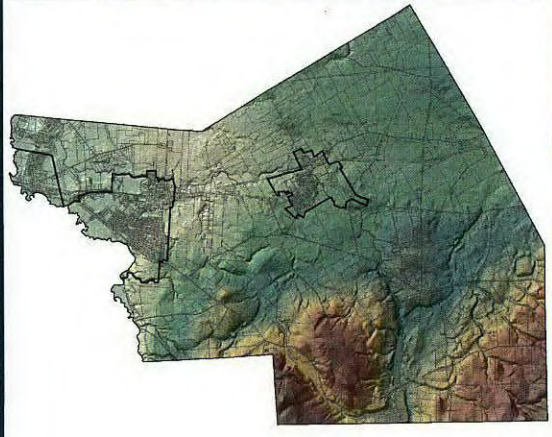
COMMUNITY COMPREHENSIVE PLAN

VOLUME II

Comprehensive Plan Inventory



Town of Vernon
Oneida County, New York

September 2005

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

Town of Vernon

Volume II
Comprehensive Plan

Community Inventory and Trends Analysis

Preamble
Demographic Profile
Natural, Cultural and Historic Resources
Parks, Recreation and Open Space
Water and Wastewater Infrastructure
Transportation and Infrastructure
Land Use

September 2005

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

290 Elwood Davis Road
Box 3107
Syracuse, New York 13220

Table of Contents

Table of Contents
- Continued -

Table of Contents
- Continued -

Table of Contents
- Continued -

Table of Contents
- Continued -

Table of Contents
- Continued -

List of Figures

Table of Contents
- Continued -

1.0 Introduction

1.1 An Overview of the Comprehensive Plan

The Town of Vernon Comprehensive Plan addresses four major subject areas with 9 sub components based upon New York State Legislation defining a Town Comprehensive Plan. Ultimately sections of the plan address; Natural Resources, Historic Resources, Cultural Resources, Transportation, Infrastructure, housing, community facilities including parks recreation and open space, economic development in the context of local land claims and issues with respect to community design. Each section of the plan includes a profile and inventory of existing conditions, a discussion of trends relevant to the Town and an analysis of local opportunities and constraints for each of the four major sections of the plan. The plan also establishes community goals, objectives and strategies of the plan relating to each element. This element of the plan is to guide local policy toward achieving the future vision of the community.

An element of the final plan will include implementation strategies and describe how progress in achieving the goals of the community can be measured and monitored. The plan will also identify resources available to the community to facilitate and support community strategies. The key to the success of the plan lies within the community goals, objectives and strategies that are established to achieve a vision for the next generation of residents.

1.2 History of Settlement

Vernon is the part of the historical territory of the Oneida Nation of the Iroquois Confederacy. The land area was part of the Oneida Indian Reservation prior to being granted as land patents. The Iroquois people (Haudenosaunee or "people of the long house") have a rich tradition of stories and pictorial

descriptions of natural phenomenon to describe their cultural heritage. The Oneidas origin is described in an oral history that is handed down from generation to generation through a series of legends. Legend has it that the Oneidas obtained their name from a stone that appeared near the mouth of the Oneida Creek. A translation of the story is as follows:

Before the Oneida Nation formed, two young warriors left the Onondaga Tribe and came to live on the north side of Oneida Creek near its entrance to the Lake (Oneida Lake). The morning after their arrival, they discovered a large boulder that had appeared mysteriously. It was different from the stone types of the surrounding region and had come to them through a mysterious agent in the night. A voice then came to them and told them that a new nation would be formed by the warriors who met around the stone" The story continues to explain that "after a short time the tribe moved to the other side of the river but the stone had followed them." (Landgraff 1926) It is believed that the location that the "sacred stone" followed them to was the area now known as Oneida Castle. It is unclear if the stone with a tribute to Sconondoa is the stone described in the legend. The story is the basis for the Oneida name and they are referred to as the "people of the standing stone" or Onayotekaono.

Upon the arrival of the Europeans the area slowly transitioned from virgin forest to open farms that exposed rolling hills. The first permanent European settled in the Town was Josiah Bushnell in the year 1794. The Town of Vernon was formed from Westmoreland and Augusta and includes the land patents to Baschard, Bleeker, Sargent, Wemple and Van Eps. The earliest known European settlers migrated to the area from Massachusetts and Connecticut. The Township was formally established in 1803 as the result of a town meeting held at the home of David Tuttle in March of 1802. The Village of Oneida Castle was incorporated in 1815 and was the original the location of the Oneida's Chief Village. Oneida Castle was the last known location of Sconondoa who was

perhaps the most well known of the Oneida Chiefs. The Village of Oneida Castle was actually considered for the location of the New York State Capitol on three separate occasions as it was generally accepted to be the geographic center of New York State. The Village of Vernon was the last municipal entity to be formed being officially incorporated on April 6, 1827. It is historically the location of the Vernon Fair that began around the year 1848.

The Hamlet of Vernon Center is located on Route 26 in the southeast portion of the Town. During the 1800's Route 26 was known as the Rome to Madison plank road. The hamlet was developed around a "green" which was cleared by the local proprietors. The "green" around which the Hamlet grew was used by the surrounding settlers during the summer as a gathering place and constituted a park-like atmosphere. In the last part of the 19th Century the local churches elected a Park Commissioner who was charged with replanting trees on the "green" and the area was utilized for social gatherings until the early 1940's.

The City of Sherrill is known as the smallest city in New York State. Sherrill's history is tied to the growth of the Noyes Community. John Noyes and his followers settled in the location of present day Sherrill along what is now known as State Route 5. He founded the Oneida Community in 1848 to establish a community to practice religious beliefs free of scrutiny. They settled in what is known as the Mansion House. During the 1850's the Oneida Community became interested in business and began developing a number of inventions including the Newhouse animal trap and machines for washing clothes, canning vegetables and developed an interesting form of child care. Ultimately, the community manufactured forks and spoons from silver and founded what is now known as Oneida Limited. The city has prospered over

time as the result of the John Noyes' Oneida Community and today is a modern community located halfway between Syracuse and Utica. Essentially, the old Seneca Turnpike bisects the community and what was once the largest tableware manufacturer in the United States

Sconondoa and Oneida Creek played an important role in the history of Vernon and the development of the Town since the 1790's. The swift change in elevation from south to north allowed the creek to be utilized as a reliable power source for the development of gristmills saw mills and a distillery. In fact, Vernon Mills flour was extremely popular throughout Central New York for more than a century.

During the early stages of European development the abundance of firewood for fuel and the availability of sawmills facilitated a local glass industry between 1810 and 1850. However, as land was forested and agriculture began to flourish it was less expensive for the "glass houses" to relocate than to transport firewood to the area to support the local glass industry.

In the early phase of agricultural development in Vernon, dairy farming became an important pursuit. Dairy farming has been the largest continuous source of employment since European settlement. Presently, farmland remains the largest land use in the Town and dairy related industry including Dairylea Milk Company is an important aspect of the local economy.

In the mid to late 19th Century the largest single commercial development factor in the Town of Vernon was the Genesee Trail. This trail, now know as New York State Route 5, was chartered as the Seneca Turnpike and toll road and was developed as the first "Plank Road" in the Town of Vernon. This route facilitated growth in farm to market transportation and the area began modest growth in population.

In 1882, the New York West Shore and Buffalo Railroad was developed within the Turnpike right of way. At first, the railroad proposed to straighten the Seneca Turnpike so that the trains could run parallel to the road. The local population opposed the new alignment which resulted in four railroad crossings within a 2 mile stretch of the turnpike but the development of the railroad brought access to new markets that facilitated growth in the exportation of agricultural products and local manufactured goods.

The location of Vernon Downs in the Town also has strong ties to local history. The Vernon Fair was an annual event and local celebration that brought the farming community and neighbors together. During the late 1800's the fair moved from the Mt. Vernon Presbyterian Church to the current location of the Vernon Downs facility. The Vernon Fair remained at this location until 1952 when the event was abandoned. Today the celebratory nature of this site continues during the many events at Vernon Downs and the facility contributes approximately 60 million dollars annually to the local economy (Oneida Dispatch, 2004).

Today, as Vernon enters the 21st Century, new opportunities exist as the economy continues to become more service oriented. While agriculture dominates the character of the community, equestrian farms, tourism development and retail establishments present new economically viable pursuits. Today, farming requires more acreage and mechanization to be profitable and many of the smaller farms are struggling to compete. It is important that an agricultural presence continues in the area. Dairy as a whole is experiencing difficulty in maintaining a profitable level of viability and protection of the agricultural heritage of the Town is likely to continue to be a regional issue. Local manufacturing operations including Oneida Limited remain. However, the twilight of the manufacturing and industrial past is beginning to take a toll on the local

economy. As the local economy continues to become more service oriented and the impact of gaming facilities provides opportunity to tourism and hospitality it is likely that manufacturing related employment will either remain in the greater Syracuse, Utica, Rome and Oneida markets or continue to decline in the absence of a shift in recent economic trends. Upon the advent of the Turning Stone Casino and Oneida Nation endeavors the local economy continues to become more attractive to tourism and visitors from other parts of the northeast and beyond. Turning Stone Casino, Vernon Downs and associated spin-off development provides a likely catalyst for future economic development over the next 20 to 25 years. The Oneida Nation recently announced the opening of a PGA level golf course in the Northern portion of the Town of Vernon that will bring more potential for economic activity and tourism related enterprises. This growth may serve to benefit all parties if it is anticipated and planned for in a cooperative manner.

1.3 Demographic Profile

Many planning decisions rely on the demographic profile of a community. Demographics provide a basis for recognizing growth or stagnant population trends, the ethnic profile of the community, and economic potential of the local work force. It is also helpful in establishing human patterns. For example, the location of employment opportunities may be evident by establishing how many people are employed locally as compared to the number of individuals who commute to other employment centers. Another example may be identifying a trend that may result in school expansion, development of senior assisted housing or the need for affordable housing, or evaluation of the median income of the local population to give some insight into the health of the local economy.

Overall figures for Oneida County reflect a 7.4 percent loss of population. Year 2000 Census figures for the Town of Vernon include the numbers for the Villages of Vernon and Oneida Castle as well as the Hamlet of Vernon Center. These sections of the Comprehensive Plan will breakdown the population characteristics for each municipality and make some general comparisons to adjacent Towns.

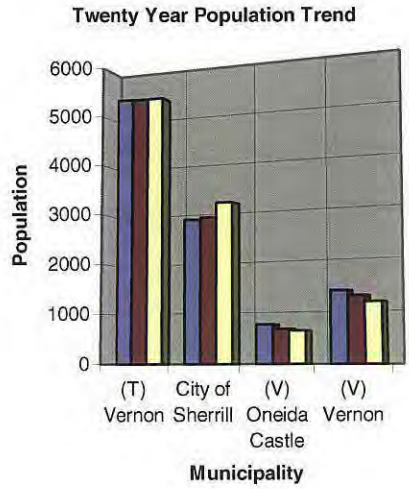
1.3.1 Town of Vernon

As of the 2000 Census, the population of the Town of Vernon is approximately 5,335. There are 2,112 households and 1,484 "traditional families." Traditional families include two legally married parents and children less than 18 years of age.

The racial makeup of the Town is 97.94 percent Caucasian; .43 percent African American; .41 percent Native American and .39 percent Asian. Hispanic or Latino citizens account for .69 percent with the remaining residents listed as Pacific Islander, from other races or listed as two or more races.

The average size of a family in the Town is 2.98 individuals including 54.6 percent of whom are married couples living in the same household. Of the estimated 2,112 households, 32.9 percent contain children less than 18 years of age. According to Census statistics, 29.7 percent of households are "non-families" and 8.3 percent contain an individual 65 years or older living alone.

The median age in the Town, including the Villages is 38 years of age. Local population density is 139.9 individuals per square mile.



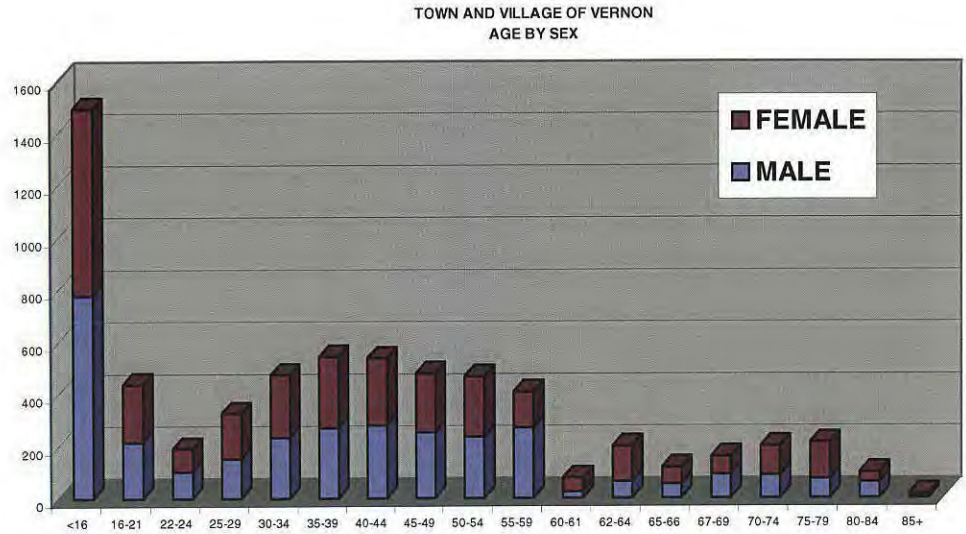
	(T) Vernon	City of Sherrill	(V) Oneida Castle	(V) Vernon
1980	5354	2830	751	1373
1990	5338	2864	671	1274
2000	5335	3147	627	1155

Population projections for the Town (including the two villages) prepared by the Herkimer-Oneida Comprehensive Planning Program estimate the Town and village population to remain relatively steady with less that a 1 percent population increase by 2030.

1.3.2 Village of Vernon

Of the total number of individuals residing in the Town 1,155 people live within the Village of Vernon. The Village contains approximately 499 households and 314 families with 31 percent of households having children less than 18 years of age. "Traditional" households account for 44.9 percent including two parents with one or more children. Households containing an individual 65 years of age or older account for 9.6 percent of residential units in the Village. The average size of a family in the Village is 2.85 individuals and the Median age is 37 years.

Population density within Village limits is 1,264.5 individuals per square mile.



1.3.3 Village of Oneida Castle

The 2000 Census indicates that Oneida Castle has a population of 627 individuals in 264 households and 178 "traditional" families. Eleven percent of all households contain an individual 65 years or older who lives alone. Of the 264 households, 26.0 percent contain children under the age of 18 and 56.8 percent are considered "traditional" families.

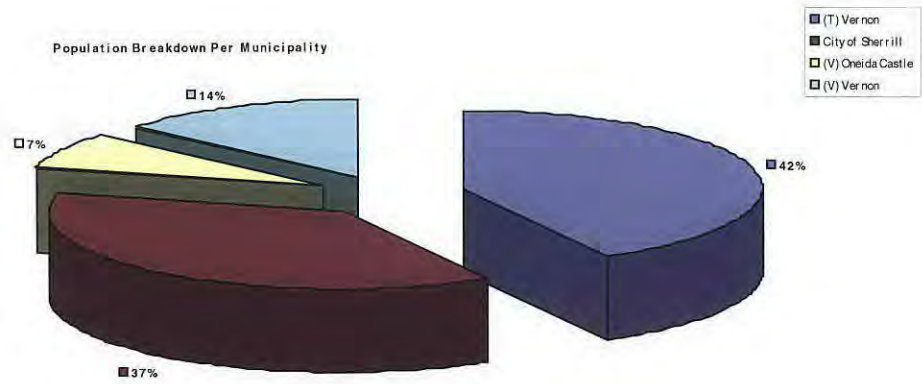
The average family size in the Village is 2.87 and the median age is 41 years. Population density of the Village of Oneida Castle is 1,201 people per square mile.

1.3.4 City of Sherrill

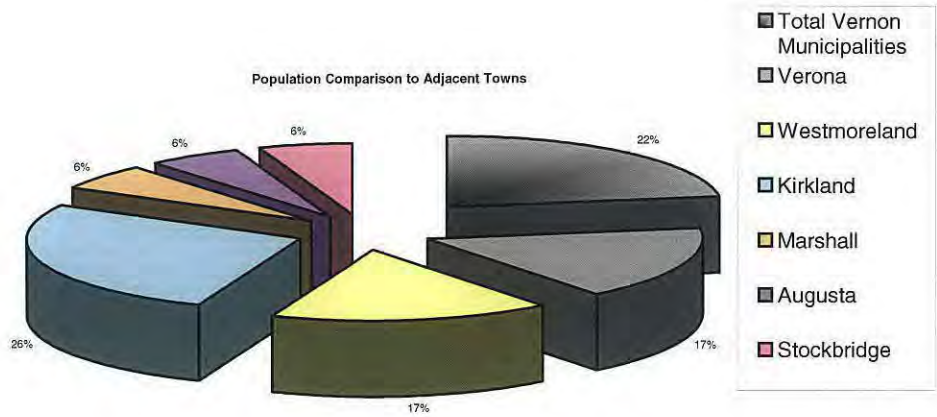
As of 2000, there were 3,147 people living in the City of Sherrill, including 1,262 households and 879 families. The racial makeup of the City is 98 percent Caucasian, .22 percent Afro-American, .60 percent Native American and .83 percent Hispanic or Latino.

Of the 1,262 households in the City, 33.6 percent have children under the age of 18 living with them and 59 percent are "traditional" families. The average family size in the City is 3.03 and households containing one individual who is 65 years of age or older amounts to 15.9 percent of all households.

Based upon 2000 Census data the population density for the City of Sherrill as of the year 2000 is 1,554.6 individuals per square mile.



The Town of Vernon is relatively large in population compared to the surrounding municipalities. It is the second largest Town (including Sherrill) in the immediate region and is comprised of 22 percent of the population of the surrounding communities.



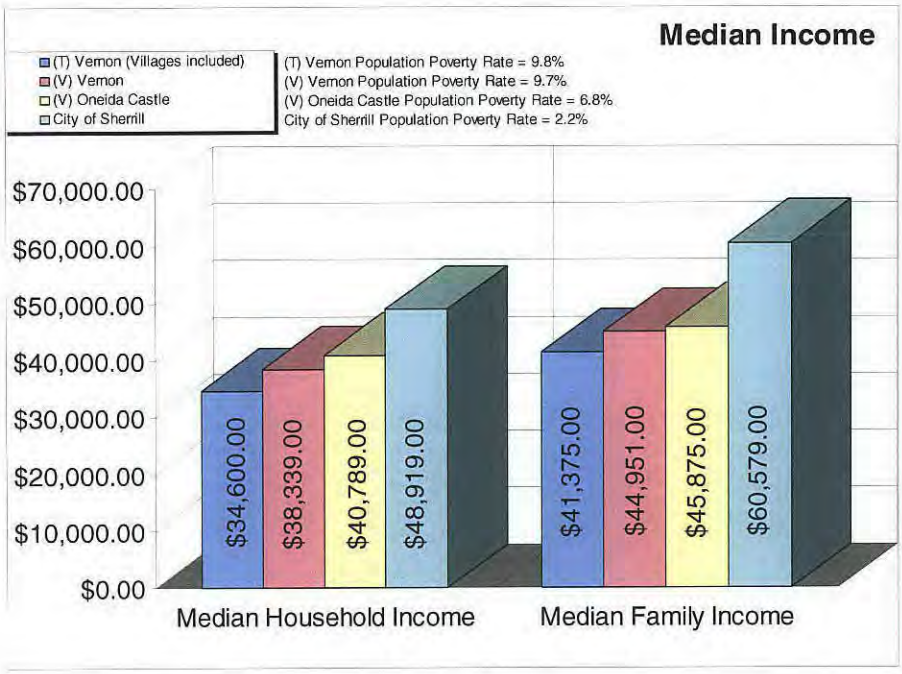
Population change over the past 30 years reflects a net population loss in the Town of .4 percent. This includes a 30-year loss in the population of the Village of 15.9 percent. The overall total net loss within the town has been minimal. However a 15.9 percent loss of population in the Village of Vernon represents a likely shift from the Village to the Town, outside the village. The thirty-year population loss to the Village and Town is not typical in the City. The City of Sherrill is the only municipality that is experiencing modest growth in population. According to the 2000 Census the City population has increased by approximately 317 individuals. This amounts to a net population gain of 11.2 percent since 1980.

1.4 Employment and Education

1.4.1 Local Estimated Income

According to the 2000 U.S. Census, out of the total population 1,027 males and 898 females held jobs in 1999 for a total of 1,925 individuals employed. Of those employed a total of 883 men and 599 women held positions at full time status. Full time status for the purposes of the U.S. census is considered to be a workweek of 35 hours or more.

Of the total remaining population 117 males and 245 females worked part time from 15 to 34 hours per week. The remaining part time workers worked any where from 1 to 14 hours per week including 45 males and 54 females.



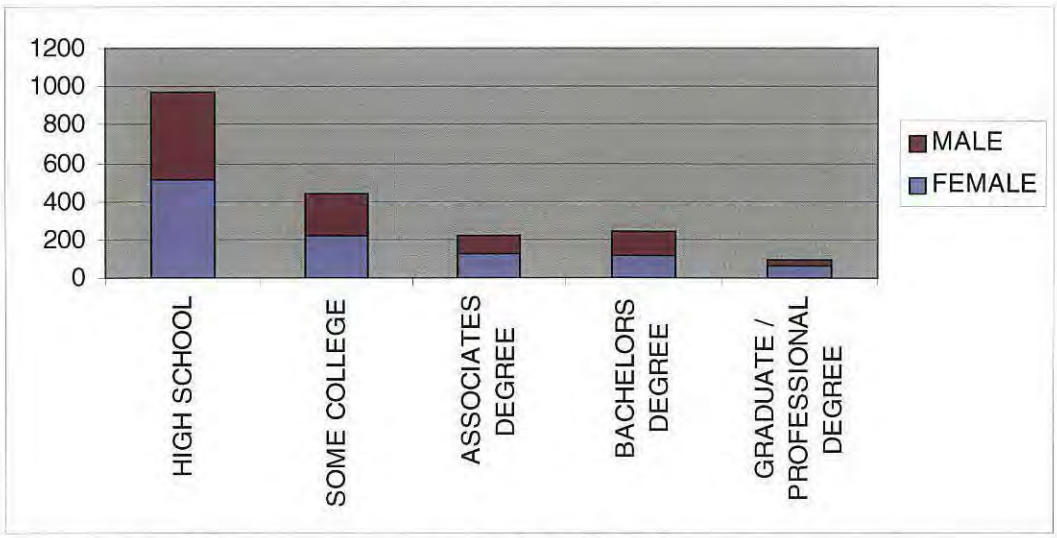
Median income level for the residents of each community is illustrated in the chart shown above. The chart reveals that residents with the highest incomes reside in the City of Sherrill. The income of Village residents follows and the lowest income portion of the population resides in the Town. While the median household income is fairly consistent among the four municipalities the median family income in the City is higher than the Town and Villages.

1.4.2 Location of Resident Employment

Of the total number of workers in the Town of Vernon 1059 individuals worked within the local Metropolitan Statistical Area (MSA). This means that over half of the local residents work within a short distance of the Town. It is likely that the close proximity of local employment is a function of the Towns proximity to the Turning Stone Casino and the City of Oneida. The remaining population worked outside of the local area either outside of the local MSA, in another county, or in another state. Of the total employed 622 individuals worked in another county while 21 people worked outside of New York State.

1.4.3 Local Educational Profile

The Town of Vernon has a relatively well-educated population compared to many rural communities. Of the total population more that 82 percent of males and 86 percent of females hold High School Diplomas and more than 400 individuals, male and female, have at least some college education.



Highest Education Attained by Local Population

Additionally, out of just under 1,000 individuals more than 400 individuals hold an Associates Degree or a Bachelors Degree from a college or university. This level of education provides a number of opportunities to present new concepts to the local population that may enhance the ability of the local community in establishing future planning goals and objectives for the area. It also suggests that there is an adequately trained workforce available to local businesses and entrepreneurs.

2.0 Natural and Cultural Resources

2.1 Natural Resource Inventory

Natural resources are the life-blood of a local community. In Vernon, this is evident in the long and successful history of agriculture and agribusiness. It is also the basis for establishing quality of life for local residents and the economic potential of the area. Natural resources provide the setting for making long term planning decisions due to potentially constrained areas that may limit development. They are relevant to many issues with respect to septic systems, soils, and availability of groundwater for drinking water, steep slopes, and other natural factors. On the other hand Natural Resources provide opportunities with respect to economics, recreation, land use potential and land values. The inventory portion of the Natural Resources portion of the plan is thus important in establishing the setting for the future vision of Town residents and is useful in developing realistic goals and objectives to guide future policy.

2.1.1 Introduction

The Town of Vernon is located at the western end of the Mohawk Valley Region. The Town is within two major watersheds including the Oneida Lake Watershed and the Mohawk Valley Watershed. The Town lies between the three physiographic provinces of the Great Lakes Plain, the Appalachian escarpment and the western end of the Mohawk Valley.

2.1.1.1 Ecological Zones

The land area of Vernon is located at the transition of three ecological zones as classified by the New York State Department of Environmental Conservation (**see figure 2-1**).

TOWN OF VERNON

St. Lawrence Plains
Malone Plain
Champlain Transition
Lake Champlain Valley
Western Adirondack Transition
St. Lawrence Transition
St. Lawrence Plains
Indian River Lakes
Sable Highlands
Western Adirondack Foothills
Adirondack High Peaks
Eastern Ontario Plains
Black River Valley
Central Adirondacks
Eastern Adirondack Foothills
Central Tug Hill
Oswego Low lands
Tug Hill Transition
Eastern Adirondack Transition
GREAT LAKES PLAIN
Drumlins
Erie-Ontario Plain
MOHAWK VALLEY
Taconic Mountains
Taconic Foothills
Cattaraugus Highlands
Finger Lakes Highlands
Rensselaer Hills
Helderberg High lands
Taconic Mountains
Schoharie Hills
APPALACHIAN PLATEAU
Allegany Hills
Central Appalachians
Catskill Peaks
Delaware Hills
TACONIC HIGHLANDS
Neversink Highlands
Mongaup Hills
HUDSON VALLEY
HUDSON HIGHLANDS
Central Hudson
Shawangunk Hills
MANHATTAN HILLS
TRIASSIC LOWLANDS
COASTAL LOWLANDS

ECOZONES

Habitat Inventory Unit

m.k.t

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

0 0.25 0.5 1 Miles

Town of Vernon 3/8/05
Context Map
New York State Ecozones
Oneida County New York

Figure 2-1
Project No. 859.005

The northern portion of the Town including most of the land area from NYS Route 5 north is within the Great Lakes Coastal Plain. This includes the City of Sherrill and the Village of Oneida Castle. The northeastern portion of the Town lies within the transition zone between the Great Lakes Plain and the Mohawk Valley. The Southern portion of the Town is an upland transition zone and is characterized by rolling foothills indicative of a rise in elevation to the Appalachian Plateau.

Information on plants and wildlife of the Town is very limited. The natural vegetation of the Town has been significantly altered over the years as changes occurred during the Towns history. Beginning as a logging community, the clearing of forested areas gave way to agriculture as important and fertile farmland soils were exposed and farming became the dominant economic force in the landscape.

The dominant forest types, though variable throughout the town mainly consist of elm-red maple climax communities. In the southern upland portion of the town mixed northern hardwoods including Maple- Beech climax communities predominate. Bottomland hardwoods including black willow, eastern cottonwood, ash and black locust dominate a number of stream corridors including the Sconondoa and Oneida Creeks.

The location of Vernon within the transitional context of these three ecological zones provides a wide range of diversity of plant and animal life. Essentially, the Town contains species associated with hydric environments, upland environments and transitional environs between upland and lowland locations. It also

creates a great deal of variation with respect to the physical attributes of the Town. For example, soils within the lake plain will exhibit a greater degree of drainage limitations than soils in the southern portion of the Town. Furthermore, the variation in soil types and drainage provides a wide range of implications for farming activities and residential development.

2.1.1.2 Glacial Geology

The geology of the Town is the result of glaciers that advanced into the region approximately 10,000 years ago. Bedrock in the Town is mostly shale and limestone from the Clinton Group and no rock outcrops are evident. Based upon the Oneida County Soil Survey the Clinton Group is described as having layers of red and green shale and sandstone with thin beds of limestone. The underlying bedrock is characterized as having an irregular surface (Coe 1984). Upland areas are oriented in a generally north to south pattern typical of drumlin hills throughout Central and Western New York. The glacial process scalped the deep soils from the tops of hills leaving behind shallow soils and areas with harder bedrock cores. The resulting rivers and streams that followed glaciers have sculpted the relatively flat Appalachian plateau by eroding the underlying bedrock to form northwest to south east oriented hills typical in the southern portion of the Town. There are no high peaks in the Town but high rolling hills are visible from the lake plain north of the Route 5 corridor.

The Lake plain itself is a remnant of ancient "Lake Iroquois." Immediately following the glacial period approximately 10,000 years ago, all of the land around Oneida Lake was part of the "Lake

Ontario" water body, as we now know it. Essentially, Oneida Lake and Lake Ontario were a single lake and much of the area in the northern part of the Town was part of the bottom and associated shores of Lake Iroquois. The geology of the lower elevations reflects this glacial history in much of the northern and eastern portion of the town.

2.1.1.3 Climate

Weather systems generally move from west to east from the Ontario Lake Plain to the Mohawk Valley. The result is a high level of precipitation as air masses pass over Lake Ontario from the west and drop precipitation over the higher land area. The Oneida Creek watershed for example receives an average of 38.3 inches of precipitation per year. This amount is evenly distributed throughout the course of the year.

Climatologically, both of the major watersheds in the Town are considered to be in a humid region. Variation in annual average temperatures ranges from 25 degrees F to 80 degrees F. The average number of days free of freezing temperatures is 150.

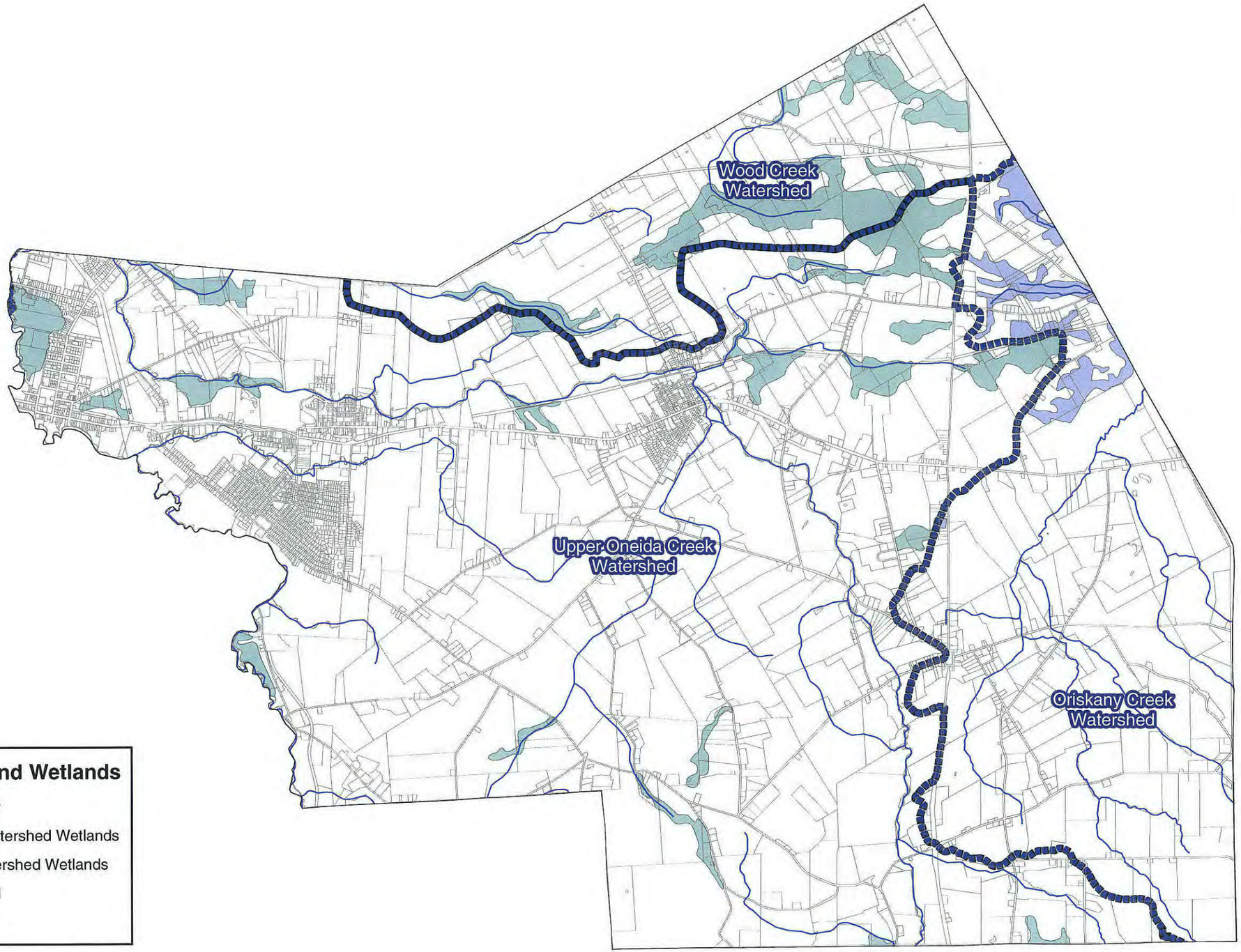
The table below shows the average monthly temperatures for the Oneida Creek and Sconondoa Creek sub-watershed and is assumed to be consistent with the remainder of the land area within the Town of Vernon.

