Town of Minden

Draft Comprehensive Plan

July 2012

Prepared by the
Town of Minden Planning Board

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Acknowledgements

Town Board

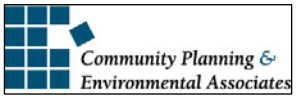
Thomas Quackenbush
Janice Zoller
KarolAnn Grimm
Douglas Simmons
Stephen R. Heiser
Janet Trumbull, Town Clerk

Planning Board

James Welch, Chairman
Keith MacGregor, Secretary
David Rivkowich, Member
Al Florian, Member
Joshua Welch, Member
Christopher Patterson, Member
Diane Raffa, Member

Consultants

Community Planning & Environmental Associates, Berne, NY
Nan Stolzenburg, AICP CEP
Don Meltz, AICP



Steve Winkley, New York Rural Water Association

Part I: Introduction and the Planning Process

A comprehensive plan is a written document that identifies the goals, objectives, principles, guidelines, policies, standards, and strategies for the growth and development of the community. It is designed to answer three critical questions:

- Where are we now?
- Where do we want to be?
- How do we get there?

The town is authorized to develop and adopt a comprehensive plan by New York State Town Law Section 272-a. New York State considers adoption of a comprehensive plan to be a critical tool to promote the health, safety and general welfare of the people of the town and to consider the needs of the people. A comprehensive plan is the policy foundation upon which communities are built. Once a comprehensive plan is adopted, there are several implications:

- All government agencies involved in planning capital projects in Minden must consider this plan before they start any capital project. That means the Town has a stake in what other governmental agencies want to do when they are proposing a project in Town.
- In New York State, all land use regulations must be in accordance with a comprehensive plan (Section 272-a). The plan is the basis for regulations. All land use laws should be reviewed, and updated where necessary to be in accordance with this plan.
- Programs and regulations may be adopted to implement the plan to protect the Town's resources and encourage desired development and growth.
- Community consensus and support can be built on the shared vision, goals, and strategies presented in the plan.
- Comprehensive plans are also important documents to help the Town be successful in obtaining grant monies to implement items contained in the Plan.

The Planning Process

In the July of 2010, the Minden Town Board began a planning process to update the existing Town Comprehensive Plan. They assigned updating of the existing plan to the Minden Planning Board and hired a planning consultant to assist them in developing the draft plan. The Planning Board had previously conducted a survey of the residents and augmented that public input with two focus group meetings with area farmers, and a public workshop. Together, this public input provided the basis for the development of the vision and goals for the Town outlined in this Plan.

Town Input and Data Collection

The issues, goals and recommended strategies detailed in this comprehensive plan are also based on new information gathered about the Town of Minden, new public input,

and relevant information from the old plan. Specific sources of information used to prepare this plan included:

- Background studies of land use patterns in Minden, including a build-out analysis
- Population and demographic information
- Housing (number of units, type of units, etc)
- Community facilities and services
- Transportation resources
- Recreation and educational resources
- Public safety programs
- Environmental conditions of the Town
- A groundwater study
- Analysis of the regional growth patterns and trends that have affected, and will continue to affect the area's growth.
- 2000 Town of Minden Comprehensive Plan

Organization of Plan

Part I: Introduces the planning process used to update the Comprehensive Plan and outlines the community strengths and weaknesses.

Part II and III: Part II of the Plan re-affirms and establishes the vision and goals for the Town and then offers a series of recommended actions that the Town can take in the future to accomplish each goal contained in this plan. Part III also helps the Town Board implement the plan by offering priorities, time frames, and identifying assistance needed. These two sections answer the "where do we want to be" and "how do we get there" questions. These parts answer the "*Where does the Town want to be in the future and how do we get there"* questions.

Part IV and V: The profile and inventory of resources along with and public input sections (found in Part V) answers the "where are we now?" questions. These sections describe current conditions, demographics, physical and cultural features, and information from the residents.

This Plan is Not a Law

This comprehensive plan is not a local law. The recommendations made in this Comprehensive Plan will not take effect <u>until</u> the Town Board decides to act on them. This Comprehensive Plan will be implemented through local laws and programs over time. For any of the zoning change recommendations to take effect, the Town Board will need to develop a local law to amend the zoning, and follow the normal procedures that include public hearing(s), review by the county planning board, and an environmental review.

As per NYS Town Law 272-a, this Plan should be reviewed and updated by the Town every five years to ensure that it remains up-to-date and useful to address current conditions and needs.

Historical Background on the Town

The Mohawk Indians were the first inhabitants of the area that is now the Town of Minden. The Mohawk Indians belonged to what the British called the "Five Nations," or the French called the "Iroquois Nation." The other tribes of this Nation were the Oneidas, Onondagas, Cayugas, and Senecas; the most eastern tribe was the Mohawks. The Mohawks controlled the area from Albany westward to the Susquehanna and Delaware Rivers, and as far north as the St. Lawrence River. The Mohawks and their fellow tribesmen would come to play a legitimate role throughout the Mohawk Valley during America's war for independence.

The first known white settler to settle in the Minden area was Jacob Crouse, around the year 1720. The earliest white settlers were Palatine German farmers who migrated from Schoharie and settled in the area called Dutchtown. These earliest settlers had very few skills and most of their necessities were most likely bought from Schenectady. They were an illiterate people and had no schools, few books, and no newspapers.

This part of the valley that became the Town of Minden was very sparsely inhabited prior to the American Revolution. The first store, which was also used as a trading post, was opened by William Seeber in 1750, near the Sand Hill area. Around this time, in the Sand Hill area, the first church was erected and called the Reformed Dutch Church of Canajoharie. This church was burned down in 1780 during the Revolution.

In 1772, Tryon County was formed from the westernmost part of Albany County. This new county was divided into five districts, and Minden fell into what was then called the "Canajoharie District."

As the American colonists began to question British rule and the American Revolution began, the Mohawk Valley saw frequent clashes between the Loyalists and the Patriots. By the time the Revolution began, the majority of the people within the Minden area were sympathetic with the Yankees. On June 2, 1775, the Canajoharie District sent representatives to Cherry Valley and met with other districts of Tryon County to adopt measures to protect the settlers of the County during the Revolution.

By 1777, there were five well-established forts within the Town of Minden. The forts included Fort Plain, Fort Planck, Fort Clyde, Fort Willett, and Fort Windecker. All of these forts were within five miles of Fort Plain, one of the main defensive forts of the Mohawk Valley during the Revolution. Fort Planck was located roughly four miles to the southwest of Fort Plain, and Fort Clyde was located a few miles to the southeast in the

Hamlet of Freysbush. Fort Willet was located in the Dutchtown area, and Fort Windecker was farther to the west in the Mindenville area. All five of these forts became places of refuge for area settlers during raids by the Tories and Indians.

Many destructive raids throughout the valley occurred during the Revolution. One of the more destructive of these raids occurred in 1780 under the command of Mohawk Indian Chief Joseph Brant. Joseph Brant led a group of Tories and Indians down the Otsquago Creek and into the valley on August 2, 1780. They ravaged the Dutchtown and Fresbush sections and terrified the families of the area into fleeing to Fort Plain.

The Revolution in America had a great impact on the Mohawk Valley and especially on Tryon County. Whole families were wiped out, and mothers were left without their husbands and sons at the end of the War. In Tryon County alone, it was estimated that only about 800 of the more than 2,500 militia men were left. It was estimated that one-third of them had been killed or made prisoners, one-third had abandoned the County, and the other third had gone over to the enemy. It should be noted that near the end of the Revolution, General George Washington visited Fort Plain in the summer of 1782 on a tour of the frontier posts of New York.

On April 2, 1784, Tryon County was renamed as Montgomery County in honor of General Richard Montgomery who had died in the War. Fourteen years later, on March 2, 1798, the Town of Minden was formed from the Canajoharie District. The Town was made up of all of, or portions of, the patents of Herkimer, Bleeker, Glen and Gunterman Tract, Lovering, Livvingston, Otsquago, Van Horn, and Windecker. It is believed that the name of Minden derived from a Minden in Germany from which many of the settlers had come. The Town of Minden lost part of its original area in 1817 when a part of the Town of Danube was taken off.

Major transportation routes led to the early development of the Town of Minden and especially to that of the Village of Fort Plain. Before the Town of Minden was established, the area developed economically because of its trade route connections with Cooperstown, Otsego Lake, and the upper Susquehanna region. With the completion of the Erie Canal in 1825, the Town of Minden, and especially Fort Plain, benefited economically from this new water route. New merchants began to arrive and settle along the route, and, at one time, the canal docks at Fort Plain were among the busiest in the County. The West Shore Railroad opened in 1883 and allowed the Minden area to gain further economic benefit from another transportation route. Today, the Mohawk River Barge Canal runs along the Town's northern border and sees thousands of recreational boaters each year.

Throughout the 19th century, the Town of Minden maintained steady population growth. In 1830, the Town, including the Village of Fort Plain, contained 2,567 people, and by 1890, it had a population of 5,198. At the beginning of the 20th century, the Town's population began to decrease, and by 1920, it was 4,366.

The Town of Minden has six hamlets: Hallsville, Mindenville, Freysbush, Fordsbush,

Salt Springville, and Brookman's Corners. Hallsville was named after a pack peddler called Robert Hall, who, at one time, operated four stores, a brewery, and a distillery. The Hamlet of Freysbush is one of the oldest settlements in the area.

Community Strengths and Weaknesses

Based on new input from the community and re-evaluation of information on resources and conditions in Minden (summarized in Part IV), the following strengths and weaknesses have been documented. This is important information because the remainder of the plan helps Minden determine how the strengths of the Town can be maintained, and how the weaknesses can be minimized or eliminated.

Strengths – Features that should be preserved in Minden

Agricultural Land Uses, agricultural businesses[1]
Amish Farms/Businesses
Beauty and Scenery
Bike trail
Convenient to travel
Emergency personnel and equipment
Four seasons
Good place to raise children
Good school system
Historic sites and buildings - churches, barns, Otsquago Bridge
Low population density
Location to Capital District, Adirondacks, Central NY, etc
Low Crime Rate
No traffic
Open spaces
Parks
Peace and quiet
People
Privacy
Reasonable land prices
Recreational – hunting, fishing, snowmobiling
Rural character and Small town feel
Town government
Town roads
Wildlife

1 Indicates that these features were identified by the public as among the top five positive features of Minden

Weaknesses – features that should be minimized or eliminated in Minden

Abandoned houses, poorly maintained
Agriculture is going away
Bedroom community not the answer
Bright night lighting
Camper permits
Code enforcement is affecting us negatively
County roads are bad
Creek regulations[2]
Do not market our natural resources
Excessive junk on property, garbage along roads
High property taxes
Lack of ag-related businesses
Lack of business (small) and jobs
Lack of incentives for environmentally green businesses
Lack of recreation for teens
Lack of using historical assets
Limited to no opportunity for children
Negatives of Village of Fort Plain spread to town
No community events
No comprehensive plan
No cut off for HUD homes
No industry (including windmills and cell towers)
No jobs/shopping
No larger commercial properties
No or minimal water sources in rural area
Noise, odor, dust, etc.
Not attractive to young professionals
Not business friendly
Not enough commercial business
Not ready for global foundries, bedroom communities
Poor road conditions
River front development – double locks
Substandard housing
Taxes
Unmarked slow moving vehicles
We are a depressed area
We are crisscrossing services Town and County

2 Indicates that these features were identified by the public as among the top negative features of Minden

Part II: Vision, Goals and Actions

Minden's Vision

In the future, the Town of Minden will be a place that has preserved our rural, historical and agricultural heritage and character. As a community, we will continue to value and protect our scenic beauty, quiet atmosphere, open spaces, and clean natural environment. Our local economy remains rooted in a diversity of agricultural operations and related businesses, and small businesses. This will help us preserve important community assets while promoting a sustainable and local economy.

The Town will provide opportunities for small businesses and carefully developed commercial uses in a way that builds on and preserves our community character. This will include tourism-related businesses that take advantage of our assets especially our open space, beauty, highway access, and our location in the Mohawk Valley as a gateway to the Otsego/Cooperstown area.

Minden will remain a family-oriented community that has a safe and peaceful setting, excellent schools, and a diversity of recreational opportunities for young and old. We will have well-maintained structures and properties. Minden will provide for quality and well-maintained infrastructures including those that embrace new technologies and use alternative energy sources. This infrastructure will support a diversity of farms, small businesses and low-density housing in a "green" and sustainable manner.

We will be a vital community that continually works to balance the old and the new and the built and natural environments. People and families of all ages and income levels find Minden an attractive place to live.

Long Term Goals for Minden

The 2000 Town of Minden Comprehensive Plan established six goals for the community. These are:

1. To Protect and Maintain the Town of Minden's Agricultural Industry and Lands

2. Maintain and Enhance the Aesthetics of the Town

3. To Advance the Protection of Natural Resources in General

4. Cooperate with Town's Adjacent Municipalities and With Montgomery County

5. To Promote Small Scale Tourism

6. Continue and Open Dialogue on the Future of the Town of Minden

Goal 6 of the 2000 Plan also called for the Town to take into account residents feelings with regard to the future of Minden by update the plan every five years. This update implements that objective.

Based on new information that includes the 2009 survey, public input received during the planning process (2011 farmer workshops and public workshop), analysis of current information about the Town resources and maps, and input from the Planning Board, the following major topics were identified as being very important to the Town of Minden.

All the plan recommendations are organized to address one or more of the following topics:

- Agriculture
- Environmental Resources
- Economy
- Rural and Small Town Character
- Recreation and Cultural Opportunities
- Infrastructure
- Government Services

Several goals have been established to address each of these topics. The table below identifies the specific direction Minden desires to achieve, preserve, avoid, or eliminate in Town.

Goals: The Town of Minden wants to achieve…	Goals: The Town of Minden wants to avoid…
More farms and agriculturally related businesses	New development that does not fit in with rural character
A better understanding and appreciation of agricultural practices in the Town by the general public	New development that negatively impacts the environment
An overall low-density residential development pattern with more concentrated residential development that is located near Fort Plain	Over development
Excellent quality and quantity of groundwater resources	Need for water and sewer districts
A prosperous, sustainable, local economy that offers locally produced food and other products and more jobs to keep and attract young families here	Lights and glare, noise, odors, dust and other nuisances that would change the character of Minden
An increased appreciation for the historical resources in Town and development of a historical waterfront area for recreation and cultural opportunities	Traffic and traffic conditions that damage local roads
Additional small-scale business development located in specific and appropriate areas.	Land prices that make it unaffordable to live here
Goals: The Town of Minden wants to achieve…	**Goals: The Town of Minden wants to avoid…**
More tourism and tourism related businesses, especially related to the waterfront	Loss of farms and farmland
More senior housing and services for an aging population	Business or industrial development in inappropriate locations
High speed internet and other telecommunication technologies that support residents, home businesses, and new small businesses	Being a bedroom community only
Additional light- industrial development in appropriate, but limited locations	Home occupations that become too big in scale or intensity for a rural community or that have negative impacts on neighbors and town character
Shared services with other towns to be more efficient in use of tax dollars	Limiting viable secondary small-scale businesses on rural properties

More recreational opportunities	Industrialization of the town from large-scale activities such as natural gas drilling
More local law enforcement	Losing more school aged children
More business friendly procedures	
A better impression of our community and have gateways be more attractive	
Better road maintenance	
Energy efficiency especially in our municipal facilities	
Goals: The Town of Minden wants to preserve…	**Goals: The Town of Minden wants to eliminate…**
Farmland and farm businesses	Junk, messy roadsides
Rural character, open spaces, the small town feeling with friendly people and a strong sense of community	Unkempt houses, structures, properties
Natural beauty and scenic views	High taxes
Peace and quiet	Abandoned houses
A clean environment and our natural resources including streams, rivers (Otsquago Creek, Mohawk River and its tributaries, wetlands, floodplains, woodlands, stream corridors, etc)	Substandard housing
Our low crime rate and our safe community by having an adequate fire and other emergency services.	Negative viewscapes
Goals: The Town of Minden wants to preserve…	**Goals: The Town of Minden wants to eliminate…**
Historical sites and features including cemeteries	Depressed feeling of area
A good school system	Bad roads
Outdoor recreation	Problems that farmers have with perceptions and attitudes of non-farmers
Ability to have low-impact home occupations	

While the original six goals of the 2000 Comprehensive Plan remain important and valid, this Plan update expands on them and offers more details on what the Town would like to preserve, eliminate, achieve, and avoid in the future. This update is designed to give the Town more specific actions and implementation steps in order to achieve the vision and goals.

Recommended Actions

In order to attain the community vision and goals outlined in this Plan, the following actions and strategies are recommended:

A. Agriculture

Goal - Maintain farming as the primary industry of the Town and promote the preservation of farmland.

Issues – Agriculture, especially dairy is the dominant land use in Minden - 67% of the total land area of Minden is in agriculture. Farming is very important to the local and regional economy, and also contributes to the character of the town and the environmental health and diversity of the area. Tourism and many forms of outdoor recreation also depend on agriculture. Over the past few years, Minden has had an increase in the number of farms as Amish have moved in, but these farms are often smaller in size. Overall, the trend has been for smaller overall sales as well. Dairy production however, has increased. The community highly values agriculture and wants Minden to remain a farm community. Threats to farming come from subdivision and building activity, farm incomes that are often too low to sustain farm families, and an aging farm population.

Highlights of Recommendations – Minden can ensure that land use regulations in Town are farm friendly, that agriculture is welcomed and promoted, and that farmlands are protected for continued agricultural use. Recommendations in this Plan center on updating zoning and subdivision to be farm-friendly so that new farm operations and supporting businesses are allowed, that impacts of new development on adjacent farms are minimized, and that farmland is maintained when possible through techniques such as the conservation subdivision design or through other innovative regulations such as use of an agricultural overlay district.

1. Update land use regulations in town to ensure they are farm-friendly and that new development is compatible with agricultural operations.

    a. Help make the zoning more farm-friendly by including definitions for agriculture-related terms. Update the definitions to include terms such as agriculture, agri-tourism, and agri-business to ensure that all agricultural-related terms are included. The definition for agri-business should include, but not be limited to a list of those businesses needed by farmers. These could include establishments that provide products or services to agricultural producers to support production, marketing, and distribution of their products including but not limited to hide tanning operations, slaughterhouse, farm equipment repair, farm equipment sales, soil preparation services, crop services, veterinary and other animal services, farm labor and management services, and seed or fertilizer sales.

b. Clarify permitting of farm stands. Current zoning doesn't specifically say farm stands in the A district are allowed. It may be part of 'Farm and accessory buildings and uses', but it is unclear from the text. Farm stands are a good way to allow farms to sell their produce and promote local foods. Amend zoning to allow farm stands in the A district as a permitted use. Farm stands should allow sale of produce from one farm. A farm market should allow sale of produce from multiple farms and non-farm products. To ensure that a farm stand does not turn into a larger unregulated retail operation, consider putting a size limitation on what a farm stand is (for example, temporary, seasonal, and less than 3000 square feet). Regulate retail farm markets as larger uses in permanent buildings that need parking, signage, etc.

c. Consider incorporating a lesser degree of review for on-farm process plants (via a modified site plan review for these ag-businesses with specific standards) and a more intense farm processing plant not on the farm as a stand-alone commercial business that would be allowed with a special use permit. Agri-businesses that support and serve Minden are desirable and can effectively maintain agriculture so I am recommending you don't prohibit larger scale processing plants provided they are sited, and developed appropriately.

d. Consider adding agricultural structures to the height exceptions in Section 90-15. It already mentions silo's but should also address other agricultural structures that may be needed on a farm.

e. Update the site plan section to ensure that information about adjacent agriculture is provided to the Planning Board so that they may be able to determine any negative impacts of a project on farming activities in the area/Town.

f. Require filling out and submittal of an Ag Data Form as required by NYS Ag and Markets Law for any application that is in, or within 500' of a NYS Agricultural District. This Ag Data Statement should be used to notify surrounding farmers of a proposed project.

g. Update zoning to ensure that the Planning Board evaluates and limits the impact of new development on surrounding and adjacent farms.

i. Consider requiring a buffer requirement between new development and farms. New development should not place the burden on existing farms to give up boundary land as a buffer zone between agricultural and residential areas. New residential development should provide for its own buffer zone and/or landscape plantings for screening when necessary in order to reduce farm/non-farm issues. Such buffers are an important tool for minimizing impacts of non-farm development on farms.

