of 3,002 AADT in 2000, back down to 1,600 AADT in 2004.

Table 21 STATE HIGHWAY AADT's

Year	Route 81	Route 85	Route 145
1984	598	1,145	1,147
1985	--	--	1,613
1986	557	--	1,467
1988	--	1,152	--
1989	410	--	1,136
1990	735	--	--
1992	--	--	1,936
1994	--	--	1,533
1995	681	1,401	--
1997	--	--	2,145
1998	623	1,503	--
2000	--	--	3,002
2001	706	1,555	--
2003	--	--	1,592
2004	800	1,650	1,600

Source: New York State Department of Transportation.

c. Proposed Highway Improvements

Several improvement projects that were discussed in the 1989-90 Comprehensive Plan have since been completed. The Albany County Highway Department, has rehabilitated the pavement of County Route (CR) 358 (completed in 2001), CR 359 (completed in 2001), CR 352 (completed in 2004), and CR 353 (completed in 2006).

Since 1990, the County has completed the reconstruction of CR 403 (S. Westerlo Road) from CR 405 to CR 351 (completed in 2006) and CR 351 (Medusa Road) from SR85 to CR 402 (completed in 2003). In addition, several sections of 13 other County roads have been paved.

As envisioned in the 1989-90 Comprehensive Plan, the county competed the rehabilitation projects for the following five bridges on county roads. These bridges include: CR 354 over the Potter Hollow Creek (completed in 2004), McCullock Road over the Ten Mile Creek (completed in 2001), Mercer Lane over the Catskill Creek (completed in 1999), Synders Road over the Catskill Creek (completed in 1999) and CR 353 over the Ten Mile Creek (completed in 1992). New York State DOT also completed a major bridge replacement project on NY Route 145 over Fox Creek.

Other projects being planned for the near future include rehabilitation of CR 10 from CR 353 to the Schoharie County line (to be completed in 2007) and CR 12 from CR 10 to the Town of Berne line (to be completed in 2007).

G. Schools (See Map 19)

The Town of Rensselaerville is serviced by four school districts, Cairo-Durham, Middleburgh, Berne-Knox-Westerlo, and Greenville Central School Districts, all of which have facilities located outside of the Town.

As is depicted on the School District Map (Map 19), the majority of the eastern part of the Town is within the Greenville Central School District, with only about eight properties within the Berne-Knox-Westerlo School District in the northern part of the Town. A large area of the western part of Town is within the Middleburgh School District, with a small segment in the south-west corner of the Town in the Greenville Central School District. A south central portion of the town is within the Cairo-Durham School District.

Rensselaerville students make up a small portion of the enrollment in each of these districts. Town government has very little influence and no control over decisions made by locally elected school boards. According to the year 2006 enrollment statistics, 200 students from the Town of Rensselaerville in the K-12 grades attend the Greenville schools, 70 students from the Town attend the Middleburgh schools, 25 students from the Town attend the Cairo-Durham schools and currently there are no students from the Town attending the Berne-Knox-Westerlo schools.

The majority of the eastern part of the Town is within the Greenville Central School District, which includes three schools, a high school, a middle school and an elementary school. The Scott M. Ellis Elementary School had a 2004-2005 enrollment of 556 students in grades Kindergarten thru 5 with 51 teachers; Greenville Middle School, had an

enrollment of 348 students in grades 6 thru 8 with 24 teachers; and the Greenville High School, had an enrollment of 468 students in grades 9 thru 12 with 30 teachers. With a total enrollment of 1,372, the overall student-teacher ratio is 13.1 students per teacher.

In the Greenville Central School District, there is and expenditure per student of $7,381. In comparison, overall in New York State, public schools total expenditure per student was $8,177.

A large area of the western part of Town is within the Middleburgh School District, which also includes three schools, a high school, a middle school and an elementary school. The Middleburgh Elementary School had a 2004-2005 enrollment of 414 students in grades Kindergarten thru 5 with 42 teachers; Middleburgh Middle School had an enrollment of 239 students in grades 6 thru 8 with 16 teachers; and the Middleburgh High School had an enrollment of 317 students in grades 9 thru 12 with 23 teachers. With a total enrollment of 970, the overall student-teacher ratio is 11 students per teacher.

In the Middleburgh School District, there is and expenditure per student of $8,207. In comparison, overall in New York State, public schools total expenditure per student was $8,177.

A small south central portion of the Town is within the Cairo-Durham School District which includes four schools, a high school, a middle school and two elementary schools. The Cairo Elementary School had a 2004-2005 enrollment of 530 in grades Kindergarten thru 5 with 40 teachers; the Durham Elementary School had an enrollment of 180 students in grades Kindergarten thru 5 with 17 teachers; the Cairo-Durham Middle School had 453 students in grades 6 thru 8 with 37 teachers; and the Cairo-Durham High School had 604 students in grades 9 thru 12 with 43 teachers. With a total enrollment of 1,767, the overall student teacher ratio is 12.9 students per teacher.

In the Cairo-Durham School District, there is and expenditure per student of $5,674. In comparison, overall in New York State, public schools total expenditure per student was $8,177.

About eight properties in the northern part of the Town are located within the Berne-Knox-Westerlo School District which includes two schools, an elementary school and a junior-senior high school. The Berne-Knox-Westerlo Elementary School had a 2004-2005 enrollment of 417 students in grades Kindergarten thru 5 with 32 teachers and the

Berne-Knox-Westerlo Junior-Senior High School had an enrollment or 670 students in grades 6 thru 12 with 52 teachers. With a total enrollment of 1,087, the overall student teacher ratio is 12.9 students per teacher.

In the Berne-Knox-Westerlo School District, there is and expenditure per student of $7,453. In comparison, overall in New York State, public schools total expenditure per student was $8,177.

According to data collected by the LUC, Rensselaerville students currently enrolled in the 4 school districts:

Greenville	200
Berne Knox Westerlo	0
Middleburgh	70
Cairo/Durham	25

Town government has very little influence and no control over decisions made by locally elected school boards.

H. Historic Resources (See Maps 20 and 21)

The Town of Rensselaerville is rich in both historic and archaeological resources. Historic buildings and archaeological sites occur throughout the Town with the largest concentration of historic buildings in the hamlet of Rensselaerville. Lesser concentrations occur in the hamlets of Preston Hollow, Medusa, and Potter Hollow and along Route 81 in the vicinity of Cooksburg. In addition, approximately 125 sites of historic or potentially historic structures are dispersed throughout the entire Town.

A report of historic sites within the hamlet of Rensselaerville was prepared by Judith Botch in June, 1982 on behalf of the Rensselaerville Historical Society. The report contains a description of the Town and hamlet in general, and specific descriptions of individual historic sites in the hamlet. The survey report was submitted to the U.S. Department of Interior National Park Service for nomination of the hamlet to the National Register of Historic Places. As a result, the hamlet of Rensselaerville is now listed on the National Register as a Historic District. Excerpts from the report summarizing local history appear in Appendix C of this document.

Sites of archaeological importance also occur throughout the Town. Information on the sites has been compiled from several sources including residents of the Town, the State Historic Preservation Office,

and the New York State Museum. Following is a list of identified and potential archaeological sites within the Town.

NYSM Site #2794
Site Type: Campsite
Location: Within hamlet of Preston Hollow, across Catskill Creek from Brookside Cemetery and on floodplains where Fox Creek enters Catskill Creek.
Source: New York State Museum

NYSM Site #5298
Site Type: Campsite
Location: Extends for at least 3/4 of a mile along Fox Creek beginning approximately 2.5 miles upstream from Catskill Creek.
Source: New York State Museum

Site Name: Fox Creek
Location: At the mouth of the creek on the floodplain in Preston Hollow to 3/4 mile upstream.
Source: Natural Resources Committee, Town of Rensselaerville.

Site Name: Area of Archaeological Potential
Location: In Cooksburg along floodplain
Source: Natural Resources Committee, Town of Rensselaerville.
Site Name: Huyck Felt Mill
Location: Ruins to the northwest of the hamlet. Evidence may occur on both sides of Tenmile Creek above the Grist Mill Pond.
Source: Edward Curtin, Archaeologist for Bagdon Environmental Associates.

The Town of Rensselaerville is, in many ways, living history. Because the Town retains the physical framework of its original settlements, and enjoys the preservation of a large percentage of its built history, it has a unique aspect that has been recognized by many organizations, such as the New York Preservation League, the National Trust for Historic Preservation, and others. As part of the 1989 Comprehensive Land Use Plan the Town officially recognized the importance of Rensselaerville's historic character by enacting an Ordinance enabling citizens to nominate their properties for historic structure designation, which can lead to New York State and National Register of Historic Places status.

Many of the public groups and organizations in the Town -- fire companies, churches, clubs -- are interested in and protective of their histories and regularly have activities, events, and displays which include

appreciations of our past. The Town has offices and membership organizations that serve the public interest in historic and preservation activities.

Town Historian: The Town Historian is appointed by the Town Board, advises the Board and the Supervisor on historical matters, responds to requests for historical information that come to the Town government, and provides information to the public.

Rensselaerville Historical Society: A Town-wide organization, the Society operates the Grist Mill Museum and a records retention and research center in the hamlet of Rensselaerville. It operates a research and genealogy program, produces regular public education programs, electronic and print publications, and a program of historic markers for the Town. The Society also supports many other Town organizations in preserving their records, artifacts, and in some cases, their historic buildings.

Rensselaerville Historic District Association: The hamlet of Rensselaerville is, with the exception of two structures, an historic district recognized by the New York State and National Registers of Historic Places. It is internationally recognized as a unique collection of late-18th-early 19th century Georgian and Federal-style architecture, preserved with relatively little government regulation. The RHDA is a membership organization made up of residents of the National Register Historic District. It monitors the activities in the district, particularly those involving public works. It sponsors educational and other public programs focusing on village history and promoting responsible maintenance of historic structures. It provides information and support to owners of the District's buildings. The RHDA also organizes public events to determine policy recommendations for any development within the District.

A full accounting of all listed historic sites in Renssealerville can be found at www.oprhp.state.ny.us.

Appendix B: Public Input

Summary of Public Opinions

Town Survey

The June 2006 Town-wide survey was mailed to 1400 households and had a response rate of approximately 38%. Residents that participated in the survey represented all geographic areas of the town, as well as a wide variety of occupations and socio-demographics. Participants were mainly one and two person-households, the majority of the respondents were between the ages of 50 and 69, and they held a variety of occupations, although many were retired. Most participants lived in owner-occupied single family homes (77%) or on farms (8%). A little more than half of the respondents were full-time residents (55%) and 65% live outside a hamlet area while 35% lived in hamlets.

Some of the highlights of the survey include:

- The majority wanted population levels to stay the same or increase slowly.

- The majority considered loss of farmland as the most serious problem facing the Town.

- Many people, but not the majority, said there are at least some problems with highways, public transportation, health and medical care, land use planning, employment opportunities and solid waste.

- The majority however, felt there were no problems with police protection, preservation of historic sites, adequacy of housing, water pollution and education.

- The majority opposed:
    - New mobile home parks
    - An increase in the number of state highways
    - An increase in the number of mobile homes not in mobile home parks
    - Large manufacturing plants

- The majority favored
  - An increase in housing affordability
  - Improvement of existing state, county and local roads
  - Small manufacturing plants, more small businesses, and home occupations

- Approximately 48% of the respondents indicated that they would sell their land only after a developer agreed to specific deed restrictions, and 35% said they would not sell at all.

- Unrestricted business expansion was not favored by 15% of the participants. For those that indicated that they wanted to see businesses expand agriculture, retail stores, outdoor recreation and small manufacturing plants were favored.

- The Ten-mile Creek area, Conkling Farm, and the hamlets were locations felt to be unique or needing preservation.

- Most participants agreed with the following:

  - A more dispersed land development pattern with houses surrounded by open spaces;
  - A Town requirement that some land remain undeveloped in order to maintain open space (there was very strong support for this); and
  - Town efforts to take special steps to support agricultural uses (there was strong support for this).

- There were mixed reactions about the concept of cluster development or land patterns, with equal numbers of people favorable and unfavorable to this option.

- There were mixed reactions about state or local government ownership of land.

- There was strong support for having the Town provide special incentives or programs for agricultural uses (74%).

- There was strong support for using zoning and land use regulations to protect open space (70%).

Summary of 2006 Town of Rensselaerville Survey

About 500 residents participated in the 2006 survey.

Q-1 Would you like to see the number of people in our Town:

1. Decrease.
2. Remain at its present level.
3. Increase slowly.
4. Increase rapidly.

Results: The majority of participants desired the population of the town to stay the same or increase slowly.

Q-2 Do you feel that the real estate taxes in our Town, when compared to taxes in other communities in Albany County, are:

1. Lower than the average.
2. About average.
3. Higher than average.

Results: Over half felt that taxes in Rensselaerville were higher than in other communities in Albany County and 42% said they were about average.

Q-3 Please examine the following list of issues. Do you consider any of them to be problems in the Town of Rensselaerville? If so, please explain how serious you consider each of them to be in our Town.

Not - means Not a problem in the Town.
Slight - means a Slight problem in the Town.
Serious - means Serious problem in the Town.

Number/Issue		Degree of Seriousness in Town of Rensselaerville		
1.	Police Protection	NOT	SLIGHT	SERIOUS
2.	Preservation of historical sites	NOT	SLIGHT	SERIOUS
3.	Adequacy of housing	NOT	SLIGHT	SERIOUS
4.	Highways and Roads	NOT	SLIGHT	SERIOUS
5.	Preservation of natural areas	NOT	SLIGHT	SERIOUS
6.	Public Transportation	NOT	SLIGHT	SERIOUS
7.	Water pollution	NOT	SLIGHT	SERIOUS
8.	Education (grades k-12)	NOT	SLIGHT	SERIOUS
9.	Health and medical care	NOT	SLIGHT	SERIOUS
10.	Planning for land use	NOT	SLIGHT	SERIOUS
11.	Industrial development	NOT	SLIGHT	SERIOUS
12.	Employment opportunities	NOT	SLIGHT	SERIOUS
13.	Junk yards, dumps, solid waste	NOT	SLIGHT	SERIOUS
14.	Enough recreational facilities	NOT	SLIGHT	SERIOUS
15.	Decrease in active farmland	NOT	SLIGHT	SERIOUS

Results: This question explored topics that may be an issue in town. Out of all 15 topics included in the question, a decrease in active farmland was by far, the issue considered to be a serious problem by over half of the participants. Together with those that consider it to be a slight problem, 83% of all participants feel loss of farmlands is a problem.

All topics had at least ¼ to 1/3 of participants indicate that there was a slight problem related to it. Many of the topics were not considered to be serious problems however. Other than loss of farmland, employment opportunities, and planning for land use, less than 25% of participants indicated they were serious problems. If the data is analyzed as "no problem" or "some level of problem" (combine slight and serious) then the topics felt to be most problematic by the majority of participants include highway and roads, public transportation, health and medical care, planning for land use, employment opportunities, junk and solid waste, and loss of farmland. Topics that had generally equal numbers of people feel it was not a problem as a problem includes preservation of natural areas, industrial development, and enough recreation facilities. The other topics had more people indicate it was not a problem were police protection, preservation of historic sites, adequacy of housing, water pollution, and education.

One issue with interpreting this question is that not all the topics had qualifiers or "direction" (for example, planning for land use could be interpreted as it is a problem that there is not enough land use planning or as there is too much land use planning. The topic "decrease in farming" indicates a direction. Without that direction, there is no sure way to fully interpret this question.)

Q-4 From the 15 issues listed above, please rank the three which you feel are the most serious (severe) in or near where you live. Put the issue NUMBER(s) on the list below. If you think only two were problems, please rank those.

Most Serious _____
2nd Most Serious _____
3rd most serious _____

Results: When asked to rank those 15 topics, decrease in farmland was again ranked as the most serious issue. This is followed by employment opportunities, and planning for land use. 67 participants also indicated that highways and roads were the most serious issue.

Q-5 Please circle a response <u>following each statement</u> to express how strongly you favor or oppose these changes which could occur in our Town.

SO <u>means</u> you <u>strongly oppose</u> the change.
O <u>means</u> you <u>oppose</u> the change.
DM <u>means</u> if the change occurred, it would <u>not matter</u> to you.

F means you favor the change.
SF means you strongly favor the change.

1. An increase in the number of (seasonal) residences used by people who live in the Town less than full-time.	SO	O	DM	F	SF
2. An increase in the number of mobile homes clustered in mobile home parks.	SO	O	DM	F	SF
3. An increase in the number of residences used by people who live in the Town full-time.	SO	O	DM	F	SF
4. An increase in the number of affordable housing units available in the Town.	SO	O	DM	F	SF
5. An increase in the number of State highways	SO	O	DM	F	SF
6. Improvement of existing State highways	SO	O	DM	F	SF
7. Improvement of existing County roads	SO	O	DM	F	SF
8. Improvement of existing local Town roads.	SO	O	DM	F	SF
9. An increase in the number of mobile homes not clustered in mobile parks	SO	O	DM	F	SF
10. Expansion of forestry industry	SO	O	DM	F	SF
11. More large manufacturing plants (employing more than 40 people)	SO	O	DM	F	SF
12. More small manufacturing plants (employing less than 40 people)	SO	O	DM	F	SF
13. More small businesses	SO	O	DM	F	SF

14. More home businesses	SO	O	DM	F	SF

Results: This question explored participants feelings about potential changes in the town as follows:

a. About ½ of participants feel an increase in seasonal home use in town does not matter, while 28% oppose this. There were about 9% who strongly favor this. For those that feel it matters, there were slightly more people who opposed seasonal uses (27.8% compared to 22% in favor). There is not strong opposition to seasonal home uses.

b. About ½ of participants strongly oppose an increase in the number of mobile homes clustered in mobile home parks and an additional 21% oppose this. There were few people who strongly favored this. There is general opposition to an increase in mobile home parks.

c. About 39% feel it does not matter if there is an increase in full time residences, and about 30% favor this. About 17% oppose this. There were 15% who strongly favored this. There is more support for an increase in the number of full-time residences than not.

d. More people favor an increase in affordable houses than those that oppose it. About 35% of participants oppose this, about 43% favor this, and 23% feel it does not matter. Almost 12% strongly favored this. There is more support for affordable housing than not.

e. About 57% oppose an increase in the number of state highways, 24% said it doesn't matter and almost 19% favored this. There more opposition for an increase in state highways.

f. Over 75% of participants favored and strongly favored improvement of existing state highways. There was little opposition to this.

g. About 78% of participants favored and strongly favored improvement of existing county highways. There was little opposition to this.

h. 82% favored or strongly favored improvement of local town roads. There was little opposition to this.

i. Over 65% opposed an increase of mobile homes not in mobile home parks and almost 26% said it did not matter. Less than 10% favored this. There was opposition to an increase in mobile homes not in mobile home parks.

j. There are mixed feelings about an expansion of the forestry industry. Almost 43% opposed this, 25% said it did not matter, and 32% said they favored it (24%

said they favored it and 8% said they strongly favored this). Although 1/3 favored expansion, more participants opposed this change.

k. Over half of participants (56%) opposed large manufacturing plants, while 30% favored and 14% said it did not matter. Large manufacturing plants were not favored by the majority.

l. On the other hand, small manufacturing plants were favored. Almost 58% indicated they favored or strongly favored this while 26% said they opposed it. 17% said it did not matter. There is more support for small manufacturing.

m. There was much more support for small businesses. 84% favored or strongly favored more small businesses. There was very little opposition to an increase in small businesses.

n. Almost 69% favored or strongly favored more home businesses. While about a quarter of participants (27%) said it did not matter, less than 5% opposed this. Home businesses are favored.

Q-6 How do you feel about living in the Town of Rensselaerville over the last several years?

1. I just moved here and I haven't noticed any change.
2. It has become a more enjoyable place to live.
3. It has become a less enjoyable place to live.
4. It has not changed much, and has remained an enjoyable place to live.
5. It has not changed much, and has remained an unenjoyable place to live.

Results: Most participants feel that living in Rensselaerville has remained enjoyable. About 21% said it is less enjoyable. Less than 10% said it was more enjoyable.

Q-7 Imagine yourself as the owner of 25 or more acres of undeveloped land. A buyer has offered you a very attractive price to buy your land, subdivide the property, and build as many houses as possible. What would you do?

1. Not sell the land at any price because you like the land undeveloped.
2. Sell the land only after the developer has agreed to certain restrictions which you feel would help preserve the present character of the land.
3. Sell the land without an agreement with the developer.

Results: This question explored how a participant would react if offered a good price for their land for development. 35% said they would not sell at any price; almost 48% said they would sell after the developer agrees to restrictions, and 8.3% would sell with no agreement. There is support for restrictions as agreed by the developer. This also indicates that people do not seem to have strong feelings to readily sell their land under any circumstance. The question did not explore people's feelings on restrictions imposed by the Town – only those as agreed by the developer.

Q-8 Please circle a response which follows each statement to indicate your degree of agreement or disagreement with the statement.

SD means you strongly disagree with the statement
D means you disagree with the statement.
N means you are neutral; you neither disagree nor agree with the statement.
A means you agree with the statement.
SA means you strongly agree with the statement.

1. If additional residences were built in or near your community they should be clustered in specific areas so land could remain open.	SD	D	N	A	SA
2. If additional residences were built in or near your community they should be dispersed with undeveloped areas around each residence.	SD	D	N	A	SA
3. In order to maintain open areas of land in or near your community, the Town of Rensselaerville should require that some of the land stays undeveloped.	SD	D	N	A	SA
4. The Town government should take special steps to support agricultural land use in the Town.	SD	D	N	A	SA

Results: This question asked for agreement or disagreement as follows:

a. There were mixed feelings about clustering. Slightly more people agreed with this concept than disagreed (43% agree to 39% disagree) with about 17% being neutral. Although there is a good deal of support for clustering among participants, many people disagree with the use of clustering.

b. About 60% agreed with new development that was dispersed with undeveloped land around each residence. A more dispersed pattern was preferred.

c. There was strong support for town requirements that some land remain undeveloped during a subdivision to maintain open space. 73% agreed with this and 18% disagreed. Almost 41% strongly agreed with it.

d. There was strong support for the town to take special steps to support agricultural land use in the town. Almost 83% agreed (of that 49% strongly

agreed) while about 8% disagreed. This question however did not explore what was meant by "special steps to support agricultural land use".

Q-9 A. Please look at the list of 9 businesses listed below. If you feel that <u>none</u> of the types of businesses listed should expand in or near where you live in the Town, please check here _____, and go to question 10.

If you feel that <u>some</u> types of businesses should expand, go on to part B.,

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Number	Type of Business
1.	
2.	Forestry Industry
3.	Hotels, motels
4.	Retail stores (examples: clothing, food)
5.	Agriculture
6.	Resorts
7.	Outdoor recreational facilities (examples: skiing areas, campgrounds)
8.	Large Manufacturing plants (employing more than 40 people)
9.	Small manufacturing plants (employing less than 40 people)
10.	Other. Please explain _____ _____

Results: 15% of participants felt that none of the businesses listed should be expanded in town. For others that supported expansion, agriculture and retail stores were those businesses considered to be the best fit for Rensselaerville. Outdoor recreational facilities and small manufacturing plants were considered to be a good fit by about 20 to 25% of participants. All other uses listed had less than 10% of participants indicate they would be a good fit.

Q-10 If you feel that there are any unique areas (for example historical sites or natural areas) in the Town which are not being preserved or protected and should be, please list them and their location.

1._____
2._____
3._____
4._____

Results: Many locations were identified as being unique or needing preservation. Some of the more frequent responses included the 10-Mile Creek area, Conkling Farm, other agricultural lands, and all the hamlets. See full list.

Q-11 Do you favor or oppose the following ways of maintaining or increasing open

space (undeveloped land) in the Town. Circle your response.