Mean Monthly Temperatures for the Vernon region (A. Titus 1993)

Month	Temp. (F)	Month	Temp. (F)
January	25	July	75-80
February	25	August	75-80
March	35	September	65
April	45	October	55
May	55	November	30-45
June	65-70	December	25-30

2.1.1.4 Wetlands

There are approximately 3854 acres of Regulated wetlands in the Town of Vernon **(see figure 2-2)**. Three hundred and eight (308) acres of State regulated wetlands are within the Oneida Lake watershed (Wood Creek and Oneida Creek sub-watersheds). The remainder of State regulated wetlands include 1,502 acres located within the Mohawk Valley watershed (Oriskany Creek sub-watershed). The remainder of wetlands fall below the 12.4 acre threshold for New York State wetland regulations. These wetlands are indicated on the National Wetlands Inventory maps (NWI) and may be classified as federally regulated wetlands. While wetlands provide a number of constraints to development they also serve a function to improve the water quality of surface runoff and provide valuable habitat for wildlife that is beneficial to the community. They also provide an opportunity for local recreational pursuits like hunting, fishing, trapping, hiking and nature appreciation. Wetlands in the Town of Vernon are found mainly in the northwest and northeastern portions of the Town.



Watersheds and Wetlands

- Hydrography
- Oriskany Watershed Wetlands
- Oneida Watershed Wetlands
- oneida_shed
- Tax Parcels

Sources: NYSDEC, NYSDOT, CUGIR

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Regional Watersheds and State Regulated Wetlands

Oneida County New York

Figure 2-2

Project No. 859.005

I:\Projects\800859000S\Projects\Final_NRI_Maps\Vernon_Wetlands_figure2.2.mxd

These areas are more closely associated with the Great Lakes Plain and result from a relatively high groundwater table and poorly drained flatland soils. While wetland soils and plants are effective in filtering pollutants from upland locations they are relatively poor for standard on-site septic systems, leach fields or large quantities of input from storm sewers.

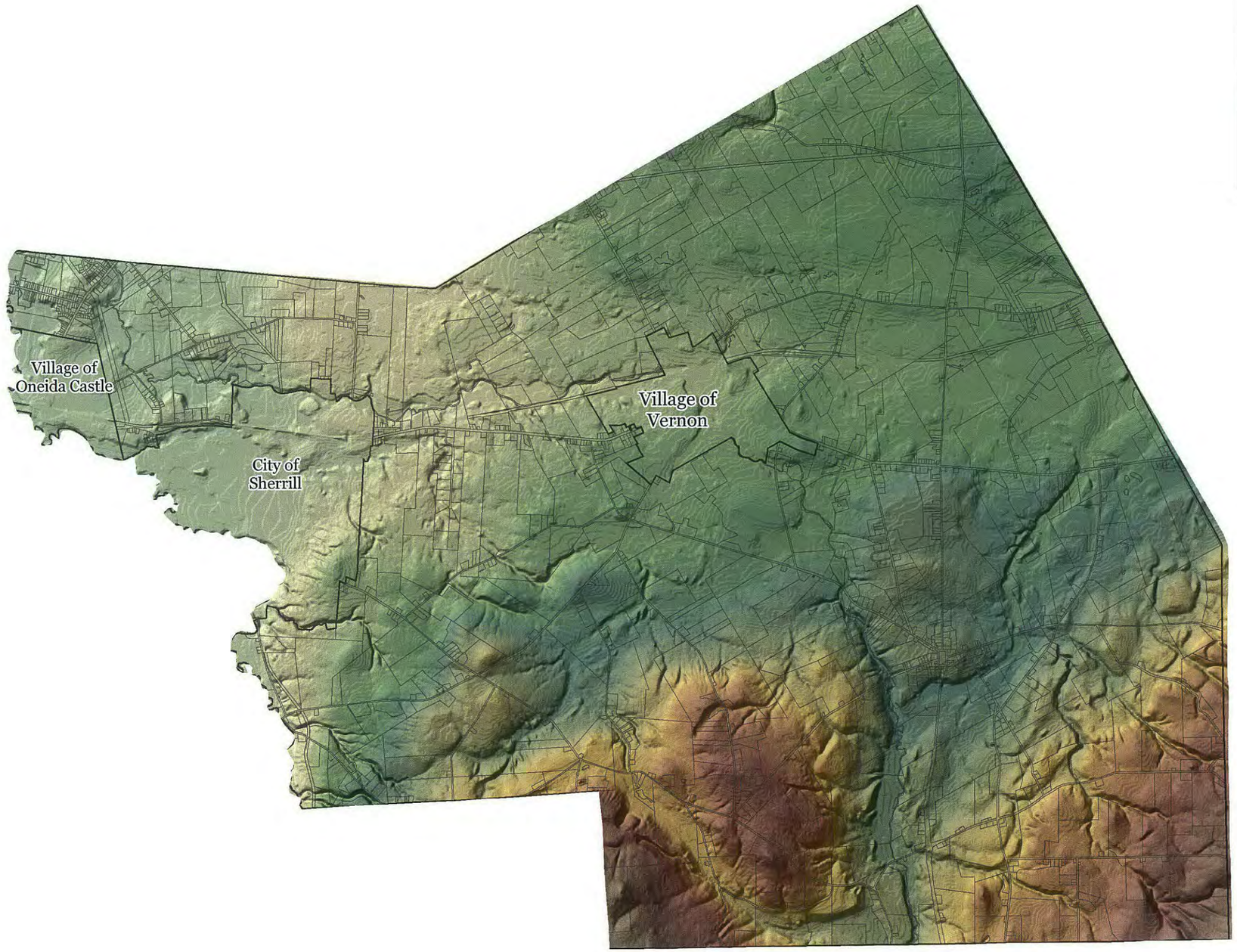
Wetlands in the northern portion of the town serve to filter agricultural runoff and non-point source pollutants but many of the preexisting wetlands were cleared to make way for farms and agriculture during the 19th Century. Due to their capacity for filtering natural pollutants, it is important that wetlands associated with streams and creeks are protected.

2.1.2 Ecological Zones

2.1.2.1 Great Lakes Plain

Topography, Geology and Soils:

The northern portion of the Town is situated in the Great Lakes Plain region. Low-lying topography and slow flowing streams characterize this portion of the Town. Steeper slopes, outwash terraces and lacustrine benches characteristic of remnants of the former lake bottom and beaches characterize the central portion. These rolling till-covered hills range to approximately 820 feet in elevation above sea level **(see figure 2-3 and figure 2-3A)**.



Elevation (Meters)

Value

High : 593

Low : 111

Town Parcels

Sources: CUGIR, HOCPP, N.Y.S. Dept. of Transportation, B&L

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

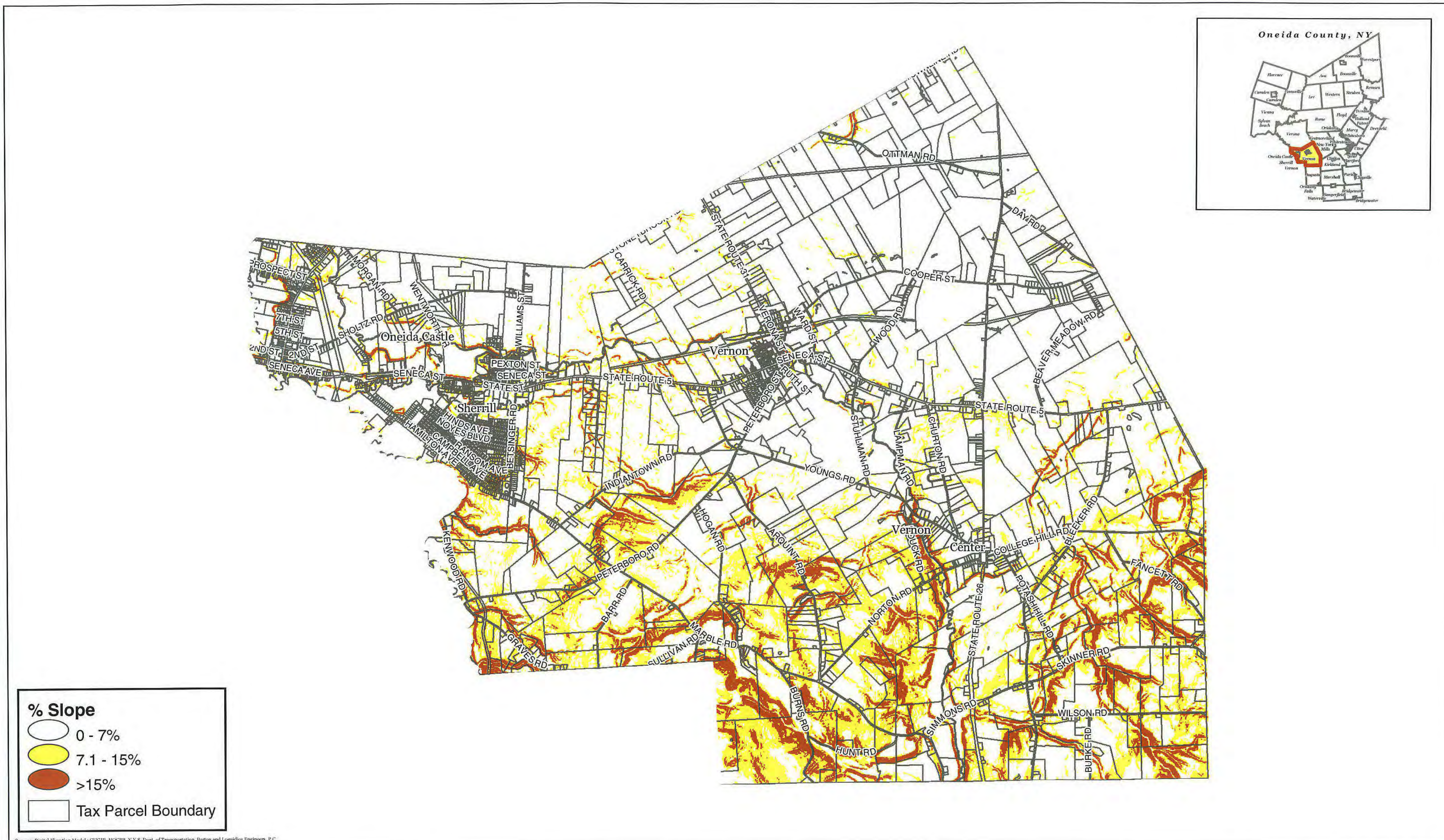
General Topography Shaded Relief Map

Oneida County New York

Figure 2-3

Project No. 859.005

I:\Projects\859\859.005\Projects\VernonHillshade



Sources: Digital Elevation Model ; CUGIR, HOCPP, N.Y.S. Dept. of Transportation, Barton and Loguidice Engineers, P.C.

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

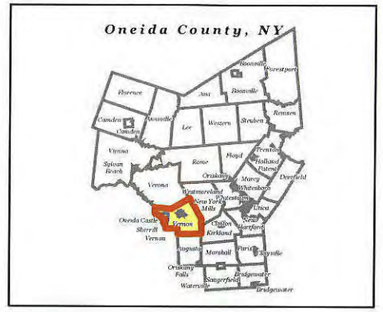
0 0.25 0.5 1 Miles

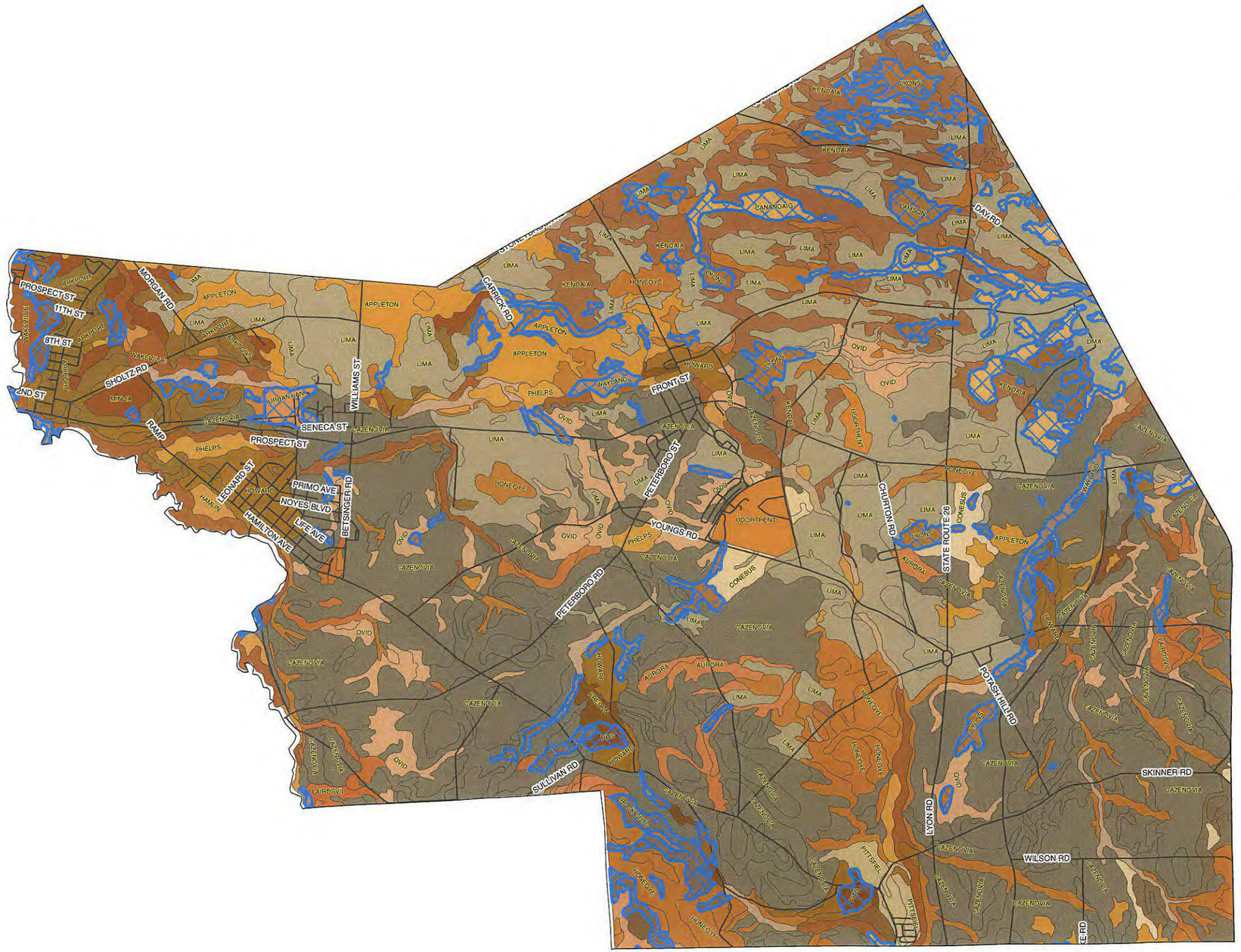
Town of Vernon	8/17/05	Figure 2-3A
Steep Slopes		Project No. 859.005
Oneida County	New York	

Most of the bedrock in the northern portion of the Town is comprised of deposits that were formed approximately 400 million years ago. The surficial deposits consist mainly of shale, dolomite and sandstone. Shale formations are frequently observed along road cuts or along the edge of stream valleys.

Generally speaking soils in the northern portion of the Town of Vernon are composed of shale and sandstone. Many areas consist of flat, deep soils formed in glacial till. Ontario, Hilton, Madrid and Bombay soils are widespread on till plains and on drumlins throughout the region. Organic soils (referred to as "muck" soils) are found in the northern portion of the Town and are mainly associated with wetlands or agricultural fields in low-lying areas. Palms, Carlisle and Edwards soils are typical muck soils found in the northern portion of the Town and result from a lack of oxygen in the soil particles resulting in a high organic content. Soils management for the northern portion of the Town is limited to improving the natural drainage on agricultural fields and for the preparation of construction sites **(see figure 2-4)**.

Due to the relatively flat topography most of the surface water in the northern portion of the Town move very slowly and flows toward Oneida Lake and ultimately the Oswego River watershed. A relatively small portion of the Town to the east drains toward the Mohawk Valley. Most of the State regulated wetlands (12.4 acres in area and larger) are located in the northern portion of the Town. Some of these areas, particularly along the lower portion of Sconondoa Creek are susceptible to seasonal flooding and are associated with riparian wetlands.





Legend

Hydric Soils
Roads

soils

COMPNAME_C

- ADRIAN
- AMENIA
- APPLETON
- ARKPORT
- AURORA
- CANANDAIG
- CARLISLE
- CAZENOVIA
- CONESUS
- FARMINGTO
- FREDON
- GALWAY
- HAMLIN
- HONEOYE
- HOWARD
- KENDAIA
- LAIRDSVIL
- LAMSON
- LANSING
- LIMA
- LYONS
- MARCY
- MINOA
- NIAGARA
- OVID
- PALMS
- PHELPS
- PITS
- PITTSFIEL
- RHINEBECK
- ROCK OUTC
- SCHOHARIE
- UDIFLUVEN
- UDORTHENT
- URBAN LAN
- WAKEVILLE
- WAYLAND

Sources: CUGIR, NRCS

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.3 0.6 1.2 Miles

Town of Vernon 8/17/05

General Soil Classifications and Location of Hydic Soils

Oneida County New York

Figure 2-4

Project No. 859.005

I:\Projects\859005\Projects\Final_NRI_Maps\Vernon_soils_figure2.4.mxd

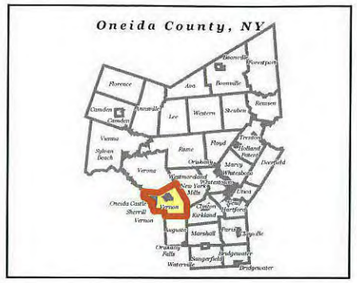
2.1.2.2 Appalachian Plateau Escarpment

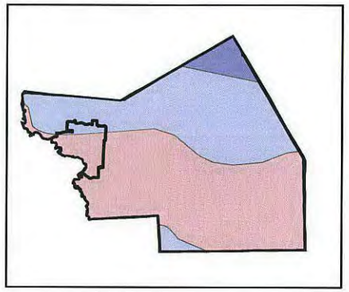
Topography, Geology and Soils

The southern portion of the Town is a transition zone between the Lake Ontario Plain and the Appalachian uplands. This portion of the Town has spectacular views of the Appalachian hills to the South and a view across the Mohawk Valley and Oneida Lake to the Tug Hill Plateau to the north. This portion of the Town is characterized by hills and valleys in a north to south orientation as the result of glacial movement during the Pleistocene ice age. Most of the surface water of the Town originates in this region and is transported to Oneida Lake or the Mohawk River.

View to Southeast from Peterboro Road.

The underlying surficial geology of the southern portion of the Town has a significant impact on local surface and groundwater quality **(see figure 2-5)**.





Aquifer Potential Based Upon Surficial Geology

Legend

Surficial Geology

- al- Recent Alluvium
- k- Kame Deposits
- km- Kame Moraine
- og- Outwash, Sand & Gravel
- r- Bedrock
- t- Till
- tm- Till Moraine

Sources: Oneida County, New York State Museum, NYS GIS Clearinghouse

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon — 8/17/05

Surficial Geology and Groundwater Potential

Oneida County — New York

Figure 2-5

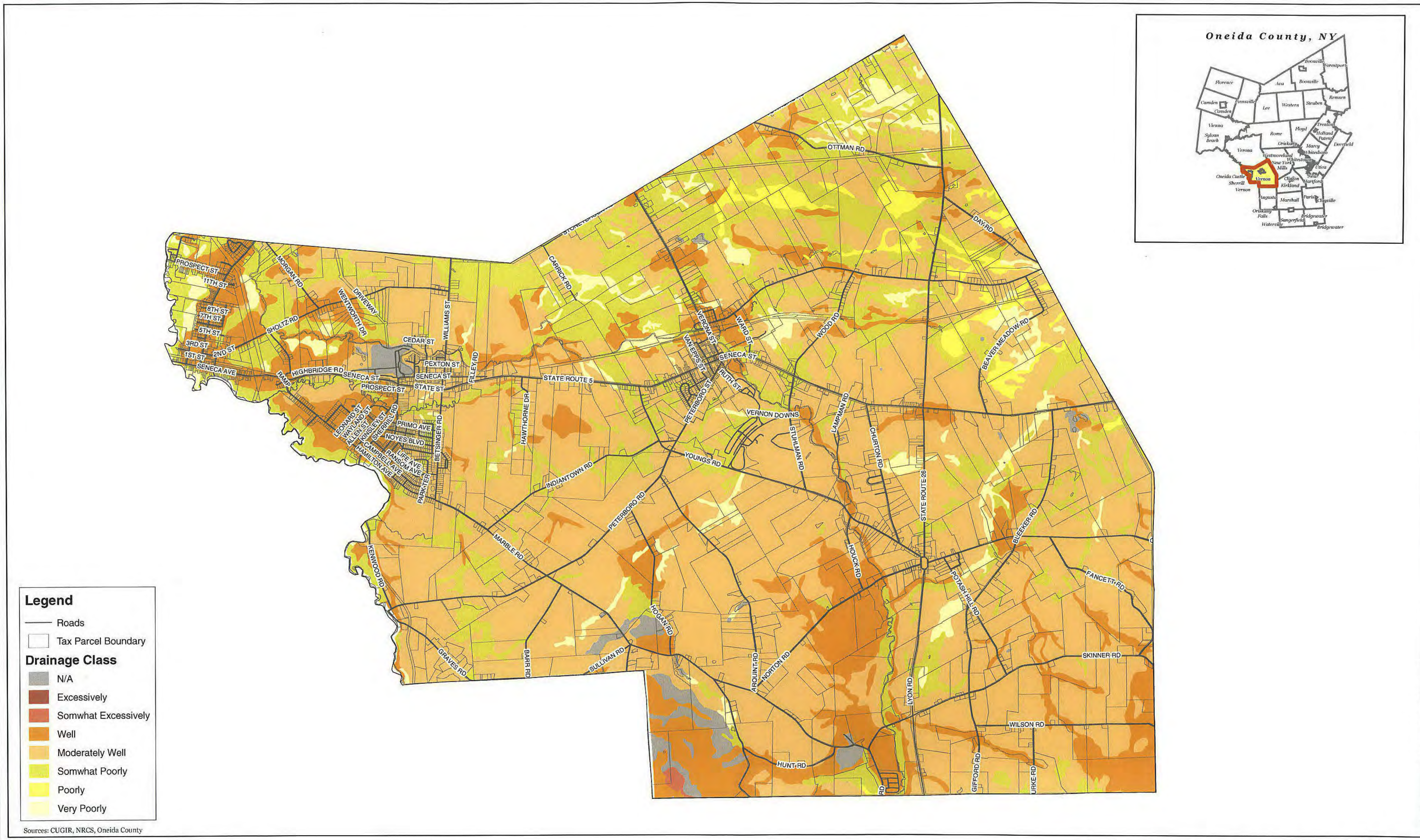
Project No. 859.005

I:\Projects\800859005\Projects\Final_NRI_Maps\vernon_surf_geo_figure2.5.mxd

Highly erodable units of Shale, Salt and Limestone have a major impact on the chemical makeup of local surface water. These rock formations along creeks and streams contribute a high level of dissolved minerals that are eventually deposited into Oneida Lake and the Mohawk River

Soils in the southern portion of the Town although limited for crop production tend to be more productive than the northern half of the land area with concentrations of deep and well drained soils **(see figure 2-6)**. Most of the soils are productive limestone based soils formed in glacial till. These well-drained soils are more useful for agriculture however steep slopes tend to limit the efficiency of crop farming operations. The most common soils to the southern portion of the Town include Honeoye and Lima soils. Soils management requires both improving the natural drainage to make land suitable for agriculture and development and controlling erosion through accepted farming practices and sedimentation control during construction activities. This is due to the erodable nature of the soils combined with areas of relatively steep topography.

This area contains characteristically steep slopes and valleys. As a result the surface hydrology in the southern portion of the Town consists of rapidly flowing streams flowing over slopes that continue to increase in steepness as one travels to the south.



Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

0 0.25 0.5 1 Miles

Town of Vernon	8/17/05	Figure 2-6
Soil Classification By Drainage Class		Project No. 859.005
Oneida County	New York	

2.1.3 Vegetation and Wildlife

The native vegetation of the Town has been heavily impacted and altered throughout recent history due to human activity. Most of the change is due to the agricultural history of the area however, some change has occurred due to expansion of development particularly in the vicinity of the City of Sherrill. In the northern portion of the Town northern hardwood species are the dominant climax forests. Much of the northern portion of the Town is associated with bottomland species typical of wetlands and hydric soils including eastern cottonwood black willow, some elm and wild grape.

Most of the wetlands in the northern portion of the Town support waterfowl such as mallard, wood duck, hooded merganser, black duck and a wide range of waterfowl and wildlife species. R.E. Chambers identified other species common to the Town in 1983. It is assumed that the following chart provides an accurate list of the types of species that occupy the land areas of the Town.

MAMMALS			
Virginia Opossum	Small-footed Myotis	Southern Bog Lemming	White-footed Mouse
Masked Shrew	Silver-haired Bat	Boreal Red-backed Vole	Striped Skunk
Smoky Shrew	Eastern Pipistrelle	Red Fox	Coyote
Longtail Shrew	Big Brown Bat	Gray Fox	Meadow Vole
Northern Water Shrew	Red Bat	Bobcat	Yellownose Vole
Pygmy Shrew	Hoary Bat	Woodchuck	Pine Vole
Least Shrew	Black Bear	Eastern Chipmunk	Muskrat
Shorttail Shrew	Raccoon	Gray Squirrel	Beaver
Starnose Mole	Fisher	Red Squirrel	Deer Mouse
Hairytail Mole	Shorttail Weasel	Southern Flying Squirrel	Porcupine
Little Brown Myotis	Longtail Weasel	Northern Flying Squirrel	Showshoe Hare
Keen Myotis	Mink	Meadow Jumping Mouse	Eastern Cottontail
Indiana Myotis	River Otter	Woodland Jumping Mouse	White-tailed Deer
REPTILES			
Eastern Painted Turtle	Common Snapping Turtle	Northern Redbelly Snake	Black Rat Snake
Stinkpot	Eastern Spiny Softshell	Eastern Garter Snake	Eastern Milk Snake
Spotted Turtle	Coal Skink	Eastern Ribbon Snake	Eastern Massasauga
Bog Turtle	Northern Water Snake	Northern Ringneck Snake	Timber Rattlesnake
Wood Turtle	Queen Snake	Northern Black Racer	
Map Turtle	Northern Brown Snake	Eastern Smooth Green Snake	
AMPHIBIANS			
Eastern Hellbender	Northern Dusky Salamander	Northern Two-Lined Salamander	Western Chorus Frog
Mudpuppy	Mountain Dusky Salamander	Four-Toed Salamander	Bullfrog
Jefferson Salamander	Redback Salamander	Longtail Salamander	Green Frog
Blue-spotted Salamander	Slimy Salamander	American Toad	Mink Frog
Spotted Salamander	Northern Spring Salamander	Northern Spring Peeper	Wood Frog
Red-Spotted Newt	Northern Red Salamander	Northern Leopard Frog	Gray Treefrog
Source: R. E. Chambers (1983) Integrating Timber and Wildlife Handbook			Pickerel Frog

List of Wildlife Common to the Vernon area

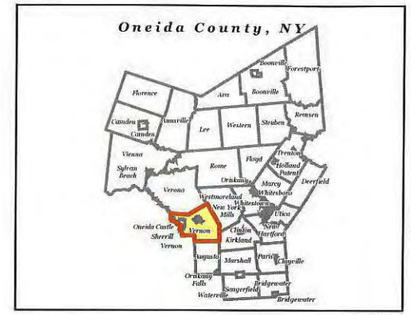
2.1.4 Agriculture

Farming is clearly a human activity in the landscape and a type of land use. However, agriculture is inherently tied to the natural resources of the Town. The pursuit of agriculture is also an important component of the local economy and Vernon's dairy industry is a major factor in the health of the economy of Oneida County. Dairy farming is the leading agricultural commodity on Oneida County. According to the Oneida County Planning department the County ranks eighth in agricultural production and the 11 member farmland Protection Board established a Farmland Protection plan to ensure the viability of farming in 1998.

There are 15,606 acres of land in agricultural taxing districts in the Town of Vernon (including Sherrill and the Villages). This accounts for approximately 61 percent of the towns land use activity. Soils are an important natural resource as an indicator of the agricultural potential of the land. There are approximately 14,736 acres of important farm soils in the Town of Vernon. Important soils for the purposes of this report include soils of Statewide Agricultural soils classification of Class 1, 2 and 3 (Prime farmland soils, soils of Statewide Importance and Unique farmland soils) that are not required to be drained to allow for active farming **(see figure 2-7)**.

2.2 Natural Resources Trends

It is difficult to address natural resource planning issues within the municipal borders of a township. Many of the areas of the State including the Oneida – Herkimer County region focuses on local natural resource issues a regional scale rather than as a municipal element of the planning process. Streams, rivers, vegetation, wildlife, wetlands and even cultural influences cross



Legend

- Agricultural District Boundary
- Not Prime Farmland
- Only drained areas are prime farmland
- All areas are prime farmland
- Roads

Sources: CUGIR, NRCS

Barton & Loguidice, P.C.
Engineers · Environmental Scientists · Planners · Landscape Designers

N W E S

0 0.3 0.6 1.2 Miles

Town of Vernon 8/17/05

Prime Farmland Soils and Agricultural Districts

Oneida County New York

Figure 2-7

Project No. 859.005

I:\Projects\800\859005\Projects\Final_NRI_Maps\Vernon_primefarm_soils_figure2-7.mxd

many jurisdictional boundaries. Due to the fact that natural resources do not necessarily coincide with municipal boundaries, issues with respect to natural resource trends may be applicable to regional as well as local planning initiatives.

2.2.1 Sustainable Development, Smart Growth and Quality Communities

In many forums these terms are used interchangeably and frequently refer to the natural resources component of the planning process. Essentially, they all refer to careful planning methods that consider the natural environment in all aspects of planning (Transportation, infrastructure etc) to make informed decisions about the future growth and quality of a local community. While "smart growth" and "quality communities" include the concepts of fiscal responsibility, sustainable economics and growth management, all of these terms ultimately are derived from the concept of sustainable development.

Sustainable development addresses the carrying capacity of local natural resources within the context of a community. This is used as the basis for determining the most appropriate type and density of development and how it effects the natural and physical environment. *The concept of sustainability involves the appropriate placement of buildings and infrastructure and the integration of natural process into the physical development of a site, location or community.*

Cluster development is one of the many methods of employing a sustainable approach to land use. Essentially, buildings are clustered in a manner that allows for the protection of open space, farmland and sensitive areas while concentrating development in the most suitable areas of the site. These concentrated areas may be more appropriate due to available water or sewer infrastructure or easily accessible to collector

roads. Concentrated areas of development would be located away from wetlands, soils with low bearing strength, prime farmland soils, steep slopes or areas that are culturally important to the community.

In a commercial area, sustainable development may include creative storm water management. Runoff from roads and buildings may be directed to a naturalized pond or man made wetlands that not only enhance the scenic quality of the site but also remove pollutants from storm water before it discharges into a stream or river or infiltrates back into the groundwater. Stormwater detention or retention ponds may also provide the secondary benefit as habitat for local wildlife.

As the result of changing concepts in sustainable development, New York State developed a Task Force to undertake a multifaceted and interdisciplinary study of issues that impact the creation of visions for the future of communities throughout the State in the late 1990s. The following is an excerpt from the New York State Quality Communities Task-Force that describes the State's intent with respect to sustainable development, smart growth and quality communities.

"The Task Force was asked to inventory local, State and federal programs which affect community development, preservation and revitalization goals of urban, suburban and rural municipalities; to obtain broad public comment; to consider balanced growth and the need for economic development; to consider housing and other community service needs; and to develop recommendations to strengthen local capacity for change. These tasks were to be undertaken in light of general principles which included the revitalization of downtown areas, historic districts and Brownfield's and the preservation of community character and open space

resources. Governor Pataki recognized that the State and local governments "require creative strategies to combine growth and environmental protection in order to enhance economic vitality and quality of life."

The Task Force worked diligently to meet the Governor's goals and expectations. An Advisory Committee was convened, composed of a broad representation of interests. The Committee held ten roundtables throughout the State to hear from government leaders, environmental advocates and members of the business community about the particular qualities which are important to communities in their regions and how these qualities can be attained.

The Task Force formed the following five subcommittees to consider issues identified at the Roundtables and matters within the particular expertise of the members:

- Revitalizing Central Cities, Main Streets and Small Towns – Chair, Secretary of State Alexander Treadwell;
- Agriculture and Farmland Protection – Chair, Commissioner Nathan Rudgers, Department of Agriculture and Markets;
- Preservation of Open Spaces and Other Critical Environmental Resources – Chair, Commissioner John Cahill, Department of Environmental Conservation;
- Transportation and More Livable Neighborhoods – Chair, Commissioner Joseph Boardman, Department of Transportation; and
- Sustainable Economic Development – Chair, Budget Director Carole Stone.