2. Enhance protection of farmlands when subdivisions occur by reviewing impacts a new non-farm subdivision may have on agriculture. Application materials should

include identification of agricultural activities when the proposed project is in a NYS Agricultural District. In this way, the Planning Board can evaluate the proposals potential impact on agricultural activities. Likewise, the Planning Board should evaluate the impact of new development on existing businesses.

3. For projects in the NYS Agricultural District, consider adding a subdivision application requirement that the final plat include an agricultural disclosure notice. As per NYS Agriculture and Markets Law, this notice is already required to be provided by real estate agents to buyers of land located within an ag district. It is designed to let the new landowner know they are buying land within an ag district and there may be noise, odors, and other things associated with farming taking place. However, this noticing often does not take place. Having the Town ensure this disclosure is made helps new land buyers be aware they are buying land where active agriculture is taking place. It shows a dedication to the farmers and agriculture as well. The disclosure notice could be placed on the plat itself, or as included in formal correspondence as part of the subdivision approval. Further, consider requiring proof of filing of the subdivision with the County be submitted to the Town assessor.

4. Work with the Montgomery County Planning Board and the Montgomery County Agricultural and Farmland Protection Board in ensuring that all active farms in Agricultural District #1 remain in the agricultural district.

5. Educate local landowners and Town officials of the provisions of the New York Ag and Markets Law Article 25-AA.

Rural and Small Town Character

Goal - Ensure that new development is in conformance with the small town and rural character of the Town. Provide for structures, layouts, signs, and landscaping that are compatible with the Town's character and that are pleasing to visitors and Town residents alike.

Issues – Minden considers itself a small, rural community. Residents value the open lands, the beautiful landscapes and scenery of the countryside, the low-density residential character, and the clean environment of the Town. Minden's peaceful setting, recreational opportunities, history, and the small town community feel are seen as the principal strengths of the community. Community character is threatened by potential loss of agriculture, excessive junk on properties, loss of open space, and heavy industrial uses such as natural gas drilling, among others. Maintaining the visual character of Minden is one of the primary goals of the Town.

Highlights of Recommendations – The Plan recommends updating zoning and subdivision to ensure that new development is designed in a way that respects the rural character of the Town. Identifying and maintaining scenic views, and improving signage and gateway landscaping are other recommendations. For example, zoning can be amended to offer a density bonus that is an incentive for protection of open spaces during development provided adequate water and waste treatment capacity exists. Zoning can also require screening and buffering new development in certain locations, and can call for use of the conservation subdivision design technique for major subdivisions.

1. Update land use regulations to include siting and design requirements that result in development that is done in an environmentally friendly, aesthetically pleasing, and safe manner.

    a. Update the purpose statements to bring these into conformance with the goals of this Comprehensive Plan. Emphasize other topics addressed in the Plan including agriculture, open space, natural resources, and rural community character. These are currently not mentioned in the zoning purposes, but are key concepts in the Plan. Establishing 'why' Minden needs to regulate is very important.

    b. Review and update the standards for review (90-25) to ensure that preservation of rural character, agriculture, and the environment are emphasized more in the criteria used by the Planning Board.

    c. Limit physical blockage of existing visual access to the waterfront and other scenic locations by ensuring that new construction is at an appropriate scale and location.

    d. Regulate the use of portable commercial storage units.

e. Update definitions in the zoning.

   1. Define all uses included in Article IV.

   2. Consider expanding nursing home definition to include the modern types, such as assisted living centers and senior step-up communities.

   3. Use New York State Department of Agriculture and Markets definitions for farm and farm operations. Remove income levels to define any kind of farm as that is usually not considered to be 'farm-friendly' and might exclude new or niche operations that might be small.

   4. Define farm worker housing separately from a farm and address include multi-family dwellings to be considered farm worker housing.

   5. The definition for Home Occupation has development standards within the definition. Remove items a through d from the definition and into a section of its own in Article VIII (supplementary regulations).

   6. Add definitions to the subdivision law. Additional definitions would be helpful to explain terms already used in the regulations but that currently are not defined and to define terms for new concepts being recommended in this Plan. Also, the definitions should be consistent between subdivision and zoning. Some terms that should be included are:

      Buffer
      Conservation Subdivision
      Screening
      Frontage
      Home Owners Association
      Right-of-Way
      Cul-de-Sac
      Building Envelope
      Conservation Easement
      Low Impact Development
      Open Space

f. Update the purpose statement (77-2) in the Subdivision law to better reflect the vision and goals established by the Town in this Comprehensive Plan. The existing purpose statement does not really express the desire to control land use in order to protect the town's rural character, the environment, and agriculture.

g. Consider making sketch plan a mandatory meeting for major subdivisions. This is an opportunity to make the process more efficient by establishing an informal meeting with the applicant so that the project can be classified (minor or major) and to go over application requirements and general issues. Use of a sketch plan

meeting can mean that the subdivision application submitted is more complete to begin the process and often results in better information early in the process. The sketch plan section in the regulations should outline the procedures and materials needed for this meeting.

h. Consider amending zoning to expand the definition of 'junk' to include other refuse, garbage, and household items other than cars, appliances and furniture.

i. Amend the Town's sign regulations to provide for more uniform size, location and appearance.

j. Review the list of permitted and allowable uses included in the zoning law and update on an annual basis to ensure that the uses stay relevant to the needs of Minden.

2. Consider incorporating the conservation subdivision technique (See also recommendation 8 of the Environmental Resources Section), and coordinate language of Chapter 90-13 (clustering) with the subdivision law. Zoning should authorize use of conservation subdivisions and should also be the place to detail any dimension, acreage, or other zoning-oriented standards needed for that technique. The Subdivision Regulations should be the place to detail any process and other development standards to be carried out during the subdivision review. A clustered subdivision should only be allowed where a municipal or small on-site centralized sewer is available or proposed. In a conservation subdivision, the density of households across the parent parcel does not exceed those indicated in the zoning for that district or overlay district.

3. The Planning Board should ask for other information that is needed to comprehensively evaluate a project. Consider requiring for all applications information on historical structures and cemeteries that may be present; the size, design, and type of construction of all buildings. Add this to special use and subdivision regulations.

4. Consider authorizing the Planning Board to require a visual impact analysis when needed to have the applicant visually illustrate and evaluate the relationship of proposed structures in terms of visual character and intensity of use (i.e. scale, materials, color, door and window size and locations, setbacks, roof lines and other major design elements). That analysis should also evaluate visual impacts on neighboring properties.

5. Consider including an incentive for certain types of development through the zoning law. Incentives may be considered provided adequate sewer and water is available and the proposed development is not located in hydrogeologically sensitive areas as identify by the Minden Groundwater Study. The incentive offered through zoning is usually a density bonus. This means that the applicant could get additional housing units in return for offering the Town a desired amenity such as open space,

farmland, or recreational opportunities. Density bonuses are given for residential development at the discretion of the Town and are governed by New York State Town Law 261-b. Some communities give a density bonus when an applicant offers land, an easement to the land, or even cash in lieu of these amenities. In Minden, density bonuses should not be approved unless a municipal or small on-site centralized wastewater treatment facility is proposed as part of the process. See Part VI (A) for model density bonus language. Density bonuses need to be substantial enough for a landowner to want to do this.

6. Improve subdivision designs.

   a. Layout a subdivision so that buildings, structures, and other improvements do not extend above the existing ridgeline or alter the hillside or ridge profile significantly when viewed from the public streets, roads, water bodies, or facilities. In already developed environments, the appearance of the new development, when viewed by the public from public areas, should be compatible with the existing visual character in terms of scale, massing, and height to the maximum extent reasonable.

   b. Promote rural character in a major subdivision by reducing uniformity and monotony to the maximum extent practical. This can be accomplished by allowing variation of lot width and area of lots in order to eliminate the appearance of a standard subdivision.

   c. Consider amending the subdivision law to allow the Planning Board to allow, at their discretion, use of double frontage lots and single loaded streets to give more flexibility in design of a subdivision.

   d. Consider re-defining a major subdivision. Currently the definition is: “Any subdivision not classified as a minor subdivision, including, but not limited to, subdivisions of five or more lots, or any size subdivision requiring any new public street or extension of municipal facilities.” This definition does not address the situation where a minor subdivision is resubdivided to cumulatively amount to the creation of five or more lots on an original parcel. To address this, consider adding the following to the definition of major subdivision: “Includes the resubdivision of a major subdivision, and a series of related minor subdivisions on land that cumulatively amount to the creation of five or more lots from any original parent parcel as of the (DATE).”

7. Clear excess and overgrown vegetation along waterfront areas, roads, cemeteries and historical places with long-range scenic views wherever practical and environmentally acceptable.

8. Identify and create locations that may be acceptable for a roadway pull-off for scenic views, especially of the Mohawk River.

9. Provide interpretive exhibits at appropriate locations to enhance the understanding and enjoyment of views.

10. Improve signage and gateway landscaping at Town boundaries. Gateway signs should reflect the community values of Minden as a small, historic, rural and clean location.

11. Work cooperatively with the Village of Fort Plain to implement property maintenance and enhancement programs, and improvements of public right-of-way areas to improve the aesthetic appearance of the area.

12. Improve visual quality and scenic vistas by[3]:

    a. Minimizing the introduction of elements which would be discordant with existing scenic components and character;

    b. Restoring deteriorated and removing degraded visual components;

    c. Screening elements which detract from visual quality;

    d. Using appropriate siting, scales, forms and materials to ensure that structures are compatible with and add interest to existing scenic elements;
    e. Preserving existing vegetation and adding new vegetation to enhance scenic quality;

    f. Allowing the selective clearing of vegetation to provide or enhance public views;

    g. Considering the impact of new development in existing visual resources.

13. Use existing vegetation and topography to buffer and screen new buildings if possible, and minimize clearing of vegetation, in a manner that minimizes crossing of steep slopes with roads and driveways, and in a way so that water flow to, and drainage of, adjacent properties is not impacted.

14. Where possible, place buried utility lines and driveways on less productive land and site driveways on the edge of farm fields, rather than through the middle.

3 Adapted from the Western Montgomery LWRP, 2005, as adopted by the Town of Minden in 2011.

Environmental Resources

Goal - Preserve and protect natural resources.

Issues – Protection of the Town's environmental resources has always been an important goal of Minden. The 2000 Plan includes environmental protection as one of the six main goals to be accomplished. The environment is important not only because it contributes to the rural character of Minden, but because it supports farms, recreation, tourism, and many economic activities. Minden's environment is currently of high quality. Groundwater sources supply all members of the community with drinking water (except for those on village public water in Fort Plain). Floodplains, wetlands, streams, and stream corridors are all important natural features that impact not only groundwater, but also the ecology of the area. These are also important habitats for plants and animals and are critical to maintain ecological diversity. Dark skies at night, ridgelines, and steep slopes are important, and are features that residents feel contribute to the quality of life in Minden. Scenic views and the overall rural landscape are features of the Town that residents hope to preserve. They do not desire intense, large, or industrial scale development that will introduce pollutants to water and land, reduce open spaces, pollute dark night skies, and adversely impact critical habitats and sensitive environmental locations. Many areas in Minden have low water capacity and low rates of groundwater replenishment that will influence future development levels.

Highlights of Recommendations – To protect these areas, this Plan recommends applying current zoning by including maps of the stream corridors, floodplains and wetlands into zoning as environmental overlay districts. It also recommends other zoning changes such as requiring fully-shielded light fixtures to reduce light pollution and use of development standards designed to preserve existing natural features. Other ideas recommended in this Plan include adopting low impact development methods for commercial development to prevent erosion, using conservation subdivision designs, establishing energy efficiency programs, adopting a road use law to control and manage high volume traffic on town roads, and defining and prohibiting heavy industrial uses.

1. Zoning currently includes a stream corridor (200'), and floodplain and wetland overlay districts. These are important resources to the community and should be protected. However, these overlay districts are not mapped. Consider adopting the concept map included in this plan (See Maps), adding the Stream Corridor, Floodplain and Wetland Overlay districts to the list of districts established in Section 90-6, and add all these areas to a map that would be included in the zoning law as a 'Zoning Overlay Districts' map.

   These features are very important to help Minden reach its goals as outlined in the Plan. In particular, the stream overlay is critical to maintain the stream-side vegetation. These ribbons of vegetation along all your streams are critical to the

environment as these areas often provide the only forested habitats in Town. Stream water quality and fisheries would be greatly enhanced by protecting this 'riparian zone'.

Overlay districts can protect streams/rivers and floodplains, as well as wetlands, steep slopes, ridgelines, historic locations, important groundwater areas such as the unconsolidated aquifers and areas with minimal recharge of groundwater (from the Groundwater Study). Zoning should protect overall water resources and could be amended through establishment of stream buffers, wetland protection standards, stormwater management methods, aquifer and wellhead protection areas, control of non-residential development on steep slopes and ridgelines, and setting appropriate minimum lot sizes based on water recharge to the ground. Use the minimum lot sizes and map as recommended in the Minden Groundwater Study as the basis for establishment of new minimum lot sizes in the zoning law.

As another option, the Town can create a Critical Environmental Area (CEA) pursuant to the State Environmental Quality Review Act to identify these as sensitive environmental features. Adoption of a CEA would require heightened environmental review for heavy industrial types of development. Use the Critical Environmental Area Map together with the Sensitive Hydrogeologic Locations and Recharge Rates (Figures 10 and 11 from the Groundwater Resources Study and the Critical Environmental Area map) included in this plan as a basis for delineation of either and overlay or CEA.

2. Section 90-18 (Floodplain overlay district) should also refer to Chapter 54 of the Code (Flood Damage Prevention) as it is within that floodplain that Chapter 54 regulates. Curtail construction of permanent development in special flood hazard areas inundated by 100 year floods as delineated by FEMA Flood Insurance Rate Map for the Town.

3. Implement the recommendations made in the adopted Western Montgomery LWRP that includes the Town of Minden.

4. Conduct a scenic inventory and include scenic viewsheds or points in a scenic overlay district. Within that district, projects would need to be reviewed for their impact on scenic views.

5. Require all outdoor lights used for businesses to use fully shielded light fixtures. This would be reviewed during the site plan and special use permit process.

6. Consider adding low impact development standards for new subdivisions designed to limit impervious surfaces as part of development design. These are recommended to reduce stormwater runoff and water pollution. (See www.**lowimpactdevelopment**.org and www.epa.gov/owow/NPS/lid for more information)

7. The Planning Board should consider and review natural resources as they affect site design during the subdivision and site plan review processes.

    a. During subdivision review and approval processes, the Planning Board, at their discretion, could use one or more of the following guidelines to protect natural resources and town character to the maximum extent practical:

        1. Minimize grading, cut, and fill, and retain, to the maximum extent practicable, the natural contours and features of the land, limit storm water runoff, and conserve the natural cover and soil. All grading, erosion, and stormwater requirements of the zoning law and of the New York State Department of Environmental Conservation shall be met.

        2. Preserve to the maximum extent practical existing natural features that enhance the attractiveness of the site, and that add value to residential or other development, or to the Town as a whole, such as trees, vegetation, stone walls, hedgerows, watercourses, ponds and similar resources.

        3. Where practicable, the Planning Board could request that natural boundaries, i.e., water courses, stone walls, forested edges, hedgerows, etc., be incorporated into the boundary configuration of new lots.

        4. Cause the least disturbance to natural infiltration of water to the groundwater table through careful planning of vegetation and land disturbance activities. Low impact development methods to control stormwater could be used.

        5. Minimize disturbance to streams, drainage swales, wetlands, and areas with seasonally high water tables.

        6. Preserve, to the maximum extent possible, woodlands along roadways, property lines, streams, and hedgerows and work to preserve the largest, unfragmented expanse of woodlands possible.

        7. Preferred locations for building include the non-prime agricultural soils, and lower topographic settings where development will be visually less intrusive.

        8. Location within the parcel containing critical habitats, as defined by the New York State Department of Environmental Conservation Natural Heritage Program, should be preserved to the greatest extent possible.

8. Consider amending Section 77-44 (Cluster Subdivisions) to incorporate use of the Conservation Subdivision method (See also Recommendation #8 of the Rural and Small Town Character section). Zoning should be amended to authorize the Planning Board to require use of a conservation subdivision layout when, at their

discretion, the Board determines that the environmental resources and character of the parent parcel can be better protected through a conservation design than through a conventional subdivision and when adequate municipal or on-site central wastewater systems are feasible. The Conservation Subdivision method, like clustering, results in preserved open space but is more flexible and does not always result in a cluster of houses. Instead, new homes are strategically located on the parcel to preserve at least 50% of the parcel as open space. It places more emphasis on preserving important features of the parcel and where the house sites will go, and pays less attention to the lot lines. Conservation subdivisions are considered 'density neutral' – this means that the number of dwellings allowed in the subdivision is the same as if designed with a conventional subdivision. The number of new units is determined by the zoning requirements for that district. Using a town-approved density bonus is the only circumstance when the density in a conservation subdivision may be increased.

There is a specific 4-step process to designing a conservation subdivision (See also Part VI (B) for model language):

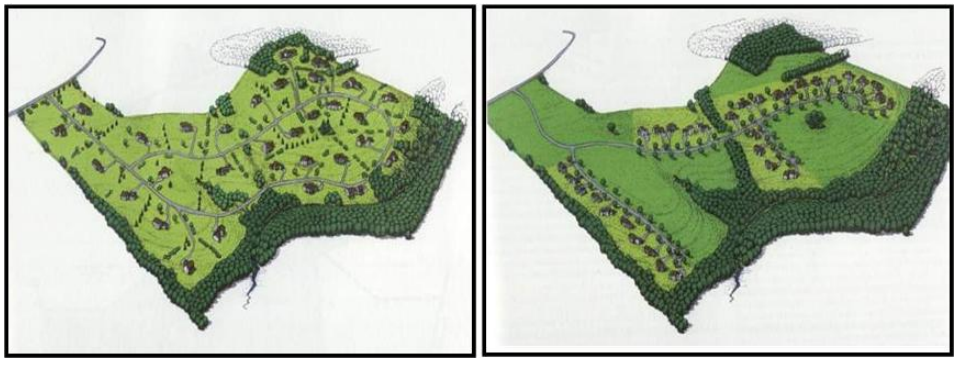
1. Identify important environmental features on the site. These become the areas to be preserved.

2. Locate house sites so that they are strategically placed for direct access or visual access to the open space.

3. Locate roads and driveways for access in a way that minimizes the amount of new road or driveways needed.

4. Draw in lot lines.

The conservation subdivision technique is much more defined as to what will be preserved, how much to be preserved, and how that preserved land will be maintained as open space.



The development on the left shows a conventional major subdivision. The same parcel of land could be better designed through the conservation subdivision technique that

reduces the amount of new roads needed, preserves more open space, and results in homes placed on the landscape that reduces sprawl.