1. Public ownership of land by state government	FAVOR	OPPOSE	NO OPINION
2. Public ownership of land by local government.	FAVOR	OPPOSE	NO OPINION
3. Town provides special support for agricultural land use	FAVOR	OPPOSE	NO OPINION
4. Use Town zoning to protect open space	FAVOR	OPPOSE	NO OPINION

Results: An equal number of participants favored state ownership of land as opposed this (about 41%). Similar results were seen for town ownership of land. There is no strong consensus as to whether public ownership of land is good or not. 74% of participants favored the town providing special support for agricultural land uses and about 12% opposed this. About 70% favored the town using zoning to protect open space while about 21% opposed this. There was support for both zoning to protect open space and special support for agriculture.

Demographics

Q-12 What is your present age? ____ years
Results: There were few young (less than 39years) or old (over 80) participants. About 56% were aged between 50 and 69 years. The survey is weighted toward the older demographics. This should be compared with the actual demographics of the town for full interpretation.

Q-13 How many people live in your household? _____
Results: Almost half of participants' households had two people in them. About 17% had 1 person.

Q-14 Which of the following best describes the present occupation for each member of your household? (Choose one for each working member.)

1. Unemployed
2. Retired
3. Student
4. Skilled Laborer or Craftsmen
5. Housewife
6. Government Employee
7. Owner or manager of small business
8. Owner or manager of large business
10. Laborer, excluding farm laborer
11. School Teacher (K-12)
12. College Professor
13. Doctor, Lawyer
14. Owner or Manager of a Farm
15. Farm Laborer
16. Sales Worker
17. Clerical

9. Business Executive 18. Other. please specify_____

Results: There were a wide variety of occupations represented by participants. All occupations listed on the survey are represented in the survey participants. The largest category were retired persons (197 members of households represented in the survey). Other occupations that were represented by more than 10% of participants include student, skilled laborer or craftsman, housewife, government worker, and owner or manager of a small business. Owner or managers of farms represented about 3% or 15 people in participating households.

Q-15 Which best describes your home in this community:

a. Single Family
b. Duplex
c. Apartment
d. Mobile home
e. Farm
f. Other. Please specify _____

Results: Over 77% of participants indicated their home is a single family home. 39 participants or 8.4% indicated that they consider their home to be a farm. There were less than 5 people living in a duplex or apartment that participated. 4.7% indicated their home as a mobile home.

Q-16 Do you own or rent your residence? 1. OWN 2. RENT

Results: Almost all participants own their own home. Less than 1% indicated they were renters.

Q-17 How long do you usually reside in the Town of Rensselaerville each year? _____MONTHS, _____WEEKS, _____DAYS

Results: Participants were a mix of part time and full time residents. There were more full time residents that participated than part timers. About 55% of participants indicated they live all 12 months in Rensselaerville.

Q-18 Do you live in a hamlet? 1. Yes 2. No

Results: Both hamlets and non-hamlets were represented in town although more people from non-hamlet areas participated. Almost 65% said they do not live in hamlets and 35% do.

Q-19 What is your mailing zip code? _____

Results: All parts of the town are represented in the survey. About equal numbers of participants live in Medusa, Rensselaerville, and Preston Hollow zip code areas.

An analysis was done comparing answers to the survey by age, location (by zip code), and residency (number of months living in Town.) Most questions showed no significant difference of how people answered the questions by age, location, or residency status. There were some questions however that did show a slight to moderate difference as follows:

a. More of the oldest participants felt that police protection was a serious problem compared to younger people.

b. More of both the oldest and youngest participants felt that adequacy of housing was a serious problem.

c. More of the older participants felt that public transportation was a problem than younger people.

d. More of the older participants felt that health and medical care, as well as industrial development were a problem than younger people.

e. Hamlet residents felt that employment opportunities were more of a serious problem than those who live outside the hamlet.

f. There were some differences in the perception of what were serious problems of seasonal residents compared to full time residents.

g. Seasonal residents were more favorable towards an increase in the seasonal population, and mobile homes clustered in mobile home parks, as were residents from Middleburg. People living in 12023 and 12083 (Berne and Greenville zip codes) had more opposition to these items.

h. Greenville residents were more favorable to an increase in the full-time population as well.

i. Middleburg and Greenville residents were more favorable to enhancing state and county highways.

j. Residents from 12460 were more favorable towards both small and large manufacturing plants in Town.

k. Non-hamlet residents more strongly agreed with the Town taking special steps to support agriculture.

l.. Full-time residents were more strongly favorable towards clustering and requiring some lands to stay undeveloped to protect open space. Overall, the differences were small however.

m. Those in the middle age brackets were less interested in any kind of business expansion as were non-hamlet residents and full time residents but a slight

margin. There were some differences in opinion as to what desired business expansions would be.

n. More hamlet residents favored public land ownership while full-time residents were more opposed to this. Middleburg residents and Greenville residents showed more opposition to public land ownership as well. Greenville had more opposition to zoning being used to protect open spaces.

Visioning and Planning Workshops

The planning and visioning workshops resulted in the identification of negative issues, positive features, and ideas for future direction as perceived by participants. Appendix B details that data by workshop location. The following information summarizes the town-wide results:

The top ten positive features identified include:

1. The rural nature of Town: rural character, open space
2. Beautiful scenery
3. Peace and quiet, quality of life
4. Good roads
5. Natural areas and features such as Huyck Preserve and Sikule Pond
6. Wildlife and hunting/fishing
7. Community spirit, caring, involved and friendly people
8. Clean water (watersheds and creeks)
9. Cultural opportunities
10. Park in Preston Hollow and other recreational opportunities

Other positive features that were mentioned include:

1. Talented people
2. Hamlets are livable, clustered, small and pleasant
3. Agriculture and farms still remain
4. Low population density
5. Historic and architectural character
6. Ideal retirement community
7. Diversity of people and mingling of generations
8. Safe and a good place to raise a family
9. Emergency services
10. Views
11. Community buildings such as library, Conkling Hall, churches, etc.

The top ten negative features of the Town of Rensselaerville were identified as:

1. High property taxes
2. No high-speed internet or cell service (especially for EMS)
3. Land development (concerns about too much, lack of clustering, lack of good planning)
4. Lack of traffic speed enforcement

5. Poor road conditions
6. Lack of incentives for open space protection
7. Lack of retail and service oriented economic development
8. Fears of degraded waters and watersheds
9. Lack of affordable housing
10. Lack of recreational facilities

Other negative features that were mentioned include:

1. Lack of support for farmers and working landscapes
2. Town government does not keep promises
3. Lack of communication between hamlets
4. Loss of scenic vistas
5. Poor code enforcement, noise pollution and light pollution
6. Bad sidewalks, limited parking
7. The Rensselaerville Institute is not a good neighbor
8. Too much tax exempt land in Town
9. Too many part-time residents
10. No health care nearby

There were many similar themes between the survey and workshops. Highlights of these include:

1. Residents are concerned with loss of farmland and value farmers and want to show support.

2. People are concerned with current development patterns and trends.

3. People value open space and want to protect it and provide methods and incentives to keep land open.

4. They want to see more local businesses and health care services, but strongly indicated that small business development was desired.

5. There is concern about road conditions and speed enforcement.

6. People value rural character, quality of life, natural areas, open spaces, scenic views, water and wildlife resources, recreational opportunities, the Town's friendly community, safe conditions, and historic and cultural assets.

Visioning Workshops

In August, 2006, three simultaneous workshops were held in Town in the Hamlets of Preston Hollow, Medusa, and Rensselaerville. Together, over 100 residents participated with about 25 in Preston Hollow, 35 in Medusa, and the remaining in Rensselaerville. The workshops were done in 2 parts: the first part was to identify positive and negative features of the Town and the second part was to articulate a future desired vision for Rensselaerville. At each workshop, participants worked together in small groups at tables. The results were collated by location and then for the entire Town later. The information is presented below by tables and/or location.

Information on the desired future vision for Town is shown below as:

Future Vision by Topic: This title was developed by participants to describe a desired feature of the future Rensselaerville.

Individual Vision Elements: These were specific elements of an individuals vision for Rensselaerville.

Summary Statement, if developed by that table for that topic: Some tables summarized their vision elements into a statement.

Hamlet of Rensselaerville Vision Elements and Statements
Table 1:
SCHOOLS
One school district for town Acknowledge informal education Good schools One school district for town **Statement: United community by having all students attending the same school community. One school tax district.**
CHARACTER OF TOWN

Maintain rural character
Scenic views
Active community
Hip (Active)
Same people
Rural
Continue to be quaint and rural
More real interaction among Hamlets - less feeling of being separate sections.
Rural (Defined as large contiguous areas of "wild" and "worked" landscapes with intermittent single family houses, homesteads, and Hamlets)
No crime
No extensive development
Statement: Maintain rural character of Town with more interaction between Hamlets. Closer feeling of community because of one school district and improved communication. Co-terminus - Police/Fire, Schools, Sanitation (Transfer St.)

HOUSING

Some housing for seniors and young people-less expensive than single homes
Place of all denomination religious services
Sustainable:

- Renewable transportation fuel station
- Renewable home energy needs met with local resources

"Methodist Hill Road"/Main Street style development, "cluster housing"
Low taxes, stabilize
Municipal renewable energy authority
Statement: Diversity of housing types for the diverse population including of affordable housing, farms, and seasonal

COMMUNICATION

Internet
High Speed Internet
Cell phone service
One phone exchange, no toll charges within Town
Wireless cell service (i.e. no towers)
Statement: Regional* local calling, *(no toll charge with towns and hamlets); DFSL/Cable/wireless options; Enhanced town newsletter; Town Newsletter

ROADS

Good roads Concentrate development to use developed and proven roads, and perhaps close some town roads to save money Local traffic only **Statement: Good roads to connect the town (hamlets) while staying insulated from the heavy state traffic**
BUSINESS
Some type of convenience store Hamlet - Country General Stores in each Food stores Local jobs **Statement: Commercial activities including small country stores that will provide local jobs and promote local products**
Overall Vision Statement: Good roads to connect the Town (Hamlets) while staying insulated from the heavy State traffic. Regional local calling (no charge from within Hamlets/Town), DSL, cable, enhanced newsletter, diversity of housing types for the diverse population including affordable housing, farms, and seasonal. Commercial activity including small country stores that will provide local jobs and promote local products. Maintain rural character of Town with more interaction between Hamlets. Close feeling of community because of one school district and improved communication.
Table 2:
TRAFFIC
Slower Unpaved roads still unpaved Traffic well-controlled, lower speed limit on Main Street Reduced controlled traffic and speed limits **Statement: The Town consists of a network of paved and unpaved roads, with no thoroughfares. In the Hamlet, traffic speed is 15 mph and commercial, heavy traffic is restricted.**
CHARACTER

Proactive preservation of historic homes
Historical buildings intact
Same as now: Beautiful historic village with low-density rural surroundings, minimum conveniences, better road services, library, preserve, institute, inns, and restaurants
Diversity of people and opinions
Landscape
Strong sense of community spirit
Statement: The Town and Hamlets very much physically resemble the character as it was in 2006. Historical charm is preserved

BUSINESS

Limited - no big box, no chains
Store in town selling locally grown produce, beef, and baked goods
Hamlet wide cooperatives providing energy and heating
Couple of great restaurants
Local stores in each Hamlet i.e –Rice's, Bell's
More small businesses i.e. home crafts
Businesses consist of an antique shops or homeowner craft shops- a successful co-op food store
Food and Service Co-op in Hamlet
Controlled Economic Development
Statement: There are no large commercial enterprises in the town. Within the hamlets, there are a variety of small, privately owned/owner operated businesses i.e. crafts, local produce, antiques/coop's, restaurants utilizing existing natural resources i.e. water, wind, Ag. in an economic enterprise to provide energy.

ACTIVITIES

Activities are as now
Town wide community center containing indoor swimming pool & gym, senior citizen and youth activities
Libraries still here and thriving
Statement: The hamlet continues to offer a full service library. Hiking, swimming, and nature walks are available in the Preserve. The Preserve and Institute remains a non-profit entity. The town wide community center offers __, youth programs and senior citizen events. Conkling Hall remains a viable center for all.

SERVICES

Expanded transportation services for seniors
More bus services - transportation services
Limited government, health services
Medical care
Frequent public transportation into Albany
Statement: There are frequent buses available providing transportation to Albany. Seniors are given discounted rates and there are specific links to other bus routes. There is also a community van to provide local transportation for those who need it.

HOUSING

Affordable but really attractive housing for single people and couples
Different types of housing-affordable, apartments, row houses
Housing opportunities for low cost housing for elderly with the good design by smart young planners
Character much the same as now but with the additional provision for cluster housing, affordable for young and aging
Clustered housing in appropriate locations (In-fill development & new hamlets)
Affordable housing near local hamlets
Cluster housing for senior citizens
Statement: There is affordable, attractive clustered housing available in or near the Hamlet. The character of Rensselaerville has been maintained.

AGRICULTURE AND NATURAL RESOURCES

Active farmland –farming is viable
We are utilizing the natural resources we currently have-producing and consuming to maintain rural viability.
Statement: The level of agriculture has increased. There is more productivity in the agro/business development.

QUALITY

Safer sidewalks
Sound water system (supply)
Town/hamlets have adopted sustainable practices inc. building codes, natural resources, development and pattern, energy production
Affordable to live here
Don't have to communicate to work – can walk
Statement: The hamlets have maintained their quality charm. The sidewalks are walk able. Our water system is adequate. There are increasing employment opportunities within walking distance of hamlets. We have adopted sustainable practices.

VISUAL APPEARANCE
If we are lucky in 15 years it will be just the same except some of the trees will be larger Town looks the same – roads in keeping with the historic village not big state roads. **Statement: We look the same**
DEVELOPMENT
Development is strictly controlled –no large development The high terrain greenway is established connecting Thatcher Park with Catskill Park **Statement: The Town hosts no large residential developments, but new construction is directed to designated areas and away from areas that should be preserved to maintain open space and natural areas important to wildlife and natural resources.**
TABLE 3:
CHARACTER
Diverse interesting people Character is 19th century semi-rural; simple & non-commercial Caring town - support for seniors Cultural center Historic architecture preserved and ordinance to enforce preservation Development has not destroyed historic hamlets Thriving hamlet communities in harmony with surrounding rural enterprises Community hamlets view themselves as a "town". No more town and __ Historic hamlets are still contained and intact – not suburban extensions of Albany Appearance is the same as early 2000's although with more people **Statement: There is a thriving Hamlet community with its historic architecture preserved in harmony with the surrounding rural sectors.**
COMMERCE
Services –businesses restaurants, gas, health services, transportation services
Development – A business park? Clustered, low-impact businesses
Businesses are ___ with the environment and lifestyle
Small number of cottage industries
Jobs- lots of small businesses organic farming, internet based consulting, back office services, small "craft based " industry
Stewart's shop
Small business that preserves rural character within Green space, and keep historic nature of homes
Business - sufficient to allow younger people to live here without sacrificing the environment
Some commercial development near town hall, ambulance, ER i.e. gas and convenience stuff
Development is a ___of local housing and job needs
Statement: The town needs business development to stabilize our tax base,

increase local services, and create jobs. However, business development needs to be carefully controlled by both designing low impact business development areas and encouraging small, clean, local businesses that preserve the rural and historic environment of Rensselaerville.
HOW DIFFERENT
Difference? Much the same Housing within green space, keep rural look More retired residents and services they need (doctor, bus, stores) so car isn't needed Up to date technology – cable for everyone broad base access so people can telecommute Easy-cell phone and Internet access Difference is _____in life here is not usual "popular" culture **Statement: Community is much the same, with historic and rural elements intact but brought up to date with respect to services for retired persons and services for the elderly, and technology that allows for greater self-sustainability**
TRAFFIC
Traffic is local. We are not an access road between main highways Traffic is numerous but in Hamlets – SLOW Local road maintenance is answerable to citizen's property and Rd. well maintained **Statement: Road and traffic conditions are reflective of the local residents and their ___adopted community life-style. It is not a thoroughfare for trucking, commuters, or vacationers. Within the hamlets (wherein the scale is still based on _____and pedestrians) slow and non-intrusive vehicular traffic is favored.**
ACTIVITIES
Activities are generally self-made; not purchased entertainment More of the same! A replacement for Palmer House **Statement: The activities in this community are generally self- made: they are not purchased entertainment. The main restaurant in town is an event in itself.**
VISUALS (TOWN LOOKS LIKE)
Much the same probable more outlying residences Land development - lots of open space for public use-beautiful rural vistas – open farms not divided up into __acres lots – cluster zoning **Statement: We have lots of open space for public use, with beautiful vista and open farms.**
HOUSING

Housing - Mix of young and old, full time & part time residnets Development is clustered homes, large expanses of green space Clustered housing developed Historic hamlets unspoiled- Housing in clusters on outskirts far beyond Hamlets Affordable housing (Not mobile homes) for low-income residents Historic preservation – buildings and landscape preserved and protected Housing - exists to support various economic levels and occupations **Statement: Preserve historic buildings and landscape with a mixture of residential (old/young, full time/part time). Develop cluster homes with green space – no mobile homes, but housing to support various economic levels.**
TABLE 4:
OUR VISION **We want a town where there is continuing and improved interaction and respect among different social groups and generations. We want large tracts of land protected and encouraged to support biodiversity, water availability and quality, small farming, and lower taxes. The preservation of land and open spaces for vistas and green ways is also important to our spiritual and mental well being (peace, privacy, and quiet). We want economic development cluster in hamlets to provide basic services such as food, household goods, and fuel. We want small farming and agriculture supported and developed as without small farming we will not have rural living.**
QUALITY OF LIFE
Beautiful large tracts of land to support biodiversity, good water, small farming & lower taxes Diverse small farms – goats, lamb, fruit trees etc. Slow population growth Continuing and improved interaction and respect among different social groups and generations **Statement: We want large tracts of land protected and encouraged to support: biodiversity, water availability and quality, small farming, and lower taxes. Want to continuing & improved interaction and respect among different social groups and generations**
ECONOMIC DEVELOPMENT
Enough economic development to avoid ex-urbanization
Services –access to food store, gas, etc.
Center of USA grass-fed beef, lamb, pork industry
Economic opportunity businesses that are compatible with rural living
A community with small business that would provide the necessary services –food, gas, household goods, etc.
All commerce clustered on Main Street (2 x housing stock / 2 x population but developed in clusters)
Statement: We want economic development that is compatible with rural living:

with commercial development clustered in Hamlets that will provide basic services such as food, household goods, and fuel.
VIEW SHED/OPEN SPACE
Vistas - open space Beautiful views of hills and mountains Preservation of open space Privacy peace & quiet Continuation of "Greenness" Continuing interaction and respect among differing social groups and generations Slow population growth Preservation of open space Continuation of "Greenness" **Statement: The preservation of open space, vistas, and greenways are important to spiritual and mental well being (peace, quiet and privacy)**
TABLE 5:
VISION **Preserve the rural character; including view sheds and open spaces of the town. While maintaining current population levels, provide low-income and elder housing. Explore and develop alternative energy options. Increase cultural activities with venues, classes, and -and outreach to all hamlets. Services (such as gas station) and small stores in the hamlets. All types of farming production – vegetable, meat, tree farms, poultry, and local market. Traffic kept slow and roads maintained. A pure and sufficient water supply and clean air. Lower property taxes to ensure an economic mix-**
historic assets are preserved.
HISTORIC
Historic Assets preserved. **Statement: Preserve Historic Assets**
HOUSING
Essentially an affordable "Old folks home for locals"
Elder housing
Housing same as now
Lower economic housing that stays nice (residents have incentives & disincentives to maintain low cost housing well.
Statement: Maintain current population density but with provisions for elderly & low-income housing, and incentives to maintain same.
RURAL CHARACTER AND OPEN SPACE

Large areas maintained as open space Rural character of the Town Uncluttered view shed Looks like same as now but get rid of junk cars etc. No housing on ridgelines that ruin view and need more services. I think anyone who moved here came for the scenic essence of the town Fewer people No differences Natural scenery of today is preserved (2006) Lots of natural areas that are accessible for "low impact" recreation. These can be public or privately preserved land. No development Same as now Lots of undeveloped space (farmland, wilderness, etc.) **Table 5 wishes to maintain the "rural character" of our community, which includes the following benchmarks: clean and uncluttered vistas and view shed, large tracts of varied open space; and areas conducive to agriculture and low impact recreational use.**
ENERGY NEEDS
Explore & develop alternative energy options Biofuel station Wind power Alternative energy possibilities **Statements: Still beautiful, still near the same population levels, clean air and water, hunting opportunities, wind power, solar power, water power-anything but oil.**
CULTURAL ACTIVITIES & CULTURAL BUSINESSES
Activities – cultural outreach to all hamlets Lots of varied cultural venues Cultural activities in the hamlets Businesses –arts & crafts, theater, art classes (all arts) **Statements: Increase of cultural activities with more venues, classes, art & crafts, theater, and outreach to all hamlets**
STORES AND SERVICES
A few small stores (grocery, clothing, etc.)
Gas station
Walk only hamlets- hamlets should have stores & services on the periphery that can be walked to. Car dispensation can be allowed for disabled and elderly.
Grocery market small (not supermarket)
Statement: Stores and services available in the hamlets.

AGRICULTURE
Small-scale agricultural opportunities e.g. sugar bushes, tree farms, and apiaries Suitable local produce & meat –farmers Strong local market for Farm grown produce **Statement: We need all types of farming production –vegetable, meat, poultry and a strong local market: tree farms, apiaries**
TRAFFIC/ROADS
Traffic same as now Dirt roads reasonably maintained **Statement: Maintain roads and keep traffic low**
CLEAN AIR & WATER
Clean air Water problems Water supply remains pure **Statement: Alleviate any problems with water supply and maintain clean water supply where it exists; maintain clean air.**
PROPERTY TAXES
Moderate or lower property taxes **Statement: Lower property taxes**
TABLE 6
ACTIVITIES
Park supported by 5 Hamlets: swimming pool, playground, hiking trails, recreation center Services for youth and aged as community takes care of both. Promote "family" life. **Statement: Central Community Center for all ages and services that promote family life**
HOUSING
Assisted living facility for aging residents so they may remain a part of the community they have nurtured
Cluster homes, low income housing for young married couples; assisted living housing for seniors
Affordable housing with large tracts left forever wild
Statement: Zoning and subdivision regulations to encourage affordable housing for both seniors and 1st time home buyers (to include assisted living) and also to preserve the open space.