"Our urban problems are a very intricate web of issues, and you can't just tug on one strand; you really have to look at how that woven fabric comes together and how we patch it, how we intervene, and how we revitalize it."

2.2.2 Wetland Protection and Regulation

The Freshwater Wetlands Act adopted during the 1970's established a regulatory control over development and impacts in wetlands at the national level. The functional value of wetlands began gaining importance for wildlife habitat, flood storage, storm water attenuation, nutrient uptake and groundwater recharge. Ducks Unlimited was an important force in establishing a national approach to conserving wetland areas. In the 1960's, 70's and 80's, duck hunters began to notice a decline in duck and waterfowl populations, and linked the decline to the loss of habitat for ducks and their food sources. As groups began to lobby federal officials, a "no net loss" of wetlands policy was established by the federal government. Over time, States began exercising States rights and implemented their own wetland policies.

As the result, New York State Department of Environmental Conservation adopted a policy that regulates all wetlands 12.4 acres and larger. Wetlands less than 12.4 acres are regulated by the U.S. army Corps of Engineers.

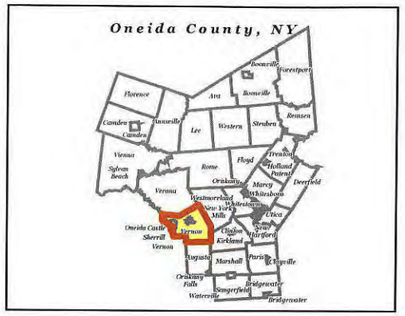
Change in regulation of wetlands has become a constant battle. For example, the federal government recently determined that federally regulated wetlands (< 12.4 acres) must be hydrologically connected to surface water bodies in order to be regulated. While many individuals identify the need to protect wetlands due to their ability to protect surface

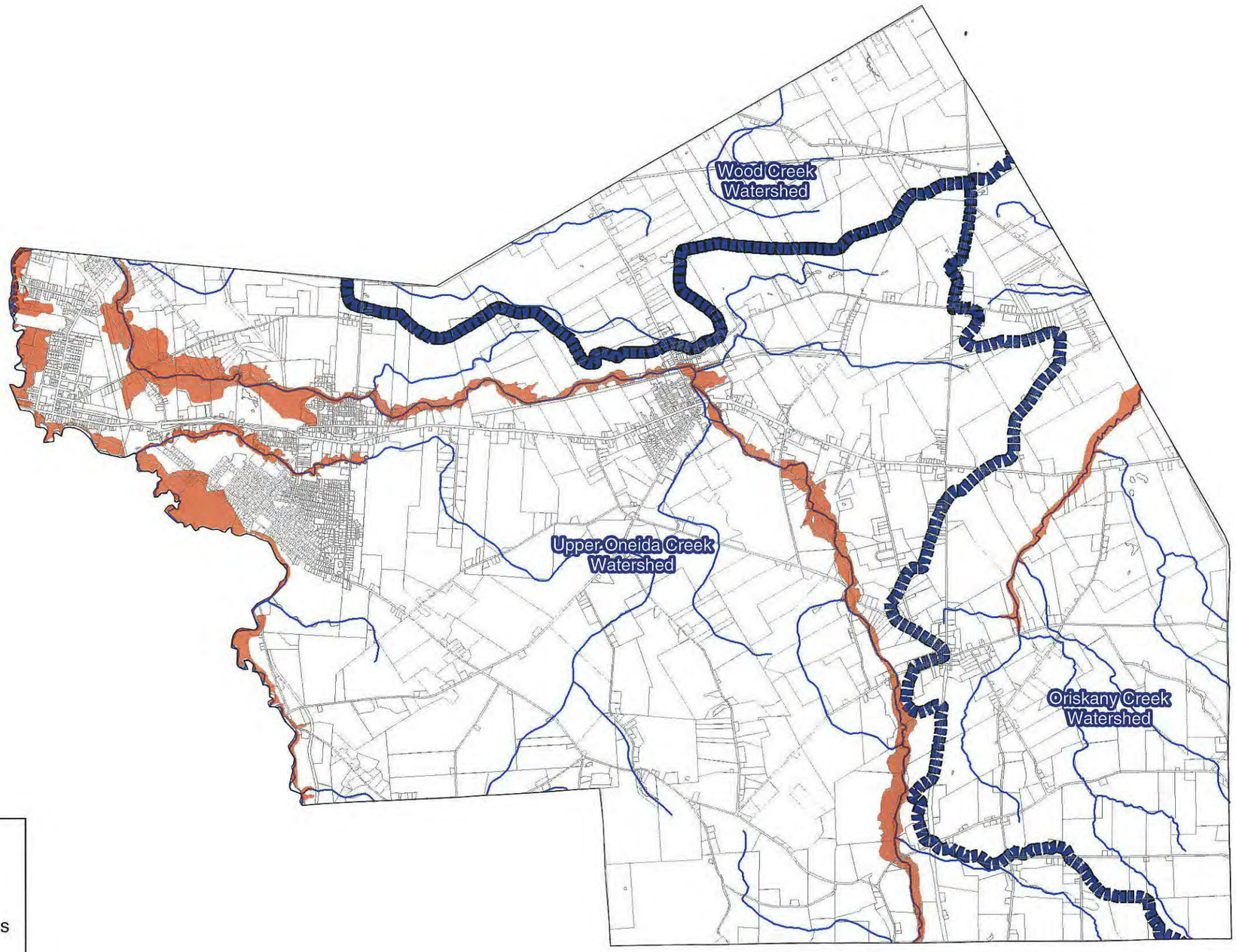
and ground water quality, others see wetland regulation as an impediment to land development and agricultural operations. Essentially wetland issues have led to a conflict between the scientific community and political pressure to deregulate wetlands. This trend will likely continue into the future as the debate over the importance of wetlands and their functional value continues.

2.2.3 Flood Plain Protection and Regulation

Proper planning is necessary to ensure that development does not alter or inhibit flood plain areas. This is due to the resulting loss of life and property that can occur during flood events and the downstream damage that can occur due to debris being carried down stream. Regulation activities within the 100 year flood plain of creeks and rivers is an important aspect of environmental and community planning. Increased development pressure and clearing of stream bank vegetation and the addition of storm water outfalls can combine over time to increase the flood potential of local streams and down stream locations. Development within creek and stream corridors can have a marked impact on downstream flooding.

The Town of Vernon for example, currently has a Land Conservation Overlay District that roughly follows the FEMA designated 100 year flood plain **(see figure 2-7A)**. Due to the relatively flat topography characteristic of the northern portion of the Town, development in flood prone areas requires careful consideration. This is an effective method of flood plain regulation and exhibits a wise approach to environmental planning due to the fact that flooding within Oneida Creek Watershed (including Sconondoa Creek) is historically a recurring problem. On October 9, 1979





Legend

- 100 Year Flood Plain
- Watershed Boundaries
- Hydrography
- Tax Parcels

Sources: FEMA, NYSDEC, NYSDOT, CUGIR

Barton & Loguidice, P.C.

Engineers · Environmental Scientists · Planners · Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon

Regional Watersheds & Flood Plains

Oneida County New York

8/17/05

Figure 2-7A

Project No. 859.005

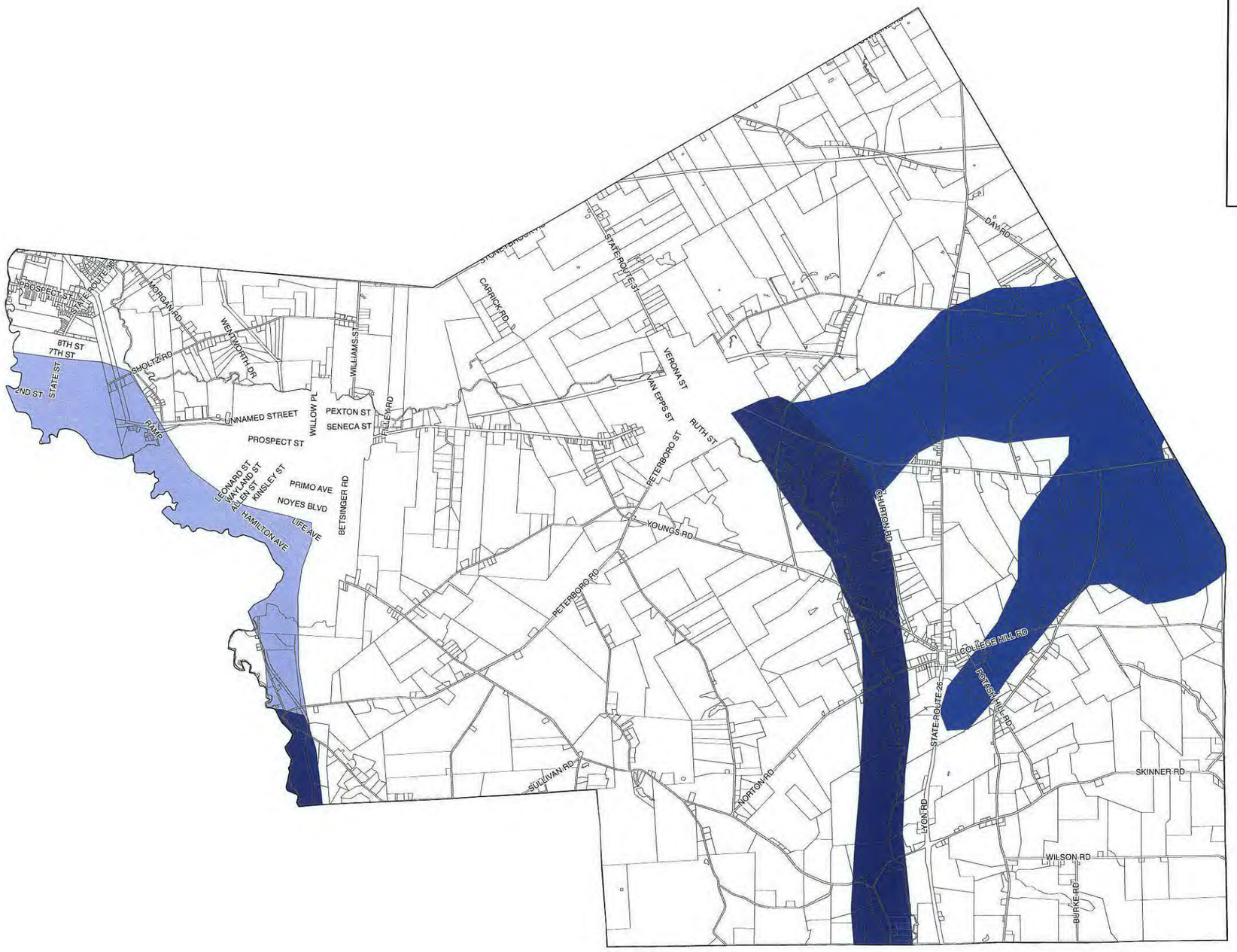
I:\Projects\800\859005\Projects\Final_NRI_Maps\Vernon_Flood_figure2.7Ar.mxd

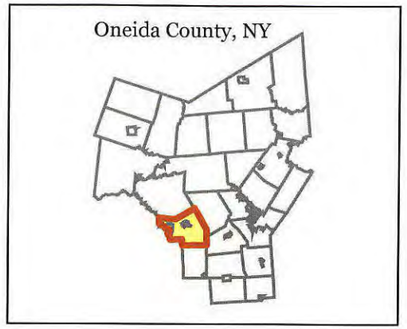
a flood along Oneida Creek caused over 2.5 million dollars in damage to local property in a single municipality. Although flood events are more likely during the spring, they can occur during any part of the season.

2.2.4 Groundwater Protection

Protection of groundwater is a major concern both state wide and nationally. Many of the human activities in the landscape ranging from septic systems and farming to storm water runoff and solid waste disposal can have a detrimental impact on local groundwater. Groundwater is prone to pollution that may not be detected until it appears in local wells and water supplies. Once groundwater is contaminated it is nearly impossible to clean up. While the Department of Environmental Conservation regulates many large scale activities that can pollute groundwater (i.e., solid waste, oil and gas operations, mining and hazardous material storage) safe drinking water is regulated by the New York State and Oneida County Health Department. In recent history, concerns regarding non-point source pollution of groundwater from construction sites, agricultural runoff and septic systems have become a concern to local health officials. Proper planning to protect groundwater has become an important aspect of protecting human health and safety.

Groundwater is a precious resource that is valuable to most local communities **(see figure 2-8)**. Due to the limitations of water supply within the Town, groundwater is a critically important to the residents of the Town. With a few exceptions almost all of the residents in the Town utilize groundwater and rely on on-site septic systems.





Aquifer Yield Potential
Gallons/Minute

- 10-100
- >100
- 5->500
- Vernon Tax Parcels

Sources: NYS Department of Health, Oneida County

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/16/05

Potential Groudwater Resources (Principal Aquifer Locations)

Oneida County New York

Figure 2-8

Project No. 859.005

I:\Projects\800\859\005\Projects\Final_NH_Maps\Vernon_aquifer_figure2-8.mxd

2.2.5 Stream and River Corridor Planning

Waterfront programs are encouraged by Federal and State agencies in order to improve areas near urban and suburban populations. Some programs recognize corridors that have yet to experience development pressure. In simple terms this approach to corridor planning is known as Greenway Planning. These corridors and greenways are important to protect surface water quality and wildlife habitat and become the most attractive areas for future development. Greenways and stream corridors also present economic potential to the area for local residents and visitors. An integrated approach to planning in greenways is an effective method of establishing a quality community for current and future residents and visitors to the area.

Oneida and Sconondoa Creek for example, provides opportunity for conservation education and recreation in the form of trails, fishing access sites, canoe launches and interpretive programs. In the City of Sherrill, Oneida Creek provides opportunity for waterfront planning, revitalization and a corridor that may provide a linear system to connect parks, open space, neighborhoods and commercial areas. Through utilization of corridor planning concepts a community may increase the value and quality of the community for the local population.

2.2.6 Surface Water Quality Protection (Non-Point Source Pollution)

Trends in water quality management include a focus on regional watershed management rather that management within municipal jurisdictions. It is more effective to identify watersheds and manage surface water quality in a cooperative manner, on a regional basis. In many ways this has improved water quality in the Vernon area, the

Mohawk River and Oneida Lake. However non-point source pollution continues to be a major concern. Agriculture, suburban development and urban areas contribute pollutants both natural and man-made such as oils, metals, salts, fertilizer, pesticides and excessive nutrients and nitrogen into local rivers creeks and ponds. An example of the impact of non-point source pollution was evident in Fulton New York during the spring of 2004. On Lake Neatawanta, just one mile from the Oswego Canal in Fulton a natural lake was overcome with a toxic form of algae due to large amounts of runoff entering the pond from the surrounding land area. The level of nutrients became great enough for algae growth to became potentially toxic to animals and humans. This event had an impact on local business and tourism related activity. Many of the factors contributing to surface water contamination are not always readily apparent. Failing septic systems can also contribute excessive nutrients (nitrates and nitrites) into local creeks, rivers and ponds and the runoff of soils and silt from construction sites can have a detrimental effect on local surface water quality.

Vernon is fortunate in that there are a number of organizations that assist in community and regional water quality protection efforts. These organizations include the Department of Environmental conservation, the local Soil and Water Conservation Service, the Herkimer Oneida Comprehensive Planning Program, the Oneida Lake Association and the Central New York Regional Planning Board.

2.2.7 Exotic Species

The proliferation of the Zebra Mussel throughout the waterways of Central New York is perhaps the most widely known example of exotic species introduced in recent years and their impact on local communities.

However, many other exotic plant and animal species are becoming a nuisance to the local environment. Purple Loostrife and Fragmite are plants that overwhelm wetlands and "choke out" native vegetation, habitat and food sources for wildlife. In many locations exotic species of plants, animals and fish have affected our land and water resources. Many of these species thrive in areas where excessive nutrients or pollutants enter local waterways. For example, Eurasian Water Milfoil is an aquatic plant from Asia that thrives in areas where failing septic systems or siltation from construction sites introduces excessive nutrients into streams or ponds. Addressing these concerns has become a nation wide trend and is clearly of concern to residents who benefit from local streams and creeks. Milfoil has become a major nuisance on Oneida Lake and the Oneida / Oswego River Corridor and is spreading to water bodies throughout Central New York.

2.2.8 Summary

These are some of the current trends in Natural and Cultural Resource Planning. While this list is not all inclusive, these trends are relevant to the Town and Central New York. Consideration of these trends is important for establishing Town Goals and Objectives with respect to Natural, Historic and Cultural elements of the Town and associated municipalities.

2.3 Cultural Resources

2.3.1 Historic Resources

There is one historic district and one historic building listed within in the Town of Vernon. These properties are determined to be historic upon being nominated for Historic Status on the National Register of Historic

Places. While many buildings and locations may be considered by the local community to be historic, they are not recognized as historic buildings or places unless they are nominated and approved for historical status by the National Register.

Vernon Center is one of the historical properties listed on the National Register of Historic Places. Vernon Center Village Green Historic District was formed in 1985. The District is located approximately five miles south and east of the Village of Vernon. As discussed in the local history portion of the plan, Vernon Center is where many of the first residents in the Town of Vernon settled around a Village Green or Village Square. The district includes the Vernon Center Presbyterian Church and the Parkside Methodist Church. The green is a centrally located green space surrounded by local residences and a loop road.

The Vernon Methodist Church is located on New York State Route 5 in the Village of Vernon. The building is a prominent part of the Village streetscape. It continues to house the local Methodist Church population and is located in the center of the Village. The building was listed in the National Register of Historic Places in 1998 and continues to be a major social gathering place in the community.

Vernon Methodist Church

The Mansion House is the historic home of the Oneida Community founded by John Noyes. It is a National Historic Landmark that was constructed by the Oneida Community between the years 1861 and 1878. Though the building is officially located in the City of Oneida, Sherrill has strong historical ties to the Oneida Community. The Mansion House is a 93,000 square foot brick building that housed the members of the community until approximately 1890 when their communal way of life was abandoned. The house contains 35 apartments, 8 guest rooms, a large dining room and library. In 1987, the Mansion House was chartered by the New York State Board of Regents as a not-for-profit museum and is partially funded by the New York State Council of the Arts.

Presently the Mansion House has rental apartments and overnight guest accommodations. It also entertains banquets and receptions.

2.4 Historic and Cultural Resource Trends

2.4.1 Historic Preservation Legislation

Historic Preservation became national policy through the passage of the Antiquities Act of 1906, the Historic Sites Act of 1935, and the National Historic Preservation Act of 1966 (National Register Bulletin 15, i). The Historic Sites Act authorized the Secretary of the Interior to identify properties of national significance. The National Historic Preservation Act was designed to expand historic preservation programs on the Federal, State and local levels. It authorizes the Department of Interior to recognize not only properties of national significance but also those of local and State significance worthy of preservation. The National Historic Preservation Act also established State Historic Preservation Officer responsibilities, Grants-in-Aid program, Certified Local Government

Program, Advisory Council on Historic Preservation, and Federal Agency responsibilities. The National Park Service sets program direction and assures consistency for preservation activities nationwide. As defined by the Department of the Interior, the goal of the national preservation program is to establish standards for historic preservation, to identify and document significant historic resources in the United States, to provide assistance to public and private agencies and organizations and to educate the general public concerning historic preservation (U.S. Department of the Interior, The National Register of Historic Places). Places that are important to the history of community provide useful information about how an area was settled, developed, or declined. It helps to identify and understand the economic, geographic, environmental, social, and cultural forces that shaped its development (Stokes and Watson, 38).

During the 1890's, many incentive programs suffered because of changes in political and public support. Changes with the federal Tax Reform Act of 1986 curtailed the attractiveness of tax credits by imposing restrictive passive-loss rules on the use of the credit and by denying its availability to wealthier taxpayers (Schwartz, 12). Previously, taxpayers could use all the credit available to them in the year the project was finished. Many state and local governments have tried to compensate for these changes however, in light of current fiscal constraints it is unlikely that preservation tax credits will be restored to the levels of the 1970's.

2.4.1.1 Neighborhood Preservation

Over the past ten to fifteen years, attention has shifted from individual buildings to larger areas, neighborhoods, villages, and rural landscapes. Historic preservation trends focus on restoring

the character and vitality of downtowns and neighborhoods, converting structures for new economic activities, and restoring outdated transportation routes for interpretation and recreation. Removing fake facades from store fronts is one step in restoring the historic character of downtowns and converting historical buildings to multiple-use is popular. For example, use of street level space for commercial activities, second level for office activities, and the third level for residential is a popular trend in downtown revitalization. Gaps in historic neighborhoods are being filled with buildings of similar style to reflect the original character of the area. With the decline in manufacturing, empty factories, warehouses, and mills are being converted for commercial space and housing. Churches and schoolhouses have been converted to residential uses like apartments or condominiums.

2.4.1.2 Historic Agricultural Buildings

Rural farms and agricultural buildings represent a strong image of community spirit and history. Many communities view old barns as a link to history and their agricultural heritage. Old barns are often considered community landmarks that embody farming tradition, local customs and a way of life for many local residents. They view local farms as a symbol of stability, freedom and strong ties to the landscape, and farming evokes a sense of rural character within the community.

In 1997, the New York State Barn Coalition was formed and has successfully established an awareness of the importance of farm structures throughout New York State. The coalition was formed to increase public awareness of historic barns and

agriculture. Their objectives include promoting the appreciation, rehabilitation, and reuse of older historic barns. Since their formation, a number of communities throughout Central New York have received historic preservation grants from the New York State Environmental Protection Fund to restore and rehabilitate old barns and farm structures.

2.4.1.3 Comprehensive Planning

Historic preservation has become an important component of comprehensive plans and the community design process since the late 1980's. Communities are now recognizing the aesthetic design and economic values of preservation. Increasingly, municipalities include a historic preservation element in their comprehensive plans or at least use preservation techniques in other elements of the plan such as housing, economic development, or community design. Preservation is an effective tool in converting historically relevant buildings and places to accommodate new uses, populations and economic trends.

2.5 Parks and Recreational Resources

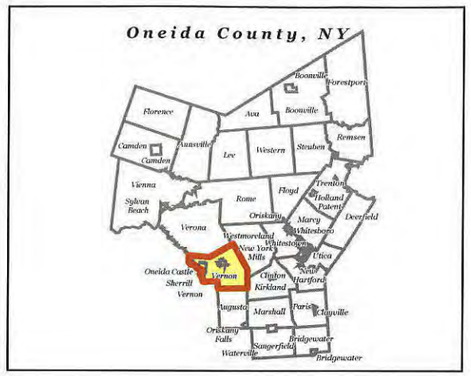
2.5.1 State Recreational Facilities

There are no State owned park or recreational facilities in the Town of Vernon. However a New York Statewide Class 3 bike route follows Route 5 through the Town of Vernon, the Village of Vernon and the City of Sherrill. New York State Bike Route 5 is part of a multi-modal bike route that connects Route 5 and the Canal way Trail through Oneida County. The route is part of a statewide bike route as part of New York State

bicycle pedestrian plan and provides important multi-modal linkages between communities and the State Canal Greenway Corridor. In 2002 the Herkimer-Oneida Counties Transportation Study (HOCTS) published the Herkimer-Oneida Counties Bicycle and Pedestrian Plan which was developed to coordinate and plan for multi-modal bicycle and pedestrian linkages ton the area. The purpose of the HOCTS plan is to:

a. Improve the quality of life in the two county area and provide a guide for future development.
b. Identify progress made on recommended projects in the 1994 plan.
c. Provide information to citizens interested in bicycle and pedestrian transportation.
d. Provide information to municipalities that are interested in planning and developing bicycle and pedestrian facilities in their communities.
e. Identify locations within the two county area to improve bicycle or pedestrian transportation.
g. Provide recommendations for projects and programs that will advance bicycling and walking within Herkimer and Oneida Counties.
h. To fulfill the requirements of the TEA-21 to provide a comprehensive bicycle and pedestrian plan.

This planning document will be used as a guide when considering multi-modal (meaning mixed transportation modes including bicycle and pedestrians) opportunities within the State Route 5 corridor under the Transportation portion of the plan. It will also open avenues to federal and state sources of funding for multi-modal projects and increase the tourism potential of the community **(see figure 2-9)**.



Legend

- Racetrack
- Social Organization
- YMCA / YWCA
- Public Golf Course
- Skating Rink
- Outdoor Sports / Athletic Fields
- Park / Playground
- School Facility
- Recreational Facility
- Cemetaries

Sources: CUGIR, Oneida County, Barton and Loguidice

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Parks, Recreation and Public Open Space

Oneida County New York

Figure 2-9

Project No. 859.005

I:\Projects\8600\8658005\Projects\Final_NRI_Maps\Vernon_Parks_figure2.9.mxd

2.5.2 Local Parks and Recreation Facilities

Town of Vernon

The Town of Vernon currently has no formal municipal recreational facility however; the Town purchased a large parcel of land adjacent to the new Town Offices to be used for Park development. During the winter of 2003-2004 a resident volunteer and student of Landscape Architecture from SUNY Morrisville developed a conceptual plan for the future Vernon Town Park. The conceptual plan by Amanda Wilson of Vernon includes programming for the following park amenities.

a. a central gazebo
b. an open pavilion
c. a volleyball court, horse shoe pits and a soccer / athletic field
d. Community gardens
e. a water fountain
f. a jogging and bicycle path
g. parking for up to 55 vehicles
h. a small water feature and walking bridge

The proposed park plan is intended to compliment the existing Village Park by providing recreational opportunities that do not exist at the current Village Park.

Proposed Town Park Facility by Town Volunteer Amanda Wilson; SUNY Morrisville

Village of Vernon

The Village of Vernon has a village park facility located near the center of the Village. Park amenities include 2 little league baseball fields, basketball and tennis courts, an outdoor pavilion and public restrooms. The park includes playground facilities for children of all ages and a stone dust trail. The park also has a concession stand and parking for approximately fifty vehicles.

In 2003 the Village made additional improvements to the park and added a softball field complete with dugouts, fencing and bleachers. Most of the park amenities were funded through Land and Water Conservation Fund and recent improvements to the park have provided the community with additional recreational opportunity.

Oneida Castle

The Oneida Castle Village Park is a small recreational park and green space that is owned by the Village and leased to the elementary school. The park contains a small children's playground and a single tennis court.

City of Sherrill

The City of Sherrill is known as the smallest city in New York State. However, the City maintains approximately 36 acres of parkland and active recreational facilities. This provides a substantial amount of recreational opportunity to City residents. The facilities are likely frequented by residents of Oneida Castle and residents in the western portion of the Town of Vernon. Recreational amenities in Sherrill are listed below.

Reilly-Mumford Park is located in the central portion of the City of Sherrill. It is dedicated to two local police officers that were killed in the line of duty in 1969. The park contains an outdoor gazebo and an ice skating rink. During summer evenings there are regular outdoor performances at the gazebo.

Robertson Park is perhaps the most diverse facility in the City. The park contains a basketball court, three tennis courts, a soccer field, softball field and a sand volleyball court. The park includes playground facilities for children of all ages and a municipal pool with lap lanes, a diving board and a wading pool. Robertson Park also harbors traditional picnicking facilities, outdoor grills and a covered pavilion.

Noyes Park contains active athletic fields and is used by Vernon, Verona, Sherrill High School and the local Pop Warner football program. The park includes a regulation baseball field, two tennis courts and a basketball court. Noyes Park can facilitate up to three football games at one time and is used extensively for organized athletic events. Babe Ruth once pitched a minor league game at Noyes Park in 1910.

Thurber Park is the home of Sherrill's Little League baseball team. Thurber field is home to the "major" games and includes Moench Park where the "minor" league games are played during the Little League season.

Willow Place Park includes a playground facility, tennis court and a basketball court. The park serves a local neighborhood and provides green space to surrounding residences.

Memorial park is the City's memorial to veterans of war. It is the site of annual Memorial Day and Veteran's Day ceremonies and the Declaration of Independence is read during an annual ceremony on the Fourth of July.

View of Memorial Park in Sherrill

Triangle Park is a small park located at the intersection of Noyes Street, Park Street and Gordon Avenue. Every December the site becomes a live nativity scene including participants from the local community.

Betsinger's Road Park is the newest home of the local children's soccer program. The park is used specifically to accommodate a growing demand for youth oriented soccer facilities.

2.5.3 Current Trends in Parks and Recreation

In 2003, the New York State Office of Parks Recreation and Historic Preservation updated the Statewide Comprehensive Outdoor Recreation Plan (SCOPR). This document is very useful to municipalities in planning for the development and continued management of recreational facilities and programs. SCORP provides a great deal of useful information and is utilized as a reference for the Parks and Recreation portion of the Vernon Community Comprehensive Plan in planning for recreational opportunity to local residents.

Based upon a statewide survey, SCORP identifies many of the trends that are applicable in the Vernon area. Most of the data in the plan is collected at the county level and can be extracted from the report to make fairly accurate assumptions as to the planning direction the Town should take with respect to Parks and Recreation.

In 1998, the greatest number of individuals surveyed in SCORP participated in passive park activity or "relaxing in a park." The relative number of individuals participating in this passive activity reflects the broad age group that can participate. This passive activity spans all age

groups and provides opportunity to children, adults and senior citizens on an even basis. SCORP suggests that there will be a 5.26 percent growth in demand for passive activity by the year 2020.

In combination with the rating of other activities this provides an important indication of the potential type of park facilities that should be planned over the next 20 years. Of the activities that were undertaken by the most participants in 1998 the top five recreational activities include:

a. relaxing in a park
b. swimming
c. bicycling
d. golfing
e. walking

These top five activities represent four of the major components of the proposed Town Park facility with the exception of swimming. The recent opening of a PGA level golf course near the Turning Stone facility also provides the fourth most participated recreational activity listed in the SCORP within the Town of Vernon, and all of the five activities are provided for in the City of Sherrill or are proposed within the town. Additional activities indicated in the Statewide Comprehensive Outdoor Recreation Plan and listed and the level of participants is shown in the chart below.

Table 2.22 - Activity Participants 1998 and 2020

	1998 Partic	% pop 1998	2020 Partic.	% pop 2020	Growth	% Growth
Relaxing in Park	10,901,801	73.53%	11,475,496	77.40%	573,695	5.26%
Swimming	7,687,154	51.85%	8,033,555	54.18%	346,400	4.51%
Biking	5,242,681	35.36%	5,411,849	36.50%	169,168	3.23%
Golfing	2,378,038	16.04%	2,524,301	17.02%	146,263	6.15%
Walking	9,173,807	61.87%	9,692,892	65.37%	519,086	5.66%
Tennis	2,444,658	16.49%	2,543,334	17.15%	98,676	4.04%
Basketball	2,742,192	18.49%	2,757,299	18.60%	15,107	0.55%
Field Sports	3,086,063	20.81%	3,141,449	21.19%	55,386	1.79%
Historic Sites	3,682,223	24.83%	3,917,109	26.42%	234,886	6.38%
Camping	1,915,988	12.92%	2,016,290	13.60%	100,303	5.24%
Hunting	1,874,539	12.64%	1,985,486	13.39%	110,947	5.92%
Hiking	3,150,310	21.25%	3,303,820	22.28%	153,510	4.87%
Boating	3,564,820	24.04%	3,757,673	25.34%	192,854	5.41%
Fishing	3,462,233	23.35%	3,659,717	24.68%	197,485	5.70%
ATV	673,578	4.54%	706,253	4.51%	32,765	4.85%
Horseback Riding	1,362,542	9.1%	1,428,302	9.2%	65,760	4.83%
Ice Skating	2,224,410	15.00%	2,314,360	15.61%	89,950	4.04%
X-Country Skiing	779,626	5.26%	821,864	5.54%	42,238	5.42%
Downhill Skiing	1,626,855	10.97%	1,678,672	11.32%	51,818	3.19%
Snowmobiling	758,989	5.12%	790,897	5.33%	31,907	4.20%

2003 SCORP Activity Participant Projection

This chart is useful in determining the type and level of facilities that will be addressed in the Parks and Recreation component of the planning process. However, there are a few more generalized recreational trends that can compliment other planning components of the Comprehensive Plan. Some of these trends are applicable to the Vernon area and are listed below.

2.5.3.1 Environmental Education and Interpretation

More and more people are becoming interested in the study of nature and our heritage through viewing wildlife in its natural habitat and naturalist recreation vacations. Environmental education programs can range from elementary school or high school level field study to guided nature tours, walks hiking or climbing in order to develop an appreciation for the environment,

wildlife and the study of ecology. Programs sponsored by local conservation groups, colleges and state and local agencies are very successful in educating people of all ages about our environment and current environmental issues.

Environmental, Historical and Cultural interpretation is a popular and effective method of educating residents and visitors to a local community. Interpretive programs are successfully implemented in greenways, along highways, at recreational facilities and in many locations throughout New York State. Interpretive signs and sites can be developed that help educate visitors who travel through the area about the local environment, history, cultural heritage and local goods and services. Interpretive information can be placed at rest areas, in public parks, scenic overlooks, fishing and boat launching access sites, local businesses and historical sites.