9. Develop and implement effective groundwater protection measures in order to protect water resources and encourage future development where it is best suited. Review and implement regulatory and non-regulatory recommendations made in the Town of Minden Groundwater Resources Study.

    a. Consider including groundwater protection strategies of Section 5.1 of the Groundwater Resources Study in subdivision regulation and site plan review updates.

    b. Consider establishing new minimum lot sizes based on the Groundwater Resource Study for proper dilution of septic effluent. Use the recommended minimum lot sizes for future development (Figure 13 of the Groundwater Study) and implement this map as an overlay map that will establish the suitable minimum lot sizes for development. These lot sizes range from 2 to 6 acres.

    c. Review the permitted and allowable list of land uses in zoning and ensure that uses having a higher risk of groundwater contamination is steered away from areas of high hydrogeologic sensitivity as well as locations having unconsolidated aquifers. Consider using Figures 10 and 11 from the Groundwater Study to establish a groundwater sensitivity overlay district where land uses such as gas stations, heavy industrial uses, and use of hazardous and toxic materials are prohibited. As an alternative, Minden could also develop a local Type I list for SEQRA that would make these areas a designated Critical Environmental Area (CEA). When development is proposed within the CEA, the Full Environmental Assessment Form would be used to ensure more detailed environmental impact assessment is conducted.

    d. Develop public education programs to help residents understand and minimize potential contamination and to conserve water resources (See Section 5.3 of the Groundwater Study).

10. Address potential natural gas drilling and hydraulic fracturing in the Town. Hydraulic fracturing and gas drilling are heavy industrial activities inconsistent with the character, environment, economy, and agricultural/residential land uses in Minden. As discussed elsewhere in this Plan, the Town of Minden has identified critical environmental resources that are the cornerstone of their economy, character and quality of life. Gas drilling activities can adversely affect the groundwater upon which all residents depend, can significantly alter the character of the Town which has been established as a critical features of Minden, can negatively impact habitats such as wetlands and streams, and can significantly affect local roads, which all residents and farmers need. For these reasons, Minden should:

a. Adding a definition to Minden's zoning for mineral extraction, heavy and light industry which would include gas drilling as part of heavy industry.

b. Amend zoning to prohibit heavy industry, including gas drilling, in all zoning districts, and clarify to allow for light industrial uses in the C-I District only.

c. Adopt a Town Road Preservation law to control and manage vehicular traffic related to heavy industry and natural gas drilling activities on local town roads.

d. Control the ancillary land uses that are associated with natural gas drilling so that if gas drilling occurs elsewhere, those ancillary uses would not adversely affect Minden.

    1. Amend zoning to ensure that it adequately addresses all ancillary land uses related to natural gas drilling so that the Town can control secondary impacts that may be related to heavy industry and gas drilling activities. These include addressing controls for truck and equipment staging areas, outdoor lights, noise, use of RV's and manufactured homes, equipment storage, scrap yards, water withdrawal sites, compressor stations, warehousing and pipe yards.

    2. The zoning should adequately address these land uses through site plan and special use reviews and approvals.

e. Encourage Montgomery County to adopt a County road preservation law to control and manage vehicular traffic related to natural gas drilling activities on county highways.

10. Work to enhance energy efficiency in Town.

a. Establish an Energy Sustainability Task Force charged with finding ways for the Town to save energy and become more environmentally sustainable.

b. Promote and educate the Town and the community about energy efficiency. Participate in NYSERDA Local Government programs periodically and review energy efficiency of town facilities. If needed, take advantage of financial incentives that are offered from NYSERDA for existing facilities.

c. Join the Climate Smart Community Program sponsored by New York State. Obtain and use the Climate Smart Communities Guide. Learn about other programs such as the one sponsored by ICLEI – Local Governments for Sustainability program (ICLEI-USA.org).

d. Work to reduce utility bills for municipal facilities and operations and increase energy efficiency. Use energy efficient products, use energy saving lights, programmable thermostat, weatherize doors, and other actions. The Town could

make available literature about energy efficiency at Town Hall.

e. Consider establishing green building standards. These could be applied to municipal facilities, or as guides or requirements for commercial buildings. Although initial costs for a green building may be somewhat higher, the energy savings long-term more than cover costs.

f. Establish a purchasing policy for the Town to ensure that energy efficient products are used.

Economy

Goal - Promote small-scale businesses located in appropriate areas, tourism and tourism-related businesses, and ensure that new commercial development is consistent with the character and environment of Minden.

Issues – There is a lack of jobs and commercial space in Minden. Residents would like to see additional commercial development in Town provided it is consistent in scale with the Town, in appropriate locations, and consistent with the environment and character of Minden.

Highlights of Recommendations – The Plan recommends that Minden take economic advantage of its best and most numerous asset – open space, farms, and the Mohawk River. Agri-tourism, tourism, and open space-related recreation are all areas that can be promoted for desirable economic development. It is also recommended that Minden market and promote itself better, and that the Town works with local, regional and state agencies and organizations to develop more tourism in Minden. Other recommendations that support this goal is to ensure that zoning allows for and is business-friendly in a way that also protects the environment, the low-density residential nature of the area, and the environment. The Plan recommends zoning changes that allow for home occupations, expansion of business zoning districts, agricultural-related businesses, and small on-farm businesses. Working to expand the Erie Canalway and the waterfront area along the Mohawk River is desired not only for expanded recreational use by residents, but to promote the economy.

1. The town's rural character is an important economic asset and should be the centerpiece to promote desirable economic development. Encourage the development of agri-businesses in Town and investigate and implement agri-tourism opportunities in Minden.

2. Promote a "creative economy" for Minden composed of companies and entrepreneurs whose products or services rely on a distinctive appearance, form, and content. Work with the County and other area communities to identify and cultivate such companies, support incubators, develop entrepreneur networks, support the implementation of relevant technologies, and identify sources of seed funding and other incentives.

3. Develop a strategy to market Minden more effectively, including promoting the Town as a tourist destination.

    a. The Town should work with county tourism officials and local tourism businesses to maximize the local impact of county and State marketing efforts. This effort should include the creation of a distinct marketing tag for Minden.

b. The Town should work with surrounding communities, especially Fort Plain and St. Johnsville to create a regional marketing effort based on the rural, agricultural, and tourist opportunities in the area. Minden will achieve more when they pool resources, identify common assets, and work together to develop the regional economy.

c. The Town and Village of Fort Plain should work together to create and promote safe and well-defined walking and biking routes connecting the Village of Fort Plain with the Canalway Trail and to the rest of the Town and surrounding areas.

4. Town zoning should allow and encourage small-scale businesses with development standards to ensure that these businesses are built and operated in a manner consistent with the environment, character, scale, style, and mixed-use nature of the town's hamlets. Establish design standards to protect the town's rural character.

5. Support the Montgomery County Chamber of Commerce in its effort to promote tourism within the county.

6. Work with the Erie Canal Trail Committee and the New York State Thruway Authority in continuing construction of the Erie Canal Bike Trail.

7. Consider updating land use regulations as follows:

   a. Consider creating standards for maximum commercial building square footage, building and parking lot siting, lighting, landscaping and signage.

   b. Use zoning to encourage retail businesses that fill community needs and that are in keeping with the town's character. Retail businesses that are not in keeping with the town character should not be permitted.

   c. Home occupations and home-based businesses have been identified as an issue in Minden. There are different types of home occupations – some not impacting at all, others could be quite impacting. To address the 'not all home occupations are created equal", consider splitting this use into two categories:
   Minor Home Occupation – is a home occupation that has no outward indication of being a business, such as no sign, no parking needs, no customers or deliveries coming and going, etc. These should be permitted uses with no review needed.

   Major Home Occupation – is a home occupation that is more intense and has signs, parking, deliveries and/or customers. These should be allowed, but with a special use permit. Further, require home occupations in accessory buildings on the parcel to also require a special use permit, a building permit and associated inspections.

   Currently, the zoning only allows one non-family member to work there. To offer

more flexibility, consider increasing the number of non-family employees from 1 to 2 or 3. Further, develop standards that address issues related with these more intense home occupations so they remain in scale with a rural community. These standards could include requirements such as building square footage limitation, or establishing a percentage of the lot that can be covered in a home occupation (that includes storage).

d. Amend zoning to enhance small business opportunities. Although there is no commercial district designated in Minden, the Village of Fort Plain has sufficient space for such development and the Town encourages directing commercial growth to the Village. However, Minden could consider establishing one or two small mixed-use/commercial districts that would encourage more local or neighborhood-scale businesses. Local or neighborhood businesses cater to the retail or personal service needs of the local population (such as but not limited to medical offices, beauty parlors, convenience stores, insurance offices) and are small in scale and intensity. Most communities limit these to smaller building envelopes or square footage of less than 8,000 square feet. Mixed use buildings often have business uses in front or downstairs and residential apartments to the rear or upstairs. Such districts do not allow manufacturing, light industrial, large retail or similar uses. Uses here would be those that are compatible in mixed-use/rural situations, and cater to more local needs than in the C-1 district. Consider areas such as along Route 5S near the Fordbush Road/Oldick Road area, or at the Route 5S and Airport Road/Leneker Road intersection. Wherever it is, these districts should be 'nodes' not sprawled along a highway.

e. Clarify the current regulations for PDD. Specify if this section is for industrial only, or for residential, commercial, and industrial uses.

    1. Consider updating this section to list specific uses that would be acceptable and which ones would be prohibited. Right now it is left totally to the Town Board and zoning gives no guidance as to what would be acceptable.

    2. Update this section to include additional development standards to ensure protection of the rural character of the Town, local agriculture, and the environment when a PDD occurs.

    3. Further, the procedure section could be updated to add specificity related to application materials, public hearing, noticing, SEQRA, and NYS Agriculture and Markets Law requirements.

f. Currently, site plan review is only required for uses that require a special use permit. That means then that all those business uses allowed in the C-1 district go un-reviewed. That may not have been a problem up to this point given the small size of the C-1 district. Consider expanding this area and require that all businesses here (including major home occupations) go through site plan review. Site plan is an important tool to ensure that development meets the goals of the

Town.

g. Consider adding to the zoning sections that detail how Minden will handle change of uses, expansion of uses which have already been issued a special permit, and lapses of special use permits after a use is permitted but not built. Consider requiring that when a use approved by a special use permit is permitted but not built within one year, it must be re-reviewed by the Planning Board prior to building.

h. The special use permit section is not very detailed. Consider expanding and adding more detail to Section 90-30 to meet other objectives of the Town that correspond to the Comprehensive Plan.

i. The zoning law does not have supplementary regulations for all the uses that are identified as requiring a special use permit. The Town should review the supplementary regulations and consider adding in standards for uses that are not currently included.

j. Consider allowing for rural businesses in the Ag District that are not home occupations, but that are agriculturally related (farm machinery repair shops, sawmills, etc.) with a special use permit. The definition of an agriculturally related business needs to be specific as to what those farm-related businesses are. To ensure that these businesses do not over-reach and cause negative impacts and to maintain rural character, consider stricter development standards such as a building footprint limitation for these businesses, smaller signs, mandatory buffering, and landscaping.

8. Review Village of Fort Plain zoning and work to have Town zoning complement it.

Infrastructure

Goal - Ensure that new infrastructure supports the low-density residential development patterns in Town and reduces rural sprawl as development occurs in the future.

Issues – There is no policy in place to guide future development and placement of public water and sewer systems.

Highlights of Recommendations – The Plan recommends that future public water and sewer systems be concentrated in the R-1 zoning district to prevent excessive development in undeveloped farm areas of Town. This will promote compact growth in locations suitable for more intense infrastructure.

1. Establish a policy that future public water and sewer infrastructure expansions would be limited to the R-1 district. Smart growth principles include not allowing infrastructure to be extended into rural, undeveloped areas. The object is to keep growth compact, and in a location that can be served by existing infrastructure. Further, Minden should not encourage development that competes with the Village of Fort Plain to the extent practical. A policy limiting infrastructure to the R-1 area will reduce sprawl out from Fort Plain.

2. Change language in the subdivision law to prohibit use of cul-de-sac roads to the maximum extent practical.

Recreation and Cultural Opportunities

Goal - Increase recreational and cultural opportunities for all ages.

Issues – Residents feel that there is a lack of recreational and cultural opportunities, especially for teens. Improving these resources will benefit not only residents, but will make the Town more attractive for visitors and economic development opportunities.

Highlights of Recommendations – The Plan recommends establishment of a waterfront development district and further development of the historic Lock 33 area as a heritage tourism and recreational area. Building funds for capital improvement over time, and updating zoning to encourage recreational uses are also recommended. Preservation of and better public appreciation of historic resources is also recognized as an important task to accomplish over time. The Plan offers ideas on ways Minden can help landowners understand their options to preserve historic buildings. It also calls for a full historic inventory of structures in the Town, and for the Planning Board to review and mitigate any adverse impacts to historical resources when development occurs.

1. Consider establishing a waterfront development district. While ownership and access patterns are complicated: there may be limited access and difficulties with NYS, such a district that allows waterfront uses (marinas, parks, restaurants, lodging, camp grounds, etc) it could be a vital economic development opportunity – especially if in the vicinity of Bridge St. and River Road. Work with the State Canal Corporation to plan for waterfront uses. Consider applying for NYS Local Waterfront Revitalization Program grant funds from the Department of State to do waterfront planning.

2. Implement action items recommended in the Western Montgomery Local Waterfront Revitalization Plan, recently adopted by the Town of Minden.

    a. Of especial importance is to open up shoreline areas along the Mohawk/Erie Canal for public enjoyment. This should be centered on Canalway Trail development and development of low-impact recreation facilities that will not degrade the natural environment or detract from water-dependent uses in that area of Town. Develop and improve the historic Lock 33 area as a heritage tourism and recreation facility. The restoration of historic Lock 33 should be a high priority improvement action, due to this facility's unique cultural and recreational values.

    b. All projects involving an increase in public waterfront access must be developed in a manner that ensures the protection of environmental resources.

    c. Opportunities for fishing should also be promoted at the Historic Lock 33 in the Town of Minden.

    d. Recreational uses of fish and wildlife resources in the waterfront area of Minden include not only consumptive uses, such as fishing and hunting, but also such non-consumptive uses as wildlife photography, bird-watching, and nature study.

3. To implement the above steps, Minden should work with the Canal Corporation to transfer ownership of their land along the Mohawk waterfront especially in the area of the double locks in the Town of Minden. The Town should work long-term towards obtaining all Canal Corporation lands for public access and recreation. Another purpose of this program is to give public access to all landowners in this area of Town.

4. Update zoning to ensure that the Planning Board review and mitigate impacts to historic structures and cemeteries during the planning process.

5. Establish a capital improvement plan (roads and facilities) for the waterfront area. Seek grants to assist in this. Consider establishing a low-impact visitor’s center/interpretive Kiosk, bathrooms and upgraded trail facilities and linkages.

6. Work to link trails in Minden with those in Ft. Plain.

7. Work with the County, State and local recreation and tourism agencies to develop tourism and recreation programs in the Town, especially at the waterfront area.

8. Change zoning so that floodplain and all current Canal Corporation lands are zoned as recreation/open space. Ensure that agricultural activities are maintained as a permitted use in that area. Other land uses in the recreation/open space district should be oriented to low-impact (low-density, small scale, open space and recreation uses) waterfront and recreation-oriented activities.

9. Enhance signage of and access to the trail.

10. Write grants and plan for capital improvements to benefit Town residents at the Walts Road Pond. Promote and expand recreational use of this area.

11. Promote the designation of historic landmarks that reflect the Mohawk Valley's cultural, social, economic, and/or architectural history.

12. Recognize that preservation of historical resources is important to the quality of life in Minden.

13. Work to avoid potential adverse impacts of development on nearby historic structures including cemeteries. Ensure that the impact on historic character, landscapes, and structures is evaluated for all projects that are subject to SEQRA. Update zoning and subdivision laws as recommended in this plan to enhance review and mitigation of negative impacts of development projects on historic resources. Landowners should recognize the important historic values of cemeteries that may be located on their properties.

14. Complete a comprehensive survey of historic resources including cemeteries and map those resources using GIS.

15. Establish an advisory committee on historic resources in Minden that can be called upon to assist the Planning Board, Town Board or Zoning Board of Appeals in identification of historic resources and review of proposals that may impact those resources.

16. Work with landowners and aid them in learning about and accessing the federal Historic Preservation Tax Incentives Program. This will promote community revitalization through private investment in preserving income-producing historic buildings. In addition, consider providing local incentives to private landowners that preserve and rehabilitate historic structures or locations.

17. Consider require exterior building design standards for commercial uses to ensure they are consistent with the traditional and historical character of the area. Standards that could be considered include, but are not limited to roofline, lighting control, landscaping, use of façade breaks for large buildings, and screening.

18. For publicly funded projects that come before the Planning Board, ZBA or Town Board, ensure that the Historic Preservation Field Services Bureau of the State Historic Preservation Office is involved in project review. This review process ensures that historic preservation is considered in the planning of publicly funded projects.

19. Understand and use all State and federal laws that can help Minden protect historic resources. These include Section 106 of the National Historic Preservation Act of 1966 which directs federal agencies to consider historic resources in their project planning. New York State has a parallel law for state agencies in Section 14.09 of the State Preservation Act of 1980.

20. Encourage adaptive reuse of historic buildings to retain historic character. Consider creation of a revolving restoration loan fund, building façade improvement grants, and tax incentives to assist owners in improving historic properties. Seek grants to fund these programs.

21. Land use regulations should define a historic structure to also include out-buildings, stone walls, mill remnants, rail road beds, barns, etc.

22. Expand use of historic markers in town. Identify, through deed records and other information, construction dates of historic buildings, and provide each landowner with a small plaque indicating the buildings date. The plaque is mounted on the exterior of the structure. Work with the New York Office of Parks, Recreation, and Historic Preservation to obtain markers for historical sites. Add all markers to a historic inventory map.

23. Consider use of historic façade easement programs. This is when the Town holds a historic easement on a structure or part of the structure to ensure that the historic qualities are preserved permanently.

25. Support and encourage placement of homes, structures and districts throughout Town on the national and state registers of historic places through the effort of the Town Historian.

Government Services

Goal - Coordinate government services at all levels with surrounding communities, continue to support existing public safety facilities and services, enhance code enforcement, and ensure efficiency in provision of government services.

Issues – Minden, Fort Plain and other adjacent municipalities can find ways to be more efficient in delivery of public services. Certain requirements, such as notification of each other during SEQR processes are not always followed. Because budgets are tight, the Town needs to find ways to be efficient.

Highlights of Recommendations – Promote shared services with adjacent municipalities, ensure that they are all notified of certain projects when subdivisions or other development occurs, establish a local law regulating escrow accounts so that applicants pay for all costs related to their project review, and continue to support the emergency services in Minden.

1. Promote more shared services between Minden and adjacent municipalities including sharing buildings, road maintenance and facilities, and purchasing agreements. Develop a formal mechanism for regular intermunicipal government meetings to resolve issues of mutual concerns and to enhance the efficient delivery of services.

2. Enhance code enforcement and give the officer the details, options, and process needed, update Article XI, Section 90-57 and address specifically the roles of and process for enforcement.

   This amendment should detail duties of the code enforcement officer, inspections, stop work orders, other remedies, notifications, complaints and how they are dealt with, recordkeeping, violations, and compliance orders (civil penalties, criminal penalties, injunctive relief).

3. Add to the subdivision law the State Town Law 239-nn requirements that all adjacent municipalities must be notified for any subdivision hearing held.