BUSINESSES
Self-contained community with restaurants, stores(s) etc. Town center where cultural activities are clustered A mix of commercial and light industrial outside the hamlets properly buffered Small convenience businesses & doctor and dentist offices. **Statement: Concentrate business development in existing hamlet areas and allow limited light industrial development outside the hamlets that is properly buffered.**
CHARACTER OF TOWN
Densely populated village Less "formal " or snooty atmosphere, more local feel. Remaining open land now overgrown Vast area of open space outside the Village area. Rural beauty, historic preservation Visually appears the same but growth has occurred in keeping with the historic atmosphere **Statement: Growth should be concentrated in clustered areas while maintaining existing pattern of open spaces and the historic character and rural beauty of the town.**
LEVEL OF DEVELOPMENT
Hydropower from Lake ____ Alternate fuel production facility to encourage local agriculture Only families with financial resources will remain High taxes –both land and school **Statement: Develop industry that encourages sustainability including agricultural alternative energy resources and housing for all income levels that is not detrimental to the natural environment**
POPULATIONS
Mix of young families with children, mid-age and seniors Zoning and subdivision regulation that are properly written and enforced to encourage affordable housing and open space **Statement: Properly written and enforced zoning and subdivision regulations that encourage affordable housing for persons of all ages and also preserves open space.**
Visioning Workshop from Medusa
TABLE 1:
1. THROW OUT POLITICS
Non-political one for all and all for one No politics

2. TOGETHERNESS
A town built around a vibrant social and economic center: shops, library, and gathering place Community involvement Community activities center
3. KEEP COMMUNITY ALIVE WITH YOUNG PEOPLE
Affordable housing Opportunities for young people to work and raise a family here
4. DEVELOP BUSINESS
Medusa Store, Co-op run by locals-owned by locals Small businesses Develop and support small businesses Support local businesses
5. IMPROVED TECHNOLOGY
High tech communication Expand communication
6. ALTERNATIVE ENERGY
Wind power owned and operated by Rensselaerville stock holders, with them using this power for home businesses Solar power, community lighting Support and develop alternative energies
7. EXPAND AGRICULTURE
Increase and expand various types of agriculture A farming community
8. ENCOURAGE LARGE LAND HOLDINGS
Tax incentives for large areas of land
9. PROTECT AND PRESERVE THE OLD LOOK
Old-fashioned appearance Rockwell appearance
TABLE 2:
BUSINESS

Small business encouraged There is adequate off-street parking for businesses in Hamlets out of sight from the street Small stores Each Hamlet has a post office, general store, diner, and gas station Local business –stores employing 40 or less employees The Huyck Preserve regularly consults the townspeople for input There is a store that sells homemade crafts, a general store that sells food, gas, some other general needs items and has a deli counter, a farm stand…. People can have businesses in their own homes as long as the businesses don't change the landscape, make excessive noise or traffic, basically change the way things are for neighbors. We have our own little schoolhouse Women having a place to have crafts We provide incentives for appropriate businesses
TECHNOLOGY
Every home and business has access to modern telecommunications We have modern technology, but it's hidden –The cell tower looks like a pine tree etc. Rural community but connected to rest of area via modern communication Lively in a modern technical area We're modern without looking it
AGRICULTURE
There are several active farms A balance between residential, community and farmland. Agriculture evident There are fruit orchards Encouragement of agriculture Small business and agriculture diversity Right to farm law Lower taxes Lower taxes Lower taxes All Hamlets get the same services for their taxes Higher taxes to go toward things we agree to
Reasonable taxes; equitable taxes to all citizens
SCENERY AND NATURE

There is a long bike path
The land outside the Hamlet is sparsely populated. Homes are well spaced.
Renssaerville looks like it belongs in another century –no tall ugly buildings, plenty of side roads with character—winding unpaved lanes, trees as far as you can see.
Tap water is drinkable
The air smells fresh and clean
It is so quiet except for the sounds of nature
There is equal access to Myosotis Lake by lottery each year
Assure water quality
The town is consistent. You can count on the land around your property remaining the same as when you bought it.
The bridge in Medusa is charming -arched and made of stone
Preservation of rural aspects
Rural area encompassing several small Hamlets
Ownership of smaller lots is allowed if property is being split among heirs and the heirs are going to live there

RECREATION

Cultural activities
There are plenty of social events –for adults, children, families –that bring together people from the Hamlets
There is a public place to swim
There are many wholesome recreational opportunities: bike trails, well-maintained playgrounds, clubs and dances etc.
Several areas for hiking –trails/outdoor recreation
Active youth programs
There is a town after school program so kids can see and make friends nearby and be active –summer and winter.
Activity center for children
We have interest groups for everyone –young families, teens working professionals, hobbyists
Active youth programs
There is a community center with an indoor playground, pool, gym, and stage, for activities all year long.

TABLE 3:

SUPPORTIVE COMMUNITY

Neighbors look out for each other
Strong community ties
Everyone votes
All the citizens know each other

Our signs may say, “No trespassing” for legal reasons, but we’d really like to post- Welcome! Come and visit! Just leave the place the way you found it. Everyone knows everyone We have a supportive and involved community
FUTURE POPULATION
My children living near me Town conductive for future generations to return to live and work in area. More young people affording to live here There is a welcome wagon to introduce newcomers to their neighbors Social economic blend –young families and retirees Multigenerational population is encouraged. With employment opportunities and affordable housing is available.
GOVERNMENT
Leaders driven by needs of community There are frequent opportunities for townspeople to tell their views to the town government –and the government listens The volunteer fire department and EMS are fully funded and staffed and housed and supplied. There is no crime Every farming and domestic animal is kept securely at home The highway department takes into consideration the wishes of the people on the small roads or stretches of road they’re considering altering. Special interest groups (political groups, the Preserve, the fire departments, the people “who have always done it”) don’t over control. Open government is responsive to the needs of the people
TRANSPORTATION
Available transportation There is a bus every Saturday morning that takes preteens, teens, seniors and anyone to the malls and back at the end of the day. A senior van or bus brings people to appointments and activities. Expand transportation to meet the needs of community members of all ages.
TABLE 4:
TOWN GOVERNEMNT
A town government that functions as a true team, serving public needs without conflicts School districts are aligned more closely with town boundaries where possible.
ECONOMICS
Rensselaerville has buying agreement with adjacent townships to save $ and increase efficiency

Town taxes have decreased on a dollar equalized _____is due to increasingly effective management.
Small/light industry supports our tax base and provides goods/products locally
A vibrant local economy with expanded farmer's market capacity
There are many options for work in the town or in their homes and not need to drive for employment
People who live there are economically stable…and work together for the betterment of the entire town
Town is able to provide much of its own energy through solar, wind, hydro.
A high-speed Internet infrastructure supports home-based business.

COMMUNITY CHARACTER

Services available for fire and ambulance
Community breakfasts and dinners
People take pride in the appearance of their property
Community minded
The people very friendly and helpful.

PHYSICAL ENVIRONMENT

Protect waterways
Balance of agricultural land, forestland
Ten Mile Creek empties into Hudson River
Rural community with fields and stonewall fences, streams and wildlife
More bucks, bigger racks
Plentiful wildlife
Wild trout in the Ten Mile Creek
No more building
Old Homes dating back to the 1800's
View
No traffic lights
Maintain open space
No condos, townhouses, box stores
Historical character has been improved or maintained

ZONING

Minimum 5 acre zoning
Controlled lot size
The town is a self-sustaining entity that supports its citizens to make their living within the community
Zoning laws that protect the quality of life, rural environment and natural resources of the town
Development is planned and cohesive
Maintain small towns

QUALITY OF LIFE

Quiet except for birds and wildlife /great sounds Beautiful views/scenery Dark nights (can still see the stars) Quiet and peaceful Farm land is well cared for and produces abundant food that serves local needs There are housing opportunities for all: young, poor, senior citizens, etc. Services are kept in the town: doctor, country convenience store Cold snowy winters Public transportation is available to town residents (van/bus etc.) Rural character
TABLE 5:
RURAL CHARACTER
Scenic views lots of green space Rural character no large industry Preserve rural views and rural character
HISTORIC DISTRICT
Many historic buildings and emphasis on documentation of local history New buildings constructed in keeping with the character of the town Where acceptable to town residents, historic districts should be created
AGRICULTURE
Right to Farm law Working farms Town should adopt "Right to Farm Law" (county)
MUNICIPAL/COMMUNITY SERVICES
Combined town jobs with other towns to get a person with enough education/experience for the job in the position versus political appointments or elected officials that don't have a clue. County and town boards combined Fire companies have combined into one entity with cooperative support, as needed. Money is saved, community spirit broadened between hamlets. Combine resources with other towns for economic, social, and quality of services.
ROADS
Dirt roads are well cared for and passable so people can enjoy driving on them and seeing beautiful scenery. Good roads Rural –style roads some still dirt (like Fleming Road) Well-maintained road system Roads are well maintained and maintain rural character while serving the needs of the businesses.
NATURE

Abundant and diverse wildlife and respect for wildlife
Deer
Diverse habitat –fields, woods, streams
Preserve natural habitats and educate the youth to enjoy nature; if they are going to hunt be safe and respect wildlife.

JOBS

More medium-size business
Hannays hose reels
Business in keeping with the character of the time i.e. organic farming
Cottage Industry
Businesses to provide some employment.

COMPREHENSIVE SOCIAL PLAN

Community is very caring of others in the community.
Community feeling (all towns united)
Young people have learned to accept how different people with varied ideas can function in a community together-respecting our differences.
Community supports local parks –(recreational opportunities) (volunteers!)
Laws are enforced to the letter. No political favors.
Perfect is the fact that the town is so beautiful that everyone wants to live here and those who live here have no trouble selling to anyone.
Foster integrity within the community.

SERVICES

General store in hamlets
Store, gas station
Store
Some store
Local doctor offices
Strategically located store and professional office that services all hamlets and architecturally blends with the rural character.

Visioning Workshop for Preston Hollow

TABLE 1:

EDUCATION

1. A new school at Preston Hollow.
2. School for all Town youth's very sake and academically top notch.

HISTORIC

1. Good stock of historic structures.

ENERGY

1. Energy independent.

ENVIRONMENTAL

1. Keeping lots of open space for family enjoyment.
2. I moved here for the rural and natural environment and don't wish it to change. I drove an hour to work and an hour home because of this.

GENERAL

1. Gas station and local community store; restore the home - family feeling.

Keep Sunday as a quiet worship day – no working.

RESIDENT

1. Want to restore the Hamlets.
2. More community spirit for the Hamlets.
3. Keep all the old fashion houses because it makes it rural.

BUSINESS

1. A community with quaint historic districts, shopping & development centralized allowing an abundance of open space with exceptional views; variety of wildlife and agriculture.
2. Bring back Mom & Pop shops.

RECREATION

1. We need more recreational places - expand parks.
2. Agricultural recreational opportunities.

AGRICULTURE

1. Produce local meats grown here on our land.
2. Keep as a farming community as it creates a family atmosphere.
3. Small business could be sheep farming, alpaca farms, produce etc.

I would love to see this kind of business in Rensselaerville. It uses the land without destroying it, adds to the view and is profitable.

4. Agriculture is thriving on small- scale diverse farms.

TABLE 2:

BUSINESS/EMPLOYMENT

1. Housing opportunities –the structures that are standing are kept up & old vacant buildings are either remodeled or torn down.
2. The Town has an economic base that supports open space.
3. The business should be centralized in the Villages and within walking distance of the resident's banks, shops, etc.
4. We do not have many local employers & businesses. Can we promote employment without losing our rural look?
5. The farmland next to the park & behind West ___ are prosperous vegetable farms like in Schoharie Valley – (business)
6. The Town is a bedroom community. Many residents work elsewhere.
7. The entire Township is served by one Telephone Company. (Different)

RECREATIONAL - SWIMMING/FISHING

1. The Town will have more activities for children to get involved in (recreational & social).
2. The Catskill Creek is dredged seasonal dam for a swimming hole.
3. Cross-country ski trails have been developed on the west side of the creek.
4. Recreational hunting & fishing.
5. Recreation areas should be closer to housing or living areas and parks.
6. Nature trails have been developed in the woods behind the school.
7. Housing should be clustered together, close to parks and town but with space around each with sidewalks, green areas, trees etc. walking distance to things.

TRAFFIC

1. Traffic should be controlled with some type of signal.

SCHOOL

1. The future of Town of Rensselaerville should include a school district of its own.

FARMING /RURAL ATMOSPHERE

1. The residents enthusiastically accept a common agenda for rural land use.
2. Farms should be outside of town to keep rural feeling.
3. The town is home to many second home as well as years round residents.
4. Help the local farmers with land incentives to promote/preserve the continuation of the small-scale farm.
5. Farming, day and logging.
6. The Town should have a neat and well-cared for look – public trash pick-up

HISTORICAL

1. The Town of Rensselaerville is what it has become because of its historical background (Grist Mill, etc.).
2. Values history.
3. The character of the Towns should remain historic but improved in appearance.
4. Everything that we like about our community is because it basically hasn't advanced. We've remained quaint.

TABLE 3:

COMMUNITY/QUALITY OF LIFE

1. To keep the Town as unique as it is now –views- people caring about community - Better leadership (Supervisor).
2. Clean well-maintained public & private property, families utilizing playgrounds & fishing, job opportunities for families to thrive.
3. The small town & farming way of life with lots of history.
4. In 15 years I would hope the Town would be far more cohesive than it is at present. Find that the abandoned buildings would either be restored or removed.

SMART GROWTH

1. Slow controlled growth - more small retail in Hamlet zones, maintain rural feel with open space – protected farms, and affordable housing to keep next

generation in Town.
CULTURE
1. Would like to see more cultural activity –Theater, Arts etc.
HOUSING OPPORTUNITIES
1. To keep the feeling of new opportunity for people moving here. 2. Affordable housing. 3. All homes kept up without penalty of increased taxes or zoning laws to make you refurbish from their "view point".

Summary of Priority Positive Features of the Town of Rensselaerville –
Combined from all Three Workshops (Green Shading indicates that this attributed was mentioned in all three locations)

Positive Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
Beautiful Scenery	5	4	2		4	1	11	16
Talented People	1						1	1
Hamlets (liveable, clustered, small and pleasant	3	3				1	3	7
Community (Spirit, Caring, Involved, friendly)	4	8		1	1	6	5	20
Cultural (opportunities)	4	3					4	7
Rural (rural character, open space, rural but accessible)	7	7	3	1	3	3	13	24
Agriculture and farms still remain	1				2	2	2	5
Low Population Density	2				1		3	3
Good Roads	1	1	9	1			10	12
Natural Areas and features (Huyck Preserve, Sikule Pond)	3	11	1	1	3	5	7	24

Positive Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
Peace and Quiet Quality of life	4	3	2		5	1	11	15
Clean Water (watersheds protected, good water quality, creeks)	3		2				5	5
Historic and Architectural Character	1	6		2		2	1	11
Ideal Retirement Community	1						1	1
Diversity of People (mingling of generations	2	3					2	5
Wildlife and Hunting/Fishing	1	3	2	1	3	5	6	15
Safe	2	1		1		1	2	5
Good area to raise family			1				1	1
Emergency Services		2	2		1	1	3	6
Park in Preston Hollow/Other recreation		4	1	1	3	3	4	12
Views		3		2		4		9

Positive Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
Community Buildings (library, Conklin Hall, Churches, etc.)		12		2		7		21

Summary of Priority Negative Features of the Town of Rensselaerville – Combined from all Three Workshops (Green Shading indicates that this attributed was mentioned in all three locations)

Negative Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Total Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
High Taxes (property taxes too high,	20	5	1	2	1	1	22	30
Unaffordable housing	2	2	2	1		1	4	8

Negative Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Total Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
Palmer House for sale	1	1					1	2
Lack of support for working landscapes, farms, forests	3	1				3	3	7
Lack of Communication (between hamlets, between government and community)	1	6				3	1	10
Town Government (clique control, doesn't keep promises)	1	1	2			1	3	5
Lack of enforcement of speeders	6	3		2	1		7	12
Poor road conditions	6	9		1	1	2	7	19
Development (need protection from outside developers, too much	8	4				2	8	14

Negative Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Total Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
development, unplanned, too much, no clustering, lack of planning)								
Development (lack of incentives for open space protection)		1	7				7	8
No hi speed internet, cell service, especially for EMS	1	4	6	1	2	2	9	16
Economic Development lacking (no retail, lacks coherent efforts	4	8	1	5	1	5	6	24
Harsh winters		3						3
Degraded waters and watersheds	3				2		5	5
Loss of vistas					1		1	1
Too much regulation of land					2	1	2	3
Planning process too long			3	2			3	5
Need smaller lot			1	1			1	2

Negative Attribute	Number of Priority Stickers Received: Hamlet of Rens.	Number of times this Attribute was Mentioned, but not added as priority: Rens	Number of Priority Stickers Received: Hamlet of PH	Number of times this Attribute was Mentioned, but not added as priority: PH	Number of Priority Stickers Received: Medusa	Number of times this Attribute was Mentioned, but not added as priority: Medusa	Total Number of Priority Stickers Received	Total Number of Participants that Mentioned this attribute
sizes								
Poor code enforcement			1	1		1	1	3
Noise pollution			1			1	1	2
Light pollution					1		1	1
Consolidation of county and town highway					1		1	1
Bad sidewalks	1	4					1	5
Part time residents	1						1	1
Rens. Institute not good neighbor	1						1	1
Too much tax exempt land	1	1			1		2	3
No health care nearby	1	2	1				2	4
Lack of Recreation Facility					4		4	4
People want open space but don't want to pay for it					4		4	4
Limited Parking in Hamlet		5						5

Appendix C: Bibliography

References

Albany County Planning Department. Population Report. Albany, New York. 1988.

American Farmland Trust, 1993. Is Farmland Protection a Community Investment? How to do a Cost of Community Services Study. Washington. DC.

Andrle, Robert F. and Janet R. Carroll, eds. 1988. The Atlas of Breeding Birds in New York State. Cornell University Press, Ithaca, New York 551 pp.

Arnow, Theodore. 1949. "The Groundwater Resources of Albany County, New York: New York State Water Power and Control Commission." Bulletin GW-20. Albany, New York.

Benyus, Janine M. 1989. The Field Guide to Wildlife Habitats of the Eastern United States. Simon and Shuster, Inc., New York. 336 pp.

Bunnell, Gene, 1997. "Fiscal Impact Studies as Advocacy and Story Telling." Journal of Planning Literature, 12/2, pp. 136-151.

Burchell, R.W. and D. Listokin, 1995. Land, Infrastructure, Housing Costs and Fiscal Impacts Associated with Growth: The Literature on the Impacts of Sprawl vs. Managed Growth. Cambridge, MA: Lincoln Institute of Land Policy.

Eyre, F.H. 1980. Forest Cover Types of the United States and Canada. The Society of American Foresters. 148 pp.

Fleischer, P. Jay. Undated manuscript. "The Geology of the Edmund Niles Huyck Preservation Area, Rensselaerville, New York." State University of New York, Oneonta, New York.

Goldring, Winifred. 1935. "Geology of the Berne Quadrangle." New York State Museum Bulletin No. 303. Albany, New York.

Jorgensen, Neil. 1978. A Sierra Club Naturalist's Guide to Southern New England. Sierra Club Books, San Francisco. 417 pp.

Kelsey, T.W., 1996. "The Fiscal Impacts of Alternative Land Uses: What do Cost of Community Services Studies Really Tell Us?" Journal of the Community Development Society, 27/1, pp. 78-89.

Kingsley, Neal P. 1985. A Forester's Atlas of the Northeast. U.S.D.A. Northeastern Forest Experiment Station. General Technical Report NE-95. 96 pp.

Kricher, John C. and Gordon Morrison. 1988. Peterson's Field Guide to Eastern Forests. Houghton Mifflin Company. Boston. 368 pp.

Ladd, H., 1992. Effects of Population Growth on Local Spending and Taxes. Cambridge, MA: Lincoln Institute of Land Policy.

Magee, Dennis W. 1981. Freshwater Wetlands – A Guide to Common Indicator Plants of the Northeast. University of Massachusetts Press. 245 pp.

New York District Corps of Engineers. Myosotis Lake Dam Phase I Inspection Report, National Dam Safety Program. Prepared by Tippetts-Abbett-McCarthy-Stratten. September, 1978.

New York State Department of Agriculture and Markets, New York Agricultural Statistics, 1988-1989.

New York State Department of Agricultural and Markets, New York Agricultural Statistics, 1987-1988.

New York State Department of Agricultural and Markets, New York Agricultural Statistics, 1986.

New York State Department of Environmental Conservation. New York State Breeding Bird Atlas – Complete Listing (Town of Rensselaerville) and Species Status Index.

New York State Department of Environmental Conservation. 1980. Freshwater Wetlands Maps and Classification Regulations 6NYCRR Part 664. (Pursuant to Article 24 of the Environmental Conservation Law). 45 pp.

New York State Department of Environmental Conservation. Use and Protection of Waters 6NYCRR Part 608 (Pursuant to Article 15, Title 5 of the Environmental Conservation Law).

New York State Department of Environmental Conservation, Biological Survey. New York Fisheries Database and Maps: Rensselaerville, Greenville, Durham and Livingston Quadrangles.

New York State Department of Environmental Conservation, Division of Fish and Wildlife. Freshwater Wetlands Maps. 1985. Rensselaerville, Westerlo, Greenville, Durham and Livingston Quadrangles.

New York State Department of Environmental Conservation, Division of Fish and Wildlife. New York State Wetlands Inventory Maps. 1968. Rensselaerville, Westerlo, Greenville and Durham Quadrangles.

New York State Department of Environmental Conservation, Bureau of Wildlife. Deer Take by County and Town, 1982-1988.

New York State Department of Environmental Conservation, Bureau of Wildlife. 1982. Addendum to the History of White-tailed Deer in New York – Deer Take, 1956-1982.

New York State Department of Environmental Conservation. c. 1971. Partridge Run Wildlife Management, Area Management Plan. 14 pp.

Newcomb, Lawrence. 1977. Newcomb's Wildflower Guide. Little, Brown & Company. 490 pp.

Peterson, Roger Tory. 1980. A Field Guide to the Birds East of the Rockies. Boston: Houghton Mifflin Company.

Petrides, George A. 1972. A Field Guide to the Trees and Shrubs. Boston: Houghton Mifflin Company.

Prindle, A.M. and T.W. Blaine. 1998. Cost of Community Service Studies. Ohio State Univeristy. CDFS-1260-98, Land Use Series.

Roddewig, Richard J. 1983. Preparing A Historic Preservation Ordinance. American Planning Association, Washington, D.C.

State of New York Department of Commerce, Division of Policy and Research. "Profile of People, Jobs & Housing 1980" for Albany, Greene and Columbia Counties.

State of New York Natural Heritage Program, New York Rare Animal Status List; New York Rare Plant Status List

Tiner, Ralph W. Jr. 1988. Field Guide to Nontidal Wetland Identification. Maryland Dept Nat. Resources in Corporation with the U.S. Fish and Wildlife Service. 283 pp. plus photos.

U.S. Bureau of the Census, Census of Agriculture. 1964, 1969, 1974, 1978, 1982, 1987.

Wyman, Richard L. 1988. History of Research and a Description of the Biota and Ecological Communities of the Edmund Niles Huyck Preserve and Biological Research Station – Occasional Paper Number 1. 135 pp.

Wyman, Richard L., Laura S. Carter and Diana Hinchcliff. 1987. Edmund Niles Huyck Preserve and Biological Research Station Annual Report for 1987. 150 pp.

Yaro, Robert D., Randall G. Arendt, Harry L. Dodson, and Elizabeth A. Brabec. 1988. Dealing with Change in the Connecticut River Valley: A Design Manual for Conservation and Development, Vol. 2. Massachusetts Department of Environmental Management Center for Rural Massachusetts. 183 pp.

Adirondack Park Agency Rules and Regulations. New York State Executive Department, Adirondack Park Agency, 1982.

Land Resource Preservation. New York State Department of State, Office for Local Government Services, 1986.

New York Guidelines for Urban Erosion and Sedimentation Control. U.S. Department of Agriculture, Soil Conservation Service, c. 1985.

Nutrient Movement from Septic Tanks and Lawn Fertilization. Michigan Department of Natural Resources, Water Resources Commission, Bureau of Water Management, 1973.

Service Foresters' Handbook. U.S. Department of Agriculture, Forest Service, 1978.

Site Development Plan Review – Procedure and Guidelines. New York State Department of State, Office for Local Government Services, 1984.

Timber Management Handbook. New York State Department of Environmental Conservation, 1985.

Waste Treatment Handbook – Individual Household Systems. New York State Department of Health, Division of Environmental Protection, 1976.

Bibliography for Agricultural Resources:

Albany County Agricultural and Farmland Protection Plan. Albany County Department of Economic Development, Conservation and Planning, 2004.

Guide to Local Planning for Agriculture in New York. American Farmland Trust, David Haight, Jerry Cosgrove and Kristen Ferguson, Saratoga Springs, New York, 200_.

Helderberg Escarpment Planning Guide. Daniel A. Driscoll and Lindsay N. Childs, Editors, Albany County Land Conservancy, Slingerlands, New York. 2002.

Olsen, Gerald W. (1981) Soils and the Environment: *A Guide to Soil Surveys and Their Applications,* Chapman and Hall, New York. 1981.

Soil Survey of Albany County, New York United States Department of Agriculture, Soil Conservation Service.