2.5.3.2 Wildlife Conservation

Over the past 25 years an increasing awareness of our impact upon the environment has evolved. Efforts to save endangered species are common knowledge from the comeback story of the Bald Eagle to controversy over the introduction of exotic species like the zebra mussel, or Eurasian milfoil into local waterways. For example, advocacy groups consisting of conservationists and local business owners have expressed concern regarding the invasion of milfoil and water chestnut on local tourism due to the harmful effects on boating, recreational fishing and swimming areas. This is significant in that diverse groups are recognizing that open space for nature and habitat must

be conserved in order to provide for the future popular recreational activities like hunting, fishing, boating, trapping, and viewing wildlife. Many private organizations like the Boy Scouts and Girls Scouts of America, Local Sportsman Associations and public agencies like the Natural Resource Conservation Service (NRCS) and Cornell Cooperative Extension (CCE) are helping encourage cooperation between public agencies and private landowners to deal with local natural resource and recreational issues and concerns. These groups open avenues of communication for concerns ranging from providing adequate open space for hunting and trapping to providing information to the public regarding conservation of the local fishery.

2.5.3.3 Greenways

Greenways are an important trend nationally and locally. Greenway planning is taking place from the Harlem waterfront in New York City; to the New York State Canal System or the Genesee River. Many communities throughout New York State are revitalizing waterfront lakes, rivers and streams through greenway planning programs. As part of a wider movement to protect linear features in the landscape, greenways are created around canals, waterfronts, rivers and shorelines. Greenways protect the natural areas and open spaces along key resources including lake shores, rivers and coastal zones. The greenway concept is to keep the corridor green with natural vegetation and create a way or integrated vehicular and trail system that connects points of interest along the corridor. Greenways have direct or indirect human benefit and use providing for hiking, wildlife observation, environmental interpretation, historical interest, fishing access, and stream bank or

shoreline protection. They may also provide the setting for scenic by-ways, roads and bridges. In summary, they create a quality lifestyle for local residents.

The greenway approach is a response to the recognition that these environments are complex and sensitive to development while demand for property along waterfronts, streams and ponds is steadily increasing. As water elements in more populated areas become congested, we can expect an increase in the number of people who will want to move to less populated streams, valleys and scenic areas. Due to the fact that these types of resources are sensitive to unplanned human impacts, the need for open space planning is important if we are to conserve the resources that play a key role in attracting thousands of fishermen, conservationists and residents to enjoy the benefits of rural and scenic landscapes.

2.5.3.4 Multi-Modal Trails and Routes

Much of the interest in pedestrian connectivity, trails, and recreation corridors was catapulted by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). In this federal legislation railtrail conversion was listed among the 10 specific enhancement recommendations. Approximately 17 percent of ISTEA funds have been granted to rail trail projects. Recreation trails take the form of linear parks that connect park, recreation and open spaces together providing an alternative to driving as a means to access recreational facilities. These trails and pedestrian routes can be planned to be integrated with streets, sidewalks and parking facilities and connect those facilities to commercial and residential areas. Today the incorporation of multi-modal (meaning

facilities for pedestrians, bicyclists and other transportation options) is an integral component of transportation programs like T-21 funding through the New York State Department of Transportation and the Environmental Protection Program through the New York State Office of Parks recreation and Historic Preservation. The current focus of multi-modal projects is for pedestrian safe routes and connections particularly along community streets and thoroughfares and between residential areas and commercial centers.

The U.S. congress is currently working to adopt a well-funded, multi-year transportation bill that will provide funding for projects according to the current T-21 guidelines. However, until the Transportation Bill is passed it is unclear how much funding will be available for multi-modal projects or what type of projects will be a funding priority. The current T-21 priority is for project that provide for pedestrian safety and mobility. It is anticipated that the reauthorization of T-21 (to be renamed upon authorization) will provide similar funding levels and priorities for multi-modal (meaning many modes of transportation) projects.

2.5.3.5 Historic Tourism

Local historians see history and local heritage as a special component of the recreational potential of the area. Museums and agri-tourism are growing in popularity both nationally and locally, providing an important framework for education, interpretation and investigation of local resources. Madison County for example, is planning for the rehabilitation of historic barns to increase the tourism potential of local farms and agricultural businesses.

Large farms, equestrian stables and more recently farms converted to vineyards and wineries provide the opportunity for understanding local agricultural history and provide a vehicle for learning and agritourism which is growing on farms, orchards and during seasonal festivals.

2.5.3.6 Corporate Green-Space and Recreational Areas

Another important trend is the willingness of companies to allow conservation and recreation easements. According to "The Conservationist" corporations own a large percentage of land in North America comprising perhaps 1/4 of the land base in the United States (Vol. 48, No. 5 and 6). Companies normally keep spare land as buffers for security or safety reasons and as space for future expansion. The planning initiatives at the Turning stone Casino is an excellent example of providing open space and recreational activities in the Town. The development of a proposed 18-hole PGA level golf course in the northern portion of the Town provides insight into the type of recreational activities that may be associated with business enterprise.

Today companies realize that protecting the environment is a genuine concern of the majority of Americans. Many of the most successful companies recognize that conservation is a sound business strategy that beneficial to "green" their corporate image.

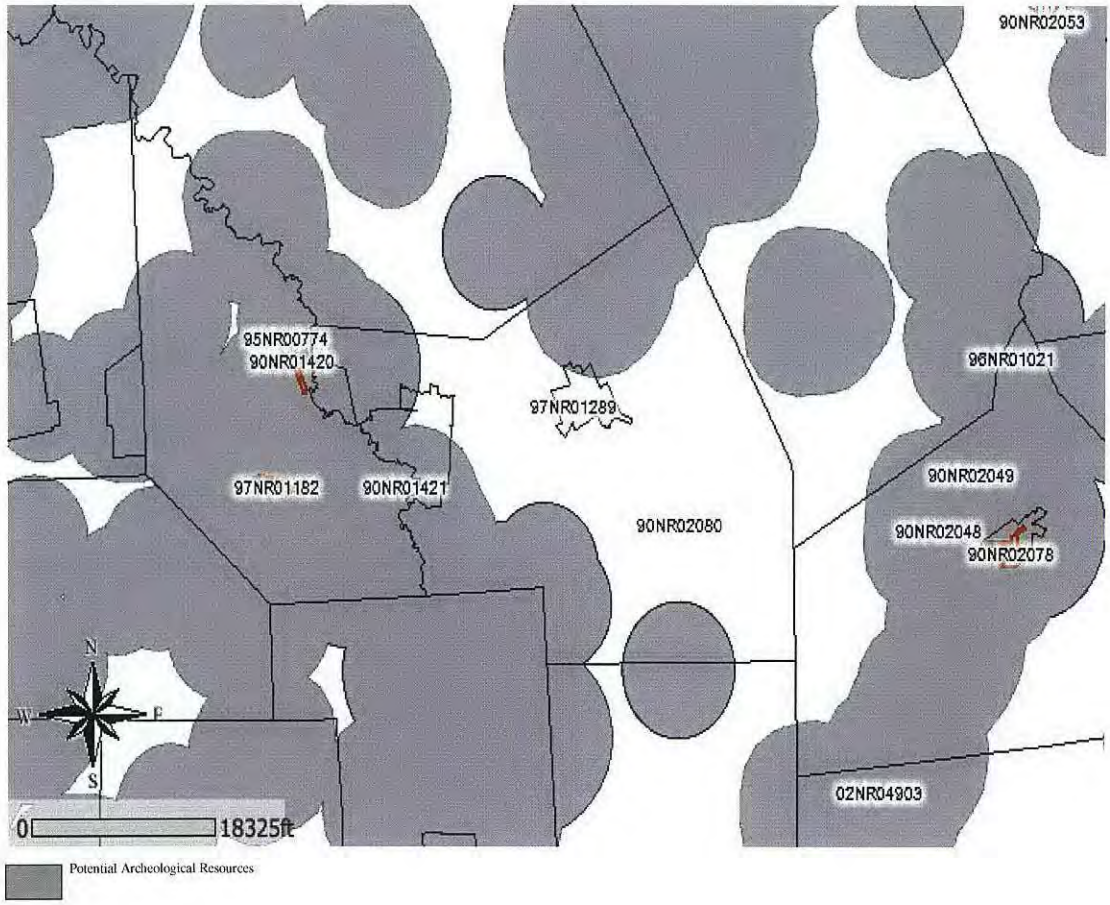
2.5.3.7 Scenic Byways

Transportation corridors provide recreational opportunities that complement greenways. Many of the parkways that Robert Moses developed earlier in the century remain quality scenic routes that link parks, waterfronts, scenic landscapes and population centers. In Vernon, State Bike Route 5 and rural routes in the southern portion of the Town provide scenic multi-modal routes that link to many parks and greenways like the State Canal System and population centers in the City of Oneida, Utica and Canastota. It also provides connectivity to locations state wide that can be accesses by vehicle or bicycle. According to the President's Commission on American Outdoors, nearly 80 percent of Americans enjoy driving for pleasure and sightseeing. If these areas are planned and developed properly they can provide a wide range of opportunity. However, without formal recognition of their value and action to protect the attractiveness of the routes, scenic assets may be lost through lack of protection for visual quality and future infrastructure pressure from development that the community may want to attract.

Although this list is not all inclusive, it identifies a number of trends that are relevant to the Vernon Area. The presence of Bike Route 5, Sconondoa Creek, the Oneida River and the exceptional scenic quality of the southern portion of the Town of Vernon provide an important backdrop to these trends that are explored through the planning process.

2.6 Archeological and Cultural Resources

The presence of archeological resources along the Iroquois trail corridor in the Vernon / Sherrill area is extensive. Prior to the arrival of European settlers this trail was considered by the local Houdonose as the central corridor between the "east door and the west door" of the Iroquois confederacy. Many of the grounds were utilized for hunting and fishing and Oneida Castle was one of the last encampments of the local chiefs of the Oneida Nation. It is also the last known location of Sconondoa, the most well known of the Oneida Chiefs. A stone in dedication to Sconondoa lies just east of Oneida on Route 5 in the general area of his last known location.



The New York State Office of Parks Recreation and Historic Preservation have mapped all of the known archeological resources of the State. These locations are indicated on an Archeological Sensitivity Map that is filed with OPRHP Offices in Albany. Due to the sensitivity of these locations and the information indicated on the maps they are not reproduced and GIS data is unavailable. By reviewing the map it is evident that most of the archeologically sensitive areas are concentrated along the Oneida Creek Corridor in the Town of Vernon, City of Sherrill and Village of Oneida Castle. This is consistent with the historical settlement of the Oneida people along the banks of the Oneida Creek. There is also a less concentrated area due north of the Village of Vernon and a location along the southern border of the Town.

3.0 Inventory of Water and Wastewater Infrastructure

3.1 Inventory of Water Supply

3.1.1 The City of Oneida

The City of Oneida is the current source of drinking water for the entire Vernon area. Oneida's Florence Creek Water System was constructed in 1926. In early 1980, the City's current water treatment plant was completed to provide filtration to the City's upland supply, for the first time correcting problems of taste, odor and color.

Today the City of Oneida Water Department serves over 20,000 people and provides an average water supply of 2.3 million gallons per day (2.3 MGD). The Water Department employs 17 individuals who treat, monitor, maintain, construct, and distribute water through more than 76 miles of mains in the two counties, three cities, five towns, and four villages. This water supply has become a regional asset through the cooperation of the municipal leaders and dedicated employees.

Communities Served by Oneida Water			
Public Water Supply	Federal ID Number	Population (1990 Census)	Water Consumption (gallons) 2000
City of Oneida	2602381	10,272	339,027,000
Sherrill Kenwood WD	3202419	3,147	158,179,000
Village of Vernon	3202412	1,255	124,367,000
Town of Stockbridge	2602379	1,061	27,289,000
Transmission Main [1]	2602381	1,150	23,256,000
Village of Oneida Castle	2602381	655	14,909,000
Taberg Water District	3202409	510	12,573,000
Village of Wampsville	2602382	561	19,969,000

Communities Served by Oneida Water (Continued)			
Public Water Supply	**Federal ID Number**	**Population (1990 Census)**	**Water Consumption (gallons) 2000**
Durhamville Water District	3230025	500	13,658,000
Prospect Street Water District	3230026	460	10,178,000
Sconondoa Highbridge WD		53	1,011,000
Town of Verona Rte 365 WD	3230037	1,285	78,234,000
Marble Hill Water District	3230058	26	414,000
Total Population / Total Metered Sales		**20,934**	**824,064,000**
Clear Water Flow			**1,002,729,000**
Unaccounted Water			**178,666,000**
(1) Includes portions of the Town of Annsville, City of Rome, and Town of Verona			

The City of Oneida starts with a high quality surface water source from Glenmore Reservoir on Florence Creek, which is located twenty miles north of the City in the Town of Annsville, Oneida County. The dam impounds water from a 13.8 square mile watershed on the edge of the Tug Hill Plateau. The watershed is mainly forestlands with approximately half being State Reforestation. The 378-foot long and 45-foot high dam, constructed in 1926 in this rural location, provides water storage to buffer seasonal water demands as well as dry weather supply. The reservoir holds 320 million gallons of water. The City owns the 500-acre site on which the reservoir and dam are located. Last year, the system did not experience any restriction of this water source.

Situated one-half mile down stream from the dam is the City's Water Treatment Plant. This conventional flocculation/sedimentation facility with a production capacity of 4 million gallons a day (4 MGD) was completed in 1980. The plant includes a rapid mix basin, flocculation facilities, (2) contact basins, (4) dual media filters, and a clear-well tank.

After the process of chemical addition, contact and filtration-microorganisms, including some that can cause disease (pathogens) may still be found in filtered water. Chlorination equipment is utilized to provide sufficient chlorine to kill any pathogens that may be present and to provide a chlorine residual in the water entering the distribution system.

Grade 1A operators operate the plant, 365 days a year. An onsite laboratory is utilized by personnel for state certified biological and chemical testing for daily operation of the plant.

A 20-inch cast iron main transports the water from the clearwell tank to the City of Oneida. A pump station at Lake Street increases the capacity of the 20-mile pipeline from 2.8 MGD to 3.5 MGD with one pump operating. The water is distributed through a network of 76 miles of cast iron, asbestos cement and ductile iron water main throughout the City.

Newly constructed Baker and Clark Tanks provide distribution storage. These two domed concrete storage tanks have a combined capacity of 15 million gallons and are used to balance pressure in the distribution system and to ensure an adequate water supply for fire protection. A chlorination facility is located at the site to further treat all water leaving the tanks.

The City of Oneida Water Department issues bills quarterly to over 4,000 customers. The bills are based on meter readings obtained at each home and business. The meters are read electronically outside of the home by a special gun that retrieves a reading from the water meter located in the basement. These readings are downloaded to the computer to calculate consumption and issue bills. Meters throughout the system are periodically replaced to insure accurate readings.

The water distribution system was improved and enlarged in 2002 with the construction of 3,005 feet of new ductile iron main. Projects included the replacement of main on North Warner Street between Railroad and West Elm Street, Mott between Lexington & Stevens and Stevens from Mott to Lenox Avenue. A new water main was also installed in Oneida Heights North Section E - Phase 2 and New Beginning Church in Wampsville.

The lead service line replacement program was continued in 2002 with the replacement or update of 15 lead services in the City, with 177 remaining, to be completed in the next 8 years. The City has completed 60 percent of the planned replacements in the past 6 years. Projects planned for 2003 include the installation of a new water main on North Main Street from North side Shopping Center to Sherman Street. (Source: CITY OF ONEIDA - Water Quality Report Spring 2003.)

3.1.2 The City of Sherrill

The City of Sherrill currently receives public water from the City of Oneida. Sherrill in turn sells water to the Village of Vernon, which is distributed via an existing water main along State Route 5 from west to east. Public water supply in the Sherrill area began at the turn of the 20th

Century. Originally a water source was the Snell Spring on Marbel Hill and serviced the neighborhood in the Hamilton, Campbell and Ransome Avenue area. The neighborhood was served from faucets along the streets that provided water at a rate of approximately 3 gallons per minute.

In 1910 a 6-inch cast iron water main was installed from the Downey reservoir located on Peterboro Road to the Kenwood sales office forming the original Sherrill-Kenwood water supply area. The system was formerly established as a water supply district in 1920.

In 1926 the City of Oneida constructed its Glenmore water supply system and the Sherrill-Kenwood Water District contracted to purchase all water from Oneida. This arrangement is still in effect today. The Sherrill-Kenwood Water District distribution system consists of approximately 25 miles of water main, 168 fire hydrants and 1,255 water services (City of Sherrill, 2002).

3.1.3 The Village and Town of Vernon

The Village of Vernon currently obtains its water supply through two feeds: a connection to the City of Sherrill water system, and a connection to the Town of Verona water system, both of which are supplied by the City of Oneida. The Sherrill connection point is located near the intersection of NYS Route 5 and Williams Street in the City of Sherrill and the second connection is to the Route 365 Water District water system in the Town of Verona along Morgan Road. The transmission main from Verona bypasses the City of Sherrill and connects to the suction side of the Vernon pumping station. The quantity and quality of water supply from

the City of Oneida water system is adequate for the needs of the Village of Vernon. The current water supply agreement between the City of Oneida and the Village of Vernon allows the Village to be supplied with an average daily demand up to 400,000 gpd.

The Village has a pumping station located along the south side of NYS Route 5 approximately 0.25 mile east of its intersection with Williams Street, which was constructed in the 1930's. There are a total of three (3) pumps at this station. Of these three pumps, only one is normally in operation. There is a 25 HP pump (not normally used), a 30 HP pump and a 25 HP natural gas engine driven backup pump. The 30 HP pump normally delivers water to the distribution system at a rate of 350 gallons per minute (gpm). This pump cycles on and off based upon level set points in the elevated water storage tank in the Village system. There is a chlorination system at this pump station, and a meter pit on the feed line into the pumping station. Normal suction and discharge pressures at the pumping station are 50 psi and 145 psi, respectively. The 25 HP pump (300 gpm at 200 feet TDH) does not have sufficient capacity to meet the Village's water demand, therefore, the pumping station is not capable of meeting the Village's maximum daily demand with the largest pump out of service as required by New York State Department of Health design standards. Further, the Oneida County Department of Health has indicated to the Village that they should install an emergency generator in order to maintain pumping and chlorination during power outages.

Approximately 11,600 linear feet of 8-inch cast iron water main along NYS Route 5 is used to transmit the water supply from the pump station to the Village of Vernon. The existing transmission main was constructed during the 1930's. This is the only feed of water from the pump station at the source of supply to the Village distribution system.

Therefore, any water main breaks that occur on this transmission main result in the Village system being vulnerable to a water shortage. The Village has experienced several breaks along this transmission main.

The existing water distribution system serving the Village of Vernon consists predominantly of 6-inch and 8-inch unlined cast iron water mains. Some of the distribution system was constructed during the early 1930's. Several sections of the distribution system were constructed prior to the 1930's. Most of the unlined cast iron water mains have become severely tuberculated as evidenced by the occurrence of red water and low C-factor (the low C-Sectors between 45 and 70 were determined as a result of hydrant flow testing and calibration of a hydraulic computer model). The severe tuberculation has resulted in a significant reduction of flow carrying capacity of the existing mains in several areas of the distribution system.

A leak detection survey of the Village's existing water system was performed by New York Leak Detection, Inc. on July 28, 2000. A computerized leak detector was used to survey approximately 10.5 miles of water distribution main. This leak detection survey identified several leaks having a total leakage of approximately 17,500 gpd in the existing system.

Distribution storage is provided by a 200,000 gallon elevated water storage tank (135 feet high, top water level of 780 feet USGS) located on Curtis Street within the village. The existing elevated water storage tank was constructed during the 1930's. Current NYSDOH standards require that sufficient storage be provided to meet the system's average daily demand plus an allowance for fire protection. Using an allowance for fire protection of 120,000 gallons (based on a fire flow of 1,000 gpm for 2

hours) and a projected average daily demand of 390,000 gpd, a usable storage capacity of approximately 500,000 gallons is recommended. Since the existing tank has a usable storage capacity of 200,000 gallons, it does not provide sufficient usable storage capacity for the existing water system. Further, the age of the tank raises concerns regarding its continued useful life.

The Town of Vernon is currently at a turning point with respect to the potential for additional water supply and the aging infrastructure is a source of local concern. The resulting demand from the Oneida Nation Casino and spin off development has potential for driving the demand for additional water service into more rural areas. The lack of water and sewer services and the age of existing water and sewer lines place a limitation upon local growth potential. This is perceived by many as a deterrent to growth and opportunity associated with the Turning Stone Casino. During the July 22, 2004 meeting of the Natural and Cultural Resources Comprehensive Planning workshop the issue of public water supply within the town was raised several times as a primary local concern and perceived as a deterrent to future growth within the Town that must be addressed in the planning process **(see figure 3-1)**.

3.2 Inventory of Wastewater Facilities

Currently, there is no sanitary sewer system or wastewater treatment facility in the Town of Vernon or the Village of Oneida Castle **(see figure 3-2)**. However, the City of Sherrill and the Village of Vernon have separate municipal sewer systems.

Legend

- Existing Water Main
- Tax Parcel Boundary
- Town of Vernon

Sources: HOCCP, NYS DOT, B&L

Barton & Loguidice, P.C.
Engineers · Environmental Scientists · Planners · Landscape Designers

N W E S

0 0.45 0.9 Miles

Town of Vernon — 8/17/05

Existing Water Infrastructure (City and Village Supply Mains)

Oneida County — New York

Figure 3-1

Project No. 859.005

I:\Projects\8500\859005\Projects\Final_NRI_Maps\Vernon_Water_figure3.1.mxd

3.2.1 City of Sherrill WWTP

The City of Sherrill Wastewater Treatment Plant (WWTP) services most of the residents in the City. The plant provides primary sewage treatment and discharges approximately .95 mgd of effluent into Oneida Creek.

The Sherrill Wastewater Treatment Plant was constructed as a primary plant in 1961. In 1982, a wastewater facilities plan was prepared and the activated sludge process was selected to upgrade the plant to secondary treatment. Construction began in 1982, and the plant was placed in operation at the end of 1983. In 1987 a belt dewatering press was added to improve sewage sludge handling and management.

Currently the plant processes an average 600,000 gallons of sewage per day, but has the capacity to successfully process up to 2,100,000 gallons of sewage per day. From this process clean water (effluent) is then discharged to Oneida Creek and the by-product (sewage sludge) is dewatered and lime-stabilized before being applied to the soil as a fertilizer.

The land spreading program has allowed Sherrill to recycle the sludge back to the soil instead of using the costly land filling option. Since 1989, this program has saved the city several thousand dollars.

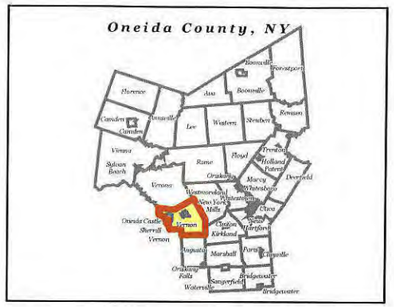
The Sherrill Wastewater Treatment Plant has long maintained a good reputation with the NYSDEC and was recently awarded the NYSDEC Operation and Maintenance Award for Excellence in 1998. (Source: City of Sherrill, Wastewater Department).

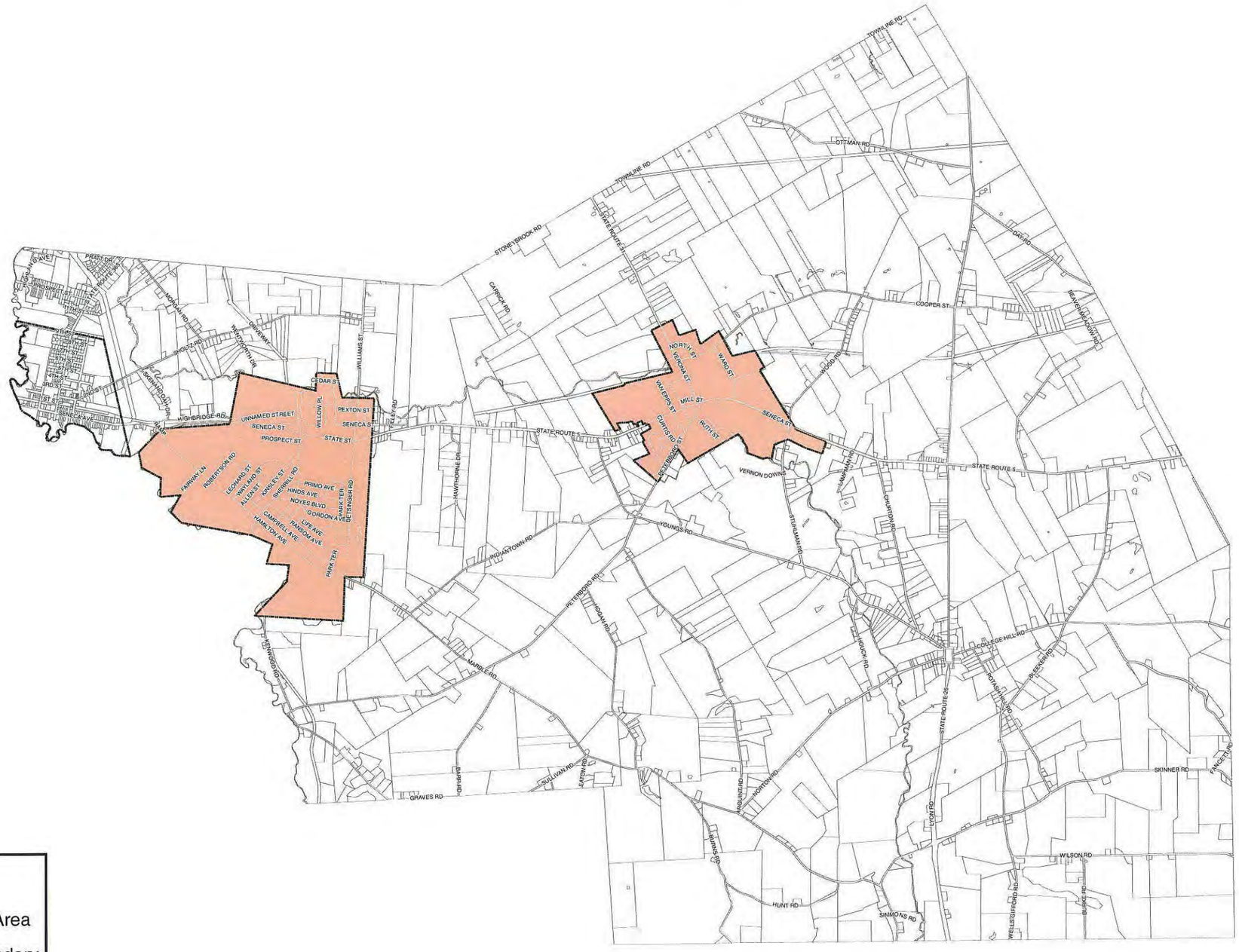
3.2.2 Village of Vernon WWTP

The entire Village of Vernon is served by a municipal sanitary sewer system. The WWTP was built in 1972 with an estimated flow rate of 300,000 gallons per day (GPD). It was originally designed for an average hydraulic loading of 500,000 GPD based on a design population equivalent of 5,200 persons in the year 1990. The facility currently discharges .5 mgd into Sconondoa Creek and is located in the northwest corner of the Village.

During the 1980's and 1990's it became evident that inflow infiltration was taking place that was directly related to rainfall events. The wastewater collection system was formerly subject to a high degree of inflow and infiltration during the spring season that resulted in the bypass of raw sewage into Sconondoa Creek. Upon renewal of the Villages 1993 State Pollution Discharge elimination permit, the Department of Environmental Conservation (D.E.C.) required the Village to eliminate the outfall of sewage into the Creek by November 1, 1995.

At DEC's request, the Village installed necessary upgrades to the wastewater treatment plant to accommodate peak hydraulic flows without bypassing sewage into Sconondoa Creek. The system was also expanded to include the racing facility at Vernon Downs. Following the upgrade the Village successfully brought its State and Federal Pretreatment Program into compliance and updated their local Industrial Pretreatment Regulations. The Village has two permitted sludge application-sites in close proximity to the Village WWTP. However, liquid waste is hauled to a WWTP in the City of Watertown for additional treatment.





Legend

- Sewer Service Area
- Tax Parcel Boundary
- Road Centerline

DATA SOURCES: HOCPP;
ONEIDA CREEK WATER QUALITY IMPROVEMENT TASK FORCE

Note: Existing Sewer Service available in the Village of Vernon and the City of Sherrill. No service currently available in the Town of Vernon

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05
Existing Sewer Service (City and Village Service Areas)
Oneida County New York

Figure 3-2
Project No. 859.005

J:\Projects\B0008590\05\Projects\Final_NFI_Maps\vernon_Ex_sewer_figure 3r.mxd

Due to current allocation and questions concerning the Villages WWTP plant capacity, the potential for servicing additional residential, commercial or industrial property is limited without an updated facility evaluation.

3.3. Non Point Source Pollution

The majority of non-point source pollution in the Town of Vernon is the result of agricultural runoff and failing on-site wastewater treatment systems or septic systems (OSWT's). Most of the existing residential units in the Town utilize OSWT's for sanitary wastewater treatment. According to the 2003 Oneida Creek Sub-Basin Sewer System Evaluation Report the majority of OSWT's in Vernon no longer provide sufficient disposal and present a threat to public health. These failing systems are a concern due to contaminants like pathogens, nitrogen compounds, phosphorous and biochemical oxygen demand (BOD). Additionally the report states that none of the soils within the project study area (i.e., the Oneida Creek Watershed including the Sconondoa Creek Watershed) meet the minimum regulatory requirements for the use of standard OSWT's.

A number of past assessments and investigations have been conducted that address wastewater issues in the Oneida Creek Watershed. Previous assessments have been undertaken by the Oneida County Health Department, New York State Department of Environmental Conservation and the Oneida Creek Water Quality Improvement Task Force have reached similar conclusions. The watershed contains most of the population of the Town it is safe to assume that development of additional sewer infrastructure within the Oneida Creek sub-watershed will resolve a number of water quality issues within the Town of Vernon.

The results of recent evaluations indicate that the Town of Vernon and the Village of Oneida Castle contribute a significant amount of contamination to tributaries in the Oneida Lake watershed. Sources of these pollutants are reportedly discharged from residential, commercial and municipal facilities. Some of these discharges include raw untreated sewage due to failing residential OSWT's. High groundwater levels and soils exhibiting poor septic system suitability compound the problems associated with OSWT's. This contributes to the degradation of local surface and groundwater quality, particularly in the low-lying areas of the northern portion of the Town.

Over the years attempts have been made to establish a municipal sewer system to address this problem. The concept has met with resistance due to the financial impact to local landowners. This presents a number of complex issues that have implications regarding the surface and groundwater resources of the Town and ultimately affect the quality of surface waters from Sconondoa Creek to Lake Ontario. It also has long-term implications with respect to the ground water quality of the Town and can impact many residents who depend on private wells for residential water supply. According to the Oneida Lake Watershed Management Plan 41.5 percent of the Town population depends upon local groundwater resources. This includes an estimated 873 units.

A breakdown of groundwater use per municipality is as follows:

Town of Vernon	873 units	41.5%
Village of Vernon	21 units	4.0 %
Village of Oneida Castle	2 units	0.0%
City of Sherrill	12 units	1.1%

The breakdown listed above indicates that, more than 45 percent of the population within the Comprehensive Planning Area relies on groundwater wells for water supply. This reflects the importance of protecting groundwater resources and the need for extending sanitary sewer services in the near future

In December of 2003 an evaluation of local sewer systems was completed on behalf of the Oneida Creek Water Quality Task Force. The assessment addresses the need for additional sewer infrastructure within the Oneida creek subwatershed. The study surveyed four options addressing the need to extend sewer infrastructure. The four options evaluated include:

A. No Action
B. Replacement of existing on-site wastewater treatment systems
C. Implementation of a regional wastewater collection system with treatment at the City of Oneida wastewater treatment Plant
D. Development of a segmented system with a separate "package" wastewater treatment plant in the Village of Oneida Castle

The report, prepared by O'Brien & Gere Engineers Inc., concludes that the most cost-effective solution to area sewer / septic system problems is to implement Option C. Option C recommends that the best method of addressing local problems associated with the discharge of human sewage and elimination of non-point source pollution is to establish a regional collection system to direct effluent to the City of Oneida WWTP. The Town of Vernon would be required to construct its share of facilities in a coordinated manner with Oneida County and other municipalities within the proposed wastewater collection system.

3.4. Trends

In the 1960s and 1970s, the goal of sanitary wastewater engineers was to provide sewage treatment to densely populated areas. Wastewater treatment is now widespread, and different challenges face wastewater operators and designers. Cutting-edge technology is allowing these challenges to be addressed with an emphasis on quality treatment and cost-effective management.

Today, some sewerage providers, especially in densely settled or rapidly developing areas, are capping the amount of additional wastewater they will accept and adding to the list of restricted contaminants because of a lack of funds and space constraints on capital upgrades. In some states, the regulatory climate points to a trend away from large treatment plant expansions. As a consequence, utilities do not want more or cannot accept more wastewater or wastewater with higher treatment needs.