4. Include language in the subdivision law that recognizes that the Town has an agreement with Montgomery County to only refer major subdivision applications for 239-m review as per State Town Law.

5. Consider adding a section in the subdivision law that details the need, and procedures for collecting escrow. For a big project, the Planning Board may need funds to cover the review of a large project. Also, add to the subdivision law language that ensures that any costs incurred by the Town associated with the review of an application are to be covered by the applicant. This is currently not in the subdivision law but a similar provision is in the zoning law.

6. Consider adding a section to the subdivision law to address how the Town will monitor lot splits (comes into play when someone only partially subdivides their property.) Consider also adding a statement that clarifies that all lots created in a proposed subdivision should be considered and reviewed as buildable lots.

7. Amend subdivision regulations to clarify that lot line adjustments and re-subdivisions follow the minor subdivision procedures.

8. Continue to contract annually with the three fire departments serving the Town.

9. Continue to support the New York State Police and Montgomery County Sheriff's Department.

10. Continue to support the two ambulance services.

Part III Putting the Plan to Work

Implementation Plan

Implementing the Comprehensive Plan will require a series of Town Board policy decisions, program initiatives and coordination with local, county, regional and state organizations and agencies. Some actions recommended in the Plan will also require finding the funds to make things happen. The Town Board should ensure that this plan is reviewed every five years and updated as needed to keep the plan relevant to the Minden community.

Success will be based on setting the right priorities and allocating scarce resources – people and funding – to the most important priorities. Priorities, on the following pages, list the major actions required by the Town Board to implement this plan. The suggested priority of each action is indicated as follows:

Key to Types of Action

Each strategy suggested in this Plan represents a specific type of action that the Town can take. These types of actions are:

CI Capital Improvement: Any action that results in an investment and improvement in property, structures, equipment, staff or other similar items.

P Policy and Program: Any action that results in establishment of a plan, activity, committee, proposal, or similar items.

R Regulatory: Any action that results in the development of new or amendment of existing land use related laws in the Town. This typically refers to site plan review, subdivision laws, or zoning.

Entity to Implement

The Town Board (TB) oversees all aspects of implementation of the Plan and directs all work to be done in the future. At the Town Board's request, the following boards, organizations, or individuals can assist the Town Board in implementation:

TB Town Board
PB Planning Board
ZBA Zoning Board of Appeals
HD Town Highway Department
Ag Agriculture Committee to be formed by Town Board
PA Professional Advisory including Attorney, Engineer, Planner or other
C Montgomery County
NC New committee recommended in this plan to be formed by Town Board
NY New York State
O Other organizations and agencies such as Cornell Cooperative Extension, Soil and Water Conservation District, Natural Resource Conservation Service, ASA, etc.

Organizing Actions to be Implemented

Certain actions should be implemented immediately after adoption of this Plan. The following list contains priority actions that the Town Board should begin implementing soon after adoption. Note that the many other recommended actions not included in this priority list are still important and these are noted in the following tables. The Town Board and other groups should review the list and table below on an annual basis to identify other actions that should be implemented next. The table that follows lists all the recommended actions in the Plan. It is organized to help the Town Board and other entities helping them implement this Plan.

Priority actions for the Town of Minden Town Board to implement include:

Recommended Action After Plan is Approved	Topic of Action	Entity to Implement (Town Board, or Other Entity as Listed with Town Board Support)	Priority	Reference and Page Number
Adopt the Road Preservation Law and implement recommendations related to heavy industry and gas drilling	(R)	Planning Board	1	
Update zoning and subdivision laws as recommended in the plan	(R)	Planning Board	2	
Implement the waterfront related recommendations including working with the State to secure the waterfront lands, and with the regional waterfront committee.	(P), (C)	Town Board, Regional Waterfront Committee, County, NY State	3	
Promote tourism programs and preserve historical resources.	(P)	County, local and regional economic development agencies, surrounding municipalities, local businesses, State Historic Preservation Office, local historic preservation groups	3	
Implement small business development recommendations and those related to promoting agricultural businesses.	(P), (R)	Coordinate with the Village, local businesses, local and regional economic	4	

		development groups, the County, and New York State		
Implement community involvement and education programs as outlined in the plan	(P)	Town Board, with assistance from an ad hoc committee to assist	5	

Part IV Town Profile and Inventory

Maps

The following maps are referenced and included in this Comprehensive Plan:

Roads and Property Boundaries
Topography
Slope
Watersheds
Water Features
Flood Hazards
Bedrock Geology
Surficial Geology
Property Classes
Agriculture
Farmland
Zoning
Historic, Recreation and Public Properties
Archaeologically Sensitive Areas
Aerial Photographs
Buildout Results
Environmental Constraints
Critical Environmental Areas (Potential Overlay Areas)
Public Workshop Important Places

Population Analysis

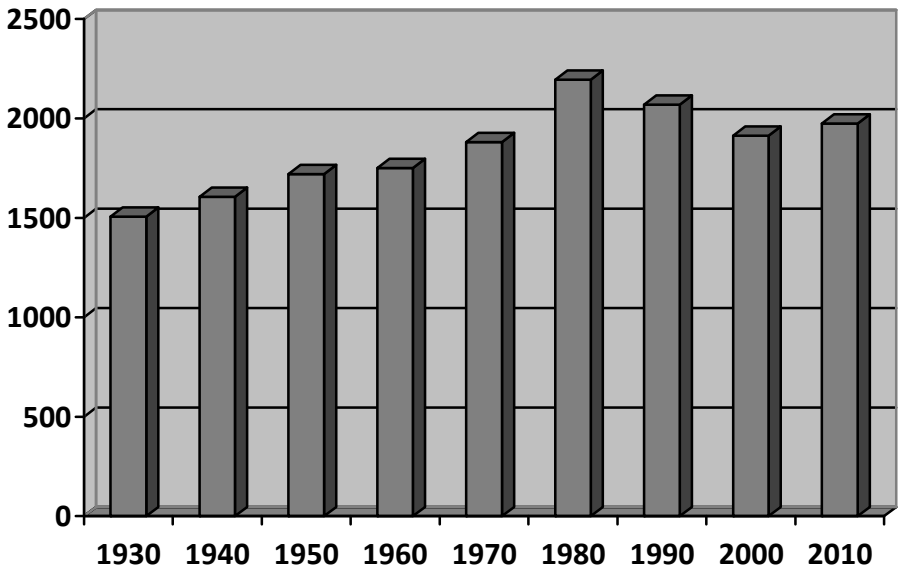
The population has decreased in the Town of Minden since 1980 but since 2000 has slowly increased. (2010 Census figures are not yet available.) Total population figures in the Town of Minden, in the Town outside the Village of Fort Plain, and in the Village of Fort Plain have decreased since 1980. The population in Montgomery County has also decreased slightly since 1980. In contrast to the Town and County population loss, both New York State and the United States have seen overall increases in total population. New York State, however, has been growing much less rapidly than has the total US population.

Table 1: Population Changes from 1980 to 2000

Area	1980	1990	2000	2010	1980-2010 Change
United States	226,546,000	248,710,000	281,421,906	308,745,538	36%
New York State	17,558,165	17,990,455	18,976,457	19,378,102	10.4%
Montgomery County	53,439	51,981	49,708	50,219	1.0%
Town of Minden (total)	4,743	4,474	4,202	4,297	-9% (but a .22% increase from 2000 to 2010)
Town of Minden (outside Village of Fort Plain)	2,195	2,069	1,914	1,975	-10%
Village of Fort Plain	2,548	2,405	2,288	2,322	-8.9%

The overall trend in population growth since 1920 is shown below.

Figure 1: Population Changes 1920 – 2010



Based on trends seen from 1990, 2000 and 2010 Census data, population levels, number of households, and number of families are expected to continue to have a small decline (see figures below). For example, the 2016 estimated population for Minden (total town) is -0.55% annual rate of decline to 2016. This compares to New York State estimated to have a 0.2% annual increase and a 0.67% national annual rate of increase. During this same time period, the median household income is estimate to increase by a 2% annual rate. That is slightly below the national estimate (2.75%) but quite a bit lower than that estimated for New York State (3.54%).

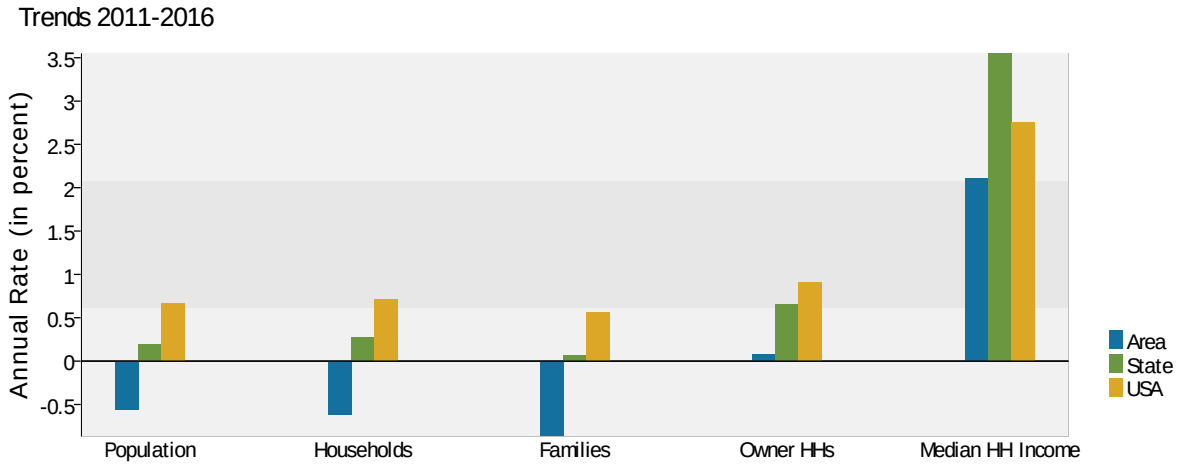


Figure 2: Trends 2011 to 2016, from Census

Since 1990, Minden (outside the Village of Fort Plain) has experienced a substantial loss in very young people under 5 years old and in people aged 15-24 (Table 2). In addition, Minden has seen another significant loss in people aged 5 to 14 (17.6% decrease) and 25-34 (17.7% decrease). At the same time, there has been a substantial increase in people aged 85 and older (52.9% increase in Town outside Village; 31.3% increase in total Town population). Minden has also experienced another increase in population aged 45-54. The median age has risen from 33.8 to 39.1 years in the Town outside the Village (from 34.9 years to 38.8 years throughout the entire Town); an increase in median age is a common occurrence throughout New York State). Twenty-seven percent of Minden's population is over 55 years. This data show an aging population as well as a loss of school-aged children (see figure below).

Table 2: Age Distribution 1990 – 2010 for the Town of Minden

Age Group	1990 (Total Town)	2000 (Total Town)	2010 (Total Town)	1990 to 2010 Change (Total Town)
Under 5 years	320	253	305	-4.7%
5 to 14	719	616	625	-13.1%
15-24	585	519	558	-4.6%
25-34	620	492	480	-23%
35-44	594	582	543	-8.6%
45-54	456	552	598	31%
55-64	446	449	521	16.8%
65-74	423	379	356	-16%
75-84	247	276	213	-14%
85 & older	64	84	98	53%
Median Age	34.9	38.8	38.3	10%

Table 3: Comparison of Age Distribution, Percent of Total Population, 2010

	0-4	5-14	15-24	25-44	45-54	55-64	65 +
Village of Fort Plain	8.0	13.7	13.3	24.6	13.0	11.6	16.0
Minden (Total)	7.1	14.5	13.0	17.7	13.9	12.1	15.6

Table 3 shows that Minden's population age statistics (including those of the Village of Fort Plain) are similar to those for both the Town and the village. Figures 3a and 3b

summarize the age distribution changes in the Town of Minden (total and outside Village) from 1990 to 2000, such as the decrease in school-age children and young adults up to age 34 and the increase in adults aged 45-54. Aside from these variations, the age distributions in Minden have followed a relatively stable pattern from 1990 to 2000.

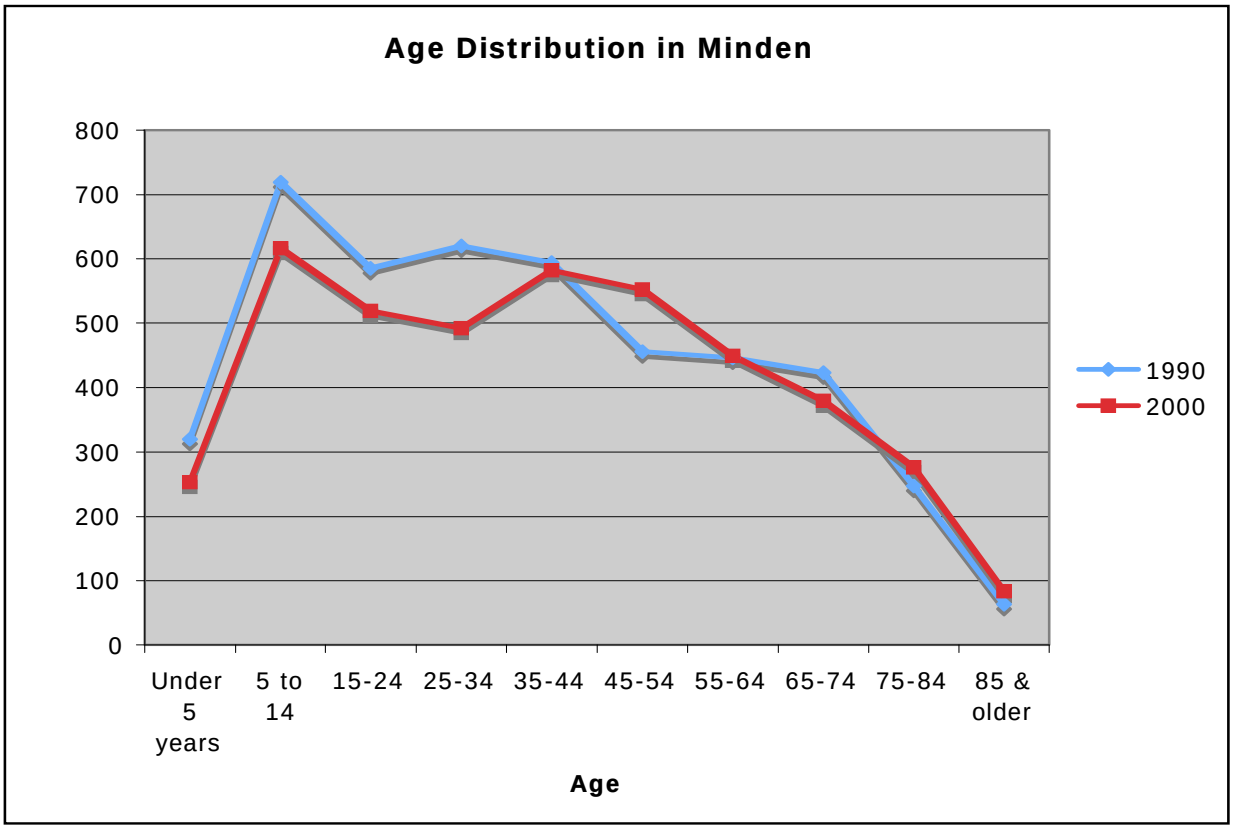


Figure 3a: Age Distribution in Minden (Total)

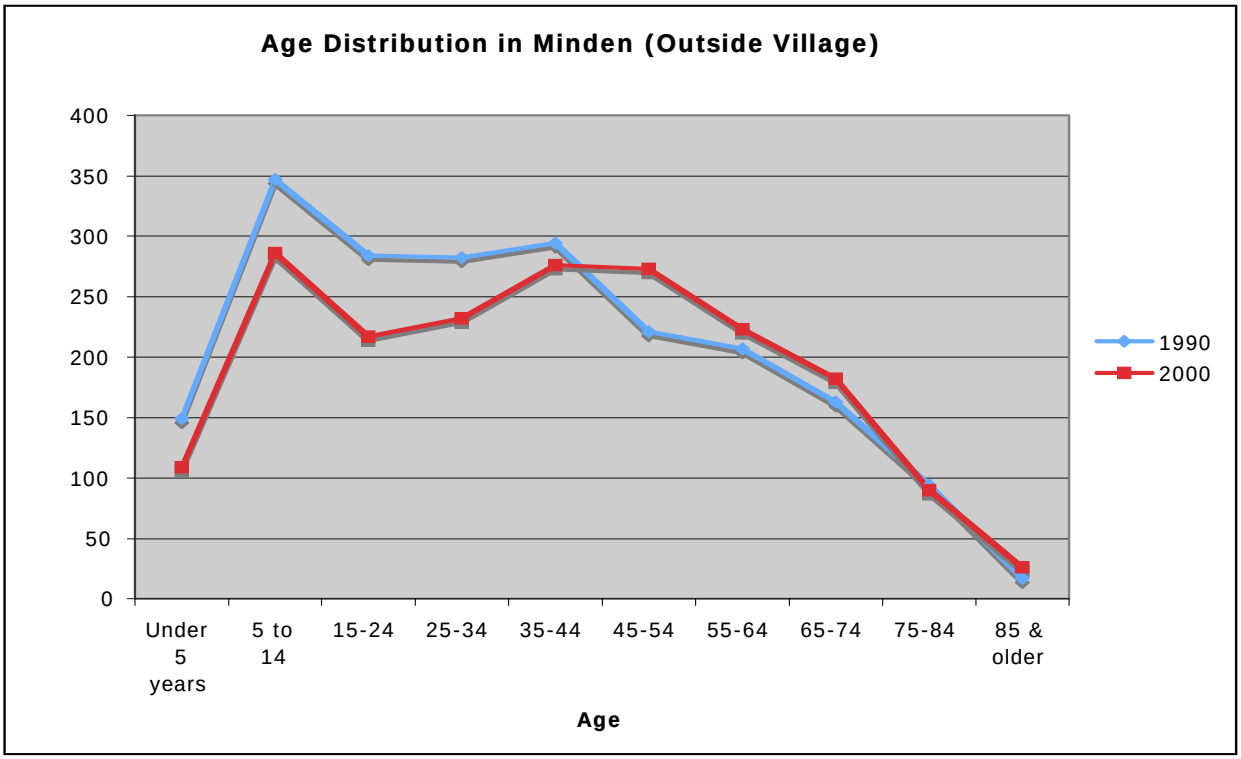


Figure 3b: Age Distribution in Minden (Outside Village)

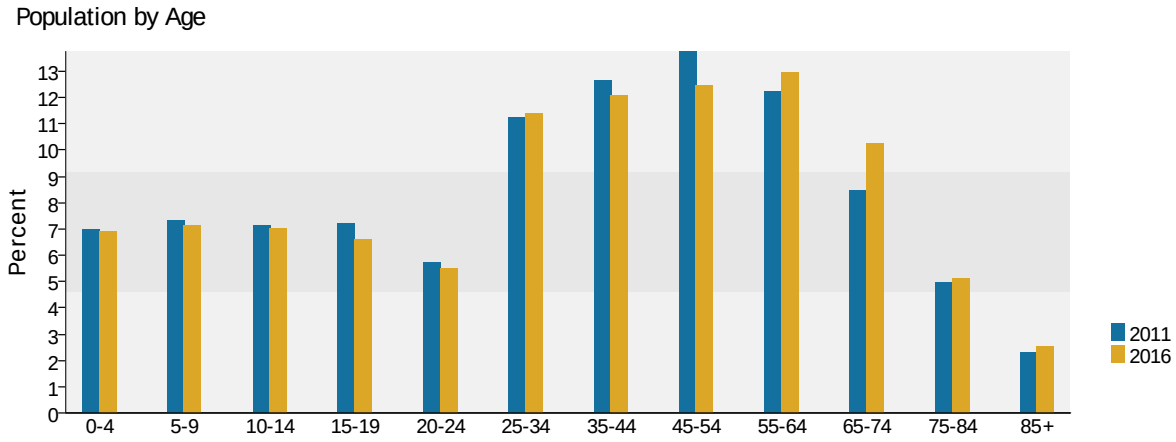


Figure 4: Population by Age, from Census

Table 5 illustrates that the number of households in Minden (outside Village) has increased between 1990 and 2010 while Minden's total number of families has decreased by nearly 16%. (Households are defined by the US Census as the people who occupy a housing unit as their usual place of residences. A family includes all people living in the same household who are related by birth, marriage, or adoption.) The number of persons per household in Minden has also decreased. In 1990, the

average household size was 2.65 persons. This figure dropped to 2.44 persons in 2010. The number of housing units in Minden (outside Village) has increased by almost 9.5 since 1990.