Appendix D: Groundwater Study (NYRWA)

1.0 INTRODUCTION

1.1 Goals and Objectives

Ground water is a valuable resource for the Town of Rensselaerville, with several privately-owned public water systems as well as individual households and businesses relying upon wells for their source of supply. In addition, ground water contributes a significant portion of water to local streams, wetlands, and ponds. Unfortunately, groundwater contamination can and does occur as a consequence of a variety of land use activities. In addition, ground water can become depleted if withdrawal rates exceed natural replenishment rates.

The Town of Rensselaerville, like many communities in Albany County, is concerned about residential and commercial development pressures. In order to preserve the groundwater resources of Rensselaerville for today and the future, the following Groundwater Protection Plan for the Town of Rensselaerville area has been prepared by the New York Rural Water Association (NYRWA) in cooperation with the Town of Rensselaerville. This plan maps the groundwater resources and aquifers in Rensselaerville, identifies potential sources of contamination, and outlines potential protection strategies.

1.2 Scope and Methods

New York Rural Water Association has utilized a variety of published and unpublished data sources for this plan. All data were inputted into a Geographical Information System (GIS). This is a computer system that allows one to visualize, manipulate, analyze, and display geographic (spatial) data.

Well data was collected from the United States Geological Survey, the New York State Department of Environmental Conservation, and Albany County. In addition, information on some sixty wells was collected by volunteers and from residents. In all, data for over 180 water wells was collected. Digital geologic maps from the New York Geological Survey were utilized. Similarly, digital soils mapping from the Natural Resource Conservation Service (NRCS) was used. Elevation data were taken from digital elevation models (DEMs). This information was then used to derive hillshading and slopes. Land use information was taken from parcel mapping from Albany County Department of Economic

Development, Conservation and Planning. Other digital data including surface waters, roads, regulated facilities, aerial photography, etc. were downloaded from the New York State GIS Clearinghouse and the Cornell University Geospatial Information Repository.

New York Rural Water Association also conducted on-site activities in Rensselaerville to document the location of some geologic features, public water supply wells, potential contaminant sources, etc. A global positioning system (GPS) device was used to capture the geospatial coordinates of such features. New York Rural Water Association also conducted geologic reconnaissance in selected areas to confirm surficial and bedrock mapping.

HYDROGEOLOGIC SETTING

2.1 Physiography and Drainage

The Town of Rensselaerville is situated within the eastern portion of the Appalachian Plateau – Southern New York physiographic region (see Figure 1). The highest elevations of the Appalachian Plateau in Rensselaerville are in the northwestern section of Town (see Figure 2). These include summits of 2,124 feet above sea-level south of Kropp Road in the State Reforestation Area and 2,146 feet above sea-level near Littner and Pond Hill Roads.

In the southern half of Town, the Appalachian Plateau is deeply dissected by valleys containing the Catskill Creek and its tributaries such as Potter Hollow Creek, Fox Creek, Tenmile Creek, and Eightmile Creek. The lowest elevations in Town (~ 680 to 700 feet above sea-level) are along Tenmile Creek and Catskill Creek at the Rensselaerville-Durham (Albany County-Greene County) boundary.

The northeastern corner of the Town of Rensselaerville is located within the Switz Kill Watershed (see Figure 2). Here drainage is directly northerly toward the Town of Berne and eventually to Schoharie Creek. Most of the Town of Rensselaerville is located within the Upper Catskill Creek Watershed. Here, drainage flows southerly to Catskill Creek.

2.2 Bedrock Hydrostratigraphy

The bedrock underlying Rensselaerville consists of Middle Devonian age rocks laid down 390 to 370 million years ago as part of a large accumulation of sediments known as the Catskill Delta. The oldest rock exposed in Rensselaerville are those of the Lower Hamilton Group. These rocks include the Mount Marion Formation and the Ashokan Formations. The Mount Marion Formation consists of fossiliferous, thin-bedded sandstones interbedded with dark bluish to greenish shales (Arnow, 1949). It is exposed in lower elevations of Town (see Figure 3). Overlying the Mount Marion Formation is the Ashokan Formation. It consists of nonfossiliferous sandstones interbedded with shale.

Above the Lower Hamilton Group beds is the Plattekill Formation (Fisher, 1970). This formation includes characteristic interlayered red and gray shale, siltstone, and sandstone beds (Fletcher, 1967). Highest elevations in Town are underlain by the Moscow Formation, known locally as the Potter Hollow and Manorkill Formations (Fletcher, 1967). These rocks are similar overall to the Plattekill Formation.

2.2.1 Bedrock Well Yields

Most water wells in Rensselaerville utilize the local bedrock formations. The average well yield from the Lower Hamilton Group rocks in Town is 15.1 gallons per minute (gpm). However, the median yield of wells in the Lower Hamilton Group is much lower at 7.5 gpm. Nearly twenty percent of wells yield at least 20 gpm.

Figure 1. Physiographic Setting.

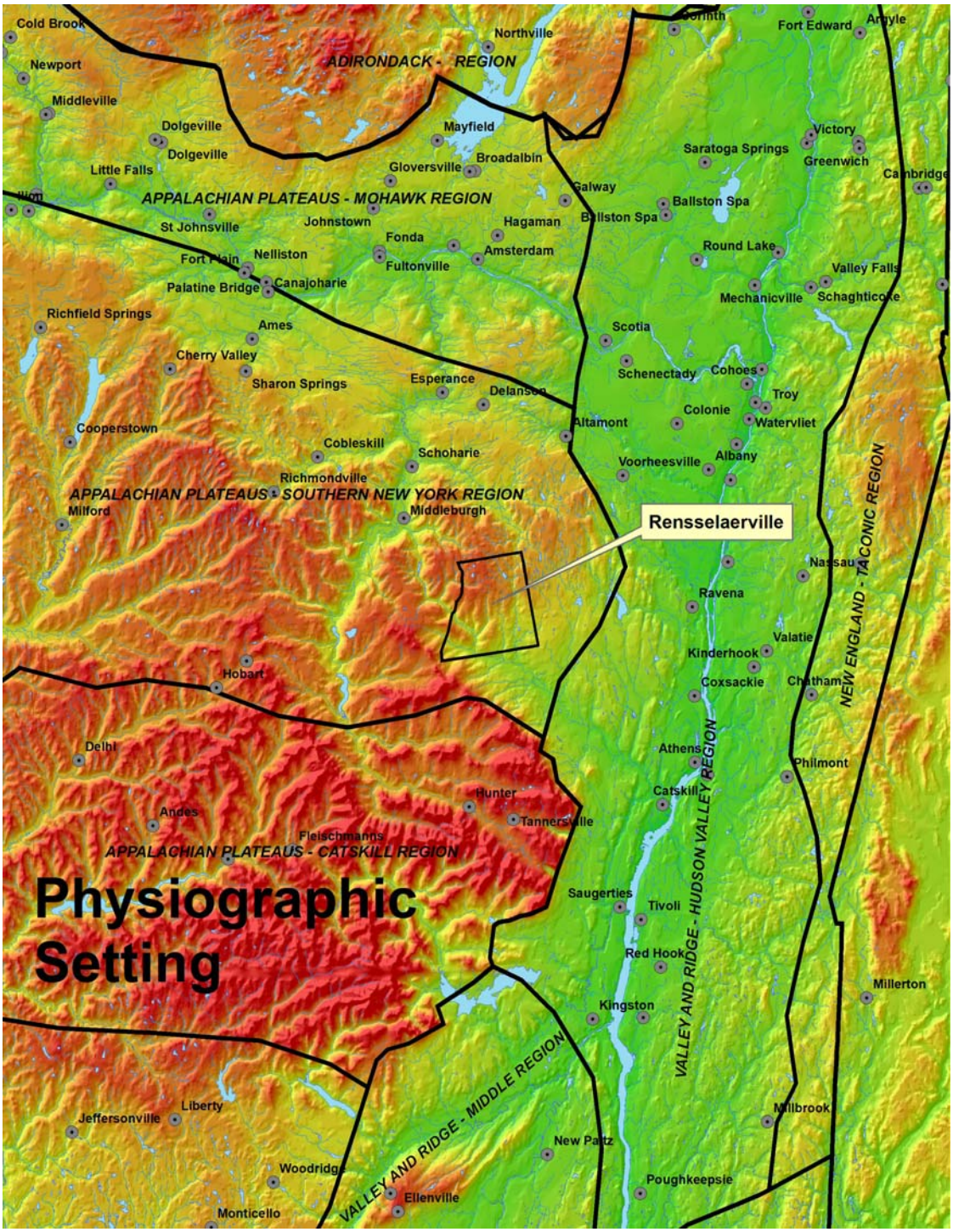


Figure 2. Local Topography and Watersheds.

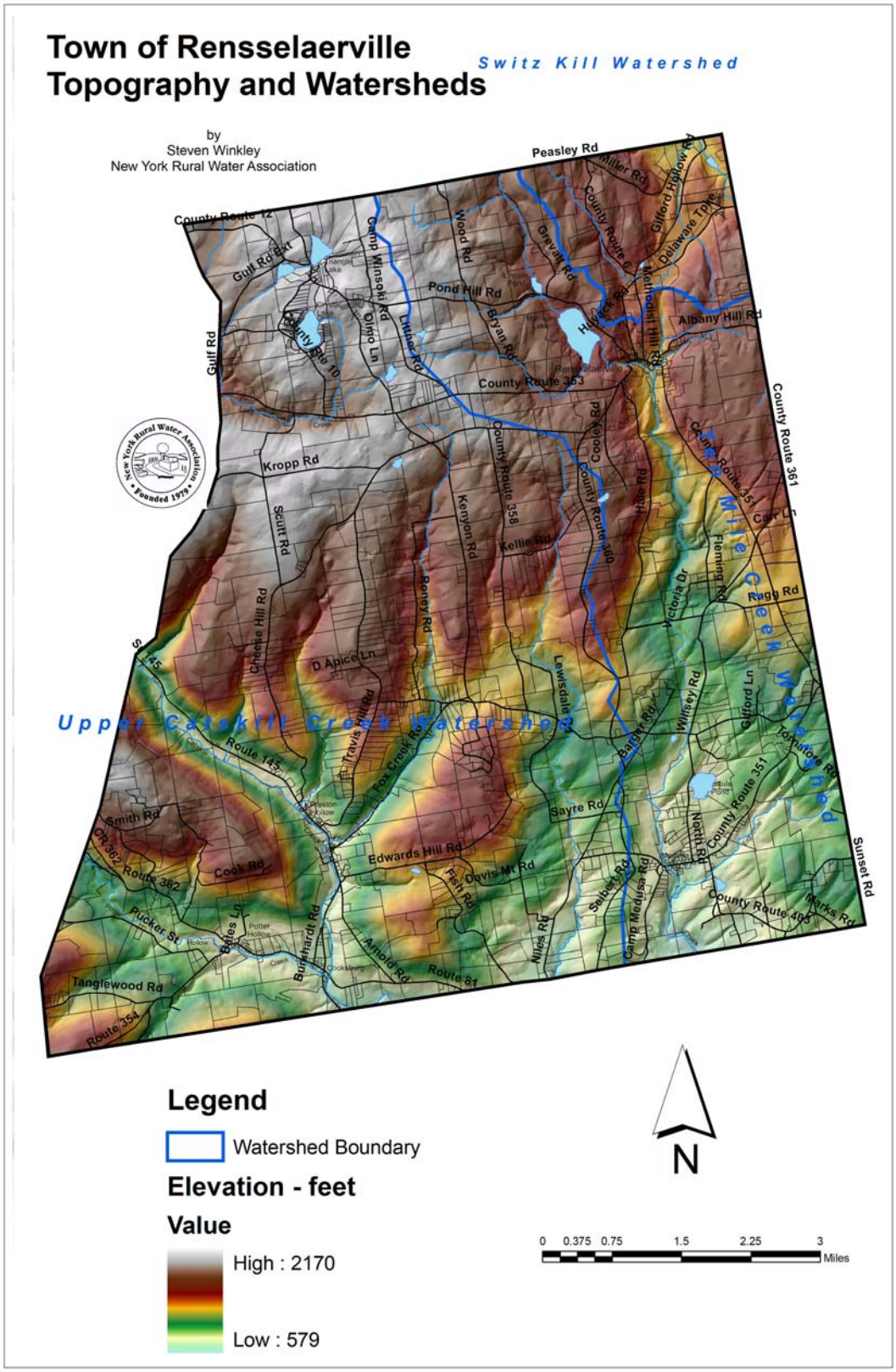
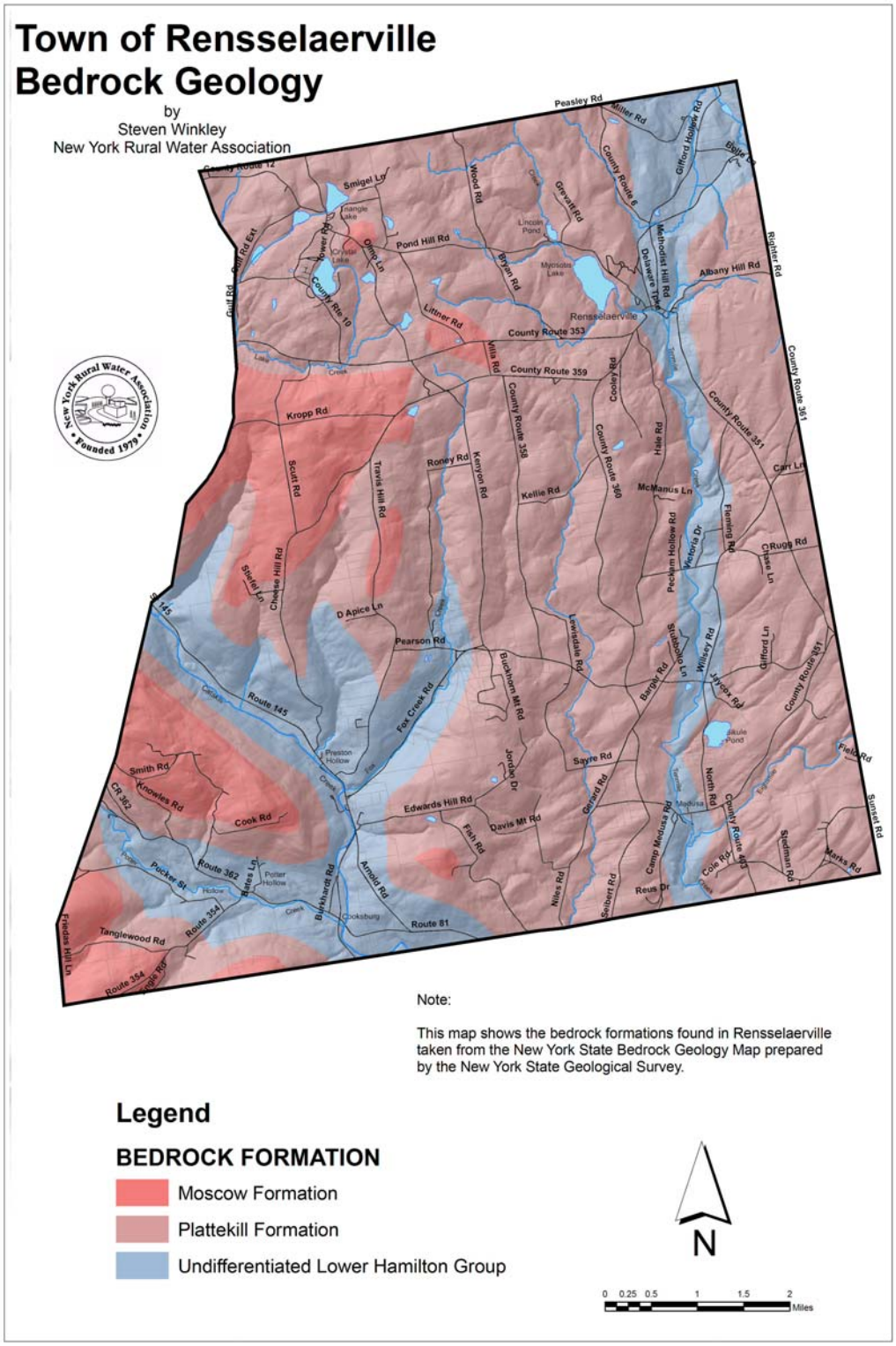


Figure 3. Bedrock Geology.



The average well yield from the Plattekill Formation in Town is 10.3 gpm, with a median well yield of 8 gpm. The average well yield from the Moscow Formation in Rensselaerville is 9.3 gpm, with a median well yield of 6 gpm. In general, the bedrock in Rensselaerville yields adequate amounts of water for domestic purposes. Nevertheless, there are some areas where documented well yields are less than 5 gpm (see Figure 4). The largest area of poorer yields is situated between the hamlets of Rensselaerville and Medusa in the vicinity of Hale Road and County Route 360. Conversely, well yields in excess of 10 gpm can sometimes be found if underlying fracture zones are intersected. Such zones often coincide with topographic linear features (see Figure 4).

2.2.2 Bedrock Water Quality

Water quality data from the Albany County Health Department indicate that the majority of bedrock water wells in Rensselaerville have elevated levels of iron (above the maximum contaminant level of 0.3 mg/L). Homeowners surveyed by members of the Town's Land Use Committee also report frequent iron problems. These iron problems in water wells are due largely to bedrock mineralogy and are widely distributed over Rensselaerville (see Figure 5). Some wells also have sulfur or rotten-egg odor. This is largely due to the presence of hydrogen sulfide, a naturally occurring gas found in water that is formed by the breakdown of organic matter in the bedrock. Some of the odor may also be caused by dissolved sulfur in the water reacting with the magnesium rod in some hot water heaters.

-

Approximately ten percent of bedrock water wells in Rensselaerville have elevated chloride, total dissolved solids, and/or specific conductance levels. Wells with higher salinity tend to be deeper than less saline wells. The median depth for saline wells is 443 feet, compared with a median well depth of 282 feet for wells without any reported water quality problems.

Unlike iron and hydrogen sulfide, the presence of elevated salinity does appear to be geographically-linked (see Figure 5). The majority of the salty wells are located in the Tenmile Creek valley. Two possibilities could explain this occurrence. First, this is the area with the lowest elevations in Town and it could be where regional groundwater discharge is occurring. Groundwater flows from recharge areas to discharge areas. As it travels through the subsurface formations, ground water becomes increasingly mineralized. Secondly, the Town of Rensselaerville highway garage and the Albany County DPW garage are both located in the

Tenmile Creek watershed (see Figure 5). Three wells with elevated salinity are located 1,500 feet of the garage facilities.

2.3 Unconsolidated Deposits

2.3.1 Surficial Geology

Surficial deposits are geologic materials that are found at the land surface. Most of these are unconsolidated deposits that formed as a result of continental glaciation, deglaciation, and post-glacial deposition. A map of surficial deposits has been completed by NYRWA (see Figure 6). This map was derived from examination of NRCS SSURGO digital soils mapping, the New York State Surficial Geology Map, water well data, site reconnaissance, and the topographic expression of the various deposits.

Figure 4. Estimated Bedrock Well Yields.

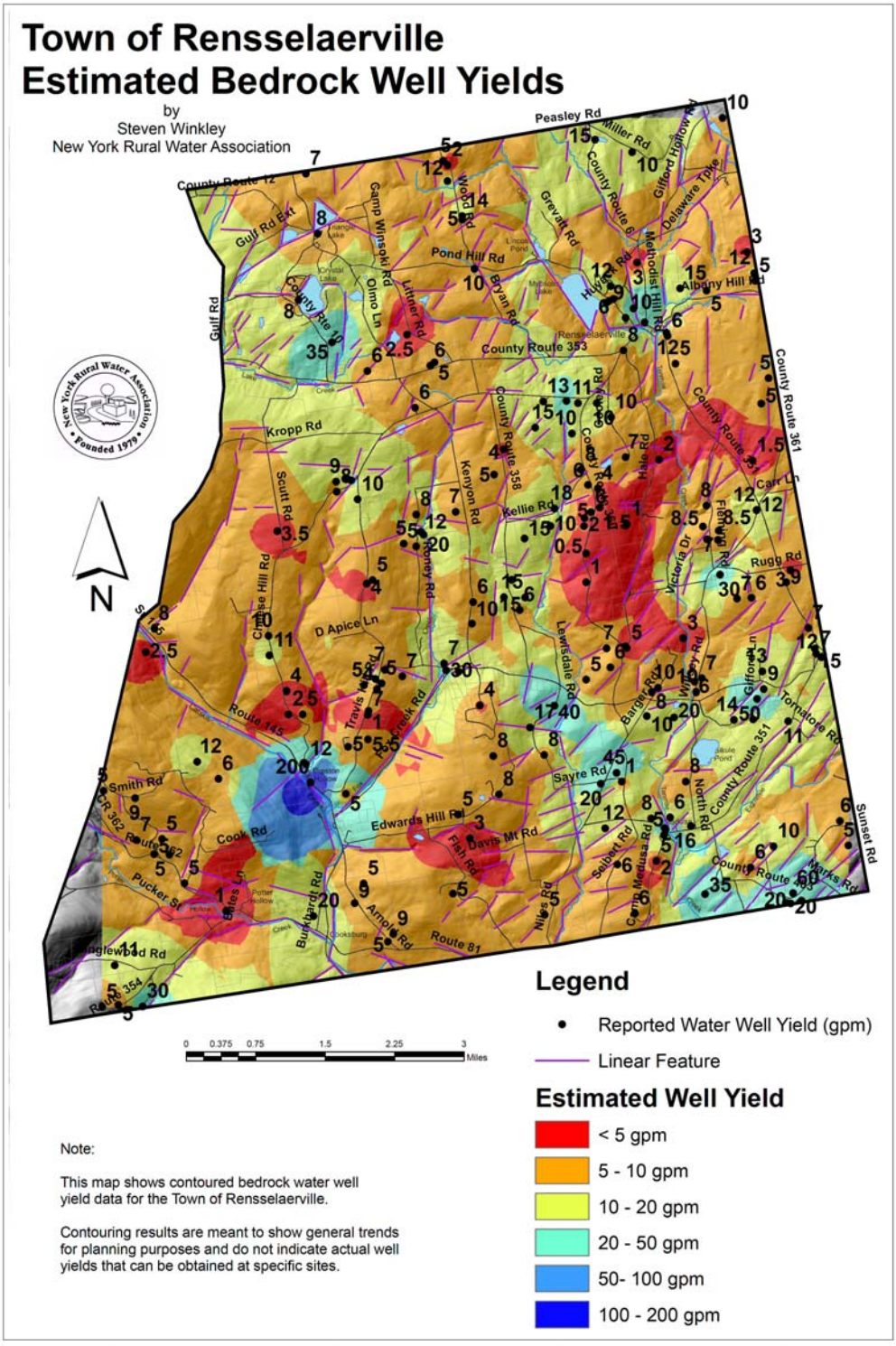


Figure 5. Groundwater Quality Data.