Also, as growth is reaching its limits in some urban and suburban areas, development is occurring in rural locations without sewage infrastructure. In these locations the drinking water source is usually limited to ground water, small lakes, and streams. To protect the quality and quantity of the ground water supply, state regulators may restrict its use to drinking water and effluent discharge forcing developers to seek ways to conserve and reuse the water.

These challenges create new demands that innovative technology and management techniques can address. With a need for tertiary treatment and indirect water reuse, small community wastewater treatment systems, such as

those that employ membrane technology, are becoming workable solutions to a growth-limiting problem. In addition to advances in treatment technology—based on new guidelines for constructed wetlands—bio-uptake of wastewater is an environment-friendly alternative to traditional treatment methods.

Other technological advancements in disinfection, such as ultraviolet treatment, are allowing municipalities to meet stricter regulations in a safe and effective manner. Improved technologies can treat biosolids efficiently to meet land-spreading regulations that restrict the amount of contaminants that may remain in the biomass. Energy conservation has increasingly taken on a creative application by using gas produced by biological activity (for example digester gas and methane) to create energy and partially to power plants.

3.4.1 Small Community Systems

Residential, commercial, and even industrial development is moving beyond the suburbs, but the infrastructure for water or wastewater treatment is not keeping pace. Well water is used for potable water in isolated developments, but for multifamily complexes and shopping centers, septic systems are not acceptable for wastewater treatment. Small community systems with tertiary treatment are becoming popular in such locations. As an added benefit, they return treated water to the aquifer.

New treatment technologies for low-flow include fixed-film package treatment systems, geotextile filtration, and membrane filtration. Other methods include drip irrigation, evapotranspiration systems, and mound systems. These systems are now being fine-tuned for unique problems encountered with small-scale flows.

The major benefit of these new systems is that the higher quality effluent can be discharged to ground water for indirect reuse. Because of low flows, the size of these systems is small; they are generally easy to operate and are inexpensive. Beyond small community developments, they can also be used as temporary infrastructure at military camps, large construction-sites, disaster relief operations, concerts, festivals, and seasonal camps.

3.4.2 Membranes

Chemical and biological processes can eliminate most pollutants and pathogens in municipal wastewater. Physical processes, such as separation and rejection, are imperative for removing small particulate contaminants including *Cryptosporidium, Giardia lamblia,* viruses, pesticides, metal ions, and other dissolved solids. Membranes can perform this physical removal. Membrane filter systems vary by pore size (the smallest particle that can pass through).

Category	Pore Size	Description
Microfiltration	0.1-10 µ	Removes particulate matter and is the most common method of municipal filtration
Ultrafiltration	0.01 µ	Generally remove pathogens and separate biomass from treated effluent (more commonly used in drinking water systems)
Nanofiltration	0.001 µ	Remove pesticides and herbicides (from, say, CSO and other source of infiltration)
Reverse osmosis*	0.0001 µ	For water reuse applications, frequently used to remove ionic species and salt from solution and all dissolved constituents

*Highest level of treatment.

Because of the level of secondary treatment currently required, membrane filtration has become an increasingly popular solution for small systems and small municipalities. Membrane microfiltration is replacing secondary clarification because it gives wastewater plants the ability to operate with poor settling sludge, smaller space requirements, higher efficiency, and ease of operation. These benefits exist because the method requires no process adjustments or controls as are needed with clarifiers. Moreover, it is cost-effective to use filtration over traditional treatment on small-scale applications.

In many cases, separate developments such as assisted-living complexes and residential complexes are turning to a potent and economical combination of biological treatment and microfiltration for their wastewater needs. These combined systems are gaining increased popularity and acceptance from regulators because of their treatment capabilities, and from private developers for their reduced capital and O&M costs.

3.4.3 Reuse

Tertiary treatment, such as membrane filtration, is not only valuable for protecting human health, but it also provides a new opportunity for industry to limit water use and wastewater production. The catalysts for these reuse projects include the scarcity of ground water and the generation of high-salt and high-BOD wastewater that local utilities may not accept.

New reverse-osmosis filtration systems, sequencing batch reactors and cloth filter systems, clarifier-continuous backwash systems, and DAF-filter systems (dissolved air filtration) are solutions for water recycling in

industrial plants. Because of the outstanding performance of these new technologies, water use in some of plants has decreased by as much as 90 percent, and wastewater generation has been eliminated.

3.4.4 Wetlands

In the past, constructed wetlands were only used for tertiary treatment of small volumes of water. With publication of the USEPA manual, "Constructed Wetlands Treatment of Municipal Wastewaters" (Fall 2000), small communities' use of wetlands as their basic wastewater treatment has been made acceptable. With sufficient land area, wetlands can provide adequate passive treatment. Aerobic and anaerobic conditions of these systems with microorganisms and with vegetation and gravel filters provide the majority of treatment.

3.4.5 Wetland Treatment: Pros and Cons

Pro	Con
-Requires minimal skilled labor -Natural appearance and ecological benefits -Little energy required.	-Large area needed for complete treatment -Lack of data on cost-effective construction and operation.

3.4.6 UV Treatment

Final disinfection is a constant hurdle among operators and designers because of the need to balance costs and treatment effectiveness. Chlorine is the traditional form of disinfection because of its relative low costs and competence. However, but it is also a "super biotoxin" and creates problems with chemical handling, storage, and

organic interactions forming chlorine-produced oxidants. It is well known that when chlorine and organic matter have significant time for interaction, chloroform, bromodichloromethane, and other trihalomethane compounds can form.

UV technology disinfects by radiating microorganisms to prevent their replicating and requires only a short contact time. Chlorine and other chemical disinfectants, on the other hand, cause chemical reactions within microorganisms and require a contact time of up to 180 times that of UV light. Pulsed UV light systems are on the forefront of wastewater technology because they destroy pathogens more effectively and at a higher rate than traditional disinfection and standard UV light.

Since the early 1940s, guidelines for UV disinfection have been available. The high cost of UV treatment and the lack of a residual following application had made it unpopular for potable water disinfection; however, these concerns are not as relevant in wastewater treatment.

UV treatment is becoming an economical alternative because it can diminish costs for power, labor, parts, chemicals, and overall O&M. Moreover, advances in lamp and ballast design, cleaning mechanisms, and power modulation have led to a decrease in costs over the past few years.

3.4.7 Biosolids

Engineers have few options for disposal of biosolids. Land-spreading and incineration have been the standard methods of disposal, but new restrictions on reuse of biosolids reuse are making land-spreading less desirable. To address these restrictions, biosolids require more thorough treatment to decrease the levels of nitrates, fecal coliform, and pathogenic bacteria.

Temperature-phased anaerobic digestion (TPAD) is a new technology that can improve the quality of biosolids by combining thermophilic and mesophilic anaerobic digestion. TPAD consumes biosolids more rapidly than other methods, produces more methane (which can become usable energy), creates less biosolids mass, and destroys most coliform and pathogenic bacteria usually found in municipal biosolids. A municipal treatment plant in Independence, Iowa uses TPAD to produce Class A biosolids that have a low pathogenic organism content. The product can be applied on land in public access areas.

3.4.8 Control Systems

Energy is the largest and most variable cost for a wastewater treatment plant. Instrumentation and controls can address energy scarcity. Control systems, such as programmable Logic Controllers (PLCs) and SCADA systems, can help to conserve energy with variable-frequency drives, energy-efficient motors, heating, cooling and ventilation improvements, lighting modifications, and fuel cells. Load management strategies, demand strategies, and cogeneration are also feasible energy conservation techniques.

3.5 Asset Management Systems

Over the past 50 years, spending on infrastructure in the U.S. has focused on construction with little regard for the cost of necessary O&M. Today, sewage infrastructure and wastewater treatment plants are aging and deteriorating without a ready source of funding for improvement.

Regulations and standards of practice are now being implemented for infrastructure management, accounting, and financing to prevent this problem from escalating. In 2000, the Governmental Accounting Standards Board introduced Statement 34 (GASB 34), a governmental accounting process that requires municipalities to account for their fixed (infrastructure) assets. Unlike accounting practices in the past, municipalities must either depreciate their wastewater infrastructure assets or use an asset management program to support maintenance and preservation of their capital.

For GASB 34 to be effective, an asset management program is necessary to plan for and fund O&M and capital improvements. Such a program is needed to budget for maintenance, determine asset reliability, and develop a capital replacement schedule. By focusing on the critical assets of a municipality, a team of engineers, operators, and accountants can integrate their knowledge to increase a wastewater facility's life.

Engineers will be able to provide the expertise to determine the current value and condition of infrastructure as well as the best schedule for maintaining these assets. By using broad system planning, engineering models can be developed to determine tradeoffs for maintenance, rehabilitation, and replacement for aging infrastructure. This important management technique will allow better planning for O&M rather than rebuilding infrastructure.

3.5.1 Revenue Generation

Revenue generating practices are becoming popular for treatment plants with excess capacity. An appropriate time to determine excess capacity is when a municipality is analyzing methods to extend the life of a treatment plant through asset management.

Because the incremental cost of treating additional sewage is small, treatment plants can sell their excess capacity to small communities and industry either to treat primary influent and/or dispose of biosolids. Another method of revenue generation, credit trading for effluent that is currently under discussion and will be designed after the successful air emissions trading program. This incentive program will give well-performing wastewater treatment plants an opportunity to benefit financially from their quality effluent. Such an arrangement, though not yet near implementation, can motivate municipal managers to maintain and improve their treatment abilities.

3.5.2 SSOs and CMOM

Throughout the nation and especially in the urban Northeast, sanitary sewer overflow (SSO) and combined sewer overflow (CSO) lead to unregulated discharges. The Wet Weather Water Quality Act of 2000 addressed these problems through the Capacity, Management, Operations and Maintenance Program (CMOM). CMOM aims to help local sewage authorities develop a site-specific plan of capital improvements and maintenance for their collection systems. It encourages the development of a management plan to outline steps to mitigate SSOs and CSOs.

A variety of grants and potential aid are available to help institute a CMOM program. The money can be used to intercept, transport, control, or treat municipal CSOs and SSOs. The Urban Wet Weather Priorities Act is a federal grant program to fund urban wet weather initiatives including overflows. The goals of the CMOM initiative fall within these two grant categories.

Municipal wastewater treatment technology and management continue to evolve and have a variety of advances in both areas. As regulations and approaches to wastewater change, new methods for dealing with water quality must be promoted. New technology in the areas of small community treatment, membrane filtration, UV radiation, constructed wetlands, and control systems will enhance the ability of water quality professionals to address their treatment issues. Reuse, asset management, final bio-solid treatment, revenue generation and CMOM will allow wastewater treatment plant operators to address new regulations and increase their efficiency. (Source: Interdonato and McCarthy, (c) 2001).

4.0 Transportation Infrastructure

In an effort to determine the future highway transportation needs and safety requirements for planning purposes an understanding of the existing highway system is necessary. Characteristics of a highway system include jurisdiction, traffic volume, street and right of way widths, shoulder conditions, accident frequency and long term improvements proposed by State and Local highway officials **(see figure 4-1)**. All of these elements of highway planning are tied to land use and the function of the existing highway system.

4.1 Highway Function

Highway function refers to the role of a particular road in context of the overall highway network. For planning purposes, function is inherently tied to existing adjacent land use and future land use potential. All public roads have two major functions as follows:

1. To carry traffic in a safe and efficient manner.
2. To provide access to adjacent land.

Highway function is often impacted as development occurs adjacent to the highway right of way. As changes in land use and the subdivision of land occurs, conflicts arise that restrict the flow of traffic. The resulting increase in the number of driveways, street intersections, the availability of lanes and turning movements all impact the safety and efficiency of a highway.

Roads

CATEGORY

- Local Road
- County Road
- New York State Route
- Tax Parcel Boundaries

Sources: NYSDOT, Oneida County Real Property Tax Service

Barton & Loguidice, P.C.

Engineers · Environmental Scientists · Planners · Landscape Designers

N W E S

0 0.3 0.6 1.2 Miles

Town of Vernon 8/17/05

Highway System Jurisdiction

Oneida County New York

Figure 4-1

Project No. 859.005

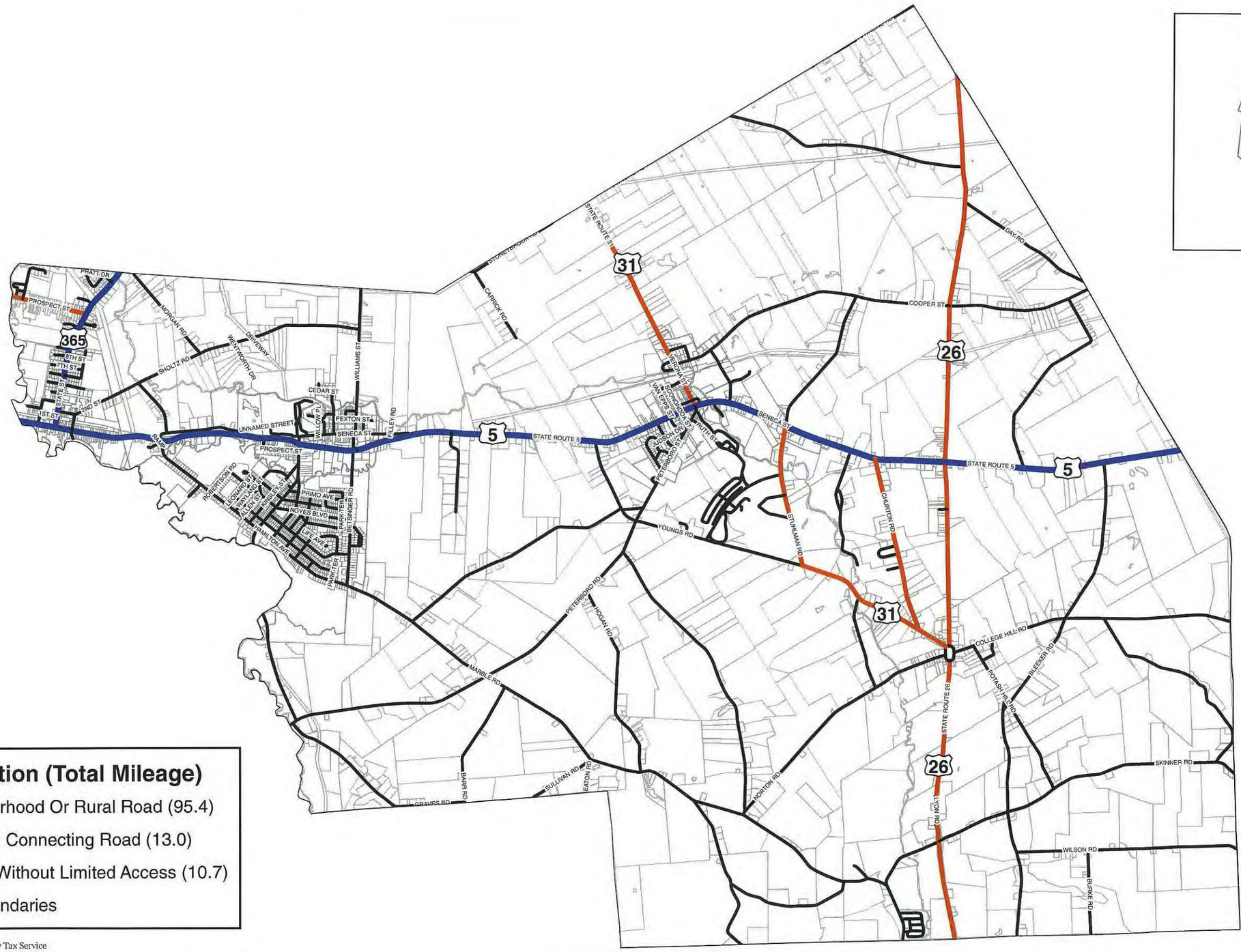
I:\Projects\859\859005\Projects\Vernon_road_class

4.2 Highway Functional Classification

Highway function is broken down into a classification system according to capacity in relation to their use as a freeway, arterial, collector or local road **(see figure 4-2)**. This is very important in land use planning in that the location of large scale development in an area with limited collector or arterial streets can place a burden on the carrying capacity and maintenance requirements of local roads. It can also reduce the safe and efficient flow of traffic and increase potential hazards to pedestrians who frequently use local roads for walking, jogging or bicycling, because local roads should remain oriented to neighborhoods. Local roads should not carry through traffic and should be designed to minimize high speeds.

The following graphics list the characteristics of highway classification and the chart lists the primary function of roads based upon their classification as a local street, collector or arterial.

The following chart illustrates the general relationship of highway function to the level of vehicle/pedestrian mobility.



Road Classification (Total Mileage)

- Local, Neighborhood Or Rural Road (95.4)
- Secondary and Connecting Road (13.0)
- Primary Road Without Limited Access (10.7)
- Tax Parcel Boundaries

Sources: NYSDOT, Oneida County Real Property Tax Service

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Highway Functional Classifications

Oneida County New York

Figure 4-2

Project No. 859.005

I:\Projects\859005\05\Projects\Vernon_road_class

Highway	Function
Local Street	Provides access to abutting properties (land service). Provides intra-neighborhood traffic; should not carry through traffic. Moving Traffic is a secondary function.
Collector Street	Collects traffic from local streets and conducts it to arterials. Provides inter-neighborhood traffic. Land access is a secondary function.
Arterial	Moves larger volumes of vehicles from one area to another (inter-community traffic movement). Land Access is a secondary function.
Limited Access (Freeway)	Carrying traffic is the only function. No land access is permitted.

4.2.1 The Function of Local Streets

- Access to abutting property.
- Intra-neighborhood traffic.
- Travel within a neighborhood.
- Pedestrian friendly.
- Moving traffic is a secondary function.
- Should not carry through traffic.

4.2.2 The Function of Collector Roads

- Collects traffic from local streets.
- Conducts local traffic to arterials.
- Provides inter-neighborhood traffic.
- Provides bicycle and pedestrian links.
- Designated crossings.
- Access to adjacent land is a secondary function.

4.2.3 The Function of Arterial Highways

- Primary function is moving traffic.
- Moves higher volumes of traffic at higher speeds.
- Provides inter-community traffic.
- Pedestrian links should be separate.
- Access to adjacent land should be minimized.

4.2.4 Limited Access / Freeway

- Carrying traffic is the only function.
- Land access is not permitted.

4.3 Current System Characteristics

The functional classification of highways and streets in the Town of Vernon is illustrated on the following transportation base map for the Town:

The current transportation system in Vernon is similar to many rural towns in upstate New York: the state highways are the primary commuting routes which carry commuters to destination points and neighboring municipalities; county highways are collector roads which generally carry traffic from the local network system to state highways; and town or local roads are typically limited as residential streets or rural linkages.

The hierarchy of roads in Vernon is an extension of a larger transportation network within Oneida County that consists of local roads, collectors, major collectors, and arterials highways. There are currently no freeways or limited access highways in the Town of Vernon. The four state roads within the Town are Route 26, Route 31, Route 5, and Route 365, where Routes 5 and 365 serve as the primary traffic movers for commuters, inter-town travelers and for commercial truck traffic as they are the major collectors within the Town. State Route 5 bisects the Town, running in an east-west direction and is the only corridor within the entire town-wide transportation network that serves the Villages of Oneida Castle and Vernon, as well as the City of Sherrill. The county system includes 10 highways which are completely or partially contained within the Town. These roads range in function from rural roads primarily serving the residents living along them to major commuting highways. The majority of the local road network is contained either completely or partially within the City of Sherrill or the Villages of Oneida Castle and Vernon, with the remaining local roads within the Town serving as rural connections linking together the larger transportation network.

4.4 Municipal Inventory

Travel demand, or the attractiveness of various destinations to commuters and shoppers, is a key element in understanding how the local highway system works. The destinations of drivers determine which roads receive the most usage, where congestion problems may arise, and where infrastructure investment will have to be made in the future. Key destinations for highway users are typically work locations, shopping/service areas, recreation-sites, schools, hospitals and government buildings. Residential neighborhoods are also key destinations and points of origin for highway trips.

Destination affects the timing of a trip and the cumulative impact of trips on the local road network. Work trips generally peak in the morning and evening rush hours. Shopping trips peak in the evening and on weekends and recreation trips may peak at a variety of times depending on the activity and the attractiveness of the event and the seasons of the year. For example, a race or concert held at Vernon Downs can be a major travel demand generator while a basketball game at a local park is a much smaller event that attracts small volume over a short period of time.

Local trips within the Town of Vernon generally focus on the City of Sherrill, the Village of Vernon, the Village of Oneida Castle, the Speedway and Vernon Downs during peak season. The ability of the street network within the Town to effectively and efficiently conduct the flow of local and through traffic from one destination to another depends on future land use development and the preservation of corridor functionality. Local streets connect almost every place within a community, but the quality of the connections varies depending on the transportation network design and adjacent land uses. This influences the accessibility of potential destinations and affects travel choices, emergency access, and quality of life.

4.4.1 City of Sherrill

The City of Sherrill accounts for approximately 59 percent of the total population of the Town of Vernon with 3,147 residents. One thousand fiver hundred fifteen (1,515) workers 16 years or older, or 48.1 percent of the total population of Sherrill commute to work. Eighty six and a half (86.5) percent of those commuters travel alone while only 6.9 percent carpool to work. According to the 2000 Census only 4 people (.3 percent) use public transportation for commuting to work, while just less than 6 percent of the population either walk to work or work from home. Furthermore, 343 workers 16 years or older, or 22.6 percent of the City's commuting population work in the City, while just 2.9 percent work outside of Sherrill but still in the Town of Vernon.

Overall, of the 1,515 workers16 years or older that reside in the City of Sherrill and commute to work, 937 (61.8 percent) of them stay within Oneida County outside of the Town of Vernon. Most of these individuals travel north to the Town of Verona. A high percentage of the balance commutes to the City of Oneida in Madison County.

The network in the City of Sherrill consists of local roads serving residential neighborhoods. Due to the amount of City residents who commute to work and the direction of various destination points such as the Village of Vernon, Town of Verona, Verona Beach, Oneida Lake and Bicycle Route 5, State Route 5 is forced to accommodate much of the local traffic as it is the only road in the area capable of sustaining such volumes.

For this reason, it is imperative to preserve the function of State Route 5 as a major collector in the future by implementing appropriate corridor management practices that will allow the safe and efficient movement of traffic in a way that maintains community character in Sherrill and the Town of Vernon as a whole.

Commuter Population In City of Sherrill

Total Population	3,147	100.0
Commuting To Work:		
Workers 16 years and over	1,515	100.0
Car, truck, or van -- drove alone	1,310	86.5
Car, truck, or van -- carpooled	104	6.9
Public transportation (including taxicab)	4	0.3
Walked	59	3.9
Other means:	8	0.5
Worked at home	30	2.0
Mean travel time to work (minutes)	19.2	(X)

4.4.2 Village of Vernon

The Village of Vernon is centrally located in the Town and has a population of 1,145 residents which consists of 21.4 percent of the Towns total population. Five hundred forty (540) workers 16 years or older, or 47.1 percent of Village residents commute to work. Of those, 461 people (85.3 percent) drive alone to work while just under 9 percent carpool. One percent of the Villages commuting population utilize public transportation while the remaining 5.5 percent of the Village workforce either walk or work from home.

Data regarding places of employment for the Village population as well as those commuting from other municipalities to work in the Village was not readily available at the time of writing this report. However, conclusions regarding transportation trends within and around the Village of Vernon can be drawn based on its geographic location. Due to its central location, the Village of Vernon is inherently a destination point for the rest of the Town.

State Route 5 bisects the Village serving as a major collector with the ability to conduct traffic volumes from various collectors and local roads such as State Route 31, Peterborough Street, Youngs Road, and Stuhlman Road to the Village. Many of these roads need to be able to sustain not only traffic from Village and Town residents, but also from the seasonal influx of traffic generated by Vernon Downs Racetrack. The proximity of Vernon Downs to the Village center puts added pressure on the local street network to efficiently accommodate traffic movement in order to minimize adverse affects on the community. A very high percentage of traffic generated by Vernon Downs utilizes Route 31 and Route 5, much of which passes right through the Village.

The Town of Vernon should be able to accommodate the influx of visitors to the Village as the added retail sales in the local market during peak season for Vernon Downs helps stabilize the local tax base. The local road network needs to be able to sustain travel demands during peak season while preserving quality of life for its local residents. Directing future growth and being conscious of the viability of the transportation network will help sustain traffic demands.

Commuter Population In Village of Vernon

Total Population	1,155	100.0
Commuting To Work:		
Workers 16 years and over	540	100.0
Car, truck, or van -- drove alone	461	85.4
Car, truck, or van -- carpooled	48	8.9
Public transportation (including taxicab)	6	1.1
Walked	13	2.4
Other means:	0	0.0
Worked at home	12	2.2
Mean travel time to work (minutes)	19.5	(X)

4.4.3 Village of Oneida Castle

The Village of Oneida Castle is a small neighborhood located in the northwest portion of the Town. It has a population of 637 residents making up approximately 12 percent of the Town of Vernon. Of that 12 percent, just over half are workers 16 years or older, 84 percent of which commute to work by driving alone. Eleven percent carpool while the balance of the working population either walk or work from home. Again, data regarding places of employment for the Village population as well as those commuting from other municipalities to work in the Village was not readily available at the time of writing this report. The Village of Oneida Castle is similar to the City of Sherrill and the Village of Vernon in that it is a municipality that is primarily served by State Route 5. However, Oneida Castle is also served by Route 365 from the north, another major collector. Local roads within the Village conduct traffic to either of these major collectors, which in some cases may reciprocate traffic volumes depending on destinations and ultimately minimize adverse effects on the local transportation system.

Commuter Population In Village of Oneida Castle

Total Population	627	100.0
Commuting To Work:		
Workers 16 years and over	327	100.0
Car, truck, or van -- drove alone	276	84.4
Car, truck, or van -- carpooled	37	11.3
Public transportation (including taxicab)	0	0.0
Walked	10	3.1
Other means:	0	0.0
Worked at home	4	1.2
Mean travel time to work (minutes)	16.8	(X)

4.5 Existing Conditions

4.5.1 Volumes

Analyzing traffic volumes and destinations of travelers helps determine which roads within the highway network receive the most use, where congestion may occur and where the need for future infrastructure investments exists. Traffic congestion is the result of specific work trip destinations, shopping and recreational trips, and special events that occur at regular intervals. The table below gives an accurate representation of traffic concentrations within Vernon's transportation system. This typically indicates where the travelers are coming from and which direction they are going.

Recorded Volumes for Primary Arterials and Collectors in the Town of Vernon			
Traffic Routes	**Miles**	**Volume (AADT)**	**Year Recorded**
Route 26			
Route 31/Vernon Center to Route 5	1.39	1,299	2001
Route 5 to Rome City Line	7.09	1,845	2001
Route 5			
Route 365 to Sherrill Western City Line	0.85	9,869	2001
Sherrill Western City Line to Eastern Line	1.69	9,280	2002
Eastern Sherrill City Line to Route 31	2.45	9,271	2002
Route 31 to Route 31	0.73	11,243	2000
Route 31			
Route 31/5 to Route 31/5	0.73	11,243	2000
Route 31/5 to Route 26	1.23	11,333	2003
Route 31/5 to North Entrance Vernon Downs	0.53	2,120	2003
North Entrance Vernon Downs to CR13/Youngs Rd.	0.56	1,016	2003
CR13/Youngs Rd. to Route 26/Vernon Center	1.24	2,117	2001

*AADT = Average Annual Daily Traffic

The highest traffic volume occurs in the Village of Vernon, particularly at the intersection of Route 31 and Route 5. The Town has expressed concern over truck traffic at this intersection and their inability to make turns safely and efficiently. High volumes also occur just east of the Village between NYS Route 31 and Route 26 which could indicate that a higher percentage of traffic flowing through the Village is born from the east or is eastbound. It is likely that this volume represents a degree of commuter traffic to the City of Oneida and the Turning Stone Casino. A consistently higher volume along Route 5 between Route 365 and the Village of Vernon indicates the capacity at which Route 5 must operate. This indicates that Route 5 must be able to accommodate and efficiently distribute motorists between municipalities within the Town. Further impairment to the function of this corridor would be costly to mitigate.

4.5.2 Accident Rates

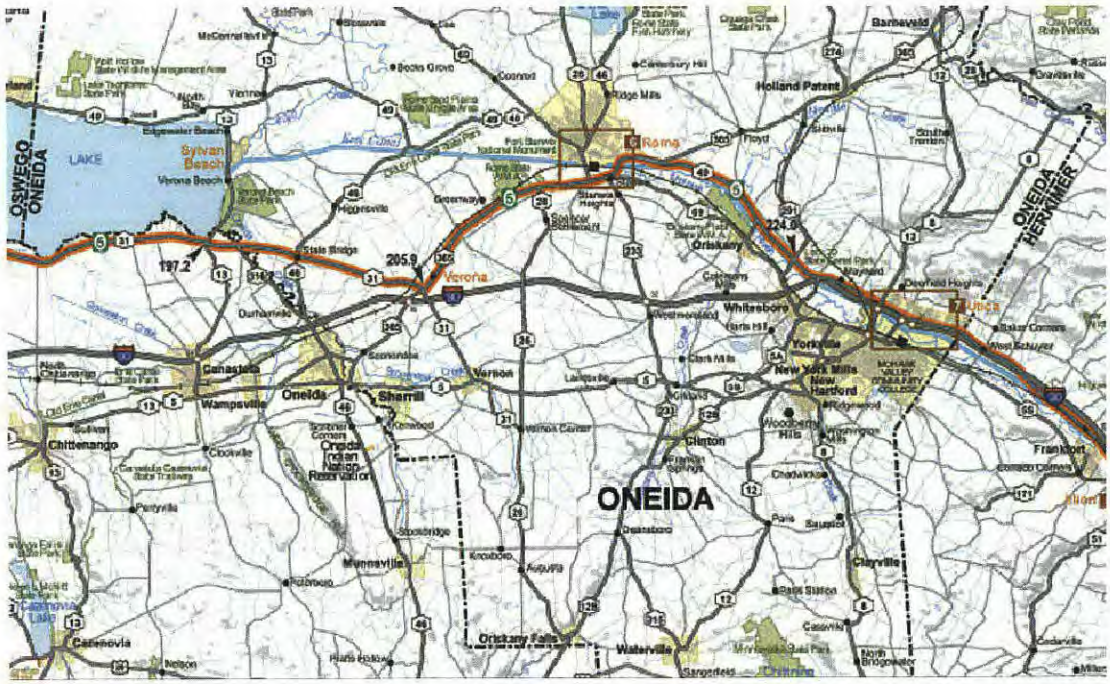
State highways in the Town of Vernon provide for intercommunity traffic. Function of these highways is important due to higher posted speed limits and higher traffic volume. According to New York State Department of Transportation the annual rate of accidents on State Routes 5 and 31 in the Town account for a total of 162 accidents between the year 1999 and 2002. The chart below shows the approximate number of accidents for each of the four major highway segments in the Town of Vernon.

Year	Highway	Total Accidents	Annual Average
1999-2002	Rt. 5, west of the Village	41 accidents	13.6 per year
1999-2002	Rt. 5, west of the Village	74 accidents	24.5 per year
1999-2002	Rt. 31, north of the Village	25 accidents	8.3 per year
1999-2002	Rt. 5, south of the Village	22 accidents	7.3 per year

4.5.3 New York State Bike Route 5

New York State Bike Route 5 runs right through the heart of Oneida County just north of the Town of Vernon and the Thruway. Bike Route 5 generally parallels the original route of the Erie Canal, bisecting New York State west to east between Niagara Falls and Albany. This scenic multi-modal byway takes advantage of the terrain which has made this corridor an attractive option for travelers for more than two centuries. Since the Canal was completed in 1825, this corridor has served as the preferred route for railroads and the New York State Thruway. Bicyclists and walkers can experience the Erie Canal by linkages between Bike Route 5 and off-road Canalway Trail segments.

Along this route, pedestrians can experience the vibrant and prosperous history of New York State by passing by a short distance within sites such as Revolutionary War battlefields at Oriskany. This corridor ties into the larger transportation network the Town experiences at a regional/county level and should take advantage of the proximity with which it lies. The presence of Bike Route 5 through the regional community provides a number of recreational and tourism opportunities for the Town and is an extension of the multi-modal network that can be utilized. The importance of maintaining a safe and efficient transportation system and State and Federal initiatives to support multi-modal systems is recognized as an important part of the planning process. This intra community connectivity is a valuable quality of life asset for current and future residents.



4.6 Planned Improvements

As of the writing of this report representatives from NYSDOT region 2 have stated that there are currently no expansion plans of any kind for state highways in the Town of Vernon. It is important for the Town to understand that NYSDOT can only control issues within the state highway right-of-way and transportation officials encourage local municipalities to address land use issues within their community. Therefore, discussion and awareness within the Town should be ongoing with regards to future growth, land use and transportation planning due to the importance of maintaining a safe and functional highway system in the future.

4.7 Trends

4.7.1 Linking Transportation to Land Use

The Inter-modal Surface Transportation Efficiency Act of 1991 (ISTEA) and the 1997 Transportation Equity Act for the 21st Century (TEA 21) emphasized the incorporation of multi-modal transportation into the current highway system. However, most of the authorized funding went into the construction of new highways and repairs to existing highways. Ultimately, this approach to the nation's highway system continued to encourage suburban sprawl. This has resulted in a continued emphasis on vehicular use, particularly in rural areas that lack updated land use plans and zoning requirements.