Table 5: Other Population Data Town of Minden

	Minden (Total)			Minden (Outside Village)			% Change Outside Village
	1990	2000	2010	1990	2000	2010	1990 to 2000
No. of Households	1,692	1,685	1,685	695	725	737	6.0%
Total No. of Families	1,231	1,143	1,082	616	544	517	-16%
Number of Housing Units	1,876	1,902	1,933	750	794	821	9.5%

Housing Data for Minden

Figure 5 shows that there were very slight changes in the housing unit characteristics in the Town of Minden between 1990 and 2010. This graph also shows that most units are occupied, and there are relatively few vacant and seasonal units. Rental units make up approximately 15% of the housing stock in Minden outside the Village of Fort Plain.

Figure 5: Housing Characteristics (Minden Total)

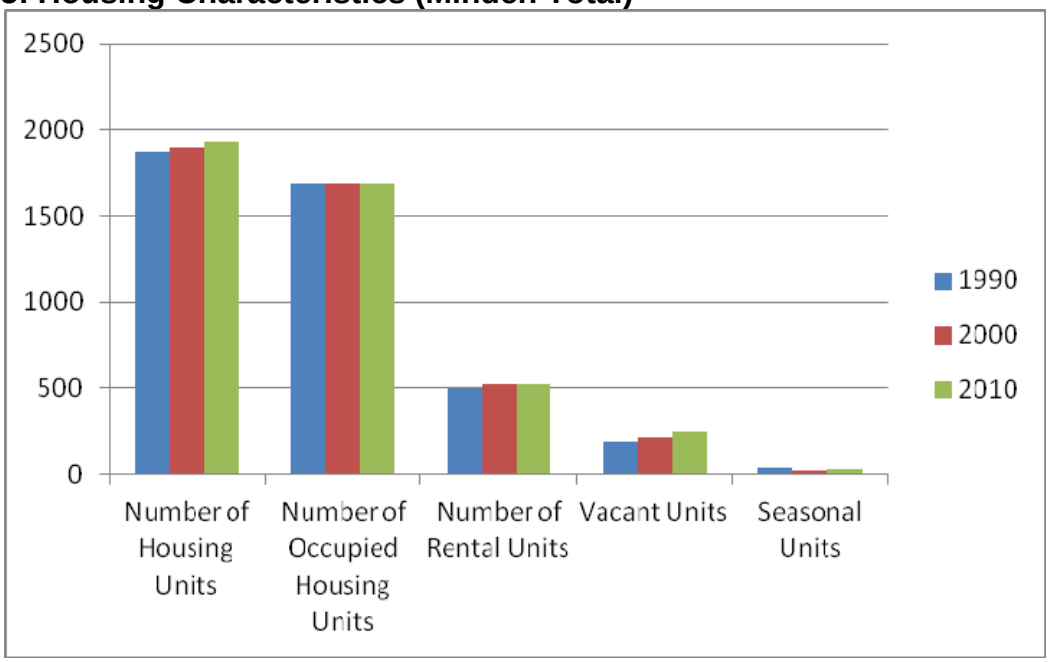
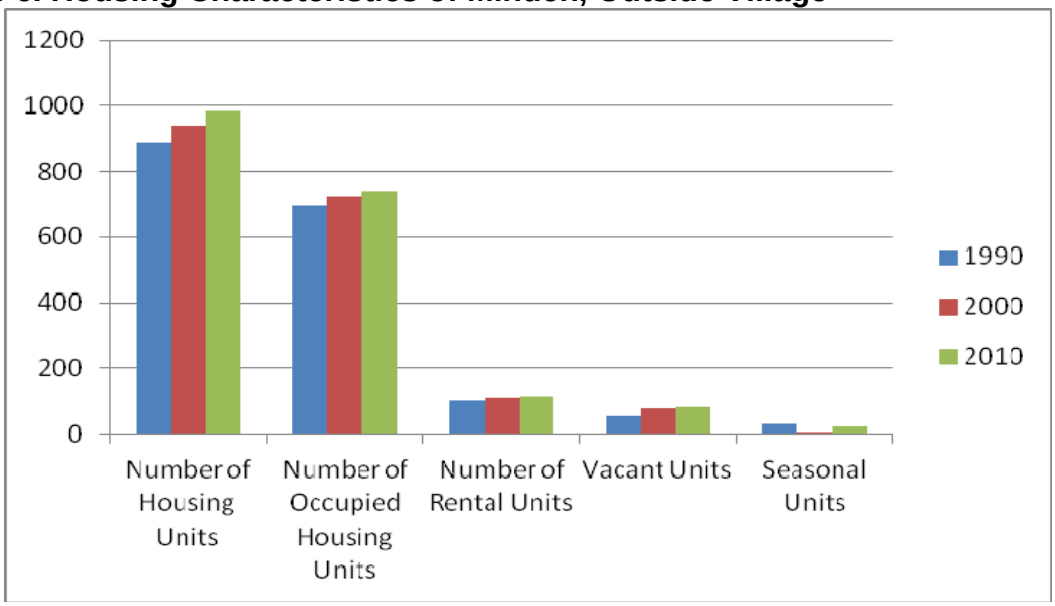


Figure 6. Housing Characteristics of Minden, Outside Village



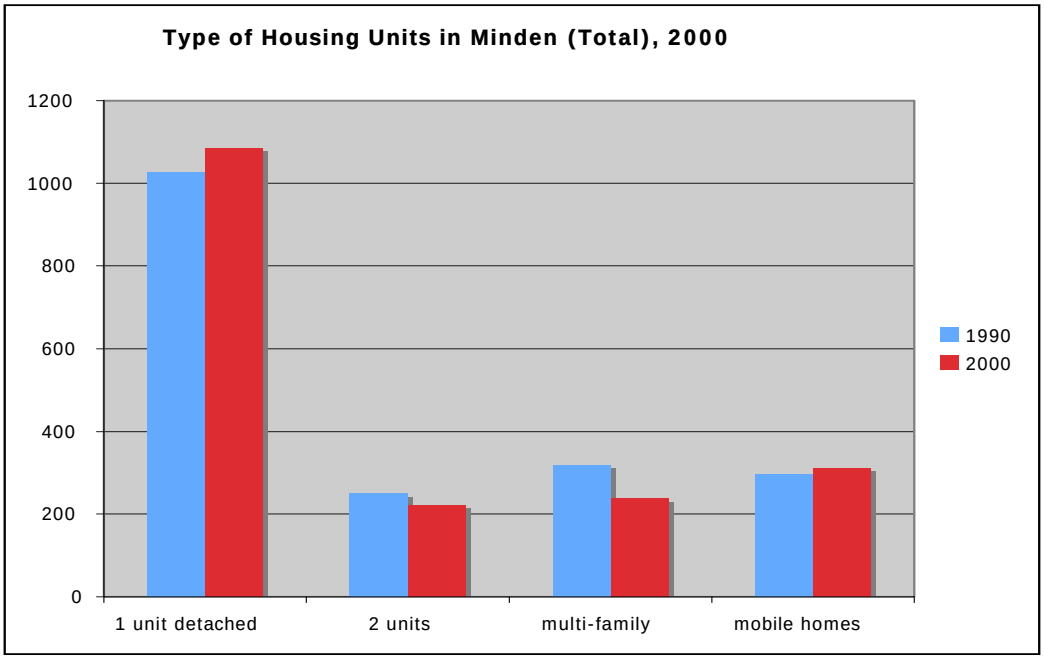


Figure 7: Type of Housing Units in Minden (Data not available for 2010)

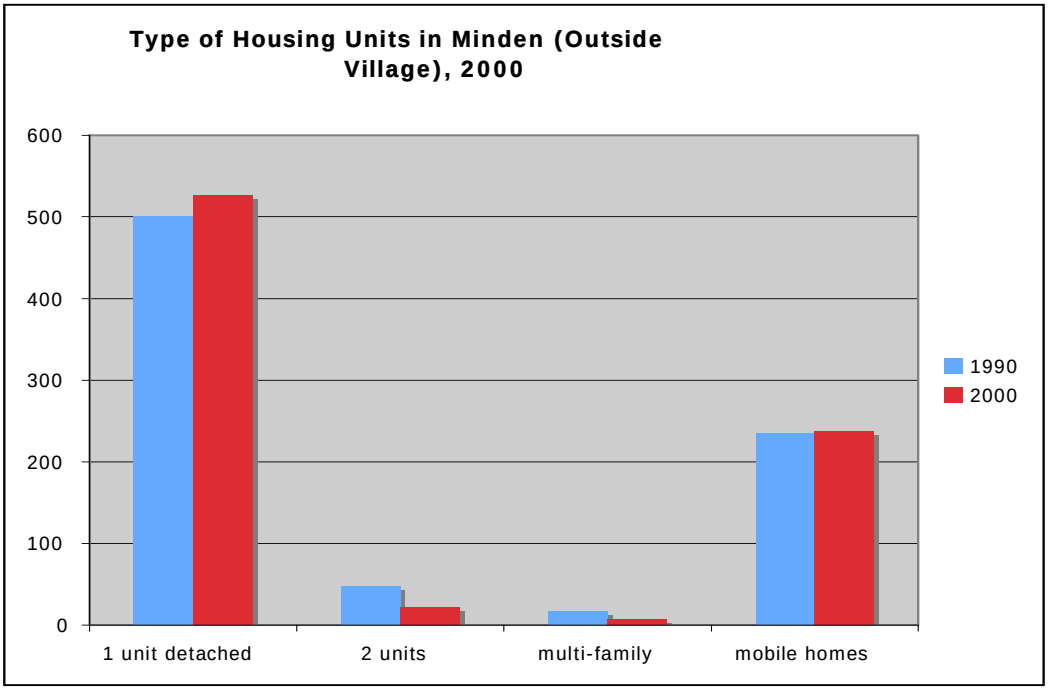


Figure 8. Type of Housing Units in Minden (Outside Village)(Data not available for 2010)

As shown by Figure 6, approximately 66% of all units in the Town of Minden (outside Village) were single-family units. Two-family units made up approximately 3% of the Town outside Village housing stock, and 3-or-more-family units accounted for slightly less than 1%. Mobile homes made up the remaining 30% of the housing stock.
Between 1990 and 2000, the number of single-family units increased by 5.2%. During the same period, both two-family and other multi-family units each decreased by over 50%. The number of mobile homes remained nearly the same between 1990 and 2000.

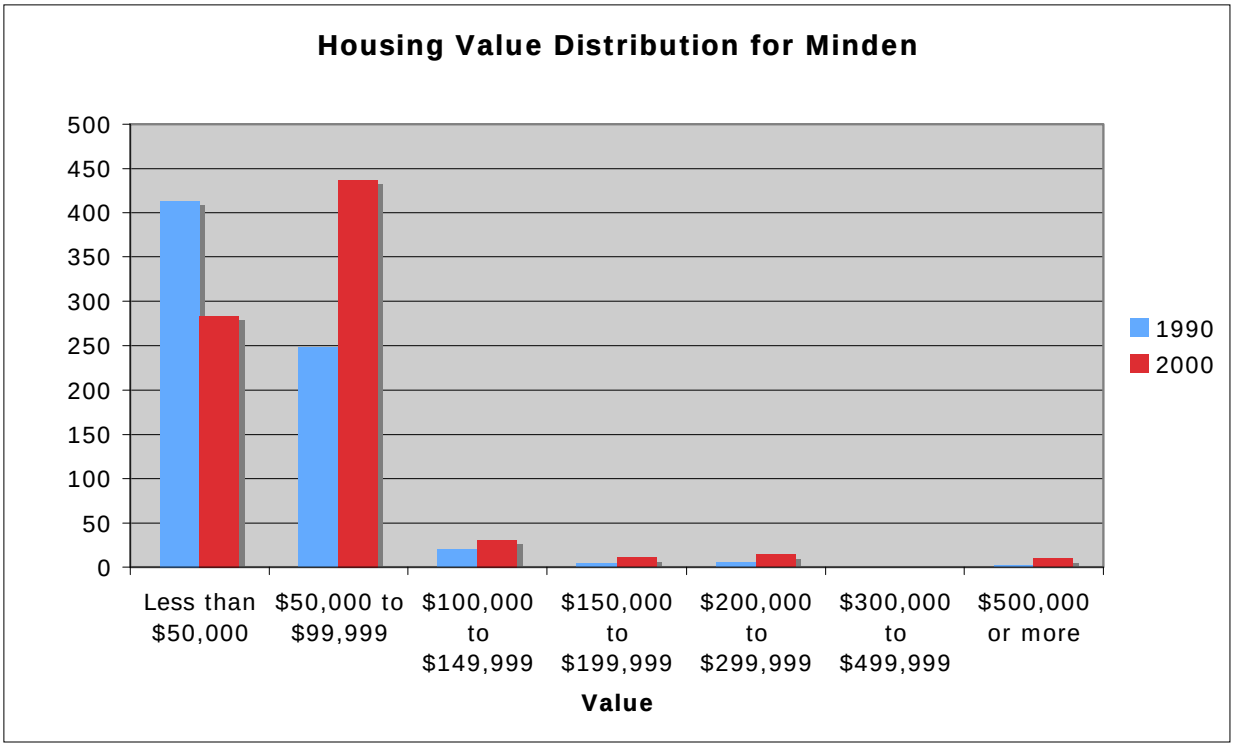


Figure 9: Housing Value Distribution for Minden (Total Town) (Data not available for 2010)

The median home value in the Town of Minden in 2000 was $57,000, an increase when compared with the 1990 value of $43,400. In 2000, about 56% of all units were valued between $50,000 and $99,999. In contrast, approximately 60% of all units were valued less than $50,000 in 1990. In 2000, about 4.5% of units were valued over $150,000.

Commercial/Economic Resources

The Town of Minden has always been an agricultural-based community. Dairy farming has been the main part of this agricultural base and continues to be so today. The Town of Minden, like most farming communities in the Northeast, has seen a decrease in farming practices and an increase in the amount of vacant agricultural land. Overall, the Town of Minden remains a rural agricultural community.

Industries and Businesses in Minden

Data from the County Business Summary for zip codes 13339 and 13320 is in Table 6. Although this data extends beyond the Town of Minden boundaries, it gives an indication of business changes between 1998 and 2009. In Fort Plain (13339), the number of businesses has decreased from 102 to 88, with a large loss in 2008. The number of employees has correspondingly decreased from 502 to 425. At the same time, payroll has increased. In Cherry Valley (13320), the number of establishments, employees, and payroll have all increased over that same time period but have also

decreased between 2008 and 2009. This data reflects those businesses who report payroll and employees but does not reflect home occupations, one-person businesses without employees and many farms. Thus the actual number of businesses in both locations would be higher.

Table 6: Comparison of Business Information for Zip Codes 13339 and 13320

	13339		13320	
	1998	**2009**	**1998**	**2009**
Number of Establishments	102	88	27	28
First Quarter payroll in $1000	2,215	2,453	214	407
Number of Employees	502	425	58	77
Annual payroll in $1000	9,964	11,356	1,157	2,081

Table 7 shows that the most common occupations in the Town (outside Village) are in manufacturing and in retail trade, followed by occupations in agriculture, forestry, fishing, hunting, and mining and in educational, health, and social services. (This data is from 2000, as there is no 2010 Census data reported at the time of writing.) After these industries, other common occupations include professional, scientific, management, or administrative occupations and construction occupations. In 2000, 97 persons in the Town outside the Village of Fort Plain were employed in agricultural occupations. Of the 1,778 workers in the 2000 US Census data for Minden, 74.8% were private wage and salary workers, while 13.8% were government workers, 10.9% were self-employed workers, and 0.5% were unpaid family workers.

Table 7: Occupations by Number of Employed Persons 16 Years or Older, 2000 (Total Town) (Data from 2010 not available)

Industry	# of Employed Persons in Town of Minden (Total)	# of Employed Persons in Village of Fort Plain	# of Employed Persons in Town of Minden (Outside Village)
Educational, Health, and Social Services	330	240	90
Arts, Entertainment, Recreation, Accommodation, and Food Service	50	37	13
Retail Trade	279	132	147
Construction	140	72	68
Manufacturing	330	171	159
Other Services	100	55	45
Public Administration	54	26	28
Professional, Scientific, Management, Administrative	133	49	84
Wholesale Trade	44	18	26
Agriculture, Forestry, Fishing, Hunting, Mining	105	8	97
Finance, Insurance, Real Estate, Rental, and Leasing	114	82	32
Transportation, Warehousing, and Utilities	60	15	45
Information	39	20	19

As shown in Table 8, the Town of Minden (total) has a higher percentage of persons employed in agricultural occupations than that of both Montgomery County and New York State. When compared with the data for employed persons throughout New York State, an additional 10% of the employed workforce in Minden is employed in production, transportation, and material moving occupations. The Town of Minden has fewer persons employed in management, professional, and related occupations (22.9%) than does New York State (36.7%). From 1990 to 2000, the Town of Minden has seen both an increase in the amount of people in the labor force and an increase in the number of unemployed people (Table 9).

Table 8: Comparison of Occupations, 2000 (Data from 2010 not available)

Occupations	Town of Minden	Village of Fort Plain	Montgomery County	New York State
Sales and Office Occupations	30.0%	28.5%	25.2%	27.1 %
Management, Professional, and Related	22.9%	22.8%	28.1%	36.7 %
Service Occupations	14.7%	16.8%	15.5%	16.6 %
Production, Transportation, and Material Moving	21.2%	25.0%	20.5%	11.7 %
Construction, Extraction, and Maintenance	9.0%	6.6%	9.3%	7.6%
Farming, Fishing, and Forestry	2.2%	0.3%	1.4%	0.3%

Table 9: Employment Data for Town of Minden (for those aged 16 and older) (Data from 2010 not available)

	Minden (Total)			Minden (Outside Village)		
Labor force	**1990**	**2000**	**1990 to 2000 Change**	**1990**	**2000**	**1990 to 2000 Change**
People in labor force	1,829	1,934	5.7%	986	807	-18.2%
People Unemployed	138	156	13%	69	59	-14.5%
People not in labor force (including retired)	1,478	1,321	-10.6%	746	589	-21.0%

Income Data

Table 10 compares changes in income data for Minden. Between 1990 and 2000, median income, and per capita income increased substantially in both the Town and in the Village. At the same time, the number of households with social security income and public assistance income decreased. This is probably due to changes in the criteria as to what type of family was eligible, rather than increased incomes. The number of households with retirement income rose slightly at the town level, but fell in the village. The number of individuals in the town classified as below the poverty level fell by 36%.