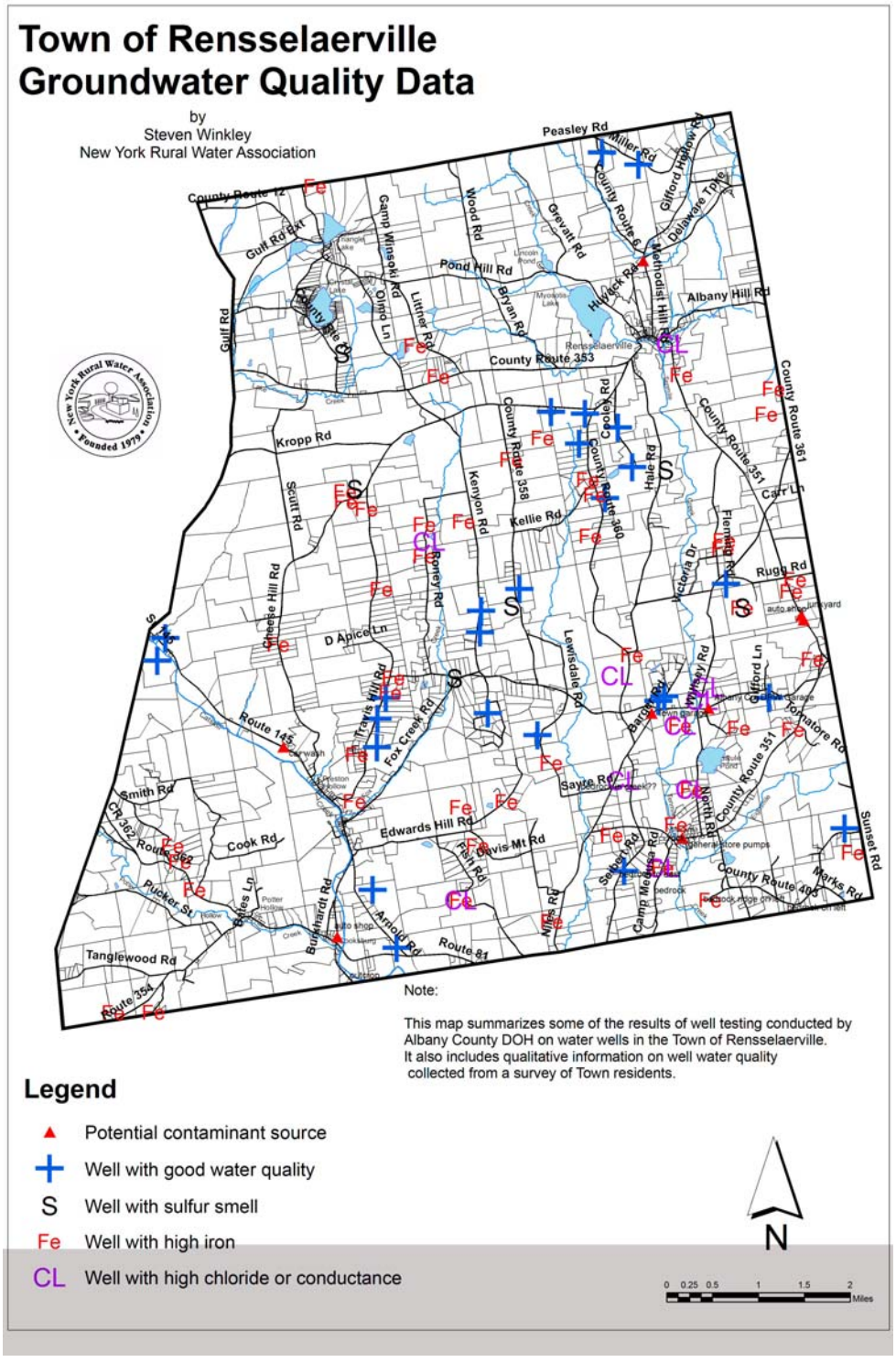
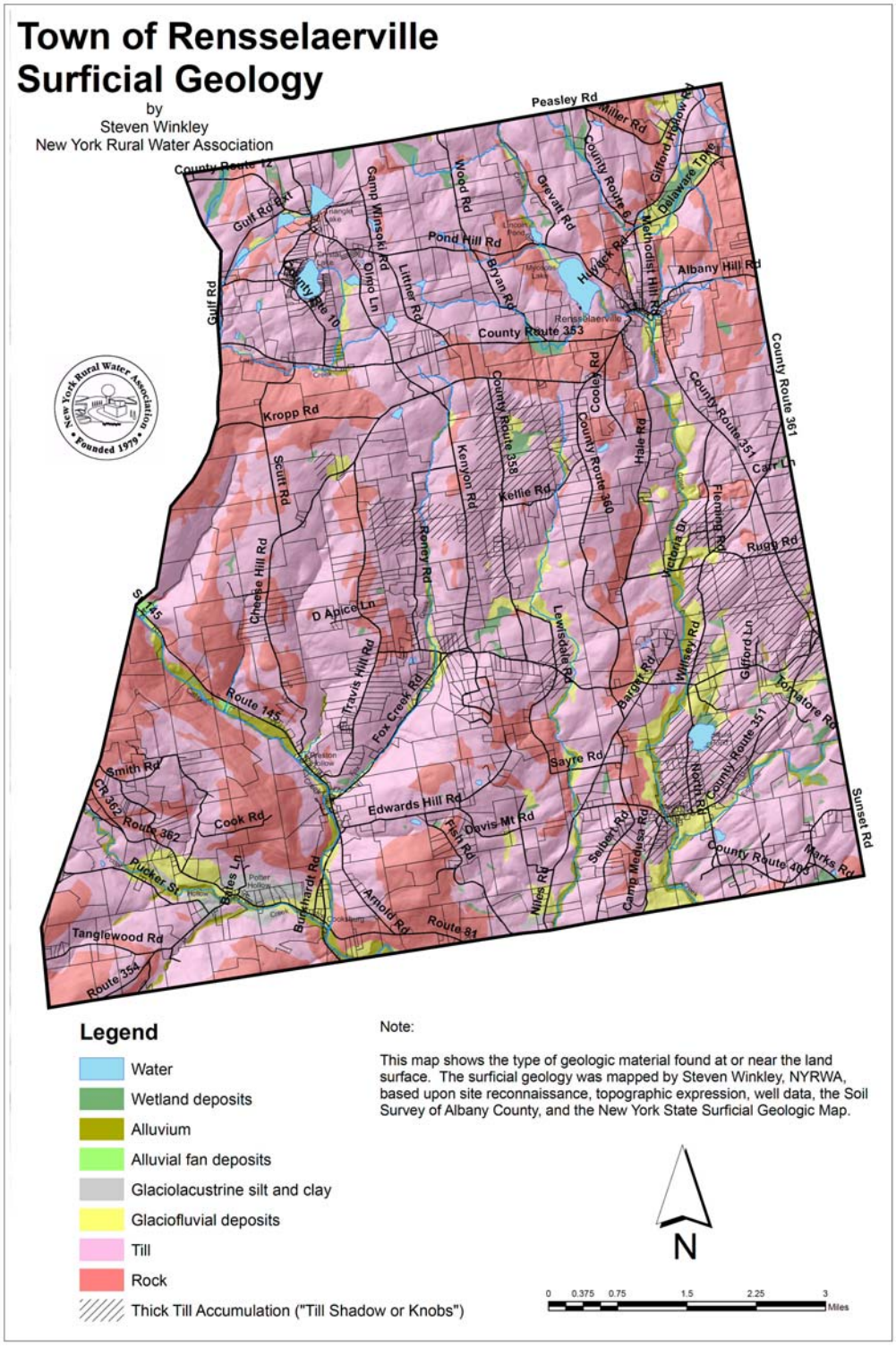


Figure 6. Surficial Geology.



Glacial till is the oldest glacial sediment, and was deposited directly from glacial ice. Till is generally an unsorted mixture of clay, silt, sand, gravel, and boulders. Glacial till typically has relatively low permeability and does not typically produce significant water well yields.
Till is the predominant glacial sediment in upland areas, areas above the valleys. The thickness of till is extremely variable. Relatively thin till deposits (less than 5 feet thick) cover many of the upland areas of Rensselaerville. In these areas, bedrock frequently outcrops at the land surface (see Figure 6). In other areas, so-called "till shadows" or "till knobs" exist. Coates (1966) described thick accumulations of till on the south sides of hills and called these "till shadows". Coates and King (1973) and Coates (1981) also refer to till knobs that can partially block valleys. NYRWA has mapped several areas in Rensselaerville where there is over 100 feet of glacial till. These areas are mapped on Figure 6. Additional areas of 20 to 100 feet of till exist in Rensselaerville. Numerous wetlands and lakes in Rensselaerville have formed where till accumulations plug valley drainage.

Glaciofluvial deposits typically consist of sorted and stratified sand and gravel that was deposited from glacial meltwater streams during the deglaciation period. Glaciofluvial deposits represent the highest yielding aquifers in the region and comprise most of the mapped unconsolidated aquifers in Town (see Figure 7). Glaciofluvial deposits are most common in valley settings, where glacial meltwater carrying sand and gravel was directed away from the ice front. Coarse-grained sediments were frequently deposited on the valley floor. In some settings in Town, glacial ice stagnated in upland areas. Here, sand and gravel was deposited by meltwater along upper valley walls.

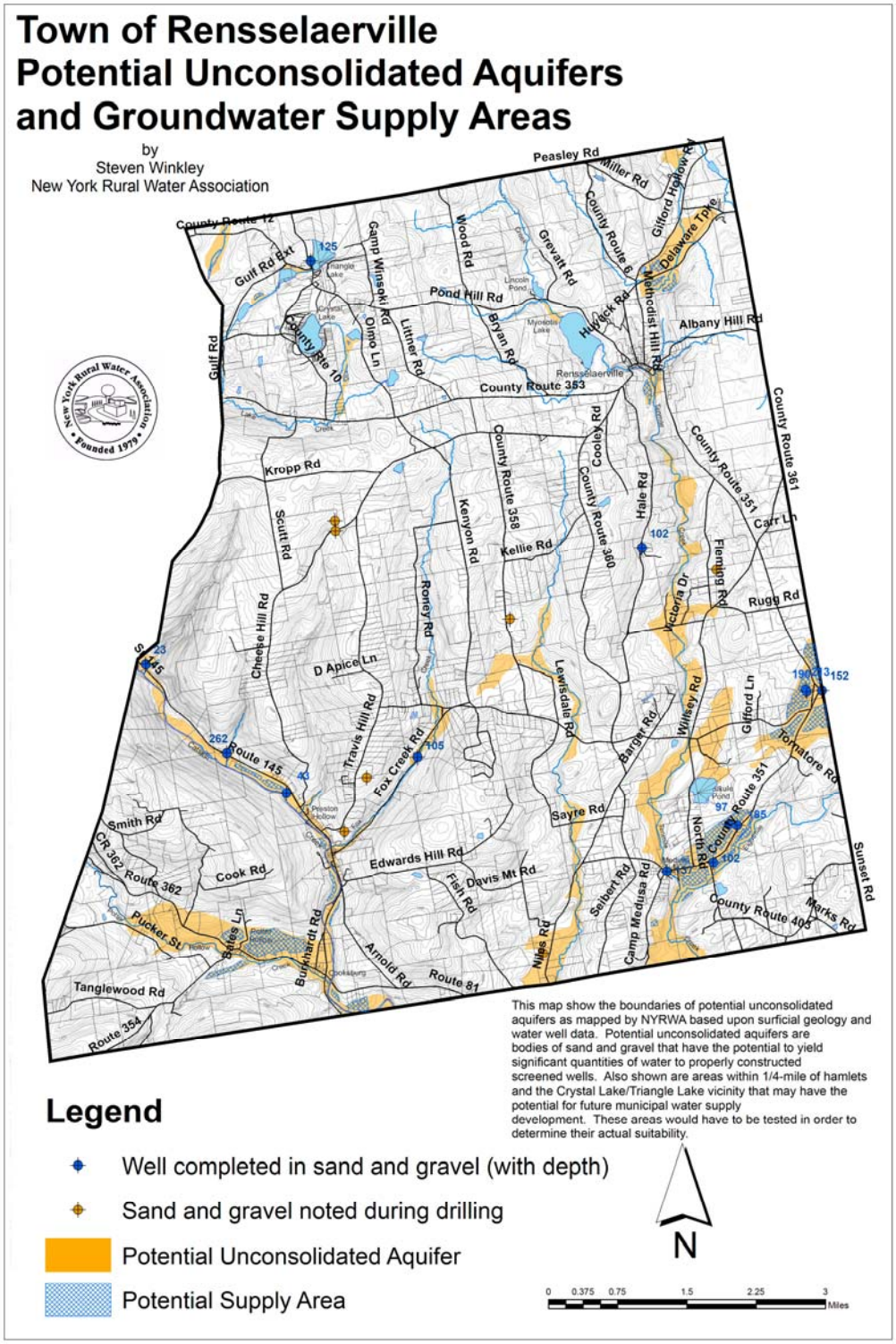
In a few places in Town, deep glacial lakes formed in the valleys. In these settings fine-grained glaciolacustrine silt and clay and/or wetland deposits formed. Overlying the glacial deposits in many locales are postglacial alluvium (floodplain deposits), alluvial fan deposits, or wetland deposits.

2.3.2 Unconsolidated Aquifers

NYRWA has mapped unconsolidated aquifers in Rensselaerville based upon surficial and water well data (see Figure 7). Unconsolidated aquifers are bodies of sand and gravel that have the potential to yield significant quantities of water to properly constructed screened wells. Most sand and gravel wells completed for household use in Rensselaerville are finished simply with an open-ended casing. To maximize yields, a screen could be placed in the well.

Yields from open-ended wells completed in unconsolidated aquifers in Town range in yield from 2 to 20 gpm. The mean and median yield of such wells is 12 gpm. Little data exists on the water quality from the unconsolidated aquifers. Typically such aquifers produce less mineralized water than bedrock. However, iron and manganese are sometimes problematic in unconsolidated aquifers.

Figure 7. Potential Unconsolidated Aquifers.



3.0 PUBLIC WATER SUPPLY WELLS

A public water system is an entity that provides water to the public for human consumption through pipes or other constructed conveyances. Any system having at least 5 service connections or that regularly serves an average of at least 25 people daily for at least 60 days out of the year is considered a public water system. Public water systems are classified as one of three types: community, non-transient non-community, or transient non-community. A community water system is a public water system that serves the same people year-round. It has the most regulatory requirements of the three system types, including the need for a certified operator and more extensive monitoring. Based upon New York State Department of Health (NYSDOH) data, there is one community water system in Rensselaerville: Cass Youth Camp (see Figure 8).

A non-transient non-community water system water system does not serve year-round residents, but does regularly serve at least 25 of the same people more than six months per year. It now requires a certified operator, but has less monitoring and reporting requirements than a community system. Based upon NYSDOH data, there are no such water systems presently in Rensselaerville.

A transient non-community water system does not regularly serve at least 25 of the same people over six months per year. It does not require a certified operator and monitoring is largely limited to bacteria, nitrate, and nitrite. There are 3 businesses having wells that are regulated as a transient non-community water system in the Town of Rensselaerville: K+D West Winds, Hilltown Cafe, and the Rensselaerville Institute (see Figure 8). In addition, Camp Medusa is inventoried by NYSDOH but is apparently not presently regulated.

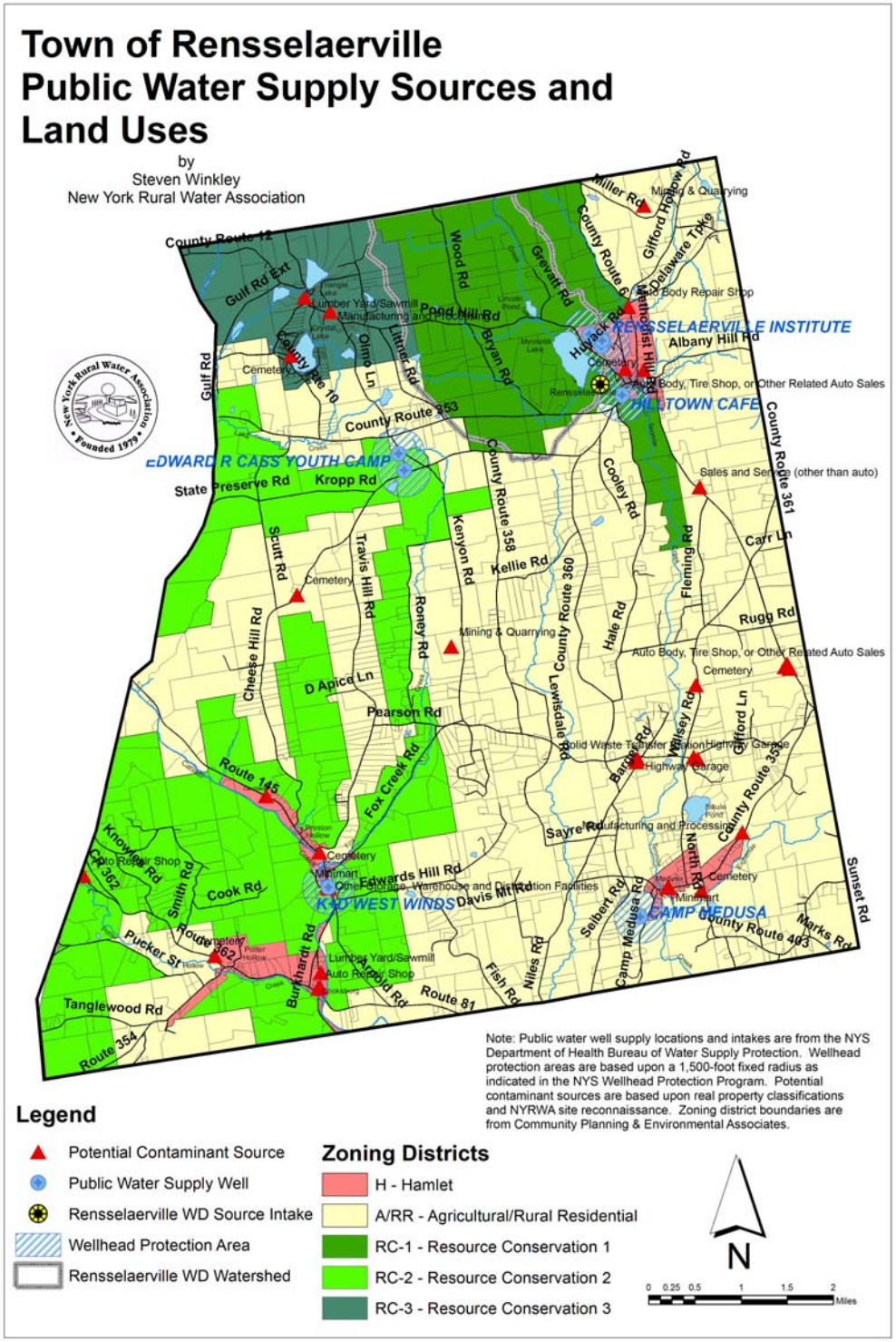
3.1 Wellhead Protection Areas

The USEPA (1994) defines a wellhead protection area as the surface and subsurface area surrounding a well through which contaminants are reasonably likely to move toward and reach the water well. This is the area where preventative steps could be focused to reduce the risk of contamination of the public water supply. New York State's Wellhead Protection Program uses a fixed radius of 1,500 feet from the wellhead to delineate wellhead protection areas in bedrock aquifers. This is the approach used by NYRWA and mapped on Figure 8.

4.0 GROUND WATER RECHARGE AND DISCHARGE

As indicated before, ground water flows from recharge areas to discharge areas. Recharge areas are where ground water is being replenished and it is flowing downwards and away from the water table. Typically recharge areas represent 70 to 95 percent of a region (Freeze & Cherry, 1979). Conversely, in discharge areas, ground water flows upwards toward the water table and eventually is removed from the subsurface into surface water bodies. In an area of high topographic relief such as in Town of Rensselaerville, much of the ground water moves in local flow systems. In local flow systems, ground water is recharged at a topographic high and discharged at the next local topographic low. Some deeper ground water in Town may be involved in regional flow systems.

Figure 8. Public Water Supply Wells and Land Uses.



4.1 Recharge

Most of the ground water in Rensselaerville is ultimately recharged (replenished) through infiltration of rainfall or snow melt. Rates of ground water recharge vary widely based upon many factors, but the important variable is believed to be the surficial geologic material. Rates of shallow groundwater recharge in Rensselaerville have been calculated by NYRWA based on base flow estimates and mean annual runoff in the region. These calculations are based upon the widely held assumption that long-term average natural groundwater recharge is equal to long-term average baseflow to streams. Mean annual groundwater recharge can be calculated by multiplying a grid of local base flow index (BFI) values by a grid of mean annual runoff values. Base flow is the component of stream flow that can be attributed to groundwater discharge into streams. BFI is the ratio of base flow to total flow, and values have been computed for watersheds by the USGS using an automated hydrograph separation computer program called the BFI program.

The USGS has also developed an empirical relation between measured base flow characteristics at gauging stations and the surficial geologic materials in the surrounding watersheds. Through iterative methods, NYRWA was able to develop specific empirical relationships between surficial geologic materials and baseflow for the Town of Rensselaerville for the Upper Catskill Creek, Tenmile Creek, and Fox Creek watersheds.

Rates of annual groundwater recharge in the Town of Rensselaerville have been calculated by NYRWA to range from approximately 17 inches per year in some glaciofluvial sand and gravel deposits to as little as 1-2 inches per year in areas of poorly permeable wetland deposits (see Figure 9)

4.2 Discharge

Ground water discharge areas are relatively low-lying areas where ground water is removed from the subsurface through evapotranspiration at the land surface or movement into surface water bodies. The water table is at or relatively near the land surface in discharge areas. One indicator of these wet conditions is what is commonly referred to as the Wetness Index. This parameter is a function of the topography and the slope of the landscape. A high wetness index indicates probable wet conditions and a likely discharge area. NYRWA has produced a map of suspected ground water discharge areas based upon high wetness index values (see Figure 10).

5.0 GROUND WATER CONTAMINATION

Ground water resources are susceptible to contamination from a variety of manmade sources. These include various industrial, commercial, residential, and agricultural uses and activities. Several of these potential sources of contamination are regulated by state agencies such as the New York State Department of Environmental Conservation (NYSDEC). Some others are not. Once contaminated, ground water is very difficult and costly to cleanup.

Figure 9. Estimated Annual Groundwater Recharge.