In the face of this spending the demand for more bicycle and pedestrian friendly streets and rural transit has increased as the result of suburban sprawl. America's reliance on motor vehicles will continue into the foreseeable future but the need for multi-modal transportation will only

increase as time goes on and as the ongoing conflict between motorists and pedestrians continues. New road construction, bypasses and widening without addressing adjacent land use is not the best method for creating and planning for quality communities. Therefore the trend in linking land use with Transportation planning is becoming more prevalent as communities continue to spread out.

At the same time, transportation officials are encouraging communities to develop land use plans that compliment the highway system, reduce costly road expansions and reduce congestion along collector roads and arterials. More emphasis is being placed on pedestrian walkways and bike paths that interconnect neighborhoods and connect neighborhoods with commercial areas, parks and community facilities like schools and municipal buildings.

This approach will allow mobility within the community that will reduce the use of the automobile for short local trips within the community. The trend to inter-connect neighborhoods to work centers and commercial areas with bicycle and pedestrian trails will continue into the foreseeable future.

Ultimately the emphasis between land use and the transportation system is important because mixed use zoning, neo-traditional design and effective planning can help reduce the need for long commuter distances. By encouraging a variety of land uses close together and by employing growth management through land use planning, communities can avoid the congestion that reduces the quality of life in rural communities. At the same time proper planning can mitigate the costly improvements that are driven by poor land use practices.

Photo: The costs to taxpayers for widening the highway and improving pedestrian safety on the left would require costly condemnation and demolition of signs, buildings and infrastructure as compared to the costs associated with purchasing a right of way with collector road setback requirements on Route 31 in Vernon on the right. The taxpayer cost on the left is astronomical compared to the costs associated with proper planning for the future. If appropriate setbacks are incorporated into planning, the future expansion of Route 31 to accommodate growth associated with Turning Stone will require a minimal amount of taxpayer assistance.

Communities that build in appropriate setbacks from collector highways and arterial routes actually reduce the costs associated with the future widening of the highway. If these measures are not taken land acquisition and condemnation becomes the burden of the taxpayers. Essentially, it is more cost effective to provide appropriate setbacks so that future highway right of ways can be purchased without the condemnation and demolition of buildings, gas stations and relocation of utilities. This is only one example of how land use planning can effectively improve quality of life and reduce costly infrastructure improvements, and ultimately hold the line on tax increases.

4.7.2 Corridor Management

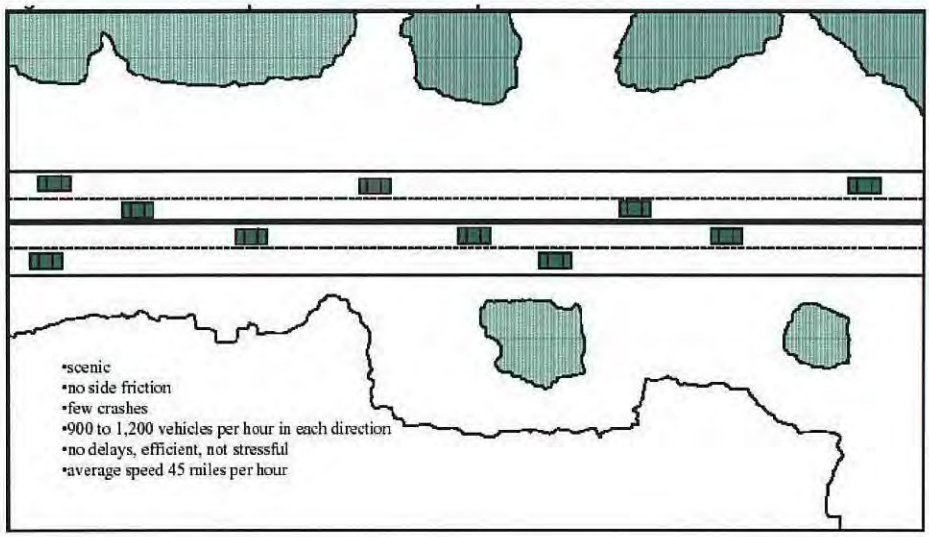
Corridor management is a concept that utilizes the coordinated application of various measures to obtain control of, or otherwise protect, the right-of-way for a planned land use and/or transportation facility. Some of the objectives of corridor management include: preservation of highway function, coordination of strategies for land use development along transportation corridors, prevention of inconsistent development, reduction of costly infrastructure expansion and access management controls that ensure neighborhoods have safe and easy access for pedestrians, transit, bicyclists, trucks and cars. By identifying issues, opportunities and strategies to improve access and mobility along the existing street network, the Town of Vernon can accommodate the growth expected in the future without compromising quality of life issues or the function of the existing highway system.

4.7.3 Access Management

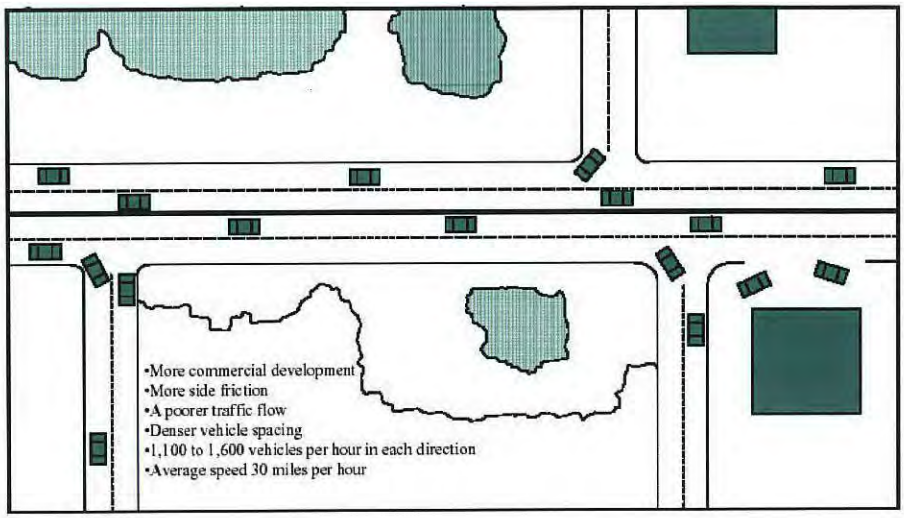
Access management is the process by which access to land development is provided while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity and speed (NYSDOT). Strategic access management practices can help coordinate the location, number, spacing and design of access points to minimize site access conflicts and maximize the traffic capacity of a roadway. Because transportation agencies at the county and state level have no authority to control land use adjacent to highways, it is important for the Town to become a partner in access management. Uncoordinated growth along some of the Towns major travel corridors can result in strip development and a proliferation of access points. In most instances, each individual development along the Towns corridors has its own access driveway.

Due to the fact that DOT's review process only looks at minimum standards, with respect to driveway design and spacing, it is important for the Town to make an effort to preserve highway function. Numerous access points along a corridor create conflicts between turning and through traffic which increases delay and accidents.

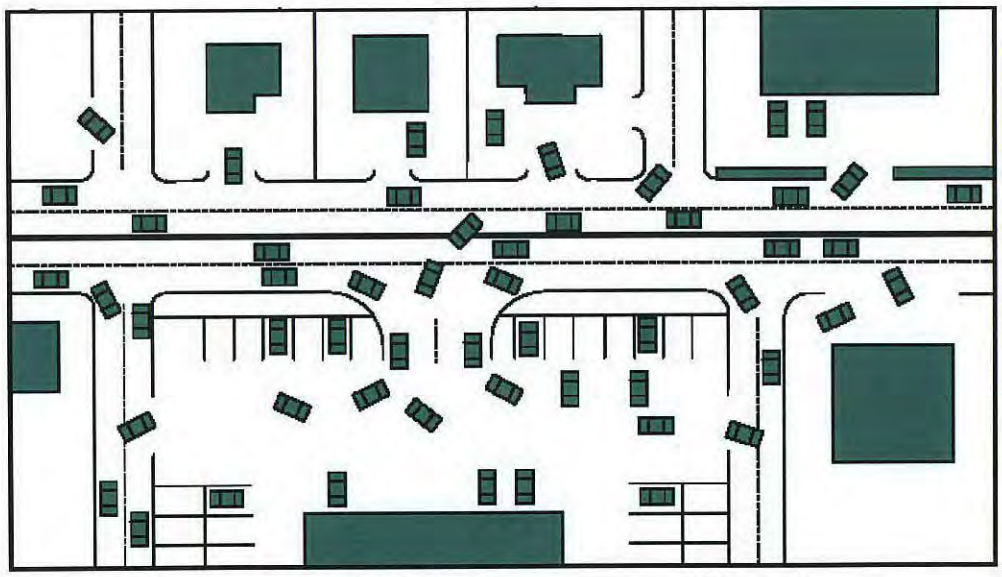
This type of strip development occurs so slowly that it is seldom viewed as a crisis until traffic problems become severe. Development therefore is often allowed to continue in a haphazard manner until the problems become unbearable.



Corridors such as Route 5 and Route 31 that carry large volumes of traffic are attractive locations for strip development. Residential and commercial developments locate along the arterial or collectors over time until strip development becomes the predominant land use pattern. The ability of the corridor to move traffic then becomes seriously compromised, resulting in increased traffic congestion and reduced safety. Ironically, the small and medium-scale businesses like convenience stores, restaurants and chain stores cumulatively create the worst problems.



Inefficient zoning and street layout forces a business to connect driveway access to the corridor. If an internal circulation system is developed, driveway access can be rerouted to these streets so that traffic can enter major collectors and arterials at single access points.



•Too much side friction
•Excessive congestion
•More crashes

•Through traffic slowed
•Too many driveways and intersections
•Inadequate spacing between driveways and intersections
•Too many conflict points and left turns

•Highly stressful
•1,300 to 2,000 vehicles per hour in each direction
•Average speed 20 miles per hour.

Historically, transportation and access management planning concentrated primarily on the movement of vehicles. Current planning efforts focus on all modes of transportation including vehicles, public transit, bicycles and pedestrians. Guidelines should consider all of these modes of transportation and discuss: the net reduction of access drives to arterials and collectors, maintaining or reducing existing intersections, combination of access to arterials and collectors where appropriate and the incorporation of access management principles into the subdivision of land.

In addition to conserving capacity, access management techniques can be coordinated with design guidelines to significantly enhance the aesthetics of a roadway corridor. A common vision that includes guidelines for access in addition to a unified design for signage, landscaping and pedestrian facilities can drastically improve the function and aesthetics of a roadway corridor.

Numerous benefits are derived from the process of access management that has an impact on motorists, land uses along a roadway and overall community character. The benefits include:

- improving overall roadway safety;
- reducing the total number of vehicle trips;
- decreasing interruptions in traffic flow;
- minimizing traffic delays and congestion;
- maintaining roadway capacity;
- avoiding costly highway projects;
- improving air quality;
- encouraging compact development patterns;
- improving access to adjacent land uses; and
- enhancing pedestrian and bicycle facilities.

While individual landowners may see regulations as restricting access to their property, a well-managed transportation system will improve access to properties and maintain travel efficiency, thereby enhancing economic prosperity for local businesses. Strong access management practices also have the benefit of closely coordinating land use and transportation decisions to improve the overall quality of life in the Town of Vernon.

4.7.4 Improving Multi-Modal Transportation

The Inter-modal Surface Transportation Efficiency Act of 1991 (ISTEA) and the 1997 Transportation Equity Act for the 21st Century (TEA 21) emphasized the incorporation of multi-modal transportation into the current highway system. Multi-modal transportation planning is a multi faceted approach which considers all modal options and is characterized by input and participation from the public. This concept recognized the fact that efficient movement of goods and people is accomplished through a system of transportation and land use planning and also that the concerns and needs of all users of the system should be considered. Multi-modal transportation planning should identify specific transportation issues and service investments that need to be made so that improvements to the transportation network in the Town can keep pace with future development. There are four primary modes of transportation that should be addressed to suit the needs of the Town: automobile, transit, pedestrian, and bicycle.

4.7.5 Bicycle and Pedestrian Safety and Connectivity

Bicycling and walking are fundamental travel modes and integral components of an efficient transportation network. Appropriate bicycle and pedestrian accommodations provide the public, including the disabled community, with access to the transportation network; connectivity with other modes of transportation; added recreational opportunities; and independent mobility regardless of age, physical constraints, or income. Effective bicycle and pedestrian accommodations enhance the quality of life and benefit any community or environment. Bicycling and walking are successfully accommodated when travel by these modes is efficient, safe, and comfortable for the public. A strategic transportation planning approach will consistently incorporate the consideration and provision of bicycling and walking accommodations into the decision-making process for the Town of Vernon's transportation network. Factors that support the need to provide bicycle and pedestrian accommodations include:

- provides a connection to public transportation services and facilities.
- serves areas or population groups with limited transportation options.
- provides a connection to bicycling and walking trip generators such as employment, education, retail, recreation, residential centers and public facilities.
- routes can provide a regional connection or can be of regional or state significance.
- provide links to other bicycle and pedestrian accommodations
- provide a tourism and economic development opportunity.
- maintains safety for all users.

4.7.6 Scenic Byways

National Scenic Byways are transportation corridors of particular nationwide interest. In New York State, there are several types of corridors that fall under the Scenic Byway Program. For example, State Scenic Byways are transportation corridors that are of particular statewide interest and are representative of a region's scenic, recreational, cultural, natural, historic or archaeological significance.

When the program was created by state Legislature in 1992, some corridors automatically became Scenic Byways. These include:

- Scenic roads that were designated by New York State Department of Conservation prior to the creation of the Scenic Byways Program;
- Parkways that exhibit statewide scenic, recreational, cultural, natural or historic significance;
- North Country Touring Routes; and the
- Seaway Trail

Essentially, a scenic byway could be a portion of a transportation corridor within the Town that could be used as recreation, attract tourism or just simply as a mode of transportation. A scenic byway within Vernon might offer magnificent views or fascinating historical sites or amazing wildlife. It might offer an array of outdoor activity, display art or sculptures, or reveal culture. Whatever the significance, they are a "win/win" arrangement for the travelers who use them and the communities that adjoin them. Typically, communities profit by an organized management

plan that protects and enhances the byway corridor while encouraging increased tourism, added safety and connectivity among the town-wide transportation network, and increased recreational activity.

4.8 Regional Job Centers

4.8.1 Local Event Destinations

Vernon has historically been a destination for entertainment. For over 50 years, Vernon has been the home of Vernon Downs. The facility has been a prominent harness racing facility and has sponsored numerous events including rodeo, track racing and concerts. The facility has a seating capacity of approximately 3500 people in the grandstand and 1500 in the Clubhouse for a total capacity of 5000 individuals. The events at Vernon Downs are welcomed by the community but presented a challenge in the past particularly with respect to traffic on Route 5 and 31.

Utica Speedway is also a strong weekend trip destination for automobile racing events. The speedway is a popular modified division racetrack that in 1999 drew large crowds on a weekly basis. The track continues to be a popular venue for racing enthusiasts.

Upon the advent of the Turning Stone Casino and Oneida Indian Nation endeavors, the local economy continues to become more attractive to tourism and visitors from other parts of the northeast and beyond. The Turning Stone Casino, Vernon Downs, and associated spin-off development provides a likely catalyst for future economic development over the next 20-25 years. The Oneida Nation recently announced the opening of a PGA level golf course in the northern portion of the Town of Vernon that will bring more potential for economic activity and tourism

related enterprises. These regional markets and the spin-off development activity that they will likely create will surely create job centers and ultimately increase activity in the region. This growth may serve to benefit all parties if it is anticipated and planned for in a cooperative manner.

While all of these venues are important to the local economy they represent a challenge to future residential growth as relates to the highway system. These event destinations may be impacted by future residential and commercial development if proper planning techniques are not exercised. New residential and commercial development along the primary highway corridors in the Town can lead to a slow deterioration in highway safety in the absence of highway corridor and access management. Important to this component of the planning process is to recognize that the system of State and County collector roads provide the primary access to event destinations in the Town and measures should be addressed to maintain their function as the future subdivision of parcels takes place.

4.8.2 Agricultural Areas

Agriculture is an important land use in the Town of Vernon and Oneida County. As growth occurs, the expansion of the highway system can unknowingly influence agriculture as farm equipment begins to mix with highway traffic. Additionally, if the highway system is not planned carefully, the growth of new roads can bring residential development into an area that may threaten prime farmland and fragment large farming operations. Essentially, the road network may grow in a way that isolates large farm parcels from one another thus reducing the efficiency of the farm operation. Some of the ways in which this can occur include:

1. The remaining farmer now has to negotiate increased traffic volume to access his fields.

2. The development of roads may alter drainage patterns that were beneficial to the farmer.

3. The farmer must now become concerned with complaints from landowners and motorists who may feel that farming is a distraction to the neighborhood or a danger to the highway.

4. The farmer has to contend with changes in patterns of maintenance that may influence the efficiency of farming his fields, applying fertilizers or irrigation of crops.

All of these factors must be taken into account when planning the future location of commercial and residential land uses.

Oneida County, through its Farmland Protection Program encourages municipalities like Vernon to focus on the need to enhance agricultural profitability. This can be accomplished by educating the public and elected officials on the value agricultural operations can have on their community, and protecting the land base necessary to carry profitable agricultural operations into the future. This can be accomplished by planning for the location of future residential and commercial development and the location of local roads in land areas that will minimize impacts to farming operations.

The County encourages Towns to be more sensitive to the needs of agriculture and to develop public policy strategies focused on keeping agricultural land in production. Analyzing land use, sewer and water infrastructure, and transportation issues will help determine the viability of future investments within agricultural areas of the Town.

It is also important to recognize that there are disadvantages as well as advantages to including retail and tourism in a community like Vernon. As much as they can be anticipated, the social and environmental costs of retail and tourism development have to be balanced against the economic benefits. Community awareness, education, leadership, cooperation, and consensus are necessary for the success of any retail and tourism commitment on behalf of the Town.

4.9 Retail and Tourism Centers

Retail development and tourism in a community should be encouraged. It is important that this type of development helps a community be progressive and grow into the future. In many towns similar to Vernon retail and tourism has become an important commercial development strategy. Business and community leaders are recognizing the spending potential of visitors, whether they are visiting or passing through town. They have realized that shopping is an important part of the tourism experience and have developed their retail base to complement that experience.

Along with an increase in the number of people traveling to get to destination centers come increased opportunities for adjacent areas to serve the unique needs of the traveler. This provides an opportunity for a town like Vernon to serve these needs and capture a share of traveler spending. The Town of Vernon has a variety of retail and tourism centers within the geographic context

of the Town and County that can be taken advantage of. Vernon Downs in the center of Town and the Turning Stone in the Town of Verona are most notable. However, the Village of Vernon, the City of Sherrill, the City of Oneida, State Bike Route 5 and Oneida Lake are all generators of retail and tourism, most of which require a percentage of visitors to pass through the Town of Vernon in order to get there.

Planning for and taking advantage of the local and regional retail and tourism industry makes sense for many small communities that are experiencing economic changes. Over the years many small towns like Vernon have seen an increasing amount of residents become more mobile, shopping and working in larger neighboring areas. As a result, many small town economies similar to Vernon's have become economically isolated.

It is also important to recognize that there are disadvantages as well as advantages to including retail and tourism in a community like Vernon. As much as they can be anticipated, the social and environmental costs of implementing retail and tourism have to be balanced and planned for accordingly against the economic benefits. Community awareness, education, leadership, cooperation, and consensus are necessary for the success of any retail and tourism commitment on behalf of the Town.

4.10 Commercial and Industrial Areas

Commercial and Industrial land uses require highway access with greater area and mobility. While the Town should encourage commercial and industrial growth in appropriate areas of the Town, it is important to recognize that growth generates traffic. If the community recognizes that growth along the Towns major highways can be planned in a coordinated manner, the Town can achieve commercial growth without exacerbating traffic congestion.

Commercial growth tends to focus on higher speed arterial and collector highways and can have a number of impacts to highway function including:

- Generating additional traffic volume
- Generating additional turning movements
- Increasing the number and density of conflict points
- Increasing the potential for truck traffic

All of these impacts can increase in the number of accidents, increase travel time for motorists and a decrease in pedestrian safety. The good news is that these impacts can be mitigated through proper land use planning techniques.

At the local level, commercial and industrial business can actually benefit from proper land use planning, corridor management and access management techniques. In fact, the community can actually assist local businesses by addressing transportation impacts before they affect highway safety and efficiency.

Some of the ways in which commercial and industrial businesses can be impacted by poor transportation planning include:

- Maintaining travel time will allow a businesses ability to retain a larger market area. If you increase travel time, you can reduce the market area of a local business by up to 15 percent.

- A study in Manlius, New York found that when motorists are blocked from making a left hand turn into a business (due to congestion) they tend to move on to another location. Businesses in the area found that their market share was dropping sharply during busy traffic hours when higher levels of potential customers were exposed to their stores.

- Market share for businesses along a highway corridor can drop sharply as concern for safety on a highway increases.

- A 3-minute delay can increase a business shipping costs up to 5 percent. In agricultural areas, this can have a major impact on the profitability of a farm.

Based upon the above discussion Transportation officials at the New York State Department of Transportation have compared the growth of commercial sales in several communities. In general, they have found that profitability in planned commercial areas and along managed highway corridors consistently outperform areas along unmanaged highway corridors. In addition, they have found:

- When Commercial growth is encouraged to take place on a local road system or marginal access road dedicated to commercial-industrial use business becomes more accessible and the level of safety energizes shopping and commercial activity.

- By providing motorist access to commercial and industrial businesses thorough concentrated points on arterial and collector roads, commercial areas can be developed to promote pedestrian access and are more successful than standard types of development.

This suggests that planning for future growth and development along the major highways in the Town can help to improve the local economy, maintain a high quality of life for local residents and reduce the fiscal impacts to the local community that result from unplanned commercial and industrial development. Therefore, the fiscal impacts associated with poor land use policy along major highways is a major planning consideration for the future growth and development of the Town.

Another important consideration for local officials and residents results from recent financial constraints at the County and State agency level. For example, State DOT is promoting policies that will limit future access points on arterial roads, where demand for commercial development is at its highest levels. Essentially, they are following a policy to maintain or reduce access points of State arterial highways in an effort to incorporate energy reduction into their planning policy.

In addition, the state is considering a new policy that may require Towns and developers to take responsibility for poor land use planning and management. The principal is that the community should not be responsible for developers' self-created problems. If communities do not begin to address highway safety concerns through Land Use planning, it is possible that the State will take the same position with respect to problems created by a local community.

The Town of Vernon has several local management tools that can be employed to maintain and safe and functional highway system. Use of these tools is encouraged by State, County and local transportation officials. Some of these tools include the following:

- Larger lot frontage requirements on arterials and collectors
- Design, location and spacing requirements for driveways
- Shared access, cross access and reverse access requirements
- Increase front and side yard setbacks
- Intersection spacing standards for local roads
- Easements for future local roads
- Restrictions for flag lots and subdivision of land
- Restrictions for commercial strip zones
- Require planned access prior to subdivision approval
- Require land subdivisions to show full lot plans for future parcels
- Improve local roads to reduce traffic in concentration areas

These tools are available to the Town of Vernon and may be useful in working toward achieving planning goals and objectives established in the Comprehensive Plan.

4.11 Residential Neighborhoods

Residential planning is often considered the driving economic force within a community like Vernon. This is particularly important during peak cycles in residential home construction. In many parts of the country, this is a means of attracting higher income residents to an area. Contemporary residential development patterns in upstate New York has taken the form of urban sprawl instead of efficient and sustainable traditional neighborhood development. A primary long-term problem of today's residential development patterns is reflected in the costly infrastructure investments necessary to be able to support the continued out-migration from urban centers or older suburban areas. This type of development pattern is becoming evident in the Town of Vernon as residential units dot the rural landscape in a sporadic outward manner. Homes begin to spread out from activity centers such as the Village of Vernon and Vernon Center instead of a logical progression outward from those activity

centers that would maximize the capacity of existing infrastructure. Additional problems with regard to the sparse natural resources needed to support communities like Vernon may also arise and become very costly to tax payers as a result of residential sprawl patterns. For the Town of Vernon, this is not in keeping with the Town's long-term vision.

Residential development with respect to the Town's transportation network should be closely monitored and planned in order to protect highway function and to promote the safe and efficient flow of local and through traffic in the Town. One way to address this is to consider highways as a type of land use. This means controlling development along local and regional highways to reflect the functional classification capacity. The intensity of abutting land use is critical to ensure the success of maintaining the primary function of a highway.

4.12 Physical Design

4.12.1 Inter-municipal Collaboration

In a community such as Vernon with various regional attractions nearby future development is inevitable. However, adverse impacts to the environment and region are avoidable. Unplanned growth threatens air and water quality, congests roads and highways, and results in tax increases to cover additional costs of servicing sprawling development. Proper inter-municipal land use planning at a regional scale can help preserve and enhance irreplaceable resources and sense of place while minimizing negative environmental and community impacts of growth.

Land use planning and development is often characterized by controversy and the divergent interests of key stakeholders can often seem to be inherently at odds. Disputes frequently revolve around the

"public good" versus "development" debate and municipalities may come into conflict with each other for many reasons. They can compete for industrial, commercial and residential development, for community facilities and for funding from other levels of government. One municipality's success may come at the actual or perceived expense of another. Establishing inter-municipal relationships at the local, state and county level and creating a process within in which planning and development conflicts between municipalities can be resolved is vital to strategic planning.

4.12.2 Signage Systems

Signs typically exist to communicate information to pedestrians and motorists. Common signage and wayfinding systems within a community usually revolve around airports, hospitals and medical facilities, parking facilities, tourism and scenic byways, and transit systems.

From the point of view of local governments, the regulation of signs is motivated by the need to ensure public safety and minimize the adverse impacts of signs in a community. The means by which these goals have been accomplished have been to limit the size of signs, control their type, placement, and appearance, and, generally, to impose measures to reduce visual clutter. It is usually not the impact of any one business or roadway sign that motivates municipalities to adopt sign regulations, but the long-term, cumulative impact of many public and private signage decisions.

The signage industry is motivated by the need to help businesses and organizations inform the public about their location. For planners and municipal building officials, signs are but one component of the complex

built environment. Planning for and regulating signs is just one aspect of any community design effort. Central to more recent community design efforts or trends and aesthetic regulations is the concept of contextualism, or context-sensitive signage design. If signs become too numerous or confusing to motorists, they can lead to the deterioration of traffic safety. In general, motorists can only address one highway conflict at a time and a confusing network of signs along highways compromises traffic safety. Therefore, it is important that the Town work with transportation officials and local business to ensure that signs do not detract from the safe and efficient flow of traffic.

4.12.3 Pavement Markings

Pavement markings help provide for general safety of the motoring public, pedestrians, and bicyclists by delineation of traveled paths. The installation and maintenance of high quality pavement markings along all arterial, collector and local streets within Vernon can improve the overall quality of the transportation network and improve pedestrian safety.

Pavement markings in Vernon could include many different forms of street striping such as:

- Signal intersection markings;
- Directional markings;
- School crosswalks;
- Pedestrian crosswalks;
- ANE control symbols and special markings;
- Parking delineations;
- Bike lane systems; and
- Curb markings.

Selection of the most cost effective pavement marking system in a given community often depends on three factors: retro reflectivity, durability, and cost. Several factors are important when considering these traffic controls: type of road surface, volume of traffic, orientation with respect to traffic, quality control at the time of installation, winter sanding and snow removal practices, schedule of pavement maintenance activity, and inconvenience experienced by the traveling public at the time of installation.

According to NYSDOT, conventional paints are generally used in areas having low traffic volumes and infrequent winter maintenance; products of higher durability are used in areas having more traffic and more instances of sanding and plowing. Therefore, the Town should focus on a markings system that maximizes motorist and pedestrian safety with the most cost effective implementation measures.

4.12.4 Traffic Signals

The coordination of traffic signals along a corridor or area can greatly increase the operational efficiency of each intersection in the transportation network system. The basic function in most arterial streets and roadways is to move traffic safely and efficiently with minimum delay. The main source of delay and congestion along most arterial streets and roadways are traffic signals. Too often motorists are required to make unnecessary stops because adjacent traffic signals bear no relationship to each other. This results in longer travel times and increased vehicle emissions and fuel consumption. Additionally, increased driver frustration related to unnecessary stops or undue delay may also result in a potential increase in accident rates.

Traffic signal coordination provides a means for alleviating these problems. It enables traffic signals to communicate with each other therefore allowing them to work together. When traffic signals are coordinated they provide maximum opportunity for motorists to travel through adjacent traffic signals without making unnecessary stops.

Traffic signal coordination is typically needed to process traffic efficiently through a group of intersections. This is an attempt to utilize the existing roadway infrastructure by ensuring optimum travel speeds while reducing delay. Traffic signal coordination may delay or even eliminate the need for roadway widening. Since this coordination attempts to reduce the number of stops and reduce speed, there is a reduction in accident potential. In addition to traffic and safety concerns, the need for signal coordination may be justified by high levels of vehicle emissions and poor air quality. Focusing on traffic signal spacing, traffic flow characteristics, and traffic signal cycle lengths will help the Town of Vernon maximize the effectiveness of traffic signal coordination in the future.

4.13 2005 Transportation Bill

On July 29, 2005 Federal lawmakers added $24 billion in special projects into the 2005 transportation bill. The bill, which passed during the adoption phase of this plan, proposes to deliver a significant amount of road/highway construction dollars, mass-transit support, and safety assistance. The package is worth $286.5 billion over six (6) years; a 30 percent increase over the $218 billion program that expired in September 2003. Based upon a preliminary

review of the bill, the lion share of funds will be distributed to California, Illinois, New York and represents potential for the Town of Vernon to seek funding for transportation projects, pedestrian safety measure, and multi-modal improvements to the town's transportation network.

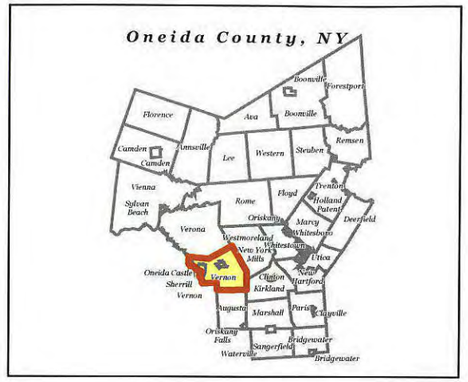
5.0. Land Use Inventory

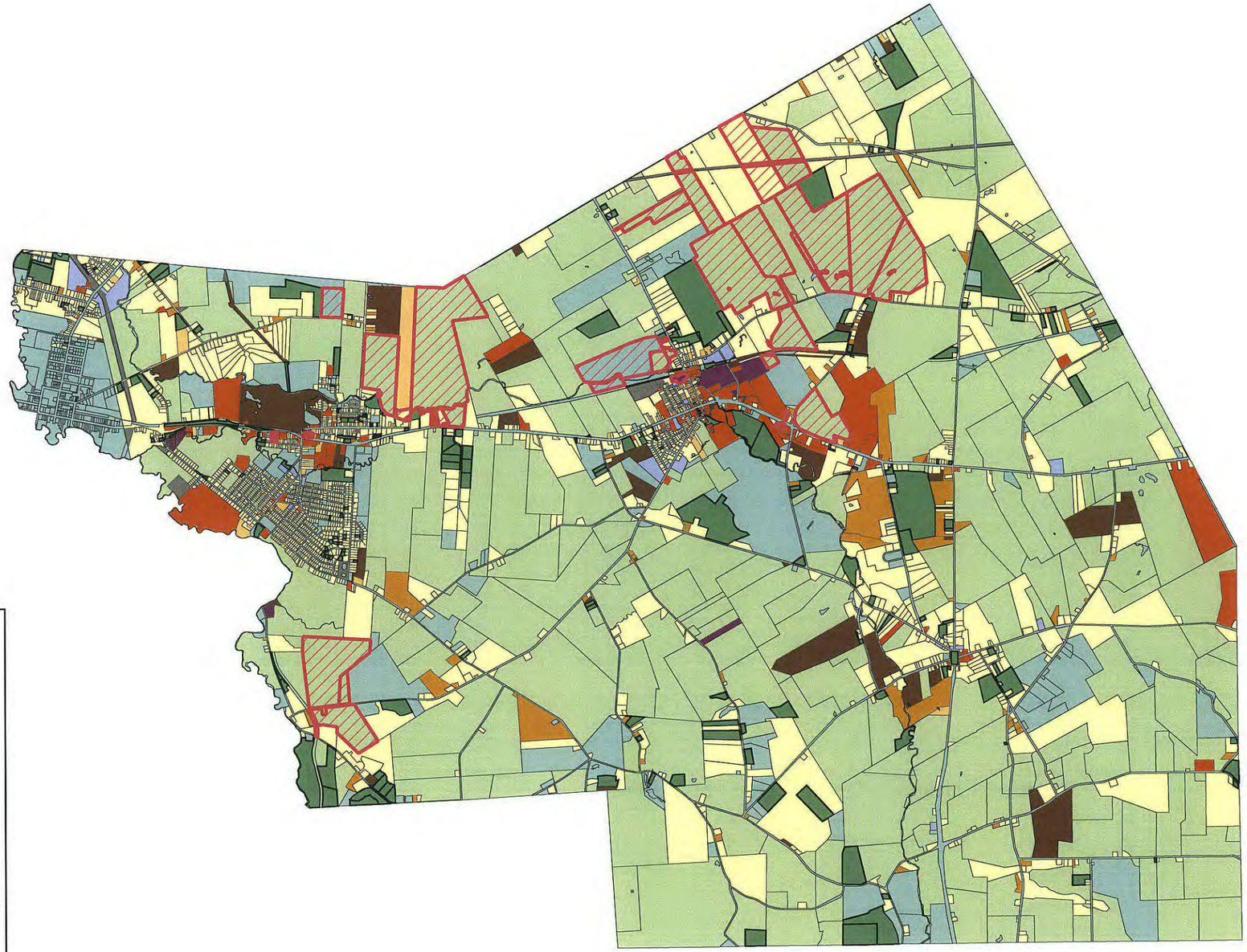
5.1 Identification of Community Land Use and Facility Requirements

Although preparation of forecasts is not necessarily strategic planning, a Comprehensive Plan must, to the extent possible, anticipate future requirements as a basis for implementation of the Plan. The future demand for land and facilities will depend primarily upon the population projections and the nature of economic potential within the Town. Control of changes to future population and economic activity levels, however, lie largely – although not entirely – outside the scope of government activity at the local level, and therefore, outside the scope of the local planning process. Therefore, future population and economic activity levels must be forecast. These forecasts, in turn, can be used to determine probable future demand for land uses and facilities **(see figure 5-1)**.