Table 10: Income Data for Town of Minden (Total Town) (Data for 2010 not available)

	1990	2000	Number of Households (1990)	Number of Households (2000)	1990 to 2000 Change
Median Income for Families	$23,716	$33,654			41.9%
Per capita income (Minden)	$8,890	$15,099			70%
Per capita income (Fort Plain)	$9,772	$16,369			68%
Average Social Security Income (Minden)			708	667	-5.7%
Average Social Security Income (Fort Plain)			539	382	-29%
Average Public Assistance Income (Minden)			160	47	-70%
Average Public Assistance Income (Fort Plain)			115	47	-59%
Average Retirement Income (Minden)			376	386	2.7%
Average Retirement Income (Fort Plain)			317	220	-31%
Individuals below poverty level (Minden)			779	502	-36%

Physical and Environmental Features

The Town of Minden encompasses 32,953.6 acres, and is located on the southwestern border of Montgomery County in the state of New York. The town is bounded on the north by the Mohawk River and on the west by the Town of Canajoharie. Herkimer and Otsego Counties serve as the town's western and southern borders respectively. The Village of Fort Plain is located in the northeastern corner of the town, with part of the Village in the Town of Canajoharie.

Montgomery County is located at the approximate center of New York State. The county is one of the smaller counties in New York State, comprised of 262,009 acres or 409 square miles. Montgomery County is only 22 miles from the State capital of Albany, and only 180 miles from New York City. The New York State Thruway and New York State Barge Canal run of 40 miles through the center of the county from the eastern border to the western border. The Town of Minden, which is the westernmost Town in the County, is only 57 miles from the State capital and 205 miles from New York City.

Topography (See Topography and Slopes Map):

Topography is the configuration of a surface, including its relief and the position of its natural and man-made features. When considering areas suitable for development, the topographic conditions of an area become a main factor in influencing the type of development that is feasible in that area.

Development in a town can include, but is not limited to, the construction of commercial and industrial buildings, houses, roads, and the installation of utilities. Due to increased technologies, development, with proper planning, can now take place on most slopes of varying degrees. In general, as the degree of slope increases, so does the difficulty of building and supporting new structures. Development on hillsides can reduce groundwater percolation and thus lead to a variety of problems, including increased runoff, destruction of water quality, increased erosion and flooding, and possibly even landslides. Another problem is the increase in costs associated with developing on steep slopes due to the extra measures that need to be taken to combat the problems listed above. Lack of slope, on the other hand, retards the drainage of surface water and limits the effectiveness of sanitary sewage disposal systems.

In general, it is safe to say that low slopes (1-10%) are the most suitable for development, provided that there is careful removal of ground cover. Development on moderate slopes (11-20%) should be analyzed carefully and the necessary erosion control techniques should be practiced. Large commercial and industrial structures should be discouraged from building on lands with a moderate slope. In general, all development should be avoided at all costs on extreme slopes (21% and over) because development on these slopes will most likely result in severe erosion. On-site inspection should always occur to determine if a site's slope is suitable for development.

The slope of a site can be determined by examining the contours of a topographic map or site development plan. Slope can be calculated by placing the vertical rise over the horizontal distance between two points. The equation for this calculation reads:

SLOPE = *Vertical Distance* divided by *Horizontal Distance* x 100

The Town of Minden has a wide variety of topography, with just about half of the town consisting of slight slopes of 2-5%. Slopes vary sporadically throughout the Town, ranging from 2% to 21% and over. Areas of extremely steep slope (21% and over) exist along sections of the Mohawk River and Otsquago Creek. Large-scale industrial and commercial development should be avoided in these areas. Areas of relatively low slopes can be found on either side of Dutchtown Road from the intersection of Snell Road in the west to that of Airport Road in the east (see Slopes Map).

Elevation within the Town of Minden ranges from a low of 300 feet above sea level along the Mohawk River to a high point of 1,600 feet above sea level just north of Quinn Road near the southwestern edge of the Town.

The Otsquago Creek enters the Town in the west and empties into the Mohwak River at the Village of Fort Plain. The Otsquago Creek and its tributaries drain almost all of the upland area of the Town and form the dominant surface feature of the Town.

Geology (See Bedrock and Surficial Geology Maps):

The Town of Minden's natural landform was created by glaciers thousands of years ago. About 550 million years ago, Minden was a nearly featureless plain underlain by ancient igneous and metamorphic rocks.

During the Ordovician period (490 to 430 million years ago), the present day bedrock of Minden was deposited under marine conditions. The Town of Minden is predominantly underlain by Canajoharie and Utica shales, and Schenectady Formation makes up the rest of the bedrock (see Bedrock Geology Map).

As time passed, very few changes took place until the Appalachian Revolution occurred during the end of the Paleozoic Era (220 million years ago). This revolution permanently raised most of the state above sea level.

The present day landscape of Minden is due to the glacial stage in New York State, which probably began 50,000 to 100,000 years ago, during the Pleistocene ice age. The glaciers transformed the landscape of the state, changing river patterns and smoothing out mountain tops. Throughout this ice age, there was a series of glacial advances and retreats. The final glacial retreat occurred 8,000 to 10,000 years ago and is known as the Wisconsin Glacier. In their wake, the glaciers left glacial till, which is the material deposited beneath a moving glacier. The makeup of this till is influenced by the bedrock over which the glacier moved. In this area, the vast amount of shale has contributed to the clay-rich soils.

Soils: It is very important to know what soils are present when determining how suitable, if at all, a site is for different types of development. Soil composition directly affects the land use potential for a given area or site. Soil conditions are essential planning considerations because the water bearing capacity and subsurface drainage capacity of the soil are important factors in the selection of areas suitable for development of any kind. The drainage capacity of various soils affects the density of residential development, which is dependent upon individual septic tanks or sanitary drain fields and private wells.

Construction of septic systems, buildings, and highways are all affected by the type of soils found at that particular development site. For example, soils with poor drainage and slow permeability can cause problems when poorly designed septic systems are installed. Two main problems may arise from installing septic systems in these types of soils: the system can become backed up more easily and the soil around the system can be easily contaminated. When installing septic systems in these soils, a properly installed septic system can be used to overcome the pitfalls of these types of soils. In addition, soils that have a high shrink-swell potential can cause streets, highways, and house foundations to crack.

Soil data for the Town of Minden is provided by the United States Department of Agriculture National Resource Conservation Service (formerly the Soil Conservation Service) in the form of a Soil Survey. The Soil Survey provides information on the properties of soils and their effect on selected non-farm uses of the land. The Soil Survey expresses soil limitations for selected uses as either slight, moderate, or severe. A rating of *slight* indicates that the soil has properties favorable for the rated use. Soil limitations are minor and can be easily overcome. A rating of *moderate* indicates that the soil has properties moderately favorable for the rated use. The limitations can be mitigated with special planning, design, or maintenance. A rating of *severe* indicates that the soil has one or more unfavorable properties for the rated use. Limitations are difficult and costly to overcome, but a rating of severe does not mean that the soil cannot be used for the specific rated use.

It is recommended that the Town Planning Board obtain a copy of the Soil Survey from the National Resource Conservation Service. This Soil Survey and its attached soil maps will help the Town Planning Board when considering the most suitable use of the land for a particular area within the Town. It should be noted that this Soil Survey will help the Planning Board to eliminate some sites from further consideration immediately, but it should not supplant direct and detailed on-site investigation when development is planned.

Water Features

The Town of Minden recognizes that most ecological and economic systems (such as provision of drinking water, recreation, wildlife habitats, and future economic growth of tourism and small business) are all dependent on adequate sources and quality of water. Agriculture and recreation are also dependent on

high quality water sources. Wetland ecosystems and streams (along with associated floodplains and stream corridors) are important habitats, and work to remove and recycle nutrients and sediments, filter impurities, and store water to reduce flood damage and feed groundwater aquifers. In Minden, groundwater aquifers are the source of drinking water for almost all residents outside the Village of Fort Plain. Groundwater's importance cannot be overstated.

Certain land use activities can adversely affect the health of water bodies, impairing their current and potential economic and environmental functions. Threats to local surface water include both point source pollution and nonpoint source pollution (originating from construction, agriculture, parking lot and street runoff, stormwater runoff, on-site wastewater systems, and commercial, industrial, and residential activities). Increases in impervious surfaces in watersheds prevent the natural recharge of groundwater. Building in floodplains and removal of stream side vegetation results in loss of habitat and increased risk of erosion and flooding. Groundwater resources can be impaired by surface pollution as well as by water withdrawals. Other threats include broken connections between wetlands and surrounding uplands, draining and filling wetlands. Water diversions and excessive removal of groundwater disrupts the natural flow of water in streams.

Groundwater: (See also Appendix A: Minden Groundwater Study). Groundwater is a valuable resource because it is a major source of water supply, and it should be taken into careful consideration when development occurs. Aquifers are subsurface waters that act as reservoirs and filters for drinking water, and they help maintain balance in the hydrologic cycle. Leaking septic tanks and sewage lines, unsealed landfill sites, and sewage disposal sites can allow pollutants to pass directly into groundwater and can then contaminate the drinking water supply. For these reasons, it is necessary that proper planning takes place concerning groundwater resources when development is proposed.

Town of Minden residents rely predominantly on groundwater for their on-site, individual water supply. According to the 1990 US Census, 49% of the water supplied to the Town's residents is from dug wells and 41% is from drilled wells. Seven percent of the Town's residents rely on public or private systems for their water supply and the remaining three percent rely on other sources.

Surface water (See Watersheds, Water Features, and Flood Hazard maps): Surface water is valuable as a source of water supply, food, recreation, waste dispersion, transportation, and even power generation. Surface water includes permanent bodies of water, such as rivers, lakes, ponds, streams and estuaries, etc. Streams, which help to replenish groundwater, rivers and reservoirs are also a major natural source of water to the entire system. They should be taken into careful consideration when development occurs near them, because if they become polluted, the whole region's water source could suffer. Major rivers can be used for transportation and power generation, and this resource should also be taken into account.

The Town of Minden has few bodies of water of any substantial size. The Mohawk River forms the northern border of the Town. The major stream of the Town is the Otsquago Creek. A smaller stream found within the Town is the Sprout Brook Creek. The Otsquago Creek and Sprout Brook Creek are all classified as Class C Waters by the New York State Department of Environmental Conservation. By definition presented in 6 NYCRR, Class C Waters are suitable for fishing and fish propagation. The water quality is suitable for primary and secondary contact recreation, even though other factors may limit the use for this purpose. The Mohawk River is classified as Class B Waters along the Town's border. By definition presented in 6 NYCRR, Class B Waters are suitable for primary contact recreation and any other uses, except as a source of water supply for drinking, culinary or food processing purposes. These waters are protected, and a permit will be required for any stream disturbance due to future development.

The Montgomery County Water Quality Committee has identified two primary watersheds in the Town of Minden: North Minden and Otsquago Creek.

Flood zone areas: (See Flood Hazard Map). Floodplains are the land areas adjacent to streams and rivers that get covered by water during periods of flooding. These locations are important because of their water capacity to collect and slow flood waters. One must be careful when building on floodlands or floodplains because building on them can endanger human life and property. Damming, filling, or leveling these floodplains decreases their storage capacity and increases flood velocity and the flood potential downstream.

In January 1983, the Town of Minden joined the Federal Emergency Management Agency (FEMA) Flood Insurance Program. FEMA produced maps of the Town showing areas of 100- to 500-year flooding potential. This map shows that areas of 100-year flooding occur along the Mohawk River, Otsquago Creek, and Bowmans Creek.

Wetlands are areas that contain unique plant and animal life, and they are scattered sporadically throughout the Town of Minden. Other areas of importance for terrestrial and aquatic species include the Mohawk River, Otsquago Creek and its tributaries. The Otsquago Creek and its tributaries contain trout. All of these water bodies are important for fish, birds, mammals and other species that rely on river ecosystems, including a variety of migratory species.

Wetlands: (See Water Features Map). Wetlands are tracts of low-lying lands that are saturated with moisture and act as sponges that absorb excess runoff and thus reduce potential flooding.

Wetlands are important in many ways and contribute positively to the social, economic, and environmental health of our nation. Wetlands act as natural flood control devices by storing runoff from heavy rains and snow melts. They also protect the water quality is lakes, streams, rivers and wells by filtering pollutants, nutrients and sediments from runoff. Wetlands support a great variety of wildlife and are essential breeding grounds

for several rare and endangered species. Wetlands provide beautiful open space, thereby enhancing the quality of life, private property values, and tourism.

Due to their importance, wetlands are regulated by New York State. New York State Freshwater Wetlands are mapped by the Department of Environmental Conservation (DEC). The New York State DEC maps wetlands that are at least 12.4 acres in size. State regulations prohibit the disturbance of wetlands (without a permit) and prohibit development within 100 feet of a wetland boundary.

New York State Freshwater Wetlands are scattered throughout the Town of Minden. Wetlands within the Town exist near Charlesworth Corners, Brookman Corners, the Fordsbush area and sporadically along the Mohawk River (see NY State DEC Wetlands on Water Features Map). Since these are not the only places within the Town that contain wetlands, the New York State Freshwater Wetlands Map should be referenced for site-specific areas.

In addition to New York State regulated and mapped wetlands, a large number of smaller and undocumented wetlands exist throughout the Town and are regulated by the United States Army Corps of Engineers. These Federal Wetlands have no minimum size, and their existence would have to be verified on a site/project-specific basis according to vegetation, soil and hydrologic conditions.

Ecological Data

NYS Breeding Bird Atlas: The first Breeding Bird Atlas Project was conducted in 1980-1985. In 2000-2005, New York conducted its second NYS Breeding Bird Atlas Project, which is a statewide survey designed to show the distribution of breeding birds in New York. The second Breeding Bird Atlas documents changes in bird distribution which occurred over twenty years. According to the Breeding Bird Atlas, “Threatened Species are determined by the DEC as likely to become endangered within the foreseeable future in New York State, or are federally listed as threatened. All such species are fully protected under the New York State ECL 11-0535.” In addition, “Special Concern Species are those native species which are not yet recognized as endangered or threatened, but for which documented evidence exists relating to their continued welfare in New York State. The Special Concern category exists within DEC rules and regulations, but such designation does not in itself provide any additional protection. However, Special Concern species may be protected under other laws.”

In 1980, the number of bird species included in the surveys ranged from 55 to 78 species per survey block included in the Town of Minden. (Eleven survey blocks are included in the Town of Minden. Note that some of the survey blocks are only partially located in the Town of Minden.) In the Town of Minden, two “threatened” species were found. Upland Sandpiper was found in six survey blocks, and Northern Harrier was found in one survey block. Six species of “special concern” were found in seven of the Minden survey blocks. These species included Horned Lark, Grasshopper Sparrow,

Red-Headed Woodpecker, Vesper Sparrow, Coopers Hawk, and Northern Goshawk.

In 2000, the diversity of bird species increased, as the number of bird species included in the surveys ranged from 56 to 99 species (compared with the 55 to 78 range from the 1980 survey). From the 1980 survey to the 2000 survey, there was an increase in the diversity of threatened species found in the Town. Five threatened species, including Upland Sandpiper, Northern Harrier, Henslow's Sparrow, Bald Eagle, and Pied-Billed Grebe, were found in nine survey blocks. The diversity of "special concern" species decreased; Red-Headed Woodpecker and Northern Goshawk were no longer found in the Minden blocks. However, American Bittern was added to the list of "special concern" species found in Minden. "Special Concern" species were found in seven of the Minden survey blocks.

According to the NYS DEC Environmental Nature Explorer Maps, Montgomery County also contains a "special concern" bat species, Eastern Small-footed Myotis, and a "special concern" turtle, Wood Turtle. The "threatened" Timber Rattlesnake has also been found in Montgomery County. Jefferson Salamander, another "special concern" species, has been found in Montgomery County.

The DEC listed the following plant species in Montgomery County:

Endangered: Erect Knotwood
Threatened: Fairy Wand, Ram's-Head Ladyslipper, and Troublesome Sedge
Rare: Jacob's-ladder.

According to the DEC, the distribution status of Jacob's-ladder in the Town of Minden is defined as "extirpated", meaning that the plant has been documented in the past, but is now believed to no longer occur in the Town.

Montgomery County has two significant natural communities in the DEC Nature Explorer database. The Calcareous Cliff Community was given a State Conservation Rank of S3, which means it is vulnerable. This means that it is vulnerable to disappearing from New York due to rarity or other factors (but is not currently imperiled). The Calcareous Talus Slope Woodland was given the same State Conservation Rank of S3 (vulnerable).

According to the DEC Environmental Facilities Navigator, there is one State Superfund Program site in the easternmost corner of the Town of Minden. There is one TRI (Toxic Release Inventory) site in the northeastern part of Minden. There are two Water Discharge sites along the northern border of the Town of Minden, between Minden and St. Johnsville.

Agricultural Resources

(See Farmland and Agriculture Maps)

Status of Farm Operations and Farmland: Farming is the predominant land use in Minden. Of the 21,700 acres of land in the Town, about 68% is farmed (See Table 11). The predominant farm activities are dairy and field crops (together account for about 42% of the total land area in Town). Vacant land, which is in any unimproved land without structures, and is mostly wooded acres, can be found on 104 parcels and almost 7000 acres of land in Minden.

Table 11: Acres of Farmland by Type of Farm

Agricultural Sub-Class	Number of Parcels	Acres	Percent of Land Area
Field Crops	66	6788.35	21.2%
Dairy Farm	46	6710.72	20.9%
Cattle Farm	6	581.95	1.8%
Horse Farm	3	305.16	1.0%
Sheep Farm	1	246.86	0.8%
Other Stock	1	62.3	0.2%
Nursery Specialty	1	15.69	0.05%
Vacant Land	104	6966.73	21.7%
Total	228	21677.76	67.6%

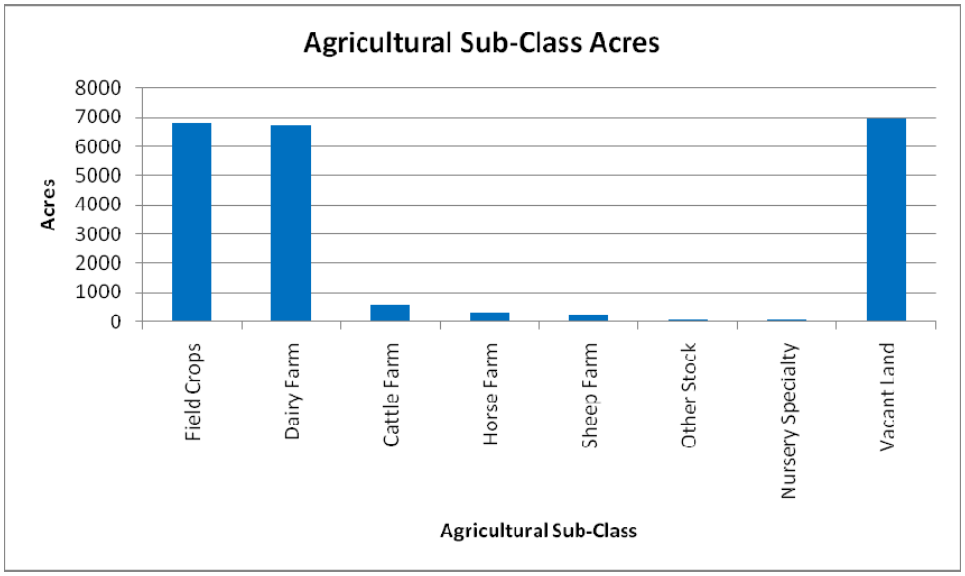


Figure 10. Acres of land by farm type in Minden (from 2009 Real Property Information)

The United States Agricultural Census offers the only agriculturally related data at the local level. Agricultural Census data is available down to the zip code and to understand farm operation changes in Minden, the zip code 13339 (Fort Plain) was examined in 1997 and again in 2007. 2007 is the last year data is available: the next census will take place in 2012. There are other zip codes within the Town of Minden, but 13339 is the one having boundaries closest to the Town boundary.