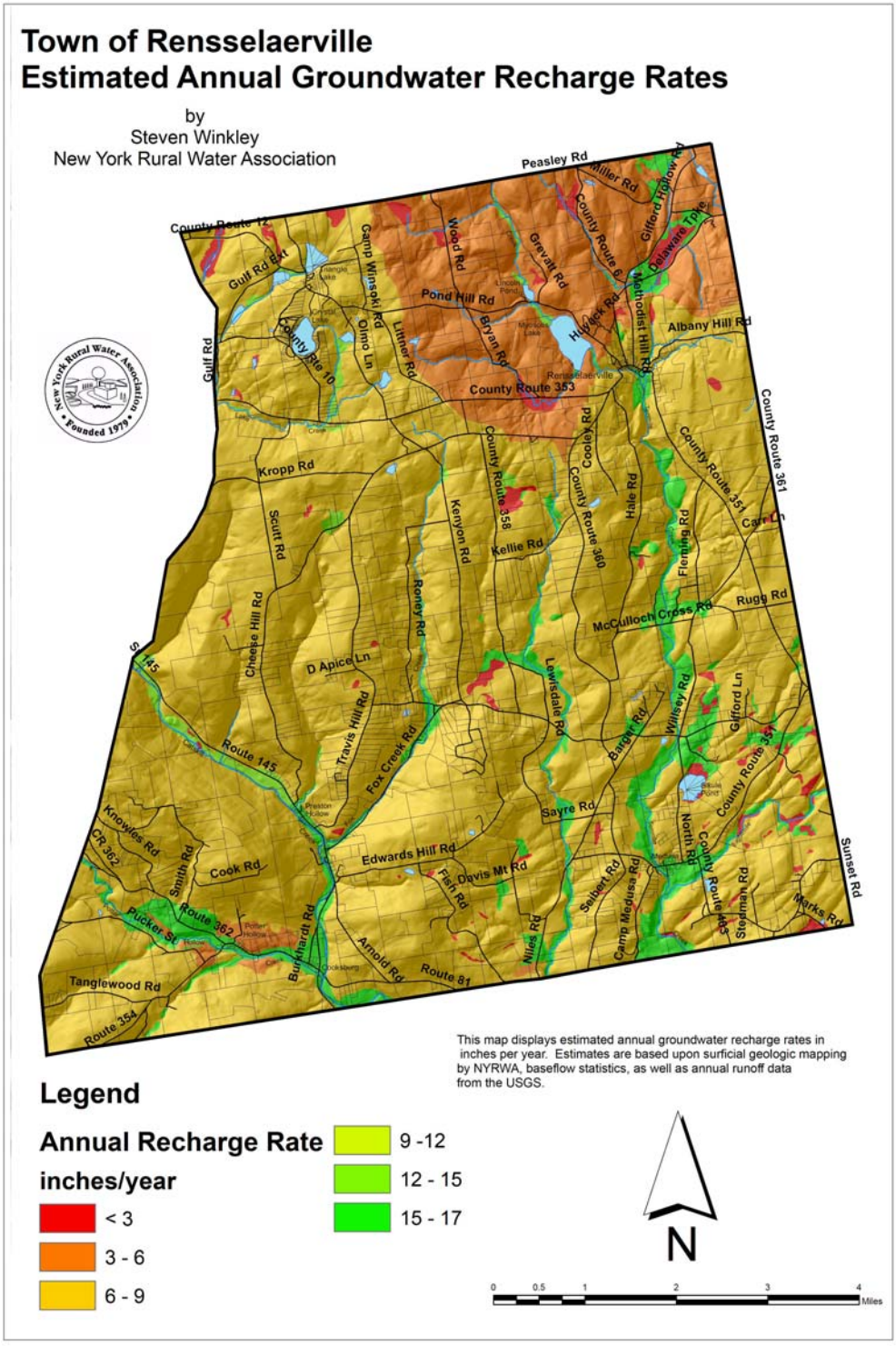
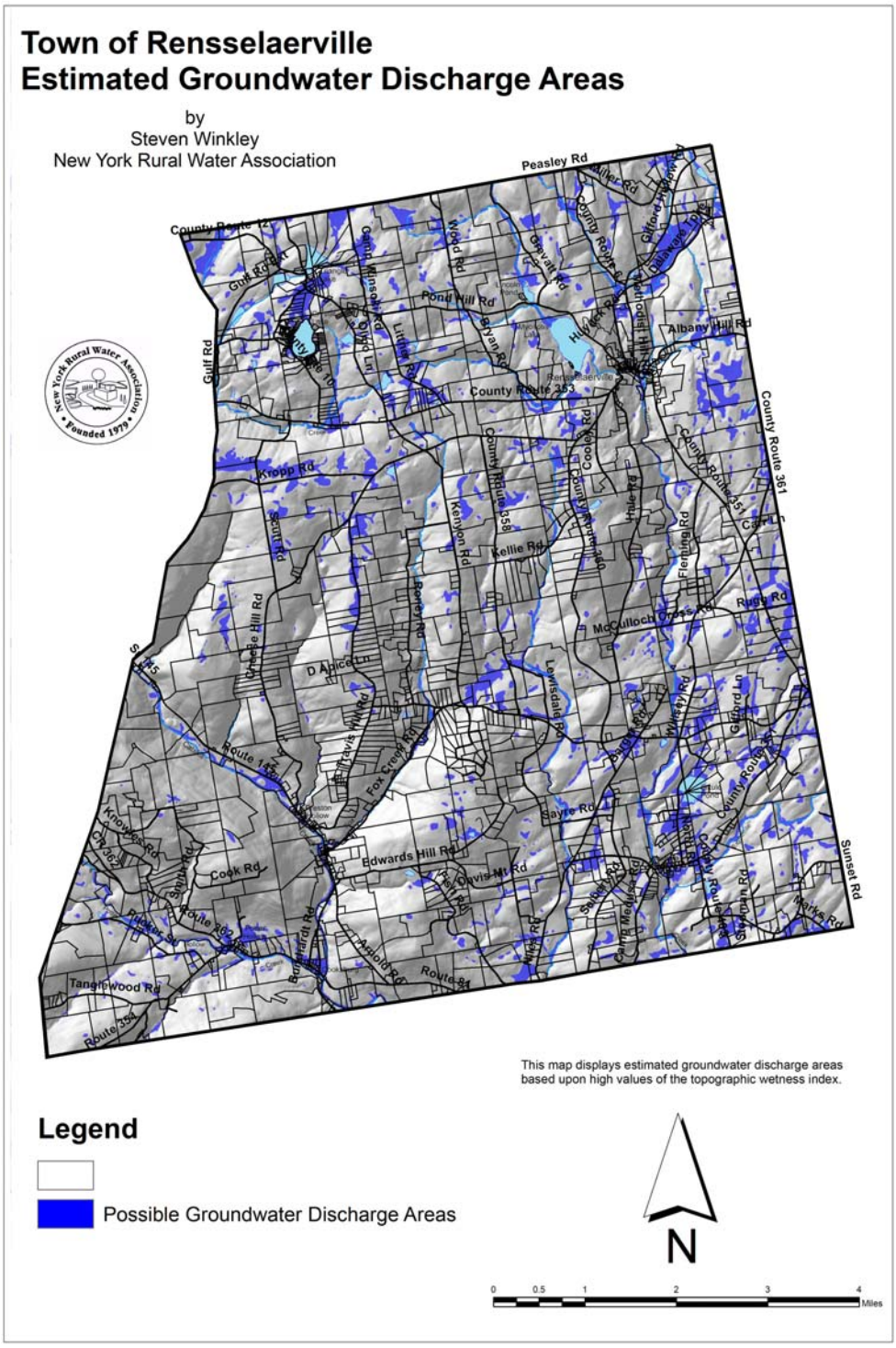


Figure 10. Probable Groundwater Discharge Areas.



5.1 Existing Contamination

Fortunately, there are no identified groundwater contamination sites in Town under the state or federal Superfund sites. In addition, there are only two active petroleum spill sites in Town: one located at Camp Cass and one at a private residence on County Route 351 in the Medusa area. Both involved the spilling of fuel oil. Spills that have not yet been closed are either still being investigated, cleaned up, or have not yet met cleanup standards. Spills arise from a number of different circumstances. The most common cause of spills is the failure of a tank. Frequently these tanks are home heating oil tanks.

5.2 Potential Sources of Contamination

As indicated previously, there are different uses and activities that have the potential to contaminate ground water. These practices typically involve the handling, use, storage, and/or disposal of petroleum and other hazardous substances that are capable of contaminating ground water. The threat of ground water contamination can be reduced to some extent through the use of environmentally-sound best management practices and/or structural methods.

NYRWA used property classification codes from Albany County real property data to identify largely non-regulated uses that could be considered as *potential* contamination sources. These uses are plotted on Figure 8. Such uses include auto repair shops, auto body shops, cemeteries, highway garages, lumber yards, mining and quarrying operations, etc.

6.0 GROUND WATER PROTECTION STRATEGIES

It is important to develop and implement effective ground water protection measures in order to protect water resources and encourage future development where it is best suited. There are number of ground water protection measures that can be chosen. Some of these are regulatory in nature. Others are non-regulatory. The Town of Rensselaerville must determine which measures are acceptable given local socioeconomic and political conditions. These measures could include: promulgation of land use regulations, environmental review, direct land purchase or purchase of conservation easements, and education.

6.1 Land Use Regulations

There are three types of land use regulations that can be used to protect ground water and other water resources. These include subdivision regulations, site plan review, and zoning.

6.1.1 Subdivision Regulations

Subdivision regulations relate to how land is to be divided into lots and what improvements such as streets, lighting, fire protection, utilities, drainage, and parks are made to service the lots. Rensselaerville's subdivision regulations are officially referred to as "Subdivision of Land of the Town of Rensselaerville". The Planning Board of the Town of Rensselaerville has the power and authority to approve, modify and disapprove the plan of subdivision. This involves review of the proposed layout of lots, roads, water supply, drainage, sewerage and other needed improvements and utilities, open space for parks and playgrounds, etc.

NYRWA recommends that subdivision regulations in Rensselaerville should be amended to optimize protection of groundwater resources. In plats and documents for major subdivision (three or more lots) approval, the following *additional* elements could be added to necessary submissions:

- *Location of petroleum storage tanks and/or geothermal heating systems, if applicable.*
- *Copies of New York State Department of Environmental Conservation Well Completion Reports for completed well(s) (including the well log and pump test data).*
- *Any and all water quality testing results.*
- *Proposed individual water supply system details such as pumps, storage, treatment, controls, etc.*
- *A completed hydrogeological study, if required.*

Such details should be in the plats and documents for final approval as well.

A hydrogeological study could be required for any new major subdivision involving five (5) or more lots that relies upon either on-site ground water withdrawals and/or on-site sewage disposal. A hydrogeological study could also be performed for any new subdivision involving three (3) or more lots that relies upon on-site ground water withdrawals and overlies an area with estimated well yields of less than 5 gallons per minute as identified in this document. Proposed requirements for a hydrogeological study are available from NYRWA.

Performance standards for subdivisions could be amended by specifying the following:

- *Well locations. Existing and proposed wells are located at minimum separation distances from on-site and off-site potential sources of contamination as specified in Appendix 5-B of 10 NYCRR Part 5.*

- *Supply suitability. A representative number of well(s) indicate that the available quantity and quality of on-site groundwater resources are suitable for household purposes.*

- *Adverse impacts. The proposed subdivision avoids adverse impacts to existing or future groundwater users and/or surface waters. If adverse impacts cannot be avoided, the applicant must provide adequate mitigation of such impacts.*

Adverse impacts should likely be defined. An adverse impact to ground water can be defined as any reductions in ground water levels or changes in ground water quality that limits the ability of a ground water user to withdraw ground water. An adverse impact to surface water would be any reductions in the level of flow or water quality needed for beneficial uses such as protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, cultural and aesthetic values, drinking water supply, agriculture, electric power generation, commercial, and industrial uses.

6.1.2 Site Plan Review

Site plan review is a local regulatory process that involves municipal review and approval of how development is to occur on a single parcel of land. In this way, site plan review differs substantially from subdivision regulations. Site plan review does not prohibit certain land uses. However, it does regulate how development will take place by specifying the arrangement, layout and design of the proposed use.

In Rensselaerville's zoning, some uses are allowed in certain zoning districts by special use permit only. All special uses require a special use review that is very similar to a site plan review. Potential sources of groundwater contamination that require a special use review include car washes, gasoline stations, golf courses, junkyards, laundromats, mortuaries, motor vehicle repair shops, nurseries, slaughterhouses, commercial excavations, manufacturing, printers/publishers, sawmills, truck terminals, and warehouses.

The following elements could be included as part of special use permit applications and site plans:

- *An estimate of the total daily groundwater withdrawal rate;*
- *The location(s) of all public water systems and other groundwater users within 1,500 feet of the proposed development boundaries;*
- *A list of all petroleum, chemicals, pesticides, fuels and other hazardous substances/wastes to be used, generated, stored, or disposed of on the premises;*
- *A description of the pollution control measures proposed to prevent ground water or surface water contamination; and*
- *A statement as to the degree of threat to water quality and quantity that could result if the control measures failed.*

A site plan *and* a hydrogeological study could be required for *any* proposed project in Rensselaerville that has projected on-site groundwater withdrawals and/or on-site sewage disposal flows potentially equal to or exceeding an average of one thousand (1,000) gallons per day (gpd). This amount of flow would be during any single thirty (30)-day period. These types of projects could include, but are not limited to, recreational developments (golf courses, etc.), multi-family housing (apartments, condominiums, townhouses, etc.), industrial, or commercial developments.

Furthermore, ARTICLE VIII. – Sections 4 through 11 of the Town of Rensselaerville Zoning Law could be amended by adding the following standards:

- *No gasoline station, motor vehicle repair shop, commercial excavation, essential facility (except for facilities necessary for the safe provision of drinking water), light industrial use, junkyard, or slaughterhouse shall be located within 1,500 feet of a public water supply system source, including wells, springs, and surface water intakes.*

Finally, ARTICLE IX., SPECIAL USE REVIEW, Section 3. Special Use Review Standards of Town of Rensselaerville Zoning Law could be amended by adding the following:

D. Water Supply

1. The proposed use has an adequate water supply in terms of quantity and quality to meet specified needs.

2. The proposed use does not adversely impact existing or future groundwater users as well as surface waters within 1,500 feet of the site development boundary. If adverse impacts cannot be avoided, the applicant must provide adequate mitigation of such impacts.

6.1.3 Zoning

Zoning regulates land uses, the density of land uses, and the siting of development. For those communities with zoning, like Rensselaerville, it can prove to be an effective means of water resource protection. There are a number of zoning techniques that are applicable to groundwater protection. One of these techniques is minimum lot size. As discussed before, an individual lot must be sufficiently large to supply on-site groundwater needs and adequately dilute effluent introduced from the site's septic system. NYRWA has calculated minimum lot sizes based upon groundwater recharge rates in Rensselaerville. These calculations are available upon request. NYRWA recommends that minimum lot sizes for on-site sewer and wells range from 2 to 7 acres (see Figure 11). Currently, the minimum lot size in Rensselaerville's zoning for a single family dwelling is 0.5 acres for the Hamlet (H) Zoning District, 5 acres for the Agricultural/Rural Residential (A/RR) Zoning District, 15 acres for the Resource Conservation-1 (RC-1) Zoning District, 15 acres for the Resource Conservation-2 (RC-2) Zoning District, and 10 acres for the Resource Conservation-3 (RC-3) Zoning District.

NYRWA has compared the recommended minimum lot sizes for on-site sewer and wells to the minimum lot size permitted in the zoning for one family dwellings. Figure 12 indicates areas that have permissible lot sizes than do not meet the recommended lot sizes. These areas include the Rensselaerville, Medusa, Preston Hollow, and Potter Hollow hamlet areas, as well as the northeastern section of Town. The Town of Rensselaerville should consider changing the minimum lot size in the northeastern portion of the Town, where groundwater recharge rates are very limited.

The Town of Rensselaerville currently has Water Resource Protection overlay districts along Catskill Creek, Fox Creek, Potter Hollow Creek, Squirmer Valley Creek, Tenmile Creek, Crystal Lake, Myosotis Lake, Triangle Lake, and certain unnamed waterbodies. These regulations provide setback requirements from these surface waters. Many communities also have Aquifer Protection Overlay Districts in their zoning regulations. The Town of Rensselaerville should consider adding an

Aquifer Protection Overlay District for the unconsolidated aquifers mapped on Figure 7. NYRWA has developed aquifer protection

Figure 11. Recommended Minimum Lot Sizes for the Town of Rensselaerville.

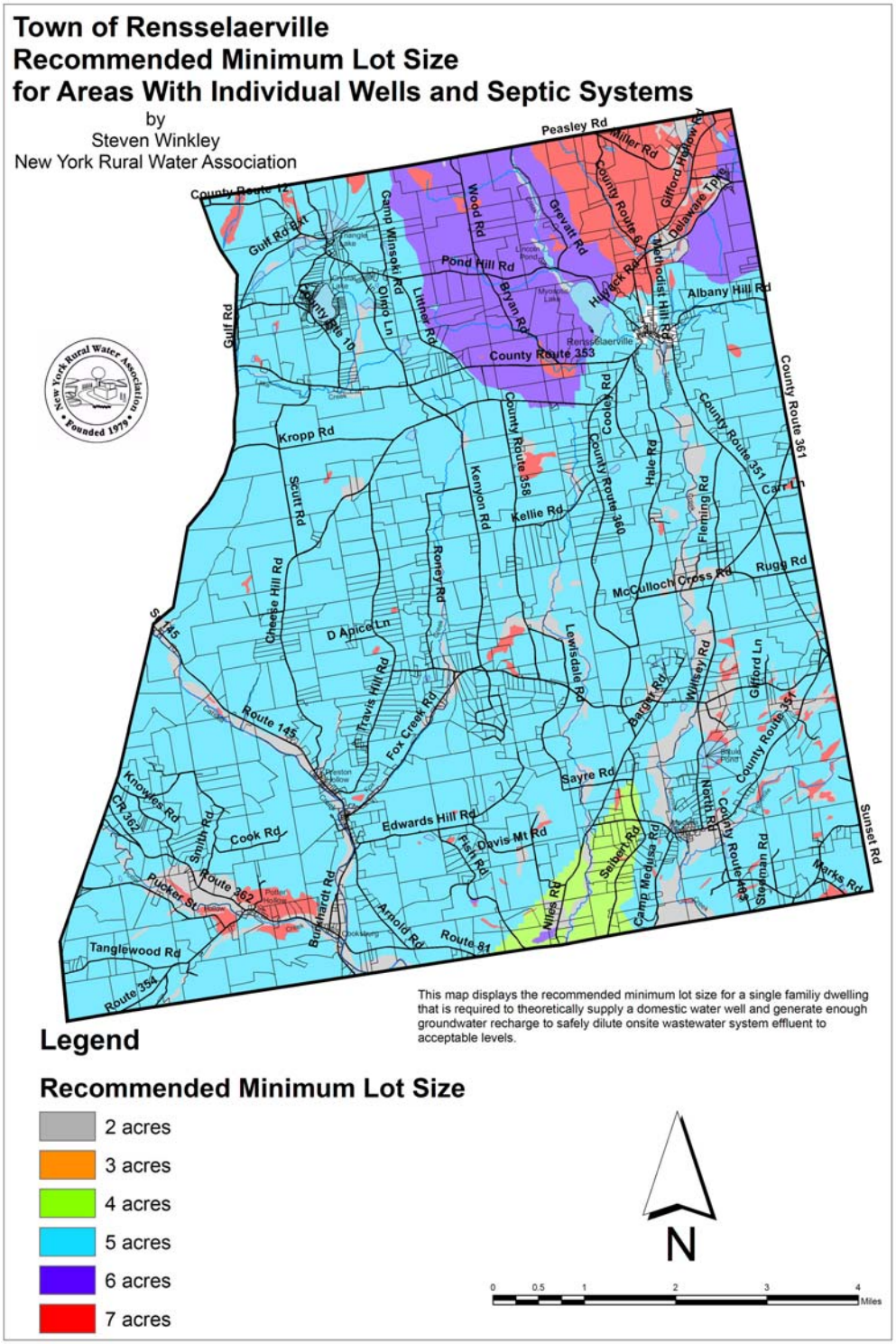
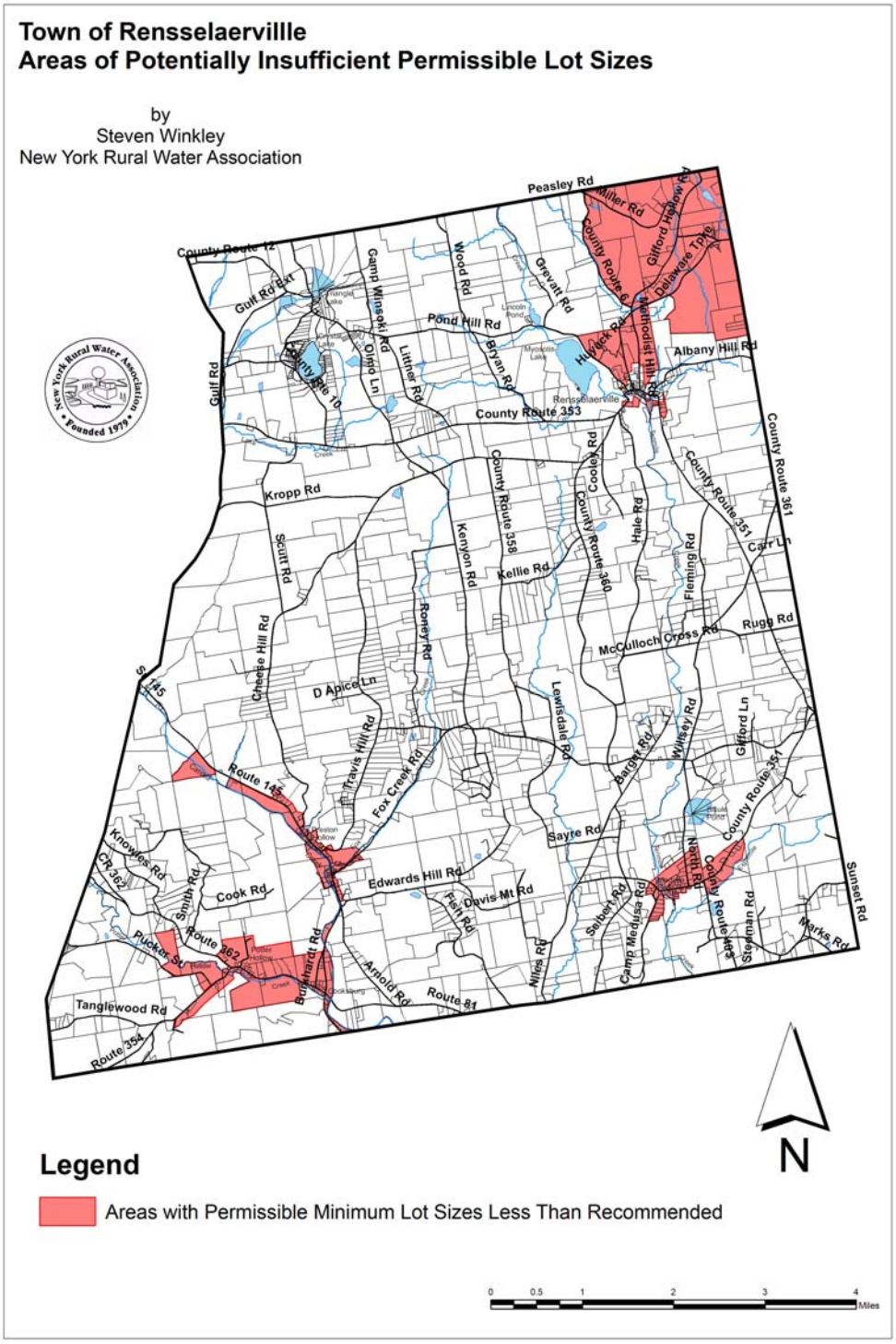


Figure 12. Potentially Insufficient Permissible Minimum Lot Size for the Town of Rensselaerville.



overlay district regulations for many communities across New York State. These regulations typically include prohibitions on certain high risk land uses, revised lot coverage restrictions, and additional site plan submittal, review, and approval requirements.

6.2 Education

Public education can be an excellent non-regulatory tool to minimize potential contamination. There are several instances where education may be effective. These include:

- Educating homeowners on proper operation and maintenance of onsite wastewater treatment systems and wells;
- Encouraging the use of water saving devices within homes;
- Promoting natural landscaping and other lower demand vegetation;
- Educating homeowners on proper fertilizer/pesticide application rates and practices; and
- Supporting proper waste disposal (i.e. recycling).

6.3 Future Infrastructure Planning Areas

As communities such as Rensselaerville experience growth, the issue of forming water and sewer districts sometimes becomes evident. One way to moderates the fears of excessive growth is to carefully plan new water or sewer districts to include only those areas where there are legitimate water quality or water quantity concerns. Such areas could include locales that have experienced contamination and/or are most susceptible to ground water contamination in the future. Such areas in Rensselaerville include areas with numerous smaller lots and limited groundwater recharge rates. Such areas are thought to be more prone to water quality and quantity problems. One of these areas, the hamlet of Rensselaerville, already has a public water system installed. Other areas that may be susceptible to water quality problems include Medusa, Preston Hollow, Potter Hollow, and the area adjacent to Crystal Lake/Triangle Lake.

The Town may wish to survey residents in the above mentioned areas in order to determine if there are water/wastewater issues. If so, a well testing program and/or sanitary survey of these areas may be in order.

NYRWA has identified unconsolidated aquifer areas that are within 1/4-mile of hamlets and the Crystal Lake/Triangle Lake vicinity that may have the potential for future municipal water supply development (Figure 7). These areas were identified on the basis of distance from surface water,

wetlands, and potential contaminant sources. Each would have to be tested in order to determine their actual suitability.

7.0 EMERGENCY PLANNING

Unfortunately, emergency situations affecting ground water do sometimes occur. One conceivable scenario involves petroleum/hazardous material spills and/or the discovery of contamination. Under state law, all petroleum and most hazardous material spills must be reported to the DEC Hotline (1-800-457-7362. NYSDEC then informs other response agencies such as the local fire department if the spill poses a potential explosion and/or fire hazard and the health department if a drinking water supply is threatened as result of a spill. However, in most instances, the local municipality is not required to be notified. Nevertheless, it is important that the Town be notified if a spill is discovered.