5.2 Population, Households, and Employment

The Town of Vernon encompasses a specific amount of land (38.1 square miles) with a relatively stagnant population growth. In fact, population projections for the Town by Oneida County estimate the Town population to remain steady through the year 2030 with less than a one percent increase. However, some of this stagnation may be due to factors such as lack of public infrastructure or employment opportunities. Information on the size, characteristics and distribution of the resident population, households, and employment levels, and anticipated changes in these socioeconomic factors over time is essential to the preparation of a sound Comprehensive Plan. This section of the Plan presents relevant data concerning these characteristics of Vernon. Population forecasts are a starting point for considering the interaction of people and the land. They





Legend

Town of Vernon

Land Use

- Agriculture
- Commercial
- Government/Public
- Industrial
- Single-Family Residential
- Multi-Family Residential
- Multiple Residential
- Undeveloped/Open Space
- Utility/Ifrastructure
- Vacant
- Other
- Oneida Nation Lands

DATA SOURCES: HERKIMER-ONEIDA COMPREHENSIVE PLANNING PROGRAM, CUGIR

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Vernon Land Use

Onieda County New York

Figure 5-1

Project No. 859.005

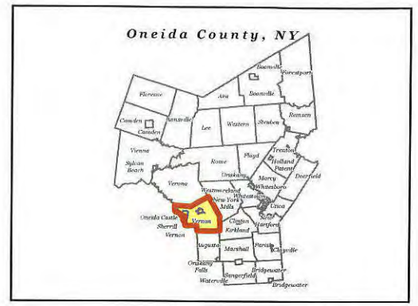
do not in themselves determine what a community wishes to work toward, but they can help the community begin to understand factors of change and determine which of those factors the community wants to try to influence.

The 2000 Federal Census is the most recent source of demographic data regarding population, housing and employment statistics. It is important to note that demographic data produced by the U.S. Bureau of the Census regarding Vernon also includes village statistics, however, does not include data pertaining to the City of Sherrill. For example, the census data for the Town of Vernon indicates that the population in 2000 was 5,335, which indicates the Village of Vernon (population 1,155) and the Village of Oneida Castle (population 627). Therefore, the actual population for the Town of Vernon, outside the villages, in 2000 was 3,553. The 2000 Census data indicates a slight decrease in population since 1990 (-0.1 percent).

A detailed inventory of relevant demographic data has been conducted and included in this report in section 1.5. For further information regarding the Town profile, refer to said section.

5.3 Population and Housing Characteristics

Population and housing characteristics provide pertinent information regarding the characteristics of the resident population and housing units in the Town **(see figure 5-2)**. This information includes residential building activity, value of owner-occupied housing units, characteristics of the housing stock and occupation characteristics of the employed labor force.



Residential Housing

CLASS

- Single Family Residential
- Duplex Residential
- Three Unit Residential
- Rural Residence w/ Acreage
- Primary Farm Residence
- Residential Estate
- Seasonal Residence
- Mobile Home
- Mobile Home Park
- Multi-Unit Residential
- Agricultural Land Use
- Tax Parcels

Sources: HOCPP, N.Y.S. Dept. of Transportation, B&L

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Unit Density - 2004

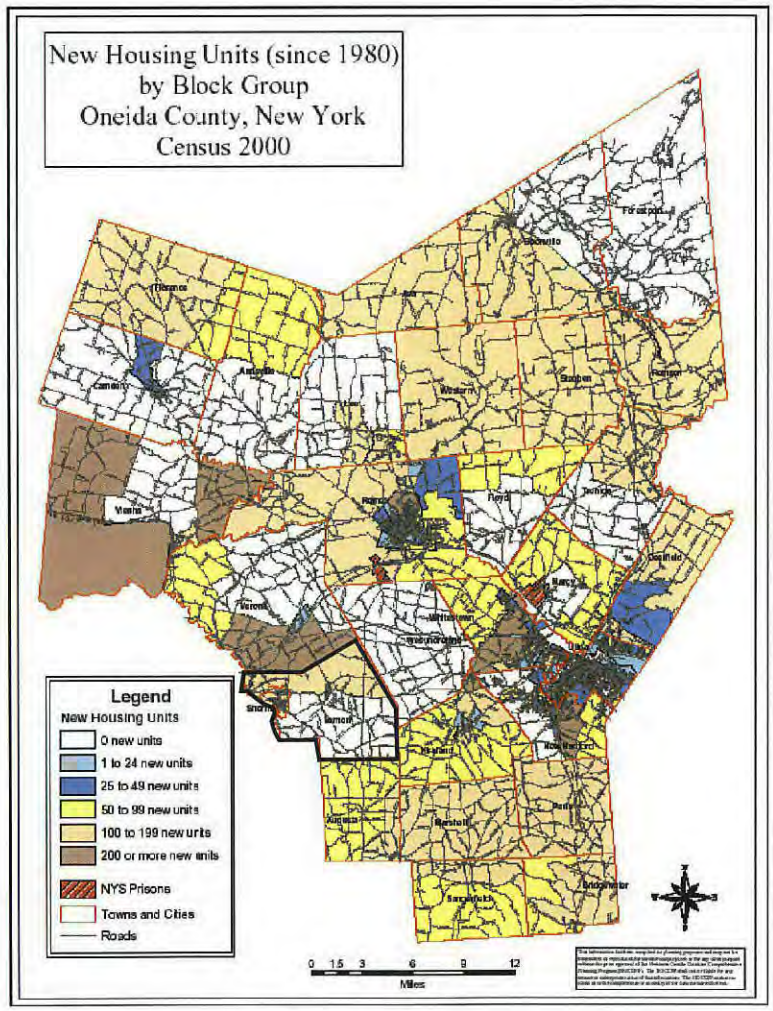
Oneida County New York

Figure 5-2

Project No. 859.005

5.3.1 Residential Building Activity

The illustration below shows the range of new housing units within Oneida County since 2000. The map indicates that the Town of Vernon has seen between 100 and 199 new units built, all of which are north of Route 5. These map projections include the City of Sherrill. Approximately 40 new units have been built in the Town since 2003, not including the City of Sherrill or the Villages of Oneida Castle and Vernon. No new single-family homes are reportedly built in the Village of Vernon or Oneida Castle since 2003, which could indicate that the Town as a whole, (not including the City of Sherrill), is experiencing a trend of 20 new residential units annually outside of its villages.



In comparison, the southern portion of the Town of Verona has experienced 200 or more new residential units since 2000. It is likely that the advent of the Turning Stone has created much of this "spin-off" residential development

and that it is beginning to spread to the northern portion of Vernon. This is an example of how adjacent towns can reap the benefits as well as inherit the impacts of regional attractions such as the Turning Stone.

Building permits issued in 2004 pertaining to residential activity were wide ranging. For example, the Town of Vernon, including the Villages of Vernon and Oneida Castle, issued the following:

- 20 building permits for pools
- 7 for additions to a house
- 11 for the construction of a garage
- 15 for decks
- 28 for installation of septic systems and;
- 4 for barns

As you can see the highest percentage of building permits issued in 2004 was for septic systems, indicating the lack of public sewer where most of the new housing units are being built. Compare those residential building permit numbers to the one building permit issued for new business in the Town (not including the City of Sherrill) and the two other permits issued in 2004 for additions or repairs to commercial structures. This could lead one to assume there could be a demand for an increase in residential and commercial activity if public water and sewer improvements are accomplished. This is more likely to affect the northern portion of the Town where the proximity to the Turning Stone could enhance geographic desirability.

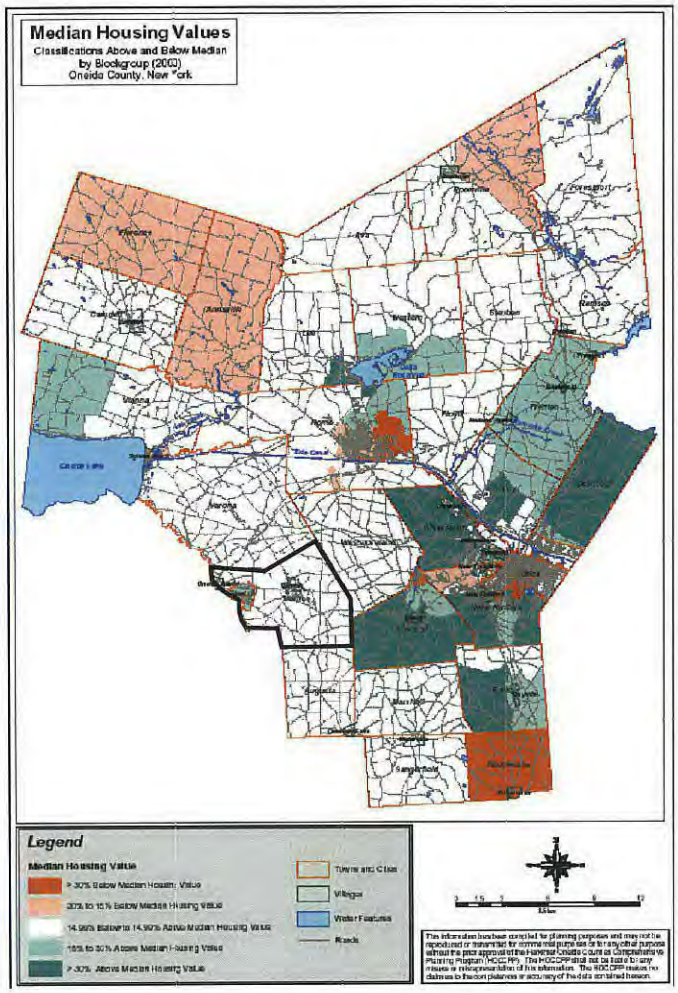
5.3.2 Housing Characteristics

5.3.2.1 Town of Vernon

Single unit, detached homes are the predominant housing structures within the Town, not including the villages or the City of Sherrill. Sixty-five percent of the total housing units in the Town are single unit, detached, with mobile homes being the next highest percentage at 19 percent. Eight percent of the housing units are three to four unit townhouses. The balance of housing structures in the Town are apartments with containing anywhere from five to 20 units.

Eight hundred fifty one residential structures or 38 percent of the housing stock within the Town of Vernon were built before 1940. Seventeen percent was built prior to 1960. Overall, approximately 77 percent of the housing stock in the Town is at least 25 years old with just more than one percent of the residential units being built between 2000 and 2002.

Only 50 percent of the housing units are heated with gas fuel while 30 percent utilize fuel oil or kerosene. Approximately 6 percent still use electric means of generating heat while the balance either have bottled, tank or LP gas, or wood as their source of heat. Approximately 80 percent of these units are either one or two bedroom houses, where as 17 percent are 3 bedrooms or more.



The average age of the housing units and the number of units that do not use gas as a source of heat likely play a vital role in the fact that 70 percent of the housing stock in place in 2000 has an estimated value less than $100,000. Approximately 19 percent of the housing units were between $100,000 and $150,000 while the majority of the balance had a value of less than $50,000. With at least ten percent of the residential stock in the Town being either apartments or townhouses with multiple rooms, these housing values are relatively low, making them affordable but less attractive to higher income wage households.

5.3.2.2 Village of Vernon and City of Sherrill

While the numbers may be different in quantity, the trends in the housing stock in these municipalities echo those of the Town. For example, as of the 2000 Census, 65 percent of the housing stock in the Town of Vernon not including the Villages or the City of Sherrill were single unit, detached dwellings. These same type of residential units represent 60 percent in the Village of Vernon and

72 percent in the City of Sherrill. Single unit, detached dwellings are the predominant form of residential structures in the Town of Vernon including its municipalities.

The age of the housing units in the Village of Vernon and the City of Sherrill is another example of how their housing characteristics echo those of the Town in general. The majority of residential units in these municipalities were built before 1940 with an estimated value of less than $100,000. While the City of Sherrill has a higher percent of units that are more expensive in proportion to the rest of the Town, the ratios of those values are similar, which is true of the balance of the housing characteristics.

This leads to the general conclusion that the Town of Vernon has an aging housing stock that exudes a certain rural, old-town character evident in its activity centers. Future spin off development that is likely to occur in the northern portion of the Town will likely start to echo the residential patterns of adjacent Towns, and thus change the statistics of the Town's housing stock in the future.

5.4 Existing Land Use

This section inventories the primary land uses and the issues associated with those uses that may be identified by the Town. These issues may be attributed to the Town's zoning ordinance, past and present land use patterns, and economic trends that affect development. The following inventory takes into account the Town, including the Village of Vernon and the City of Sherrill. However, GIS land use data was not available for the Village of Oneida Castle at the time this report was written, and thus, was not incorporated into any of the

calculations regarding acreage and percentage totals for the Town of Vernon. All GIS data for the Town is based upon figures that were current in the spring of 2004.

5.4.1 Residential Land Use

The current land use map created for the Town of Vernon by B&L has broken down residential land use into three classifications: single-family residential, multi-family residential and multiple residential. For the sake of summarizing overall land uses in the Town, this report merged those residential classifications. The spatial organization of each residential classification can be seen on the land use map provided with this report.

Sixty percent or 2,367 of the total parcels in the Town of Vernon, not including the Village of Oneida Castle, contain a residential unit. Although 60 percent of the parcels within the Town of Vernon are dedicated to some form of residential use, that 60 percent only makes up 21 percent (5,667 acres) of the total acreage in the Town.

By spatially organizing residential land use with GIS Land Use Data, one can see that there are two kinds of residential development patterns within the Town. In the Town's activity centers such as the Village of Vernon, City of Sherrill and Vernon Center, residential growth takes the form of traditional neighborhood development where housing lots are densely plotted in a grid format bounded by local roads. This type of development pattern should maximize the efficient utilization of any infrastructure that is in place, and provide for a sustainable community. It represents a logical extension outward from existing centers making it easier to supply the bulk of the Towns residential, commercial and

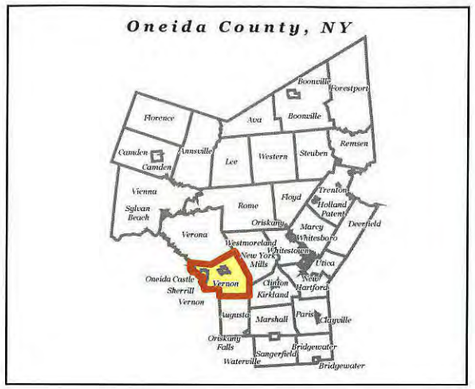
industrial stock with public sewer and water. Additionally, with proper planning, traditional neighborhood development patterns could take advantage of unique resources to create pedestrianized neighborhoods within the Town, otherwise known as "people places".

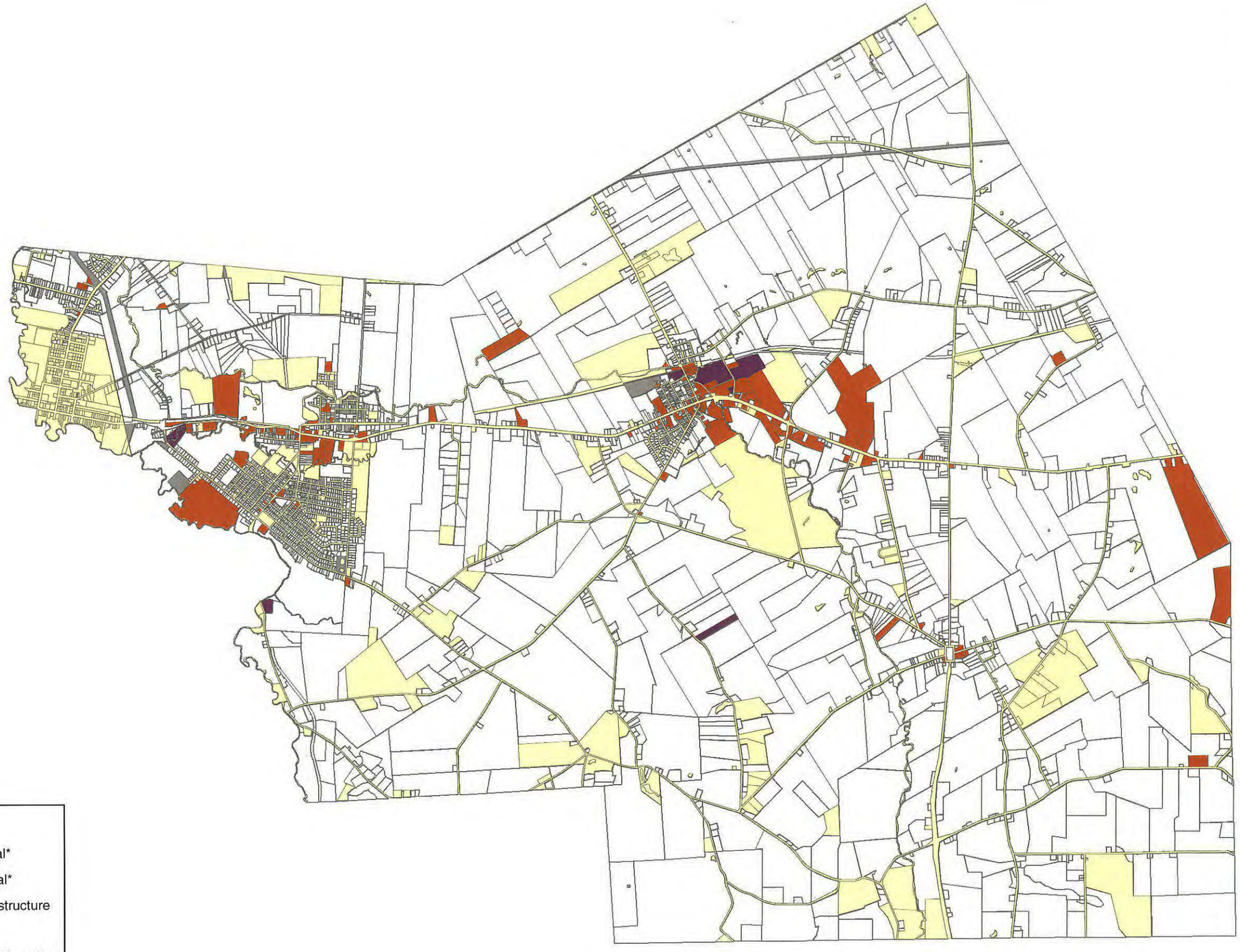
Outside of the Towns activity centers, residential development takes very different form of neighborhood development – suburban sprawl. In the Town of Vernon, this development is scattered about the landscape with many single unit structures built on very large lots. These "estate lots" have a tendency to make it more difficult to provide public open space and recreation for people who wish to take advantage of the outdoors within the Town. The inefficient sprawl of development patterns in the rural portion of the Town makes it very difficult to provide future public sewer and water as extensions. The cost of extending infrastructure in this portion of the Town would be very inefficient and costly.

5.4.2 Commercial Land Use

There are currently 167 commercial parcels in the Town, making up just four percent of the Towns total lots. This four percent represents 2.5 percent of the total acreage dedicated for commercial use in the Town. An analysis of GIS data indicates only 653 acres are currently dedicated to commercial use in the Town **(see figure 5-3)**.

The majority of commercial use is located in the Village of Vernon and the City of Sherrill. There are a few commercial entities located in Vernon Center and scattered on the outskirts of Town. Most economic development decisions should be located within existing activity centers to





Legend

- Commercial*
- All Industrial*
- Utility/Infrastructure
- Other
- Tax Parcel Boundary

DATA SOURCES: MOCPF, CUGIR

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.45 0.9 Miles

Town of Vernon — 8/17/05

Commecial & Industrial Parcel Locations

Oneida County — New York

Figure 5-3

Project No. 859.005

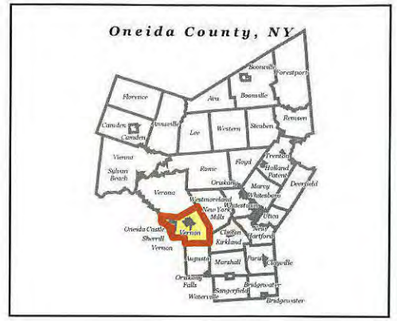
take advantage of any available infrastructure and to enhance the viability of those centers. As the Turning Stone Casino and the new PGA level golf course create the potential for "spin-off" development in the southern portion of Verona, it is likely that the northern portion of Route 31 may begin to experience commercial development pressure in the near term.

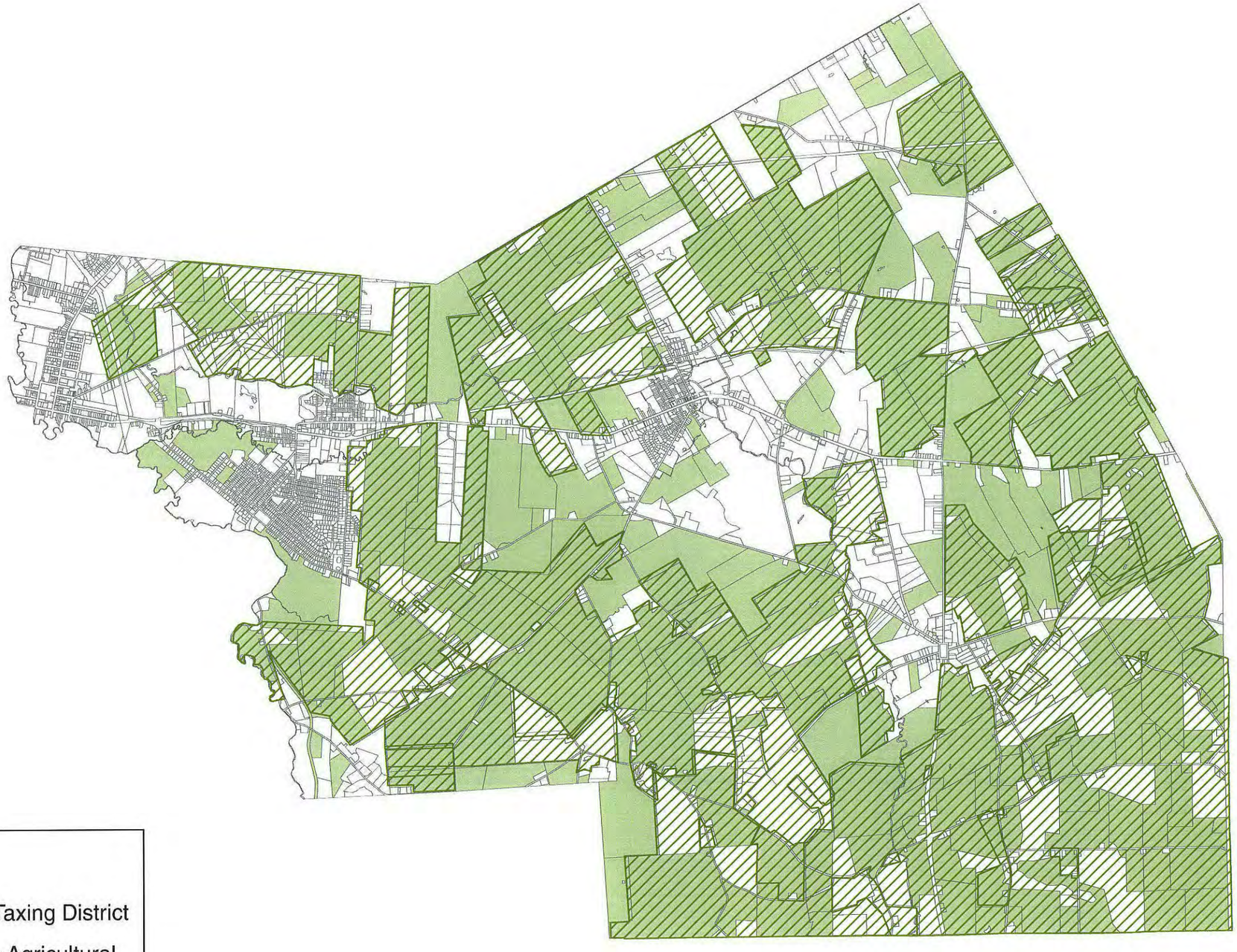
Planning and preparation for future development in the northern portion of the Town (especially along an important transportation corridor like Route 31) is vital to the establishment of a strong commercial tax base. Therefore, the functionality of NYS Route 31 is an important aspect of this growth potential.

5.4.3 Agricultural Land Use

Agriculture is the dominant land use in the Town. Although there are only 328 parcels (8 percent of total parcels) in the Town are designated for agricultural use, most of these parcels are very large, comprising 14,610 acres of land accounting for 55 percent of the total acreage in the Town **(see figure 5-4)**. The map on the next page illustrates the volume of agricultural land within the Town compared to residential and commercial land use. Much of this agricultural land is used for active farming, creating an awareness of agriculture as a tool for economic development. The balance of the agricultural land in Vernon is either undeveloped or not actively farmed, or used for single-family residential or "estate lots".

Often time there are perceptions in suburbanizing communities that farming is not an attractive way of life and does not provide for second economic development. However, a Town such as Vernon with its abundance of agricultural land and desirable soil qualities has realized it





Legend

- Agricultural Taxing District
- Classified as Agricultural
- Tax Parcel Boundary

Sources: HOCPP, NYSA&M

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon — 8/16/05

Agricultural Land Use and Agricultural Taxing Districts

Oneida County — New York

Figure 5-4

Project No. 859.005

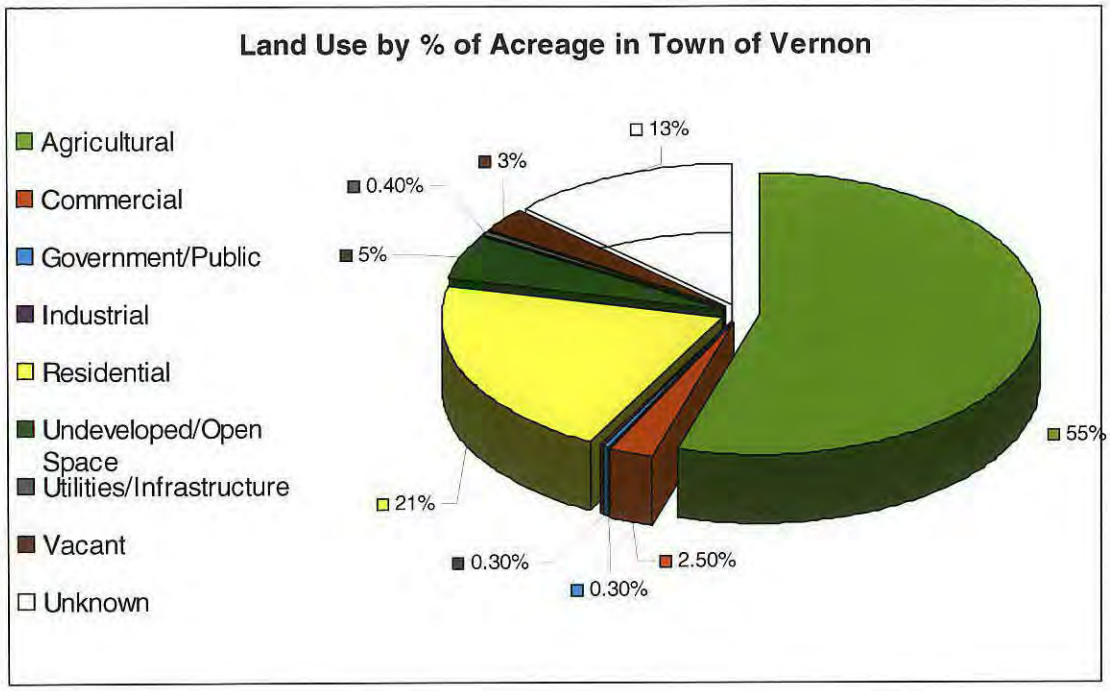
I:\Projects\800\859005\Projects\Final_NFL_Maps\Vernon_AgLandUse_figure5.4.mxd

could benefit from agricultural business. This is quite the contrary. In fact, for every dollar expended on local services, agriculture uses about 30 percent (.30) as compared to single-family residential land use. In fact, single-family residential development uses 124 percent (1.25 or more) for every tax dollar expended on local services.

Taking advantage of agricultural opportunities as they relate to economic development is in keeping with the Oneida County Farmland Protection Plan (OCFPP) of 2002. The OCFPP encourages towns to foster an economic climate that supports and promotes the retention and expansion of agricultural businesses within the county. This could be vital for Vernon's economic stability in the absence of a strong commercial or industrial base. Although commercial, industrial, and residential development pressure are likely to occur in the future as a result of spin-off development from the Turning Stone in Verona, it would still be desirable for the Town to promote agricultural awareness and economic development by taking advantage of their predominant resource – agriculture. This may be accomplished by focusing farmland protection efforts south of Route 5 and encouraging open space planning throughout the Town.

5.4.4 Other Land Uses

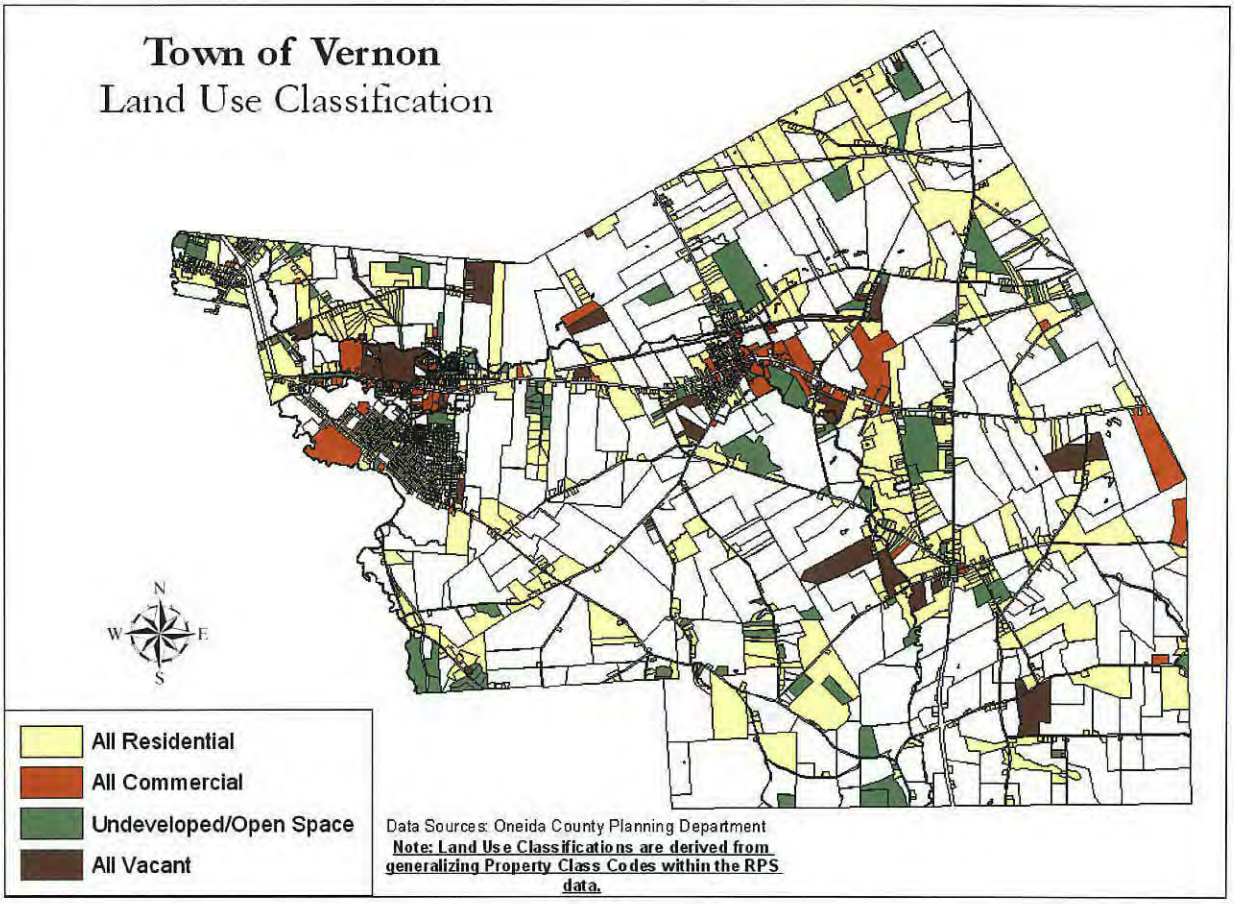
Other land use in Vernon includes industrial, vacant, undeveloped/open space, government/public, utilities/infrastructure, and parcels that currently have an unknown land use. The chart below summarizes the quantitative relationship of all land uses in Vernon.