Table 12 illustrates that the number of farms in Minden has increased almost 20%. This is likely due to the movement of Amish farmers into Town. There are relatively few very large farms (over 1,000 acres), but between 1997 and 2007, the number of small farms, less than 50 acres grew about 11%. This shows that the growth in farm operations in Minden has been in small acreage farms. In 1997, 45% of farms were middle-income earners (sales between $10,000 and $99,000) with about 20% earning less than $10,000. In 2007, 26% of farms were in the middle income range (measured in 2007 as between $50,000 and $249,000). The largest percent of farms by 2007 were in the small income earners (<$50,000). The Ag Census also indicates that more farmers are full owners and have farming as their principal occupation, but there are more tenant farmers as well. This also likely reflects the Amish farm operations.

There is a wide diversity of farm products raised or grown in Minden. Dairy remains the predominant type of farm, but the following are other types in Town:

Beef	Hogs	Pigs	Sheep	Goats	Poultry
Horses	Turkeys	Oats	Vegetables	Christmas trees	
Fruit and orchards		Potatoes	Specialty animals		
Nursery/greenhouses		Soybeans	Organic farms		

While zip code level data is not available yet past 2007, New York State collects county-level data. The most recent is 2010 for Montgomery County shows that there has been a loss of farms, loss of farmland, loss of dairy cows, but an increase in overall milk production. In 1997, there were 650 farms in Montgomery County. In 2010, there were 605, a 6% loss. There were 145,000 acres of farmland in the county in 1997, and in 2007 there were 121,600, a loss of 16%. There were 19,000 milk cows in the County in 1997 and 13,200 in 2007, but at the same time, milk production went from 307.8 million pounds in 1997 to 316.5 million in 2007. This matches trends seen elsewhere – a loss of farms, farmland and animals, but production increases due to more efficiency.

The 2007 Ag Census data above can be used to estimate the gross sales of farms in Minden. While sales from agricultural products have surely changed since 2007, the following analysis gives a general approximation of the very important economic role agriculture plays in the Town:

In 2007, there were:

- 30 farms having gross sales greater than $250,000
- 43 farms having gross sales between $50,000 and $250,000

- 94 farms having gross sales less than $50,000

A very conservative estimate on the total gross sales in Minden (the 13339 zip code area), is as follows:

- 30 farms selling at least $250,000 = $7.5 million
- 43 farms selling on average $100,000 each = $4.3 million
- 94 farms earning on average $20,000 = $1.9 million
- **Total possible gross sales in 13339 area = 13.7 million dollars**

Farms make important economic contributions since farmers purchase goods and services from local and regional businesses. The New York State Comptroller (Office of the State Comptroller document, 'Bet on the Farm: Farmland Protection as A Strategy For Economic Growth And Renewal, October 2010') indicated that In addition to the direct revenue produced by farm production and the agricultural service and food manufacturing industries, farm businesses generate further production valued at close to $1 for every $1 produced directly. And, for every dairy job created, 1.24 other jobs are created. Thus the 13.7 million dollars produced from farms in the Minden area are a huge contributor to the local economy. Farmland loss and loss of farmers result in negative economic multipliers.

Table 12: Comparison of 1997 and 2007 US Census of Agriculture Data for Zip Codes 13339 (2007 is the last year that zip code data is available for)	1997	2007	% 1997 to 2007 Change
Zip Code	**13339**		
Farms by size all farms	140	167	19.3%
Farms by size 1 to 49 acres	15	29	93%
Farms by size 50 to 999 acres	122	135	10.7%
Farms by size 1000 acres or more	3	3	No change
With sales > $250,000	49 (>$99,000)[4]	30	NA
With sales $50,000 to $249,000	63 ($10,000 to $99,000)	43	NA
With sales < $50,000	28 (< $10,000)	94	NA
Full owners	73	110	51%
Part owners	62	45	-27.4%
Tenants	5	12	140%
Operators by Principal Occupation farming	109	120	10%
Operators living on the farm operated	124	155	25%
Cropland harvested 1 to 49 acres	27	40	48%
Cropland harvested 50 to 499 acres	92	85	-7.6%
Cropland harvested 500 acres or more	11	9	-18%
Cropland idle total farms	25	31	25%
Land under Conservation Reserve or Wetlands Reserve Programs total farms	9	8	11%
Cattle and calves inventory total farms	116	108	6.9%
Beef cow inventory total farms	18	36	100%
With dairy sales	91	70	-23%
Hogs and pigs sold total farms	7	10	43%
Sheep and goats total farms	1	7	60%
Poultry, total farms	8	16	100%
Horses and ponies of all ages inventory total farms	30	13	-57%
Turkeys sold total farms	0	3	300%
Oats for grain total farms	17	21	24%

4 *Market values reported in 1997 differ from those in 2007: 1997 Ag Census categories were $10,000 or more, $10,000 to $99,999 and $100,000 or more. 2007 categories were less than $50,000, $50,000 to $250,000 and more than $250,000. A direct comparison between the two census years is thus, not feasible.

Table 12: Comparison of 1997 and 2007 US Census of Agriculture Data for Zip Codes 13339 (2007 is the last year that zip code data is available for)	1997	2007	% 1997 to 2007 Change
Zip Code	**13339**		
Land used for vegetables total farms	7	8	14%
Berries total farms	2	0	-100%
Cut Christmas Trees	0	2	--
Fruit and Nut trees	0	5	--
Orchards	2	3	50%
Potatoes	3	2	-50%
Specialty animals	NA	3	--
Soybeans	5	7	40%
Organic farms	NA	12	--

Schools

The Town of Minden includes portions of five school districts:

Fort Plain School District
Cherry Valley-Minden School District
Canajoharie School District
Van Hornesville-Owen D. Young School District
St. Johnsville School District.

In addition, there are four parochial and other private schools in Minden. These are:

(2) Amish (One on Freysbush Rd. and the other on Nestle Rd. (2011 one is planned to be built for Pickle Hill Rd.)
(1) Fordsbush Bible Academy (Fordsbush Rd)
(1) Yoga- (Starkville Rd)

Listed in the charts below are the NYS Department of Education School Report Card and District Enrollment information for each school district.

Across all five school districts, total enrollment has dropped slightly from 2002 to 2009. The Canajoharie and Van Hornesville-Owen D. Young School Districts have seen the smallest decreases (3-10 students) in enrollment, while Fort Plain has seen the largest decrease with 76 fewer students.

From 1990 to 2000, Minden saw a significant decrease in the number of people 25 years and older with less than a high school diploma (38.5% decrease). During this same time period, Minden also saw a substantial increase in the number of people 25 years and older with an associates degree, bachelors degree, or higher degree (47.7%

increase). As shown in Table 13, people 25 years and older with a high school diploma and some college (no college degree) also increased in the Town.

Table 13. Educational Attainment Town of Minden (25 years and older)

Educational Attainment	1990	2000	1990 to 2000 Change
Less than high school diploma	1,074	661	-38.5%
High school diploma	1,143	1,289	12.8%
College, no degree	313	371	18.5%
Associates, Bachelors degree or higher	329	486	47.7%

Table 14. NYS Department of Education School Report Card for Fort Plain School District.

	Fort Plain School District		
	2002-2003	**2005-2006**	**2008-2009**
Total Enrollment	931	894	855
Attendance Rate	95.2%	95%	NA
Suspension Rate	5.8%	6%	NA
% with Free or Reduced Lunch	36%	49%	65%
# Teachers*	85	87	87

Free or reduced lunch eligibility is based on household income by household size. For example, a family of four with an income of $39,220 per year would be eligible for the free lunch program.

Table 15: Fort Plain School District Enrollment

		2002-2003	2005-2006	2008-2009
	grades K-6	468	465	442
	grades 7-9	237	221	209
	grades 10-12	226	208	204
	Total	931	894	855

Table 16. NYS Department of Education School Report Card for Cherry Valley-Minden School District.

	Cherry Valley-Minden School District		
	2002-2003	**2005-2006**	**2008-2009**
Total Enrollment	664	606	588
Attendance Rate	94.7%	95%	NA
Suspension Rate	1.8%	3%	NA
% with Free or Reduced Lunch	33.1%	40%	36%
# Teachers*	60	56	55

Free or reduced lunch eligibility is based on household income by household size. For example, a family of four with an income of $39,220 per year would be eligible for the free lunch program.

Table 17: Cherry Valley-Minden School District Enrollment

		2002-2003	2005-2006	2008-2009
	grades K-6	333	303	284
	grades 7-9	162	168	136
	grades 10-12	169	135	168
	Total	664	606	588

Table 18. NYS Department of Education School Report Card for Canajoharie School District.

	Canajoharie School District		
	2002-2003	**2005-2006**	**2008-2009**
Total Enrollment	1,100	1,101	1,059
Attendance Rate	95%	95%	NA
Suspension Rate	NA	3%	NA
% with Free or Reduced Lunch	30.3%	31%	39%
# Teachers*	103	100	90

Free or reduced lunch eligibility is based on household income by household size. For example, a family of four with an income of $39,220 per year would be eligible for the free lunch program.

Table 19: Canajoharie School District Enrollment

		2002-2003	2005-2006	2008-2009
	grades K-6	539	560	518
	grades 7-9	285	249	273
	grades 10-12	276	292	268
	Total	1,100	1,101	1,059

Table 20. NYS Department of Education School Report Card for Van Hornesville-Owen D. Young School District.

	Van Hornesville-Owen D. Young School District		
	2002-2003	**2005-2006**	**2008-2009**
Total Enrollment	233	206	230
Attendance Rate	95.2%	97%	NA
Suspension Rate	3.4%	5%	NA
% with Free or Reduced Lunch	51.1%	61%	58%
# Teachers*	23	26	24

Free or reduced lunch eligibility is based on household income by household size. For example, a family of four with an income of $39,220 per year would be eligible for the free lunch program.

Table 21: Van Hornesville-Owen D. Young School District Enrollment

		2002-2003	2005-2006	2008-2009
	grades K-6	121	93	118
	grades 7-9	56	61	47
	grades 10-12	56	52	65
	Total	233	206	230

Table 22. NYS Department of Education School Report Card for St. Johnsville School District.

	St. Johnsville School District		
	2002-2003	**2005-2006**	**2008-2009**
Total Enrollment	485	465	452
Attendance Rate	94.6%	94%	NA
Suspension Rate	6%	5%	NA
% with Free or Reduced Lunch	55.5%	50%	47%
# Teachers*	51	42	45

Free or reduced lunch eligibility is based on household income by household size. For example, a family of four with an income of $39,220 per year would be eligible for the free lunch program.

Table 23: St. Johnsville School District Enrollment

		2002-2003	2005-2006	2008-2009
	grades K-6	252	240	264
	grades 7-9	133	111	87
	grades 10-12	100	114	101
	Total	485	465	452

Historic Resources

The Town of Minden contains some historic, architectural and cultural resources that give the Town a character all its own. There is a wealth of buildings associated with the Town's early history and development.

Throughout the Town, there are several old farmhouses and barns that were erected in the 18th and 19th centuries. One such barn built in the early 18th century is the Windfall Dutch Barn. The barn is a living relic of 18th century farming and is one of only a few of the old Dutch barns still standing today. These old Dutch barns are distinguishable by their square proportions, high steep roofs and gable-end doors. The Windfall Dutch Barn was restored from 1973-1976, when it was opened to the public.

"Its restoration began in the spring of 1973, after consultations with Professor John Fitchen (author of *The New World Dutch Barn*), with Willis Barsheid, Jr., a local antiquarian and authority on these barns, and with members of the staff of the New York Historical Association. The first task was to remove by hand a huge quantity of old hay that covered the entire floor and filled the south bays and the mow.

In the next few years, step by step, the crumbling foundations were rebuilt, rotted sills spliced, all later additions torn down, every bit of old siding and shingle removed and replaced (these were not original), and the heavy framing straightened and repaired. For the new floor, two-inch pine planks were especially cut and were secured with splines.

A major problem was finding timbers large enough to replace the missing or rotted parts of the sills and columns. Some of this material was salvaged from other ruined Dutch barns in the neighborhood.

The work of restoration was planned and carried out by a team of young carpenters, all in their twenties, headed by William Kelly Brown, with Willis Barsheid, Jr., as consultant.

In 1975 the Regents of the University of the State of New York granted a charter to a non-profit organization to be known as Salt Springville Community Restoration, Inc. The founding Trustees named in the charter were Willis Barsheid, Jr., Nancy Countryman, Blake Hayes, Louise P. Moore, and Keith Prime. This organization took title to the completed Windfall Barn and opened it for public use in the summer of 1976." (*The Windfall Dutch Barn*. Salt Springville Community Restoration, 1978.)

Today, various festivals are held at the Windfall Dutch Barn.

In the Hamlet of Mindenville, there is a section of the original Erie Canal built in 1825, which is still very visible and in good condition. This portion of the canal was later abandoned, and today, the New York State Barge Canal, located about a half mile away, runs adjacent to it.

Also located throughout the Town are many other buildings and private residences that have historical, architectural, and cultural significance. These properties are representative of the valuable heritage of the Town.

Additionally, because of the Town's location along the Mohawk River, there is the possibility of the existence of unknown archeologically sensitive sites and artifacts.

Erie Canal Locks 32 and 33

The Town of Minden has also completed an inventory of historic rural cemeteries. These cemeteries are scattered throughout the Town. Refer to the map for the specific cemetery locations.

The Town of Minden has listed the historical sites in the town where historical markers have been placed or will be placed:

1. Fort Plain Museum
2. Sand Hill Reformed Church
3. Indian Village (Airport Road)
4. Lydius Street (Home)
5. D.A.R. House
6. Sand Hill School
7. Sand Hill Burial Grounds (Indians)
8. Sand Hill Cemetery
9. Gersenburg Church and Cemetery
10. Windfall Dutch Barn
11. Indian – Salt Springville – Salt Spring
12. Fort Planck – Paris Road
13. Fort Clyde – Rt. 163

The Town has also compiled a list of school houses:

1. Sandhill School House (home of Sandra Failing)
2. Old Mang Homestead (south side of 5S)
3. Fordsbush
4. Rt. 163 (next to Dave Webbs)
5. Brookman's Corners (Mill Road)
6. Hallsville (northside Rt. 80)
7. Mindenville
8. River Road (House north of road, west of Klemme Farm)
9. Salt Springville (Quinn Road)
10. Paris Road (corner of Paris and Leneker)
11. Hallsville (left side of Fordsbush Road)

As the Town continues to grow and develop, individual buildings of historic significance may be at risk for replacement or alteration. The Town of Minden should support efforts that help to protect the historically, architecturally and culturally important sites and areas that are found throughout the Town.

According to the New York State Historic Preservation Office, the following locations are listed on the State and National Historic Registers (See Historic Resources Map):

Table 24a: State and National Historic Register Listing – Town of Minden

Windfall Dutch Barn
Enlarged Double Lock No. 33, Old Erie Canal
Fort Plain Conservation Area
Site of Fort Plain Fort Rensselar

Table 24b: State and National Historic Register Listing – Village of Fort Plain

Fort Plain Conservation Area
United States Post Office – Fort Plain
John Burke Carriage and Wagon Factory (The Betzinger Building)

The Town of Minden and the Village of Fort Plain also include the following historic districts:

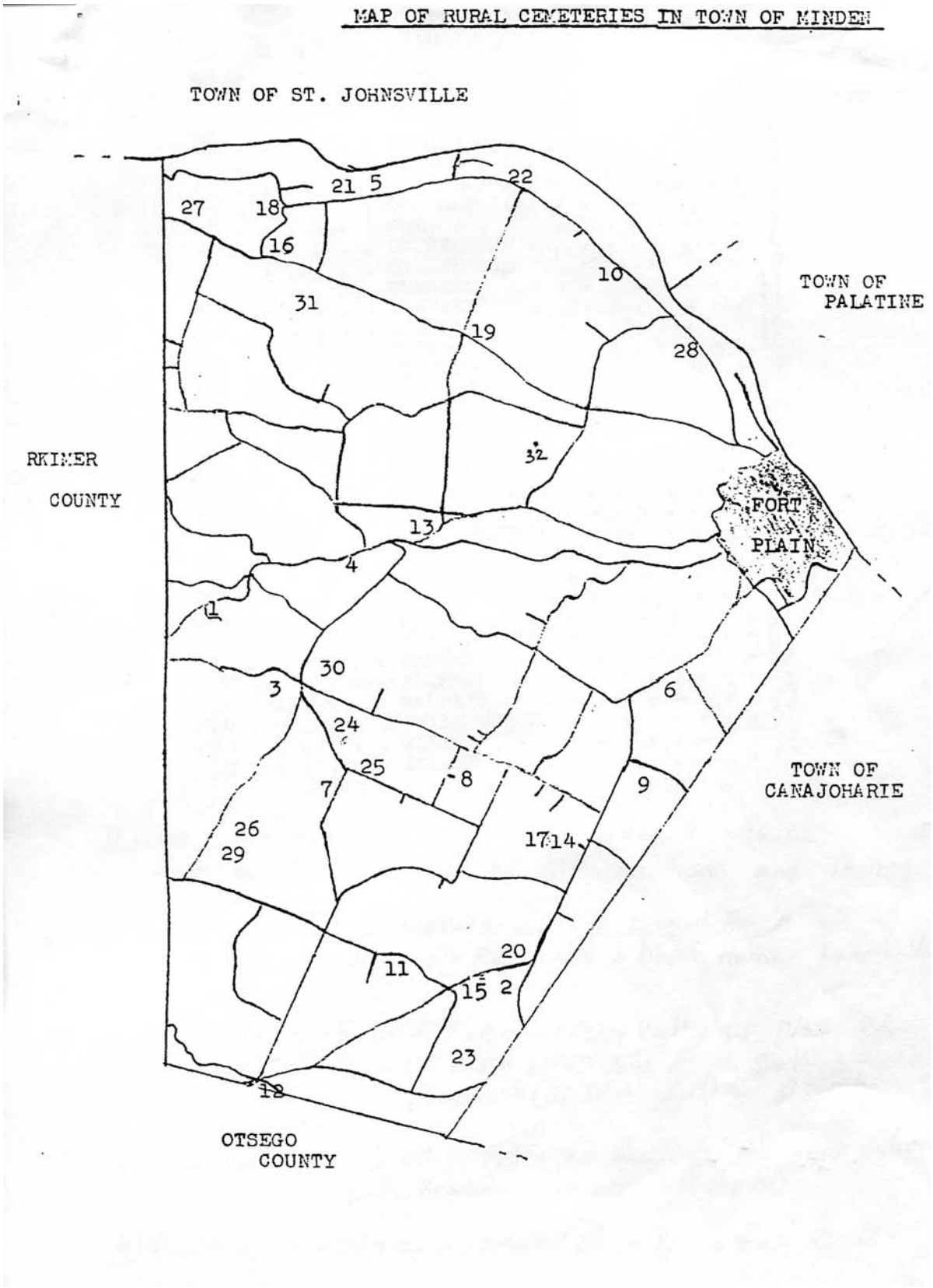
Canal Street (Multiple)
Center Street (Multiple)
Division Street (Multiple)
14 High Street, Clark David Property
17 Home Street, Residence
Lydius Street (Multiple)
Main Street (Multiple)
Mohawk Street (Multiple)
Reid Street (Multiple; District and Individual)
River Street (Multiple)
South Street (Multiple)
Washington Street (Multiple)
Willett Street (Multiple)
Lock E-15, Erie-Barge Canal/Mohawk River
6 Abbott Street
40 Canal Street (Individual)
9 Center Street (Individual)
99 Reid Street, Residence, East Corner Beck St (Individual).