Another emergency situation involving ground water is drought. Here in New York State we on average have ample precipitation. However, there are variations in weather patterns that result in periods of drier weather. Based upon data from the National Climatic Data Center, New York State regularly experiences moderate drought conditions every 2 to 5 years. These moderate droughts typically last for a few months. Of much more concern is the fact that we also experience severe to extreme droughts every 10 to 20 years. These can last nearly a year to over two years. During these periods of severe to extreme drought, many private wells with marginal yields may fail. The Town of Rensselaerville may wish to have a plan in place in order to assist households or water systems in such difficulty. For example, the Town could help arrange that water tankers be brought in.

Appendix E: Surface Water Study

Section 1: Results of Biological and Chemical Testing on September 8th 2006

To determine the current quality of surface water in the Town biological and chemical tests were performed on the 7 sources shown in Section 1. The tests were, fecal coliform, nitrate, reactive phosphorus, chloride and conductivity. With the exception of conductivity, the tests provide evidence of human impact. Fecal coliform is present in all animal feces and would indicate possible farm manure runoff or septic system leakage. Phosphorus and nitrogen are also indicators of farm manure runoff and septic leakage. They are also indicators of fertilizer runoff. Chloride is mainly an indicator of road salt runoff. Conductivity is a general test that indicates the presence of dissolved ions (charged particles) that can be both man-made and naturally occurring. It is useful in detecting sources of pollution in streams and is illustrated in the study of the Catskill Creek found in Section 2. It also provides a check on the chloride levels since an increase in chloride should be reflected by an increase in conductivity.

Table 1. Results of September 8, 2006 surface water sampling.

Site	Fecal Coliform per l00 ml (1)	Reactive Phosphorus (micrograms per liter) (2)	Nitrate Nitrogen (milligrams per liter) (3)	Chloride (milligrams per liter) (4)	Conductivity (microsemens per centimeter) (5)
Catskill Creek at Preston Hollow/Cooksburg line.	Less than 20	Less than 20	Less than 0.2	17	190*
Crystal Lake at outlet	40	Less than 20	Less than 0.2	31	183
Myosotis Lake at outlet	40	Less than 20	Less than 0.2	10	103
Sikule Pond	Less than 20	Less than 20	Less than 0.2	32	239
Tenmile Creek at Route 81 bridge	20	Less than 20	Less than 0.2	32	222**

Triangle Lake	Less than 20	Less than 20	Less than 0.2	18	127
Lincoln Pond	Less than 20	Less than 20	Less than 0.2	4	89

* This reading was actually taken further downstream at the route 81 bridge.
** This reading actually taken at Route 352 Bridge.
(1) Acceptable limit : less than 1000 colonies per 100 ml
(2) Values over 20 ug/l stimulate excess algae growth.
(3) Acceptable limit: less than 10 mg/l
(4) Acceptable limit: less than 250 mg/l. Danger to fish 1000 mg/l.
(5) No established limits. NYS streams range: 20 to 1000 uS/cm

The above results indicate that surface water quality in Rensselaerville is good. The levels of phosphorus and nitrate were below detection limits and indicate that human impact upon the watershed is not significant. The state of Vermont has set 17 ug/l as the acceptable limit for phosphorus in Lake Champlain. Above this limit, unacceptable levels of algae growth may occur. In this study the detection limit was slightly above this level at 20 ug/l so it is not possible to conclude that the levels in our watershed are indeed acceptable . Chloride levels were also low. A report in the Journal of Surface Water Quality Professionals (October, 2006) on the effect of road salting in the New York City watershed indicated that chloride levels begin effect aquatic organisms at levels above 220 mg/l. Levels above 1000 mg/l are toxic to rainbow trout, one of the trout species in our watershed. Since the major source of chloride is probably road salt, it was interesting to note that the lowest level was found in Lincoln Pond where the watershed is not impacted by roads. The highest levels found were around 30 mg/l in the Ten Mile, Crystal Lake and Sikule Pond (Section 1). Higher levels were found in the three tributaries of the Ten Mile (Section 5). These tributaries are bordered by heavily salted roads. At this point, the levels found are not a problem but warrant monitoring as the Town may increase salting in response to increased development.

Section 2: Conductivity along the Catskill Creek and two tributaries on September 7th 2006.

The potential for human impact is presently greatest along the Catskill Creek as is flows through the hamlet of Preston Hollow. If significant pollution were occurring from human activity such as seepage from leach fields, marked elevations in conductivity should be evident.

Table 2. Conductivity values on Catskill Creek and two tributaries.

Site	Conductivity (microsemens/cm)
Conesville at Route 19 bridge	95
Livingstonville Fire Dept	186
Manice Road Bridge	171
CC Camp Bridge	147
Elsbree Park Pavilion	156
Junction of Routes 145 and 352 above junction with Fox Creek	161
Fox Creek at Entrance to Catskill Creek	327
Preston Hollow/Cooksburg Border	175
Route 81 Bridge	190
Potter Hollow Creek at entrance to Catskill Creek	142

The results of this study show a gradual increase in conductivity as the Catskill Creek flows South over a distance of several miles. There was no significant increase as the Creek passed from Elsbree Park to Cooksburg indicating minimal human impact. A comparatively large jump was noted from Conesville to Livingstonville. The source of this increase is unknown but could be due to the entrance of the Hauversville Creek in Livingstonville. The conductivity of the Fox Creek was significantly higher than the Catskill at the point where it entered the Catskill Creek. This is just one of several probable factors causing the gradual increase in conductivity in the Catskill.

Section 3: Total Coliform at Myosotis Lake Bathing Area

During the summer bathing season, monthly samples for total coliform bacteria are taken at the beach area of Myosotis Lake. Violations occur when single day numbers exceed 5000 colonies per 100 ml or the average for a 30 day period exceeds 2400 colonies per 100 ml.

Table 3 below shows data from 1998 through 2006. Data for the 2003 season is not included.

Table 3. Albany Department of Health Data on Myosotis Lake

Date	Colonies per 100 ml
8/28/98	4
9/30/98	280
5/25/99	200
7/23/99	1

8/24/99	60
5/5/00	140
6/22/00	160
7/24/00	40
8/23/00	140
6/14/01	40
6/21/01	80
7/19/01	Less than 20
8/28/01	20
5/06/02	Less than 20
6/04/02	2
6/12/02	Greater then 4000
6/17/02	240
7/16/02	140
8/09/02	60
5/15/04	600
6/18/04	200
7/20/04	800
8/04/04	120
5/03/05	60
7/14/05	Greater than 4000
7/15/05	2460
7/18/05	1040
8/08/05	1100
5/12/06	480
6/13/06	140
7/13/06	80
8/10/06	80

The results show that bacteria levels are reaching higher levels in recent years. During the summer of 2005 the July levels indicated that bathing was possibly not safe. The reason for this is unknown but could be due to an increase in bathers or the presence of Canada Geese. A similar spike was not noted in 2006.

Section 4: A one year study of ions present in Tenmile Creek.

This study was done as part of a Masters thesis by Sean S. Madden, Biology Department, SUNY, Albany (2003-2004). It provides valuable baseline data for the Tenmile Creek Watershed. Madden sampled every month, beginning in May 2003, for a year at the points shown in Fig 1.

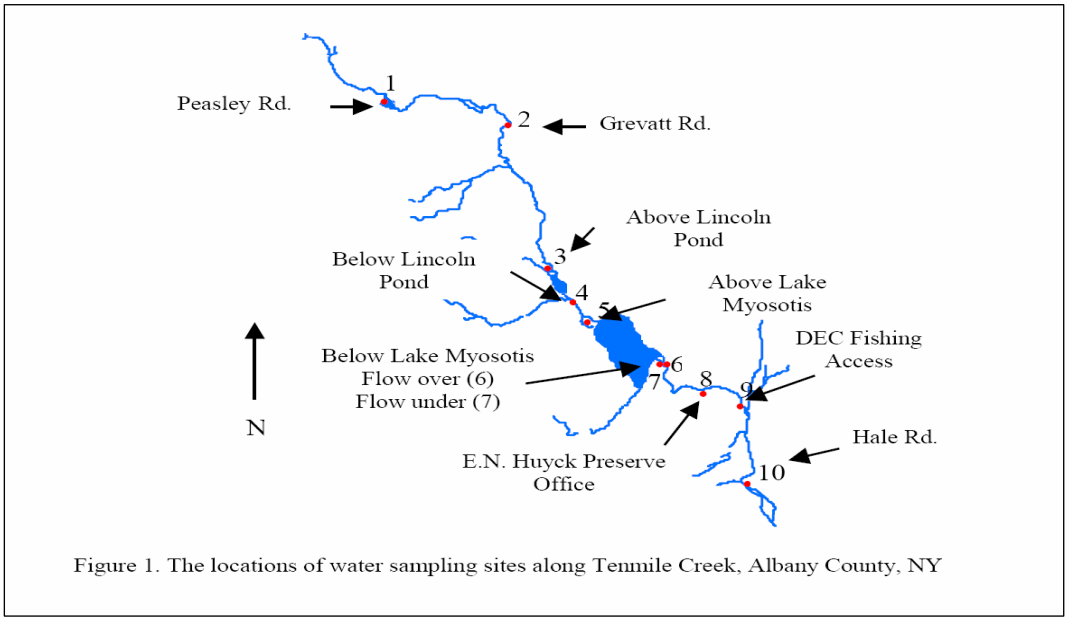


Figure 1. The locations of water sampling sites along Tenmile Creek, Albany County, NY

The ions measured are shown in Table II. Table X shows a summary of those monthly events for each ion. All of the data points for each numbered location are averaged. Madden also looked at the averages for each point. Figure 17 shows the mean concentration for chloride at each location. This depiction of the data illustrates increase in chloride as the stream flows from point 1 to point 10. Similar trends were found in the concentrations of sodium, calcium and magnesium.

Table II. Anions and cations tested from monthly water sampling on Tenmile Creek, Albany County, NY using ion chromatography.

Anion Name	Anion Symbol	Cation Name	Cation Symbol
fluoride	F^-	sodium	Na^+
chloride	Cl^-	potassium	K^+
nitrate	NO_3^-	ammonium	NH^+
phosphate	PO_4^{-3}	magnesium	Mg^{+2}
sulfate	SO_4^{-2}	calcium	Ca^{+2}

Table X. Monthly statistics for major ions sampled in Tenmile Creek. Statistics represent values across all sample sites for a particular month. Means are presented in bold. Examples of complete chemistry data collected sample locations are provided in Appendix L.

Ion		May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Cl	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	3.13	1.12	1.43	2.24	0.28	2.15	1.51	1.67	1.51	2.20	3.65	1.78
	max	46.33	29.21	61.11	23.86	52.61	33.32	23.41	18.87	36.88	34.27	85.17	34.19
	mean	**14.39**	**8.43**	**12.09**	**7.79**	**12.23**	**9.56**	**5.99**	**5.56**	**9.04**	**9.15**	**21.48**	**7.96**
	sd	14.09	8.55	18.48	6.83	17.03	9.54	6.50	4.93	11.93	10.95	33.35	9.99
NO3	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.89
	max	9.47	0.50	1.86	0.00	5.55	0.00	0.00	0.00	0.53	0.96	2.08	1.90
	mean	**1.04**	**0.10**	**0.50**	**0.00**	**0.97**	**0.00**	**0.00**	**0.00**	**0.14**	**0.54**	**1.54**	**1.37**
	sd	2.97	0.20	0.66	0.00	1.76	0.00	0.00	0.00	0.20	0.31	0.50	0.33
PO4	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	max	0.17	0.00	0.00	0.00	0.18	0.00	0.00	0.28	0.00	0.18	0.00	0.22
	mean	**0.03**	**0.00**	**0.00**	**0.00**	**0.10**	**0.00**	**0.00**	**0.04**	**0.00**	**0.02**	**0.00**	**0.06**
	sd	0.06	0.00	0.00	0.00	0.07	0.00	0.00	0.09	0.00	0.07	0.00	0.07
SO4	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	6.53	3.67	1.95	1.87	0.00	0.00	3.37	4.24	4.39	3.80	3.96	3.42
	max	38.43	4.95	6.57	4.91	7.31	5.17	5.34	5.74	6.23	6.97	7.85	5.28
	mean	**10.13**	**4.30**	**3.86**	**3.27**	**3.34**	**3.15**	**4.19**	**4.75**	**4.99**	**5.41**	**5.21**	**4.38**
	sd	9.95	0.45	1.43	1.08	2.43	1.37	0.50	0.44	0.53	0.91	1.37	0.55
Na	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	2.92	1.99	2.42	2.41	0.81	2.46	2.11	2.01	1.89	2.24	2.96	1.92
	max	24.66	18.62	32.95	15.39	29.85	20.21	15.73	13.71	21.84	19.10	42.87	19.07
	mean	**9.07**	**7.22**	**8.96**	**6.43**	**8.27**	**7.27**	**5.64**	**5.40**	**6.55**	**6.73**	**12.70**	**6.07**
	sd	7.32	5.24	9.38	4.52	9.96	5.59	4.33	3.62	6.98	5.84	16.30	5.43
NH4	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	0.03	0.00	0.00	0.09	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.21
	max	2.94	0.33	0.58	0.49	0.36	0.60	0.36	0.26	0.34	0.54	1.09	0.50
	mean	**0.44**	**0.16**	**0.23**	**0.29**	**0.18**	**0.34**	**0.13**	**0.12**	**0.07**	**0.18**	**0.30**	**0.31**
	sd	0.89	0.13	0.19	0.13	0.11	0.20	0.10	0.08	0.10	0.16	0.34	0.09
K	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	1.05	0.52	0.56	0.59	0.18	0.81	0.66	0.50	0.44	0.62	0.66	0.48
	max	3.55	3.72	1.05	1.03	1.72	6.30	1.55	3.58	0.79	1.51	1.24	0.85
	mean	**1.62**	**1.33**	**0.71**	**0.75**	**1.15**	**1.80**	**0.98**	**1.51**	**0.64**	**0.96**	**0.95**	**0.60**
	sd	0.75	1.03	0.14	0.15	0.47	1.70	0.25	0.91	0.11	0.29	0.24	0.11
Mg	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	1.76	1.14	1.67	1.74	0.12	1.81	1.58	1.49	1.34	1.64	1.58	1.20
	max	2.62	2.06	3.50	2.31	3.19	2.76	2.32	2.08	2.04	2.42	3.11	1.98
	mean	**1.96**	**1.53**	**2.25**	**1.96**	**1.99**	**2.07**	**1.80**	**1.66**	**1.50**	**2.03**	**1.99**	**1.35**
	sd	0.27	0.24	0.64	0.17	1.03	0.26	0.21	0.16	0.22	0.28	0.54	0.23
Ca	n	10	10	10	10	10	10	10	10	10	8	9	10
	min	12.68	10.60	13.36	12.87	0.38	13.18	11.07	9.99	9.68	12.42	11.55	8.88
	max	21.29	17.05	29.51	19.64	33.37	22.64	18.27	16.14	16.22	18.22	25.62	15.86
	mean	**15.20**	**12.32**	**18.64**	**16.06**	**17.00**	**16.14**	**13.61**	**12.34**	**11.33**	**14.63**	**15.41**	**10.40**
	sd	2.50	1.91	5.04	1.81	9.94	2.74	2.01	1.65	1.98	1.90	5.05	2.05

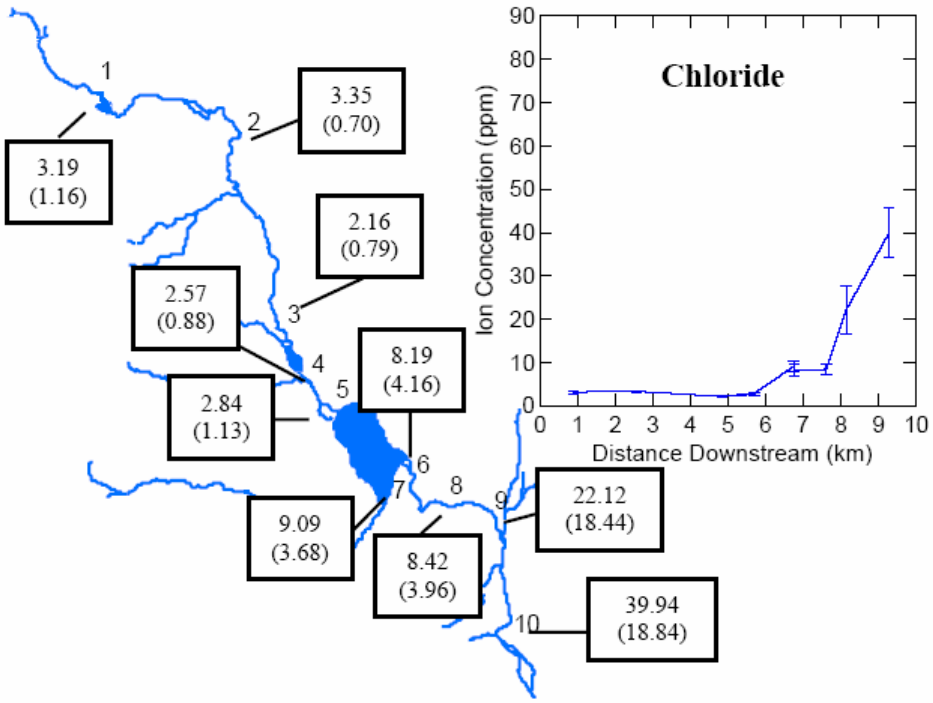


Figure 17. Mean chloride concentrations (ppm) for sample sites along Tenmile Creek. Samples were collected monthly from May 2003 through April 2004. Values in () are single standard deviations. Error bars on the line graph represent standard error.

Section 5. A study of three tributaries of Ten Mile creek by Sean S. Madden as part of his Masters thesis (2004).

The results in Figures 33 below are referenced to site 10 (see fig. 1 above) which is just below the entrance point for the third tributary and to the mean for the entire Creek (Table X). According to Madden, the Tenmile Creek should have chloride and sodium levels as low as those found at Lincoln Pond. The tributary results show that they are a source of increases found in the main channel. Since the tributary watersheds contain heavily salted roads it is likely that the increases of chloride levels shown in figure 17 above are related to salting. These results are similar to those found in Section 1.

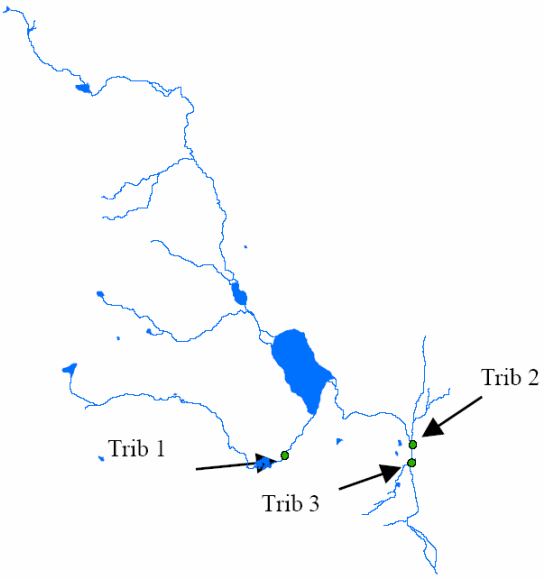


Figure 2. Tributaries of Tenmile Creek sampled April, August, and October 2004 for water quality parameters.

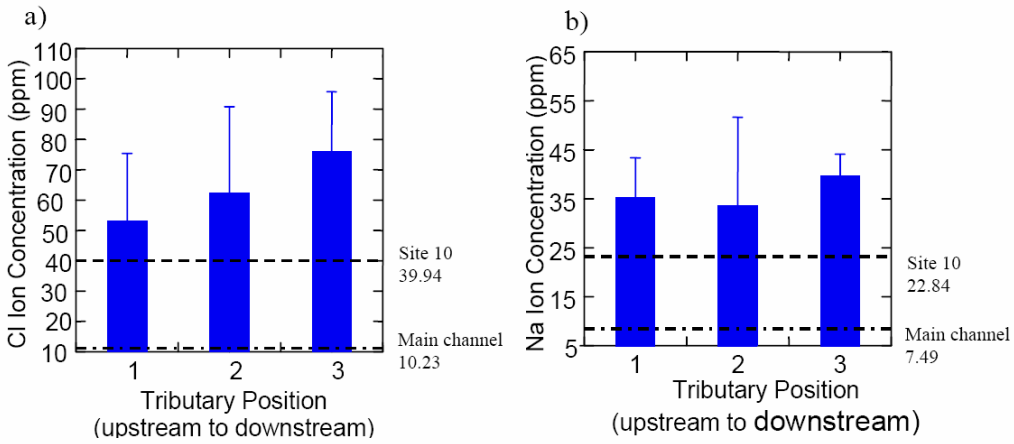


Figure 33. Mean concentrations of chloride (a) and sodium (b) in three tributaries of Tenmile Creek. Tributary 1flows into Lake Myosotis, Tributary 2 flows into Tenmile Creek below the Hamlet of Rensselaerville, and Tributary 3 flows into Tenmile Creek above Site 10. Samples were collected in April, August and October 2004. The error bars represent standard error. The dashed lines represent the mean concentrations at sample Site 10 and the mean concentration for all sample sites along the main channel of Tenmile Creek across all months.

Section 6. Macroinvertebrate surveys

New York State DEC uses the type and distribution of benthic macroinvertebrates as another way of assessing water quality. The results reflect the chemical quality of the water but may be more sensitive since the effect on the living organisms is from the total load of all chemicals, including those not measured such as pesticides and herbicides. The results in Table 1 and 2 below are recent studies performed by T Mikulka and J LaRocca using NYSDEC methodology.

Table 1. Tenmile Creek Macroinvertebrate Survey, September 4, 2006. Route 357 Bridge

organism	total	biotic value	score	10 mile creek:09/04/06	
caddis	1	10	10		
caddis net	2	8	16		
mayfly	40	10	400		
stonefly	5	10	50		
dobson	12	10	120		
riffle		10			
penny	30	10	300		
beetle larva, other		8			
cranefly	7	8	56		
scud		6			
clam		6			
crayfish		6			
dragonfly	3	6	18		
damselfly		6			
black fly		6			
midge		5			
snail		4			
sowbug		2			
leech		2			
worm	1	0	0		
total	101		970		
Biotic Index	**96**				
Results: excellent water quality					
Percent Model Community					

group	# found	model community	difference		
mayfly	40	40	0		
stonefly	5	5	0		
caddis	3	10	7		
midge	0	20	20		
beetles	30	10	20		
worms	1	5	4		
others	11	10	1		
total	101	100	52		
PMA = 100 - (total diff x 0.5)					
PMA = 74 (excellent water quality)					
Water Temp: 16.6 C					
D.O. = 8.0 mg/L					

Table 2. Catskill Creek Macroinvertebrate Study, September 4, 2006. Junction of Route 145 and 352.

organism	total	biotic value	productB:C	Catskill creek:09/04/06		
caddis		10				
caddis net	41	8	328			
mayfly	32	10	320			
stonefly	10	10	100			
dobson	2	10	20			
riffle		10				
penny	2	10	20			
beetle larva,other		8				
cranefly	14	8	112			
scud		6				
clam		6				
crayfish		6				
dragonfly		6				
damselfly		6				
black fly		6				
midge		5				
snail		4				
sowbug		2				
leech		2				
worm		0				

total	101		900			
biotic index	**89**					
Results: excellent water quality						
Percent Model Community						
group	# found	model community	difference			
mayfly	32	40	8			
stonefly	10	5	5			
caddis	41	10	31			
midge	0	20	20			
beetles	2	10	8			
worms	0	5	5			
others	16	10	6			
total	101	100	83			
PMA = 100 - (total diff x 0.5)						
PMA = 59 (good water quality)						
Water Temp: 17.1 C						
D.O. = 8.8 mg/L (Winkler Method)						
Conductivity = 141 us/cm						

The results indicate that the Tenmile Creek is non-impacted (excellent quality) and the Catskill Creek is slightly impacted (good to excellent quality). The results for the Tenmile were similar to those found by Madden in 2004 (Figure 25) In addition to Biotic Index and Percent Model Affinity (PMA), Madden calculated two other indices, Family Richness and EPT Richness. These could not done in the above study because the organisms found were not differentiated by family. Madden's results range from non-impacted to slightly impacted. It is interesting to note that both sets of results above indicate an improvement in water quality from 1997 when the NYSDEC last sampled (Figure 26). This apparent improvement may be directly related to the construction of a sewage treatment facility for the Hamlet of Rensselaerville in 2003. .