To summarize, there are 31 government/public parcels in the Town. These uses consist of libraries, schools, churches, treatment centers, highway or any government office buildings, police and fire stations. These government/public entities only consist of .3 percent of the land area in the entire Town. Most of these are located within, or just on the edges of the Village of Vernon and City of Sherrill.

A combined 8 percent of total land acreage is vacant or undeveloped land and open space. These land uses appear similar as agricultural land on the surface; however, they are intended to be used outside of the agricultural realm. This land consists of large parcels within and around activity centers and adjacent to commercial and residential areas that could be strategic locations for commercial, office or industrial uses in the future. Many of the large parcels categorized as undeveloped/open space are in locations along the old rail bed and adjacent to Sconondoa Creek, making these parcels or portions thereof

desirable areas for parks, conservation areas, or for recreation trails. Preserving these areas could prove advantageous to build upon and enhance the Town's parks and recreations areas and/or to save for any potential economic development pressures that may occur in the future.



Vacant and Undeveloped Open Space Map showing Spatial Relation to Existing Residential and Commercial Development

Typically, when the demand for housing is present, a Town is approached by developers who want to subdivide and build on vacant or undeveloped land. By conducting an inventory of all vacant, undeveloped land and open space, it is clear that there are building lots available to developers. This is particularly obvious on the edge of the Towns activity centers where there is limited access to public water and sewer and access to local roads. It is important for the Town to consider development proposals for parcels with these land uses, and plan strategically to mold any new development (whether it be commercial, residential or industrial) into the existing fabric of the Town. Ideal locations for new development of any kind would be for those parcels within or adjacent to the Village of Vernon or the City of Sherrill. Encouraging new development in these areas would provide for logical extensions of growth from existing centers. It would also serve to preserve land and natural resources that can enhance these centers as "people places" and maximize the efficient use of any infrastructure already in place. Many of these vacant and undeveloped parcels front upon some of the Town's main transportation routes, so it is important to take into account how these corridors will be affected by growth. It is necessary to plan for future development and to distribute new growth to areas where adverse affects on land and roads can be minimized.

Breakdown of Land Use by Total Number of Parcels and Percentage of Total Acreage Town of Vernon

Land Use	No. of Parcels	% if Total Parcels in Town	No. of Acres	% of Total Acres in Town
Agricultural	320	8%	14,610	55%
Commercial	167	4%	653	2.5%
Government/Public	31	.7%	97	.7%
Industrial	9	.2%	69	.2%
Residential	2,387	60%	5,667	21%
Undeveloped/Open Space	224	6%	1,237	5%
Utilities/Infrastructure	25	.6%	109	.6%
Vacant	59	.2%	667	2%
Unknown	709	18%	3,360	13%

** These calculations are for the Town of Vernon including the Village of Vernon and the City of Sherrill. GIS parcel data for the Village of Oneida Castle was not readily available at the time this report was written.

5.5 Community Facilities and Services

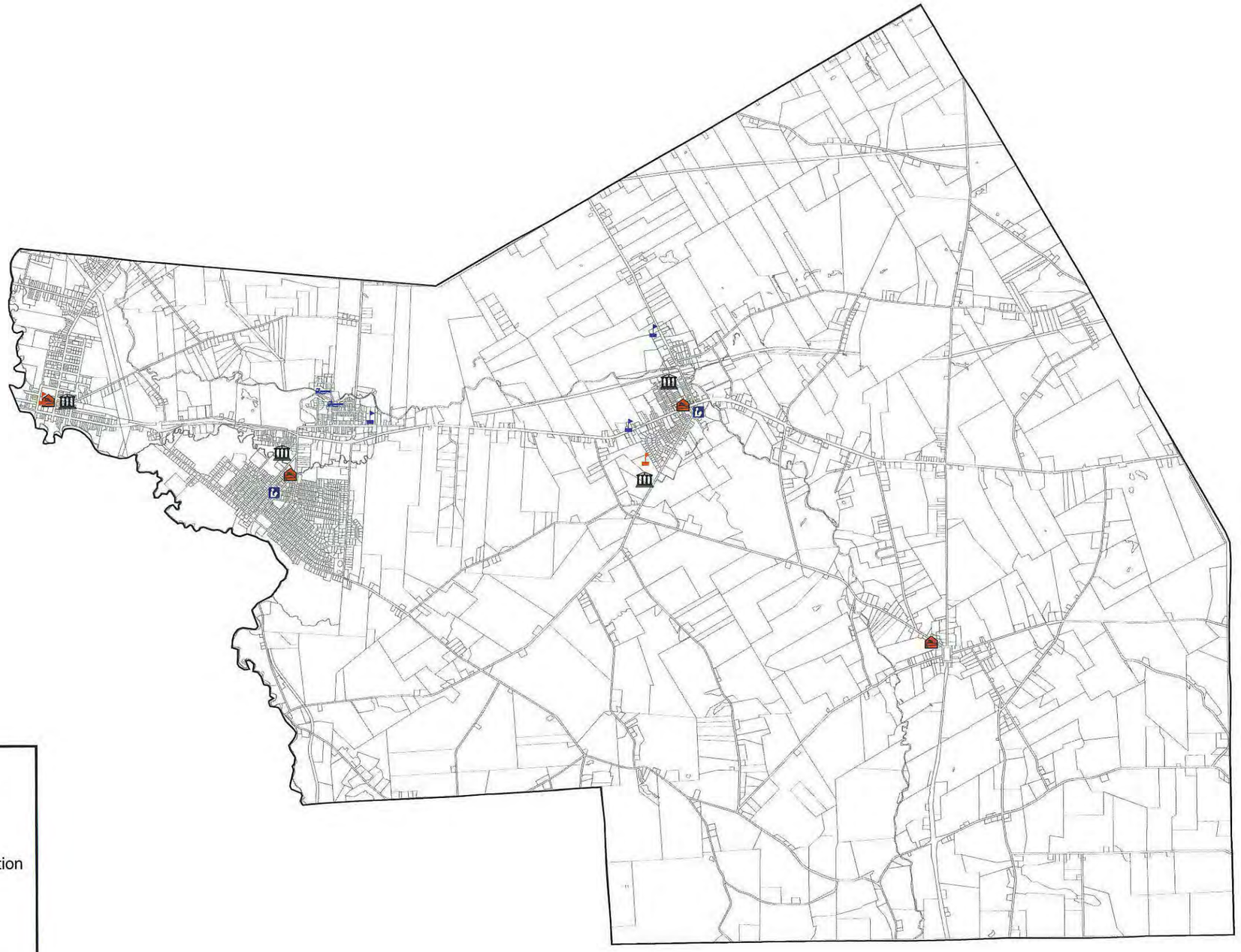
Community facilities are important for the life and health of a community. It is necessary to ensure that there is an adequate supply of appropriate land for community facilities to accommodate the changing needs of the Town. These types of uses typically include childcare centers, community activity centers, health facilities, churches, educational establishments, aged care and community theaters. Facilities can be provided by government and non-government agencies and may be either profit or non-profit.

5.5.1 Schools

Vernon Verona Sherrill is the primary public school in this part of the region for students from the Town of Vernon and Verona, including the City of Sherrill and a portion of the City of Oneida. Each municipality within the Town has its own elementary schools providing educational facilities within close proximity to their prospective location of residence **(see figure 5-5)**. Connecting these facilities to population centers with multi-modal routes may minimize transportation costs each school district would have to spend transporting students to and from school. With each municipality having its own elementary school, there lies an increased opportunity to provide parks and public open space within the community, that enhances the overall attractiveness of any potential trail system to link schools with populated areas (and neighborhoods).

5.6 Existing Land Use Regulations

Zoning and subdivision regulations not only establish procedures for controlling how land gets divided up, but also set standards for creating adequate building sites. They ensure that sites are adequately served by permanent roads, water supply, and proper means of waste disposal. These regulations are applied to specific development proposals so town officials have an opportunity to make recommendations regarding improvements before development takes place. The intent of this section is to summarize the Town's zoning and any land use regulations that affect patterns of development in Vernon.



Community Facilities

- Library
- School Facility
- Special School / Institution
- Highway Garage
- Office Building
- Life Safety Services
- Tax Parcels

Source: HOCPP(RPS Propoerty Class Codes)

Barton & Loguidice, P.C.
Engineers · Environmental Scientists · Planners · Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Community Facilities Map

Oneida County New York

Figure 5-5

Project No. 859.005

I:\Projects\900859005\Projects\Final_NRI_Maps\Vernon_Community_Facilities_figure5.5.mxd

5.6.1 Zoning **(see figure 5-6)**

Zoning is used to control the location of different land uses in a community. Historically, zoning was established to regulate land use so one does not adversely affect another. It was not the intention of zoning to completely isolate land uses from one another to the point where neighborhoods and commercial districts are pockets within themselves, creating voids of any sense of place.

Zoning is a tool to help restrict the types of uses to which land may be put and the intensity of the development. By regulating location, use, and density (intensity), zoning can have a significant impact on protecting critical features in a community like Vernon, such as farms, rural hamlets and villages, and historical or critical environmental areas.

The Town of Vernon is divided into the following zoning districts:

A	Agricultural District
R-H	Rural Hamlet District
R-1	Residential District
R-MHP	Residential/Mobile Home Park District
C-1	Commercial District
C-M	Commercial/Manufacturing District
P-D	Planned Development District
L-C	Land Conservation Overlay District
PDET	Planned Development District Entertainment and Tourism

Village of Oneida Castle

City of Sherrill

Village of Vernon

Legend

Stream

Current Zoning Districts

- (A) Agricultural
- (C-1) Commercial
- (C-M) Commercial-Manufacturing
- (P-D) Planned Development
- (R-1) Residence
- (R-H) Rural-Hamlet
- Land Conservation Overlay District
- Tax Parcel Boundary

Conservation Overlay District: 100 buffer around streams, floodplains & NYS DEC wetlands

DATA SOURCES: ONEIDA COUNTY REAL PROPERTY TAX SERVICE, NYS DEC, FEMA, CUGIR, TOWN OF VERNON

Note: Map discrepancy identified.

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Current Zoning Map

Oneida County New York

Figure 5-6

Project No. 859.005

The majority of the Town is zoned for agricultural use with the activity centers being the focal point of most zoning decisions thus far within the Town. Vernon Center is currently zoned as RH-Rural Hamlet that provides for pockets of moderately dense housing development while maintaining the overall rural character of the Town. Areas zoned for residential use are primarily located within the City of Sherrill, and the Villages of Vernon and Oneida Castle. Areas just on the edges of these activity centers are also either zoned for residential or commercial use, again, indicating that the intent of the zoning ordinance is for the logical extension of growth outward from existing centers. The only areas zoned for industrial use, here known as C-M or commercial-manufacturing, is located just east of the Village of Vernon. Vernon Downs Racetrack, just south of the Village of Vernon is the only land within the Town zoned for PDET – Planned Development Entertainment and Tourism District. The Village of Vernon and its proximity to Vernon Downs provides a mix of residential, commercial, industrial entertainment and tourism, providing a strong base of land use from which the Town can build on and grow in the future.

Based upon current zoning, the Town has made conscious efforts to preserve, enhance and build upon the abundance of natural resources by establishing a Land Conservation Overlay District. The purpose of this overlay district is to delineate areas of the Town with critical environmental features such as wetlands, floodplains, stream corridors habitat and unique aesthetic areas. This tool allows the Town's Planning Board to undergo a diligent review of any development proposals that may have an affect on any natural resources in the Town. Utilizing such a district in a strategic manner affords the Town opportunity to allow development while

building upon the character of the Town by preserving its natural features. It also provides for nodes and corridors to establish links between developments via pedestrian trails, and potential greenways.

The Town of Vernon has established Planned Development procedures that could allow for the planning and development of large, mixed-use areas of activity that considers the context of the community. To date, the only Planned Development in the Town surrounds Vernon Downs. By re-establishing Vernon Downs as a viable source of recreation, entertainment, and economic stability, the Town could potentially build upon Vernon Downs by incorporating mixed-use developments as extensions of the Village of Vernon, thus providing residents and visitors with attractions, shopping, jobs and general recreation and entertainment. Strategically implementing the Planned Development procedures as set forth in the existing zoning ordinance would allow for this type of activity.

5.6.2 Subdivision Regulations

Subdivision regulations are typically implemented as an added measure to help protect communities and ensure building lots provide a wholesome living environment for future residents. These regulations generally ensure adequate lot size, public access, and the availability of public services to each lot created. They also help to conserve natural, scenic, historic and recreational areas. It is necessary for future subdivision regulations to be in harmony with the recommendations of this Comprehensive Plan.

Whenever any subdivision of land is proposed in the Town of Vernon, and before any structure can be built on such subdivided land, a developer or land owner must apply for preliminary and final plat approval, showing how land will be divided. The subdivision must comply with requirements pertaining to street improvements, drainage, sewerage, water supply, fire protection and similar aspects of services.

In regards to recreation areas and open space created when the subdivision of land occurs, regulations typically specify relevant requirements as to the ownership and maintenance of these areas. This prevents the Town from having to maintain them, and carry the costs necessary to do so. Existing regulations regarding parks, recreation and open space are laid out as a provision to 'clustering' in section 114-11, which states that any plats showing land available for park, recreation and open space will be issued a set of conditions pertaining to ownership, maintenance and use as set forth by the Planning Board during the review process. This review is key so the Town does not acquire maintenance costs for such open space areas while providing open space planning techniques.

Subdivision regulations also typically address issues of access and layout of streets within the Town. The current subdivision requirements for Vernon address some of these issues, and should be encouraged to continually enforce these regulations in the future in order to preserve the function of local roads, collector streets and any arterials that may provide the safe and efficient flow of traffic throughout the Town. Diligently enforcing the proper zoning and subdivision regulations throughout the development process will help ensure activity does not adversely affect the local transportation network.

5.6.3 Relevant County Codes

Certain zoning and planning actions must be referred to the Oneida County Department of Planning as required by sections 239-l, 239-m, and 239-n of New York State General Municipal Law. Area and use variances, special use permits, site plan reviews, subdivisions, zoning map amendments, zone text amendments are among the actions subject to this review. However, the determining factors on whether these actions must be referred to the county are whether the actions affect property lying within 500 feet of: a municipal boundary; the right-of-way of a county or state highway; the boundary of any county or state owned property on which a public building or institution is located; or the boundary of a farm operation located within an agricultural district, as defined by Article 25-AA of the Agricultural and Markets Law (excluding area variances).

The Town of Vernon should keep this information in mind when applications for development projects are submitted to the local boards for review.

5.7 National Trends in Land Use Planning

Although it is clearly understood that there are problems associated with sprawl, it is still the most common type of new land development in and around central New York. Currently, there is a growing interest in land use, how it can be used, bought, sold, developed or preserved. In the Town of Vernon, proper land use planning can minimize the demand for sprawl by improving quality of life in centers of existing residential, commercial, industrial and agricultural activity so that people do not wish to flee to less settled areas. Edge, in-fill, and revitalization development in existing neighborhoods such as the Villages of Vernon and Oneida Castle, and the City of Sherrill can be planned and

strategically to accomplish this task. Other common land use planning practices that could benefit the Town of Vernon, have been highly regarded, and are successfully proven planning tools are explored below.

5.7.1 Promoting Safe and Strategic Circulation Patterns

In the past, the majority of development in Towns such as Vernon has been based on the use of the automobile. Patterns have transitioned to spread-out, low-density forms of development. These patterns have largely ignored most other forms of transportation such as transit, biking and walking. As discussed in the Transportation section of this plan automobile dependency results in higher volumes of traffic, congestion, potentially haphazard circulation patterns, and pollution.

All modes of transportation are important to any community and can be enhanced through well designed development techniques. Existing land use and transportation assets should be protected by implementing appropriate land use practices, site design guidelines, and access management tactics.

State Routes 5, 365, 31 and 26, in the context of county and local roads create a defined hierarchy for land development and settlement patterns. Traffic congestion and unchecked development should be minimized by balancing and distributing of land uses, access management controls, and site specific designs to protect right-of-ways, level of service and capacity. It is important for each road within the overall transportation system to be viewed as a unique land use which must be compatible with adjacent uses in scale, intensity and access (context). A well-planned and designed network of roads and their relationship to adjacent land uses can enhance traffic mobility, livability of neighborhoods and viability of

businesses. Being conscious of development patterns within and around these major highways, providing access at a neighborhood scale to surrounding services, and establishing a strategic network of interconnected streets could help minimize travel and trip length. This would distribute lower volumes of traffic over more streets, thus, preserving corridor functionality and maximizing quality of life within adjacent land uses.

The Town of Vernon should anticipate spin-off development proposals in the future as a result of venues like Vernon Downs and the Turning Stone. This development will need to be approached with the establishment of access management techniques regarding street connections between neighborhoods, sidewalks, bike lanes, pedestrian paths and land uses adjacent to neighborhoods that will promote convenient and effective access to parks and recreation. The pattern of driveways, retail site entrance roads and intersections are a key site design and subdivision element that need to be considered when reviewing all project proposals in the Town.

5.7.2 Smart Growth and Sustainable Development Patterns

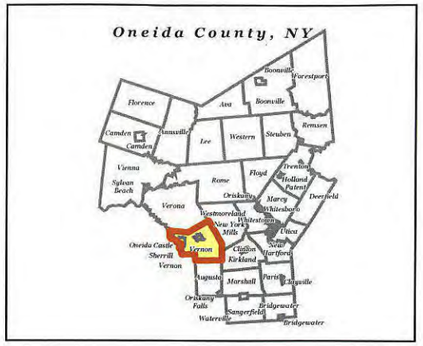
The majority of land in the Town of Vernon remains an undeveloped rural landscape with small areas of scattered development surrounded by farms, woodlands and open space. All of this farmland and open space within the Town forms a continuous, productive landscape with small fields providing important wildlife habitats. The character of the existing rural environment is a very important asset to the Town of Vernon. Future residents and officials should be encouraged to establish and build upon smart growth concepts and sustainable development patterns.

Establishing an appropriate balance between smart growth and sustainable development will provide an opportunity to balance natural resources and public investment, siting in appropriate areas, minimizing loss of available agricultural resources while ensuring the long term desirability and viability of the Town **(see figure 5-7)**.

The concept of smart growth as it pertains to Vernon would embody objectives such as encouraging mixed land uses in existing centers of activity in the Villages of Vernon and Oneida Castle as well as the City of Sherrill. Utilizing these assets and encouraging growth in existing communities will help preserve open space, farmland, natural beauty and critical environmental areas. It will also minimize implementation costs of expanding public utilities and infrastructure to outlying areas. With strategic land use planning in place, these practices could help guide the Town toward achieving sustainable development patterns. It would also ensure that proposed projects are designed with the elements to create and sustain a long term quality of life for future generations.

5.7.3 Consideration of Environmental Constraints

Consideration of environmental constraints in land use planning efforts is the first step in the planning for any type of new development. Identification of areas where vital natural resources and environmental constraints exist will lead to more sustainable development patterns. Even within a particular project site, some areas may be more suitable for development while others should be left as permanent open space.



Legend

- Activity Concentration Area

Roads

- Local Road
- County Road
- New York State Route
- Tax Parcel Boundaries

Sources: NYSDOT, Oneida County

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Activity Concentration Areas

Oneida County New York

Figure 5-7

Project No. 859.005

I:\Projects\859\859.005\Projects\Vernon_road_juris_fig4.1

New developments that are mindful of environmental features and designed to fit within the natural landscape prove to be more feasible. In the short run, implementation of infrastructure can be less costly when there are minimal major environmental constraints to overcome that require special engineering. In any case, complying with existing environmental features can yield opportunities to create a setting that is appealing to residents, functional, and sensitive to the Town's natural environments yet are functional and cost effective. An appealing environment should have a natural effect on economic development as quality of life issues are major economic development enticements.

5.7.4 Regional Land Use Planning

Municipal boundaries are arbitrary and the Town should explore efforts to plan beyond its boundaries, particularly the northern and western borders, due to the Town's proximity to the City of Oneida and the Turning Stone. Strategic regional land use planning will help Vernon concentrate efforts on preserving an appropriate amount of open space, developing the most viable areas with compatible inter-municipal land uses and accommodating these areas with strategic and cohesive plans for transportation, infrastructure and community services.

Establishing inter-municipal relationship with the county and adjacent towns will help regulate development along the Town's boundaries at the regional scale. With concentrated efforts from State and County agencies and neighboring towns, officials can work in concert to maximize future economic development potential within the region.

5.7.5 Strategic Economic Development Practices

The loss of agricultural farmland and existing open space can often cause some unexpected economic challenges for rural communities such as Vernon. In these areas, farmland, open space, and potential recreation areas tend to be economic drivers that could attract businesses, residents and tourists. Sprawling development as a result of uncoordinated land use planning will compromise the resources that are inevitably the core of the community's economy. This type of development rarely spurs the economic benefits anticipated, which is why it is extremely important to preserve lands in areas that will be defined as potential hubs for future agriculture, commercial, residential and industrial activity. It is important to implement strategies that will cohesively fit those uses into the rural fabric of Vernon.

Costs of Community Service (COCS) studies conducted in more than 83 communities show that owners of farms, forests, and open lands pay more in local tax revenues than it costs local governments to provide services to their properties. Residential uses in areas with no public utilities, in contrast, are a net drain on municipalities: it costs local governments more to provide services to homeowners than residential landowners pay in property taxes (COCS Facts Sheet).

For rural communities such as Vernon, practicing smart growth and strategic economic development means supporting commercial cores and such as Villages of Vernon, Oneida Castle, and the City of Sherrill. This is accomplished by attracting and encouraging growth and investment in and adjacent to these existing neighborhoods in an effort to preserve and enhance the rural character of the Town. In contrast, a lack of strategic land use planning efforts to manage commercial growth along highways

draws economic activity away from existing centers. This can eventually reduce commercial viability and dramatically increase infrastructure costs. Smart growth and strategic economic development, however, simultaneously preserves open space and farmland while ensuring that there is an adequate supply of housing for families with a mix of incomes and provides the economic climate for a mix of retail, offices, restaurants and other services that residents can access by automobile, bus, bike, or foot.

Economic development in rural areas such as Vernon poses special circumstantial challenges because of its geographic location and sparse population. The lack of adequate infrastructure, difficulty in accessing resources and professional services, lack of access to capital, and proximity may constrain local finances to local market centers. In recent decades many communities in New York State have tended to fall into two broad categories when dealing with rural economic development strategies, they include:

1) Attracting businesses to the area or deter existing companies from relocating by developing industrial parks and offering tax abatements and other financial incentives, and;
2) Stimulating the creation or expansion of small businesses through micro-enterprise, business incubator, and related programs.

In the wake of the decline in former industrial and manufacturing, sectors of the economy in the northeast, smaller communities are generally move successful in pursuing the later strategy.

The quality of life offered in Vernon can be an important competitive advantage when it comes to economic development. This may be a key strategy to attracting new investments and quality jobs.

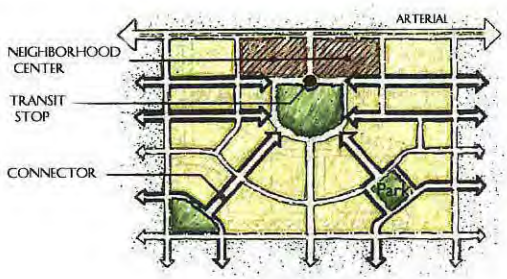
5.7.6 TND vs. CND

The purpose of this section is to address the distinctions between two different models of growth communities in central New York have experienced: the *Traditional Neighborhood* and *Suburban Sprawl.* These two models are polar opposites in appearance, function, and character: they look different, they perform differently, and they affect residents in different ways.

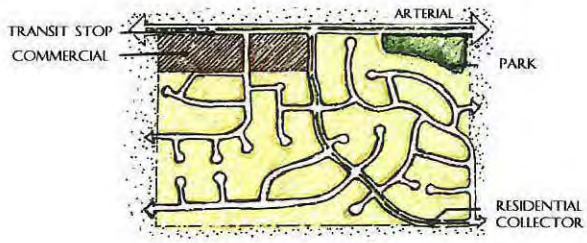
The *traditional neighborhood* was the fundamental form of settlement through the Second World War. It continues to be the dominant pattern of growth outside of the United States, as it has been through history. The traditional neighborhood — represented by mixed-use, pedestrian-friendly communities of varied population, either standing free as a village or grouped into towns and cities — has proven to be a sustainable form of growth. It allowed us to settle the continent without bankrupting the country or destroying the countryside in the process.

Suburban sprawl, now the standard North American pattern of growth, ignores historical precedent and human experience. It is an invention, conceived by architects, engineers, and planners, and promoted by codes developers and codes from World War II to the present. Unlike the traditional neighborhood model, which evolved organically as a response to human needs, suburban sprawl is an idealized artificial system. Unfortunately, this system is showing itself to be unsustainable within a very short period of time. Unlike the traditional neighborhood,

sprawl is not healthy growth. Even at relatively low population densities, sprawl consumes land at an alarming rate and places a greater burden on local services, while producing traffic problems. These particular outcomes were not expected. Neither was the toll that sprawl exacts from America's cities and towns which continue to decant slowly into the countryside. As the ring of suburbia grows around most of our activity centers, the quality of life within those centers begins to decay.



PREFERRED



DISCOURAGED

Municipalities, developers, designers, and citizens are all faced with a choice: to continue to grow along the suburban sprawl model, or to reintroduce the principles and techniques of traditional neighborhood design. Whether America grows into a placeless collection of subdivisions, strip centers, and office parks, or a country of real towns with real neighborhoods, will depend on whether people understand the difference between those two alternatives.

5.7.7 Preserving the Rural Economy and Natural Resources Through Strategic Infrastructure Planning

The Oneida County Farmland Protection Plan recognizes the protection of the rural economy and natural resources as a policy for community investment and an important element in the planning process. In order to protect natural resources in the Town of Vernon from future

development pressures, strategically planning for and implementing public sewer and water should be taken into great consideration. Any expansion of public services is likely to attract different types of development with different consequences if not planned for accordingly, and care should be taken to avoid extending public water into predominantly agricultural areas.

5.8 Framing Primary Issues Pertaining to Land Use Planning

5.8.1 Land Use

As an entity of local government, the Town of Vernon must be concerned with the details of future land use proposals. The Town must take a generalized view of land use issues and concerns regarding patterns of development and take into account density of development, relationships to surrounding development, and visual impacts that development can have on a community. These three elements transcend municipal boundaries and could provide a basis for evaluating the impacts of future development.

From the perspective of community growth, a specific land use has typically has less of an impact than the overall location and density of development. Over time, sophisticated environmental reviews have given local planners another tool to review the economic and environmental impacts of a proposed land use. In practice, those reviews have been concerned primarily with the effect of development on natural resources.

Strategic land use planning should place emphasis on existing centers, corridors and open space as the proper matrix for community growth and as an added assessment tool. For example, the siting of a

proposed land use outside of an existing center such as the Villages of Vernon or Oneida Castle may be compatible with planned density recommendations (with surrounding land use) but may have an adverse impact on a nearby neighborhood, activity center, or may reinforce a detrimental use in a particular corridor.

5.8.2 Adaptive Reuse

The efficient use or reuse of commercial space in economic downturns may contribute more to a community's economic health and to the convenience of the Town's residents than new office buildings or retail outlets on land where additional infrastructure would be required. Or, adding a residential component to a corridor already preserved or developed for office and commercial use may do more for that corridor's appearance and economic vitality than scatter site housing introduced in agricultural fields in the Town's hinterlands.

5.8.3 Activity Centers

Existing activity centers such as the Villages of Vernon and Oneida Castle, as well as the City of Sherrill, with their infrastructure, population concentrations and mix of uses, often provide the very resources on which the local economy must depend. When these centers can accommodate development, the scattered siting of commercial and residential uses across the Town's agricultural landscape becomes less likely. The same benefits accrue when strategic development of corridors can support housing and other uses that help them function as mini-centers linking the Town's populous together. Three basic elements of land use that have become common review measures are explored here.

The concept of density is a key aspect of land use planning for any community since it determines the point at which certain Town provided facilities such as public water and sewer lines are needed, or services such as public transportation can be supported. The highest levels of density should typically relate beneficially to the Town's centers or to corridors suitable for enhancement as mixed use areas.

Density may be expressed as a ratio of residential units or floor area to a unit of land area, usually an acre. These ratios relate this plans density recommendations to any recommended changes to the Town's zoning ordinance. Ranges of recommended density will be defined in the recommendations section of this report.

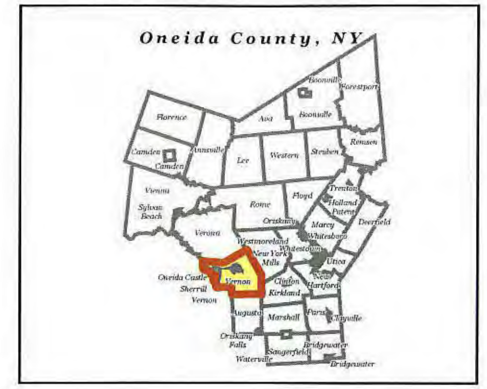
5.8.4 Contextual Relationships to Surrounding Development

The impact that a particular use has on its surroundings is of area-wide significance. Although a use may have a density compatible with planning recommendations, it generates traffic, produces sewage or consumes water that may overburden the area infrastructure and markedly alter any established community character that may exist. The use also may have adverse economic impacts on existing centers.

Conversely, new development or redevelopment of facilities in aging parts of the Town may add to overall vitality and spark other investment. The addition of multi-family housing to corridors already developed or planned to be developed with office or commercial uses could capitalize on existing infrastructure without adding significant demands and help create mini-centers. Such developments can enhance any opportunities that may be necessary for public transportation services, and bicycling and pedestrian movement.

5.8.5 Visual Impacts

Development can be evaluated through its impact on the form and appearance of the landscape. A building set in a green and shady framework may not change the viewer's perception of the area's open space character. Good design for new public buildings and respect for the historical architectural character of the area reinforce the quality of the Town's existing activity centers. Design elements are an integral part of planning for any projects within a Town such as Vernon, in keeping with the Town's goal of maintaining the rural character of the Town while moving toward an economically sound future.

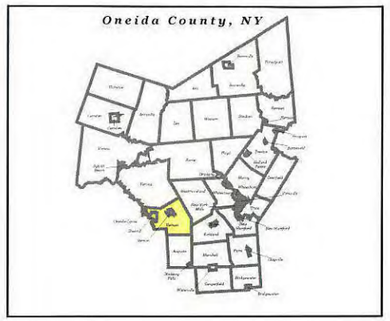


FIRE DISTRICT MAP TO BE INSERTED
AS CURRENTLY BEING REVISED
BY TOWN OFFICIALS

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

0 0.25 0.5 1 Miles

Town of Vernon	8/17/05	Figure A
Area Fire Districts		Project No. 859.005
Oneida County	New York	



Legend

Tax Parcels by Acreage

ACRES

- 0-20
- 20.1-50
- 50.1-100
- >100
- Tax Parcel Boundary

Sources: HOCPP

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

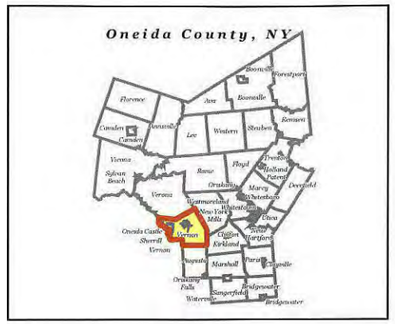
Parcel Acreage

Oneida County New York

Figure B

Project No. 859.005

\\Projects\000\859\005\Projects\mxd\VH_Maps\Vernon_Parcels_acreage_figures.mxd



Legend

- Oneida Nation Territory
- Tax Parcel Boundary
- Hydrography

DATA SOURCES: HOCPP(2004 RPS DATA)

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

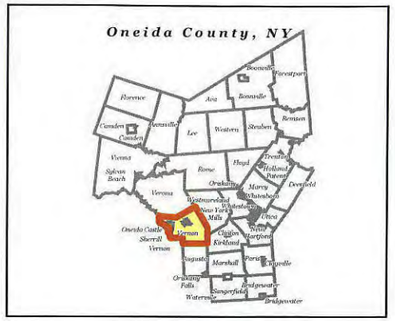
Town of Vernon 8/17/05

Oneida Nation Lands

Oneida County New York

Figure C

Project No. 859.005



Legend

Tax Parcels

Agricultural Districts

Distrcict #

- 6
- 9
- 16
- 17
- 66

Sources: New York State Agricultural Districts Mapping Program, HOCPP

Barton & Loguidice, P.C.

Engineers • Environmental Scientists • Planners • Landscape Designers

N W E S

0 0.25 0.5 1 Miles

Town of Vernon 8/17/05

Agricultural District Map

Oneida County New York

Figure D

Project No. 859.005

I:\Projects\860\859005\Projects\Final_NRI_Maps\Vernon_ag_dists_figureD.mxd