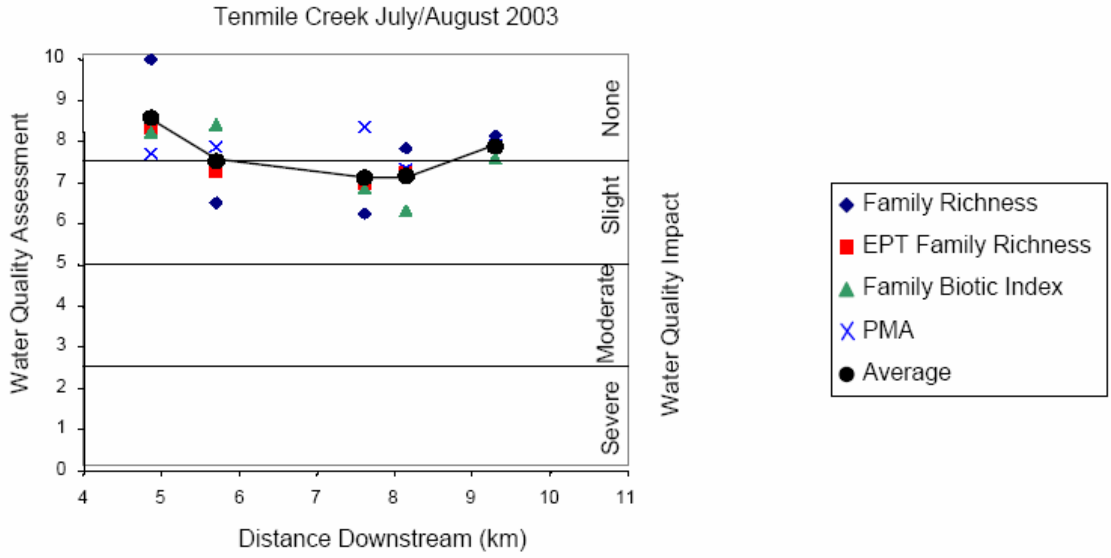


Figure 25. Water quality assessment of Tenmile Creek using the average of normalized values for four benthic invertebrate indices; family richness, EPT, family biotic index, and percent model affinity. Water quality impact, ranging from severe to none, is on the right axis. Invertebrate samples were conducted July 2 and August 7, 2003.

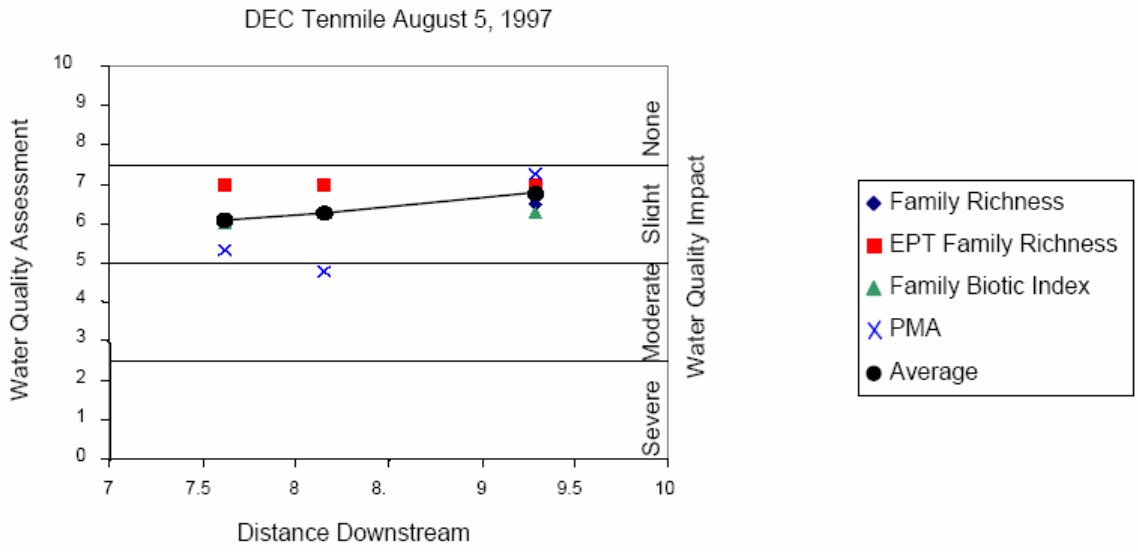


Figure 26. Water quality assessment of Tenmile Creek using the average of normalized values for four benthic invertebrate indices; family richness, EPT, family biotic index, and percent model affinity. Water quality impact, ranging from severe to none, is on the right axis. Invertebrate samples were conducted July August 5, 1997 by NY DEC.

Section 7. July 2005 mercury levels in four species of fish from Crystal Lake

The Crystal Lake Association contracted with Pace Analytical Labs from Greenbay Wisconsin to catch and analyze fish for Hg levels.

Table 1. Mercury levels in fish from crystal Lake

Species	Concentration of Hg (ppm)
Pickerel	0.28
Largemouth Bass	0.41
Perch	0.21
Bullhead	0.069

The above results are consistent with existing data from NYSDEC which indicates that most fish in New York State contain detectable levels of mercury. The current advisory level is 1.0 ppm for fish.

Conclusions:

The general conclusion from all of the above data is that the quality of the surface water in Rensselaerville is good with the possible exception of the bathing area at Myosotis Lake where bacteria levels were sometimes above acceptable limits for a public bathing area. Chloride levels are slightly elevated and warrant monitoring as development continues in the Town's watersheds. The source of the chloride is probably road salt.

Appendix E. Cost of Community Service Study Fact Sheet Prepared by the American Farmland Trust

FARMLAND INFORMATION CENTER

FACT SHEET

COST OF COMMUNITY SERVICES STUDIES

American Farmland Trust

TECHNICAL ASSISTANCE
One Short Street, Suite 2
Northampton, MA 01060
Tel: (800) 370-4879
Fax: (413) 586-9332
www.farmlandinfo.org

NATIONAL OFFICE
1200 18th Street, NW, Suite 800
Washington, DC 20036
Tel: (202) 331-7300
Fax: (202) 659-8339
www.farmland.org

November 2002

DESCRIPTION

Cost of Community Services (COCS) studies are a case study approach used to determine the average fiscal contribution of existing local land uses. A subset of the much larger field of fiscal analysis, COCS studies have emerged as an inexpensive and reliable tool to measure direct fiscal relationships. Their particular niche is to evaluate working and open lands on equal ground with residential, commercial and industrial land uses.

COCS studies are a snapshot in time of costs versus revenues for each type of land use. They do not predict future costs or revenues or the impact of future growth. They do provide a baseline of current information to help local officials and citizens make informed land use and policy decisions.

METHODOLOGY

In a COCS study, researchers organize financial records to assign the cost of municipal services to working and open lands, as well as to residential, commercial and industrial development. Researchers meet with local sponsors to define the scope of the project and identify land use categories to study. For example, working lands may include farm, forest and/or ranch lands. Residential development includes all housing, including rentals, but if there is a migrant agricultural work force, temporary housing for these workers would be considered part of agricultural land use. Often in rural communities, commercial and industrial land uses are combined. COCS studies' findings are displayed as a set of ratios that compare annual revenues to annual expenditures for a community's unique mix of land uses.

COCS studies involve three basic steps:

1. Collect data on local revenues and expenditures.
2. Group revenues and expenditures and allocate them to the community's major land use categories.
3. Analyze the data and calculate revenue-to-expenditure ratios for each land use category.

The process is straightforward, but ensuring reliable figures requires local oversight. The most complicated task is interpreting existing records to reflect COCS land use categories. Allocating revenues and expenses requires a significant amount of research, including extensive interviews with financial officers and public administrators.

HISTORY

Communities often evaluate the impact of growth on local budgets by conducting or commissioning fiscal impact analyses. Fiscal impact analyses project public costs and revenues from different land development patterns. They generally show that residential development is a net fiscal loss for communities and recommend commercial and industrial development as a strategy to balance local budgets.

Rural towns and counties that would benefit from fiscal impact analyses rarely have the expertise or resources to conduct them, as studies tend to be expensive. Also, fiscal impact analyses rarely consider the contribution of working and other open lands uses, which are very important to rural economies.

Agricultural land is converted to development more commonly than any other land use. American Farmland Trust (AFT) developed COCS studies in the mid-1980s to provide communities with a straightforward and inexpensive way to measure the contribution of agricultural lands to the local tax base. Since then, COCS studies have been conducted in at least 95 communities in the United States.

FUNCTIONS & PURPOSES

Communities pay a high price for unplanned growth. Scattered development frequently causes traffic congestion, air and water pollution, loss of open space and increased demand for costly public services. This is why it is important for citizens and local leaders to understand the relationships between residential and commercial growth, agricultural land use, conservation and their community's bottom line.

The Farmland Information Center is a public/private partnership between American Farmland Trust and the USDA Natural Resources Conservation Service that provides technical information about farmland protection.

SUMMARY OF COST OF COMMUNITY SERVICES STUDIES, REVENUE-TO-EXPENDITURE RATIOS IN DOLLARS

Community	Residential including farm houses	Commercial & Industrial	Working & Open Land	Source
Pennsylvania				
Allegheny Township	1 : 1.06	1 : 0.14	1 : 0.13	Kelsey, 1997
Bedminster Township	1 : 1.12	1 : 0.05	1 : 0.04	Kelsey, 1997
Bethel Township	1 : 1.08	1 : 0.17	1 : 0.06	Kelsey, 1992
Bingham Township	1 : 1.56	1 : 0.16	1 : 0.15	Kelsey, 1994
Buckingham Township	1 : 1.04	1 : 0.15	1 : 0.08	Kelsey, 1996
Carroll Township	1 : 1.03	1 : 0.06	1 : 0.02	Kelsey, 1992
Hopewell Township	1 : 1.27	1 : 0.32	1 : 0.59	The South Central Assembly for Effective Governance, 2002
Maiden Creek Township	1 : 1.28	1 : 0.11	1 : 0.06	Kelsey, 1998
Richmond Township	1 : 1.24	1 : 0.09	1 : 0.04	Kelsey, 1998
Shrewsbury Township	1 : 1.22	1 : 0.15	1 : 0.17	The South Central Assembly for Effective Governance, 2002
Stewardson Township	1 : 2.11	1 : 0.23	1 : 0.31	Kelsey, 1994
Straban Township	1 : 1.10	1 : 0.16	1 : 0.06	Kelsey, 1992
Sweden Township	1 : 1.38	1 : 0.07	1 : 0.08	Kelsey, 1994
Rhode Island				
Hopkinton	1 : 1.08	1 : 0.31	1 : 0.31	Southern New England Forest Consortium, 1995
Little Compton	1 : 1.05	1 : 0.56	1 : 0.37	Southern New England Forest Consortium, 1995
Portsmouth	1 : 1.16	1 : 0.27	1 : 0.39	Johnston, 1997
West Greenwich	1 : 1.46	1 : 0.40	1 : 0.46	Southern New England Forest Consortium, 1995
Texas				
Bandera County	1 : 1.10	1 : 0.26	1 : 0.26	American Farmland Trust, 2002
Hays County	1 : 1.26	1 : 0.30	1 : 0.33	American Farmland Trust, 2000
Utah				
Cache County	1 : 1.27	1 : 0.25	1 : 0.57	Snyder and Ferguson, 1994
Sevier County	1 : 1.11	1 : 0.31	1 : 0.99	Snyder and Ferguson, 1994
Utah County	1 : 1.23	1 : 0.26	1 : 0.82	Snyder and Ferguson, 1994
Virginia				
Augusta County	1 : 1.22	1 : 0.20	1 : 0.80	Valley Conservation Council, 1997
Clarke County	1 : 1.26	1 : 0.21	1 : 0.15	Piedmont Environmental Council, 1994
Northampton County	1 : 1.13	1 : 0.97	1 : 0.23	American Farmland Trust, 1999
Washington				
San Juan County	1 : 1.28	1 : 0.27	1 : 0.71	American Farmland Trust, 2002
Skagit County	1 : 1.25	1 : 0.30	1 : 0.51	American Farmland Trust, 1999
Wisconsin				
Dunn	1 : 1.06	1 : 0.29	1 : 0.18	Town of Dunn, 1994
Dunn	1 : 1.02	1 : 0.55	1 : 0.15	Wisconsin Land Use Research Program, 1999
Perry	1 : 1.20	1 : 1.04	1 : 0.41	Wisconsin Land Use Research Program, 1999
Westport	1 : 1.11	1 : 0.31	1 : 0.13	Wisconsin Land Use Research Program, 1999

American Farmland Trust's Farmland Information Center acts as a clearinghouse for information about Cost of Community Services studies. Inclusion in this table does not necessarily signify review or endorsement by American Farmland Trust.

COST OF COMMUNITY SERVICES STUDIES

For additional information on COCS studies and farmland protection contact AFT's Farmland Information Center (FIC.) The FIC offers reports, an online library and technical assistance. Call us at (800) 370-4879 or visit us on the Web at http://www.farmlandinfo.org.

COCS studies help address three claims that are commonly made in rural or suburban communities facing growth pressures:

1. Open lands—including productive farms and forests—are an interim land use that should be developed to their "highest and best use."
2. Agricultural land gets an unfair tax break when it is assessed at its current use value for farming or ranching instead of at its potential use value for residential or commercial development.
3. Residential development will lower property taxes by increasing the tax base.

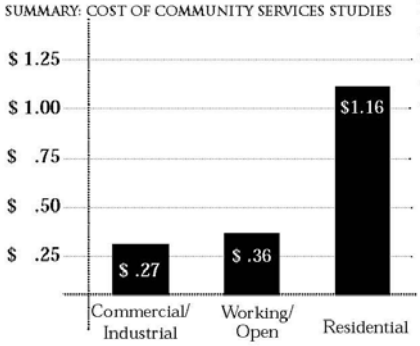
While it is true that an acre of land with a new house generates more total revenue than an acre of hay or corn, this tells us little about a community's bottom line. In areas where agriculture or forestry are major industries, it is especially important to consider the real property tax contribution of privately owned working lands. Working and other open lands may generate less revenue than residential, commercial or industrial properties, but they require little public infrastructure and few services.

COCS studies conducted over the last 15 years show working lands generate more public revenues than they receive back in public services. Their impact on community coffers is similar to that of other commercial and industrial land uses. On average, because residential land uses do not cover their costs, they must be subsidized by other community land uses. Converting agricultural land to residential land use should not be seen as a way to balance local budgets.

The findings of COCS studies are consistent with those of conventional fiscal impact analyses, which document the high cost of residential development and recommend commercial and industrial development to help balance local budgets. What is unique about COCS studies is that they show that agricultural land is similar to other commercial and industrial land uses. In every community studied, farmland has generated a fiscal surplus to help offset the shortfall created by residential demand for public services. This is true even when the land is assessed at its current, agricultural use.

Communities need reliable information to help them see the full picture of their land uses. COCS studies are an inexpensive way to evaluate the net contribution of working and open lands. They can help local leaders discard the notion that natural resources must be converted to other uses to ensure fiscal stability. They also dispel the myths that residential development leads to lower taxes, that differential assessment programs give landowners an "unfair" tax break, and that farmland is an interim land use just waiting around for development.

One type of land use is not intrinsically better than another, and COCS studies are not meant to judge the overall public good or long-term merits of any land use or taxing structure. It is up to communities to balance goals such as maintaining affordable housing, creating jobs and conserving land. With good planning, these goals can complement rather than compete with each other. COCS studies give communities another tool to make decisions about their futures.



Graph: Median cost—per dollar of revenue raised—to provide public services to different land uses.

American Farmland Trust

American Farmland Trust works to stop the loss of productive farmland and to promote farming practices that lead to a healthy environment.

SUMMARY OF COST OF COMMUNITY SERVICES STUDIES, REVENUE-TO-EXPENDITURE RATIOS IN DOLLARS

Community	Residential including farm houses	Commercial & Industrial	Working & Open Land	Source
Colorado				
Custer County	1 : 1.16	1 : 0.71	1 : 0.54	Haggerty, 2000
Saguache County	1 : 1.17	1 : 0.53	1 : 0.35	Dirt, Inc., 2001
Connecticut				
Bolton	1 : 1.05	1 : 0.23	1 : 0.50	Geisler, 1998
Durham	1 : 1.07	1 : 0.27	1 : 0.23	Southern New England Forest Consortium, 1995
Farmington	1 : 1.33	1 : 0.32	1 : 0.31	Southern New England Forest Consortium, 1995
Hebron	1 : 1.06	1 : 0.47	1 : 0.43	American Farmland Trust, 1986
Litchfield	1 : 1.11	1 : 0.34	1 : 0.34	Southern New England Forest Consortium, 1995
Pomfret	1 : 1.06	1 : 0.27	1 : 0.86	Southern New England Forest Consortium, 1995
Georgia				
Carroll County	1 : 1.29	1 : 0.37	1 : 0.55	Dorfman and Black, 2002
Idaho				
Canyon County	1 : 1.08	1 : 0.79	1 : 0.54	Hartmans and Meyer, 1997
Cassia County	1 : 1.19	1 : 0.87	1 : 0.41	Hartmans and Meyer, 1997
Kentucky				
Lexington-Fayette	1 : 1.64	1 : 0.22	1 : 0.93	American Farmland Trust, 1999
Maine				
Bethel	1 : 1.29	1 : 0.59	1 : 0.06	Good, 1994
Maryland				
Carroll County	1 : 1.15	1 : 0.48	1 : 0.45	Carroll County Dept. of Management & Budget, 1994
Cecil County	1 : 1.17	1 : 0.34	1 : 0.66	American Farmland Trust, 2001
Cecil County	1 : 1.12	1 : 0.28	1 : 0.37	Cecil County Office of Economic Development, 1994
Frederick County	1 : 1.14	1 : 0.50	1 : 0.53	American Farmland Trust, 1997
Kent County	1 : 1.05	1 : 0.64	1 : 0.42	American Farmland Trust, 2002
Wicomico County	1 : 1.21	1 : 0.33	1 : 0.96	American Farmland Trust, 2001
Massachusetts				
Agawam	1 : 1.05	1 : 0.44	1 : 0.31	American Farmland Trust, 1992
Becket	1 : 1.02	1 : 0.83	1 : 0.72	Southern New England Forest Consortium, 1995
Deerfield	1 : 1.16	1 : 0.38	1 : 0.29	American Farmland Trust, 1992
Franklin	1 : 1.02	1 : 0.58	1 : 0.40	Southern New England Forest Consortium, 1995
Gill	1 : 1.15	1 : 0.43	1 : 0.38	American Farmland Trust, 1992
Leverett	1 : 1.15	1 : 0.29	1 : 0.25	Southern New England Forest Consortium, 1995
Middleboro	1 : 1.08	1 : 0.47	1 : 0.70	American Farmland Trust, 2001
Southborough	1 : 1.03	1 : 0.26	1 : 0.45	Adams and Hines, 1997
Westford	1 : 1.15	1 : 0.53	1 : 0.39	Southern New England Forest Consortium, 1995
Williamstown	1 : 1.11	1 : 0.34	1 : 0.40	Hazler et al., 1992
Michigan				
Calhoun County				
Marshall Township	1 : 1.47	1 : 0.20	1 : 0.27	American Farmland Trust, 2001
Newton Township	1 : 1.20	1 : 0.25	1 : 0.24	American Farmland Trust, 2001
Scio Township	1 : 1.40	1 : 0.28	1 : 0.62	University of Michigan, 1994

SUMMARY OF COST OF COMMUNITY SERVICES STUDIES, REVENUE-TO-EXPENDITURE RATIOS IN DOLLARS

Community	Residential including farm houses	Commercial & Industrial	Working & Open Land	Source
Minnesota				
Farmington	1 : 1.02	1 : 0.79	1 : 0.77	American Farmland Trust, 1994
Lake Elmo	1 : 1.07	1 : 0.20	1 : 0.27	American Farmland Trust, 1994
Independence	1 : 1.03	1 : 0.19	1 : 0.47	American Farmland Trust, 1994
Montana				
Carbon County	1 : 1.60	1 : 0.21	1 : 0.34	Prinzing, 1999
Gallatin County	1 : 1.45	1 : 0.16	1 : 0.25	Haggerty, 1996
Flathead County	1 : 1.23	1 : 0.26	1 : 0.34	Citizens for a Better Flathead, 1999
New Hampshire				
Deerfield	1 : 1.15	1 : 0.22	1 : 0.35	Auger, 1994
Dover	1 : 1.15	1 : 0.63	1 : 0.94	Kingsley et al., 1993
Exeter	1 : 1.07	1 : 0.40	1 : 0.82	Niebling, 1997
Fremont	1 : 1.04	1 : 0.94	1 : 0.36	Auger, 1994
Groton	1 : 1.01	1 : 0.12	1 : 0.88	New Hampshire Wildlife Federation, 2001
Stratham	1 : 1.15	1 : 0.19	1 : 0.40	Auger, 1994
Lyme	1 : 1.05	1 : 0.28	1 : 0.23	Pickard, 2000
New Jersey				
Freehold Township	1 : 1.51	1 : 0.17	1 : 0.33	American Farmland Trust, 1998
Holmdel Township	1 : 1.38	1 : 0.21	1 : 0.66	American Farmland Trust, 1998
Middletown Township	1 : 1.14	1 : 0.34	1 : 0.36	American Farmland Trust, 1998
Upper Freehold Township	1 : 1.18	1 : 0.20	1 : 0.35	American Farmland Trust, 1998
Wall Township	1 : 1.28	1 : 0.30	1 : 0.54	American Farmland Trust, 1998
New York				
Amenia	1 : 1.23	1 : 0.25	1 : 0.17	Bucknall, 1989
Beekman	1 : 1.12	1 : 0.18	1 : 0.48	American Farmland Trust, 1989
Dix	1 : 1.51	1 : 0.27	1 : 0.31	Schuyler County League of Women Voters, 1993
Farmington	1 : 1.22	1 : 0.27	1 : 0.72	Kinsman et al., 1991
Fishkill	1 : 1.23	1 : 0.31	1 : 0.74	Bucknall, 1989
Hector	1 : 1.30	1 : 0.15	1 : 0.28	Schuyler County League of Women Voters, 1993
Kinderhook	1 : 1.05	1 : 0.21	1 : 0.17	Concerned Citizens of Kinderhook, 1996
Montour	1 : 1.50	1 : 0.28	1 : 0.29	Schuyler County League of Women Voters, 1992
Northeast	1 : 1.36	1 : 0.29	1 : 0.21	American Farmland Trust, 1989
Reading	1 : 1.88	1 : 0.26	1 : 0.32	Schuyler County League of Women Voters, 1992
Red Hook	1 : 1.11	1 : 0.20	1 : 0.22	Bucknall, 1989
Ohio				
Madison Village	1 : 1.67	1 : 0.20	1 : 0.38	American Farmland Trust, 1993
Madison Township	1 : 1.40	1 : 0.25	1 : 0.30	American Farmland Trust, 1993
Shalersville Township	1 : 1.58	1 : 0.17	1 : 0.31	Portage County Regional Planning Commission, 1997