There are many historic, rural cemeteries in Minden. The cemeteries include (See map that follows):

1. Bauder	Corner of H. Moyer Road and Rt 80
2. Bowman	800 ft. South of Indian Trail Rd, 2000 Ft west of Junction with Rt 163
3. Brookman	300 ft south of Mill lane, 300 Ft west Brookmans Corners
4. Coapman	2000 ft west of Hallsville, side of Route 80 across from Stockwell Bros Farm
5. Cox	3000 ft west of Junction River Road and Bridge St, 250 ft north of River rd by old gravel pit
6. Diefendorf	1400 ft west of Nestle Rd, off Nestle Rd by Route 163, 250 ft south of highway in middle of field
7. Dillenbach	West side of Salt Springville Rd, 1600 ft south of Young
8. Dunckel	1500 ft east of Miller Rd, 1500 ft south of Hessville Rd
9. Dunckel	150 ft south of Marshville, 1200 ft east of Rt 163
10. Eisenlord	100 ft south of River Rd, 2150 ft east of Gottung
11. Flint	150 ft south of Starkville Rd, 1200 ft east of Chriss Rd
12. Flint-Wiesen	South edge of Ripple Rd, halfway between Salt Springville and County line
13. Geisenberg	450 ft west of Sanders and Pickle Hill Rd, adjacent to Sanders Rd
14. Hess	900 ft west, end of Korniat Rd
15. Hufnail	800 ft east of Indian Trail Rd, 800 ft north of Hess Rd
16. Kneeskern	375 ft. north of Rt 5S, 30 Ft. east of Rt 5S and Mindenville Rd
17. Miller	900 ft west – end of Korniat Rd
18 Mindenville	200 ft north of Thruway, 500 ft west of bridge over River Rd
19. Moyer	400 ft east of Rt 5S/Sanders Rd, 200 ft north
20. Rush/Bush	400 ft west of Rt 163, 250 ft north of Indian Trail Rd
21. Sanders	3000 ft west of River Rd and Bridge St, 250 ft north of River Rd by old gravel pit
22. Sanders	150 ft north of intersection of River Rd and

	Sanders Rd
23. Seeber	1600 ft north of Clinton Rd, 2400 ft east of Junction of Hessville Rd
24. Sitts	300 ft east of Salt Springville Rd, 200 ft north of Junction of Salt Springville - Young
25. Suits/Sitts	400 ft east of Salt Springville Rd and Youngs Rd along north side of Youngs Rd
26. Wagner	3600 ft north of Starkville Rd and Brookmans Corners, 500 ft east of Brookmans Corners
27. Walrath	150 ft north of Rt 5s, 300 ft east of Herkimer Co.
28. Walrath	150 ft south of River Road, 250 ft east of Airport Rd
29. While/Wiles	800 ft east of Brookmans Corners Rd, 2800 ft north Brookmans Corner Rd and Starkville Rd
30. Wiles	200 yards north at 1st farm on left side of Hessville Rd from Brookmans Corners
31. Zoller	800 ft south of Rt 5s directly opposite Snell Rd

MAP OF RURAL CEMETERIES IN TOWN OF MINDEN



Recreational Resources

The Town of Minden has seasonal music festivals, which are held at the Windfall Dutch Barn. There are also several clubs in the Town, including the Tri-Town Coon Club, the Fort Plain Beagle Club, AmVets, and the Mountain Man Hunting Club. In addition, the following can be found in Minden:

Hilltop Paintball and Golf/Driving Range
Twister Valley Motorsports Park
Florians World of R.C.
Erie Canalway Trail
Nellis Airport
Walts RD Pond and Park Area
Snowmobile trails (in various areas)
Lock #33 (Old Erie Canal)
Lock #16 (Mindenville)
Great Vista Farm

Community Facilities and Services

The Town of Minden has a municipal building located at 134 State Highway 80. The Town Clerk and Town Justice are located in this municipal building. The Town Board and Town Planning Board hold their regular meetings at this location. The Town Highway Department is also located at this site.

Other community groups include the Salt Springville Community Restoration Inc. and the S. Minden Fire Department.

Transportation and Highway

It is important to analyze the transportation network of the Town because a transportation network ties a community together and links it to the outside world. Transportation networks, especially those to the outside world, are important to the economic growth of a town and community in providing the needed access to goods and services not found in the town.

Historically, the availability of viable transportation routes has been a great contributing factor to the development of the Town of Minden and the Mohawk Valley. The completion of the Erie Canal in 1825 helped the economic development of the Town of Minden and the Village of Fort Plain. New merchants began to arrive and settle along the canal route. At one time, the canal docks at Fort Plain were among the busiest in the county. The opening of the West Shore Railroad in 1883 also helped the Town of Minden in both its economic and physical development.

The Town has a small airport, which is located off of Route 5S.

State Roads: The Town consists of three state highways, which encompass

approximately 19 miles: State Route 5S runs along the northern border of the Town, Route 80 runs from the Village of Fort Plain through the central part of the Town from East to West, and Route 163 runs nearly parallel with the eastern border of the Town.

County and Town Roads: The Town consists of 23 county roads and 48 town roads. The 48 town roads include dead end lanes and drives. The town roads are mostly single lane roads with a pavement width of 11-13 feet.

Traffic counts for State roads (NY5S, NY163, and NY80) are in Tables 25 to 27. The data show relatively small changes in average annual daily traffic volume on these State roads. The absence of large changes in the traffic counts suggests that there have been few development projects in the Town that affected the daily traffic volume on these roads.

These roads and highways within the Town are maintained by three agencies: the New York State Department of Transportation, the Montgomery County Highway Department, and the Town of Minden Highway Department.

The New York State Barge Canal is an important waterway that makes up the northern border of the Town. This waterway is used by hundreds of recreational boaters each year.

Exits 29 and 29A of the New York State Thruway are less than three and a half miles from the Town. Proximity to an interstate highway, such as the New York State Thruway, has brought growth and development to many other rural towns that are similar to the Town of Minden.

Proper maintenance of the Town of Minden's transportation infrastructure is essential; the transportation network is a major factor in influencing the future growth and development of the Town and in ensuring economic stability for its residents.

Table 25: Traffic Volumes on State Roads (NY 5S)

Route	Location of Count	Average Annual Daily Traffic Volume	Year	%Change in AADT
NY5S	CR 66 SANDERS RD	1390	2008	-7.3%
		1200	2000	
		1500	1993	
NY5S	FT PLAIN W LN	1920	2008	6.7%
		2000	2000	
		1800	1990	
NY5S	RT 163 START 80 OLAP	2760	2008	-4.8%
		1900	2000	
		2900	1993	
NY5S	END 80 OLAP FORT	6000	2008	-16.1%

Route	Location of Count	Average Annual Daily Traffic Volume	Year	%Change in AADT
	PLAIN	6900	2000	
		7150	1991	
		2850	2000	
		3950	1993	

Table 26: Traffic Volumes on State Roads (NY 163)

Route	Location of Count	Average Annual Daily Traffic Volume	Year	%Change in AADT
NY163	RT 5S START RT 80 OLAP			
NY163	END 80 OLAP FORT PLAIN	6610	2008	0.2%
		6650	2000	
		6600	1991	
NY163	CR 79 FREYBUSH	1480	2008	23.3%
		1550	2000	
		1200	1993	
NY163	CR 77 INDIAN TRAIL RD	1270	2008	27.0%
		1050	2000	
		1000	1991	

Table 27: Traffic Volumes on State Roads (NY 80)

Route	Location of Count	Average Annual Daily Traffic Volume	Year	%Change in AADT
NY80	FT PLAIN S LN	1000	2008	13.6%
		940	2000	
		880	1996	
NY80	START 163 OLAP	2840	2008	1.4%
		2900	2000	
		2800	1991	
NY80	END 163 OLAP START 5S OLAP	6610	2008	0.2%
		6650	2000	
		6600	1991	
NY80	END 5S OLAP	6000	2008	-16.1%
		6900	2000	
		7150	1991	
NY80	WILLET ST	5650	2008	37.8%
		4700	2000	
		4100	1991	

Route	Location of Count	Average Annual Daily Traffic Volume	Year	%Change in AADT
NY80	RT 5 END RT 80	7680	2008	34.7%
		6850	2000	
		5700	1995	

Emergency Services

The Town of Minden is policed by the Montgomery County Sheriffs Department and the New York State Police. The Town and its residents have access to the County-wide E-911 system, which was established by the Sheriffs Department.

Ambulance service in the Town is provided by Mid-County Volunteer Ambulance, which is located in the Palatine Bridge, and by Rural/Metro Medical Services located in the Village of Nelliston.

Like most towns of its size in New York State, fire protection in the Town of Minden is provided by volunteer fire companies. The Town contracts with the Village of Fort Plain, South Minden, and the Village of St. Johnsville Volunteer Fire Departments for fire protection.

Water and Waste Water

There are no public water supplies or sewer systems in the Town of Minden except in the Village of Fort Plain. Those services extend out of the Village along Route 80 only to the Town Hall.

Land Use

Between 2000 and 2011, 87 building permits have been issued for new single family homes.

Table 28: Building Permit Summary for Single Family Homes

Year	Number of Permits Issued
2000	10
2001	9
2002	9
2003	13
2004	8
2005	8
2006	11
2007	2
2008	9

Year	Number of Permits Issued
2009	8
2010	0
2011	0
Total Number of New Single Family Homes 2004-2010	87

Land use oriented regulations in the Town of Minden include the following:

Flood Damage Prevention (Chapter 54)
Outdoor Furnaces (Chapter 66)
Subdivision of Land (Chapter 77)
Wind Energy Facilities (Chapter 87)
Zoning (Chapter 90)

The Zoning Law includes a Right-To-Farm provision. Four zoning districts are established (R-1- Residential, A – Agriculture, and C-1- Commercial, and a Planned Development District. Most of the Town is in the A district, with the R-1 located along Route 80 from the Village of Fort Plain boundary to the intersection of Route 80 and Spring Street. The Commercial district consists of a few parcels located along Route 80 at Brookmans Corners Road.

Principal permitted uses in the R-1 district include one and two family homes, residential assessor uses and home occupations. Additionally, several special uses are allowed including nursing home, mobile home park, launderette, retail store, multi-family dwellings, bed and breakfasts, farms, and public buildings. The A district allows more permitted uses than the R-1 District including one and two family dwellings, parks, home occupations, farms, mobile homes, and home occupations. Special uses include commercial recreation, bed and breakfasts, nursing homes, farm products plant, cell towers, boarding/rooming house, church and their accessory uses, retail farm market, schools, and multi-family dwellings.

Twenty-four commercial uses are allowed in the C-1 district along with and additional 14 uses allowed as a special use. The Planned Development District is considered a floating zone where the zoning establishes the standards and procedures for creating one, but it is not mapped and established as a separate district until an applicant applies for it.

Zoning also includes a Floodplain Overlay District that coincides with the floodplain maps, and a Wetland Overlay District that includes land within 100 feet of a New York State Regulated Wetland (See Water Features and Flood Hazards maps).

Most residential uses require a 2-acre minimum lot size in both the R-1 and A

districts and most commercial uses need from 1 acre minimum lot sizes to 2-acres. Some uses such as golf courses, parks, schools, and industrial uses need more than 5 acres.

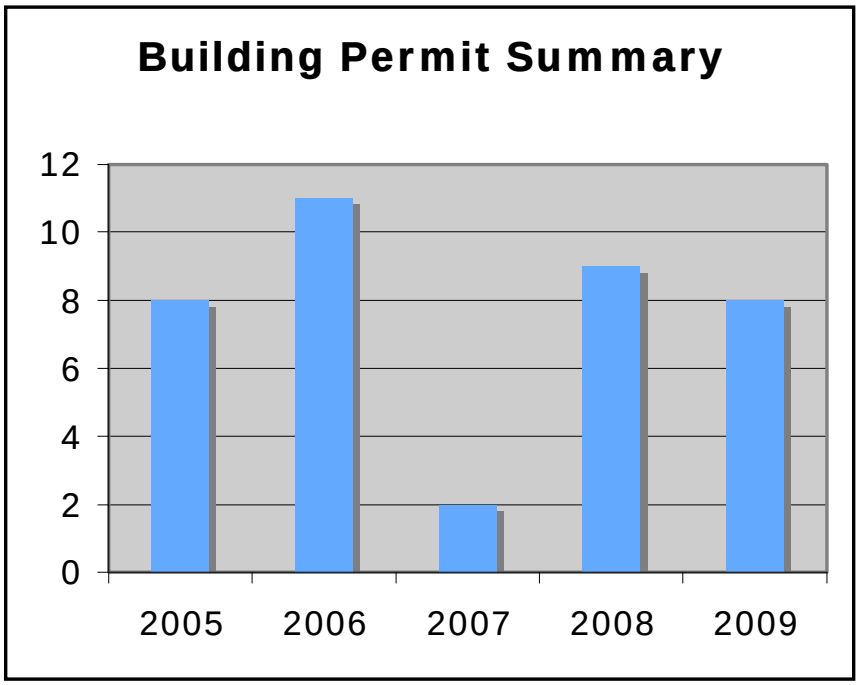


Figure 11. Building Permits Issued for New Single Family Homes, 2005-2011

Between 2000 and 2011, 98 subdivision applications have been approved. These approvals created about 260 lots. Most of the subdivisions were minor and were splitting one lot into two. During that time, there were 5 major subdivisions (where 5 or more lots were created). Eighteen special use permits were granted between 2005 and 2011 and 36 variances were issued between 2000 and 2011.

Table 29: Subdivision Summary in the Town of Minden, 1990-2011

Year	Number of Subdivisions Approved	Number of Lots Created
2000	11	25
2001	4	6
2002	4	10
2003	2	3
2004	11	30
2005	7	17
2006	11	26
2007	8	20
2008	9	31
2009	11	23
2010	14	43 (estimated)

Year	Number of Subdivisions Approved	Number of Lots Created
2011	13	28 (estimated)
Total # Approved	98	260

Table 30: Special Permit Activity in the Town of Minden, 1990-2011

Year	Number of Permits Issued
2005	2
2006	2
2007	1
2008	3
2009	4
2010	2
2011	3
Total Number of Approved Special Permit Applications	18

Table 31: ZBA Applications in the Town of Minden, 1990-2011

Year	Number of Permits Issued
2000	1
2001	0
2002	0
2003	0
2004	0
2005	5
2006	3
2007	2
2008	9
2009	8
2010	4
2011	4
Total Number of Approved Variance Applications	36

The land use tables and figures below represent real property tax data from Montgomery County. This data is derived from the Town Assessor and computerized by the County. In 2010, the most predominant use of land was for agriculture, with about 67% of the total land area of Minden devoted to farming. However, there were three times as many residential parcels (648) on 4,878 acres, or 15% of the land used for residences. Less than 1% of the land is used for commercial or industrial uses. About

3,400 acres are considered vacant (no structures, no farm activities and probably wooded), or about 11% of the land base in Minden.

Table 32: Number of Parcels and Acreage of Land Uses, 2010

Property Class	Number of Parcels	Acres	Percent of Land Area
Residential	648	4,878	15.2%
Agricultural	228	21,678	67.6%
Commercial	11	67	0.2%
Industrial	1	5	0.02%
Community Services	15	89	0.3%
Public Services	5	658	2.1%
Recreation and Entertainment	1	23	0.1%
Wild, Forested, Conservation Lands and Public Parks	8	413	1.3%
Vacant Land	342	3,374	10.5%
Road ROW	1	864	2.7%
Total	1,260	32,048	100.0%

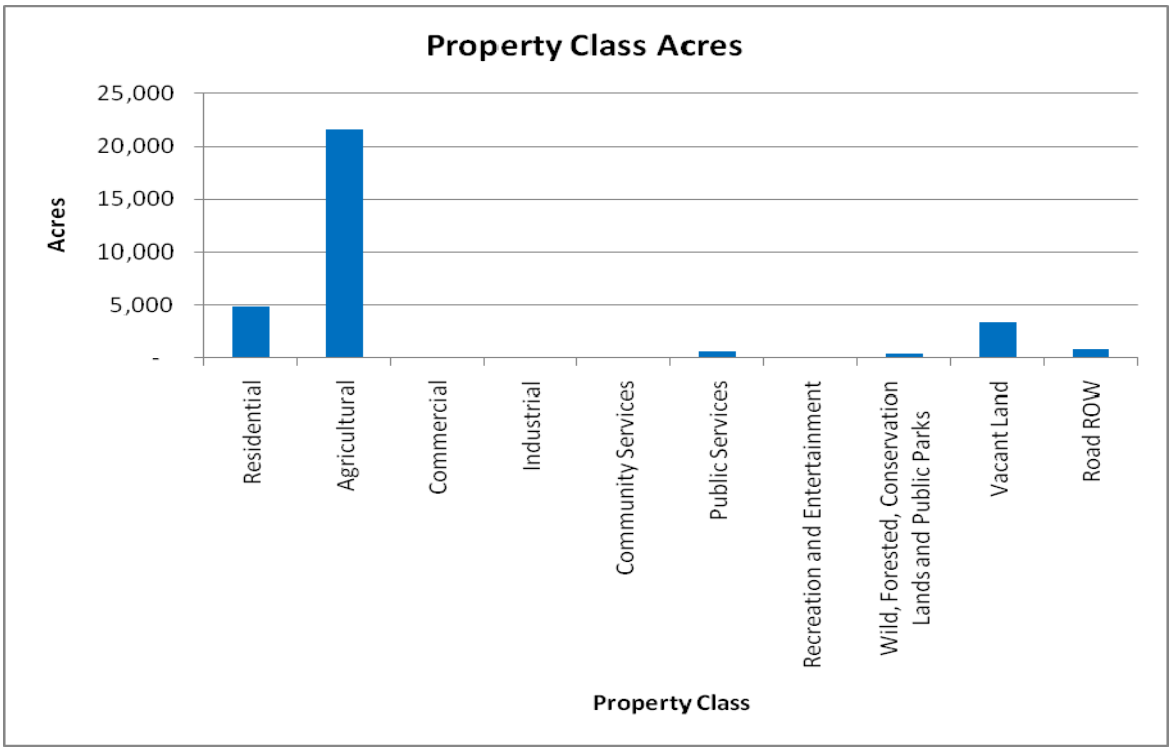


Figure 12. Acres by Land Use in Minden, 2009

Of the 648 parcels of land used for residences, 437 were used for single family homes. That is followed by an additional 117 parcels used for mobile homes. Rural estates,

defined as a single family residence on 10 or more acres of land were on 26 parcels, and 43 parcels were considered part of an agricultural operation.

Table 33. Parcels and Acres in Residential Land Uses, 2010

Residential Sub-Class	Number of Parcels	Acres	Percent of Total Town Land Area
Single Family	437	1096.44	3.4%
Rural Estate	26	852.59	2.7%
Seasonal	2	5.89	0.02%
Agricultural	43	2133.18	6.7%
Recreational	12	235.26	0.7%
Mobile Home	117	440.67	1.4%
Mobile Home Park	1	4.84	0.02%
Apartment Condominium	1	0.59	0.002%
Multiple	8	106.6	0.3%
Two Family	1	2.05	0.01%
Total	648	4878.11	15.2%

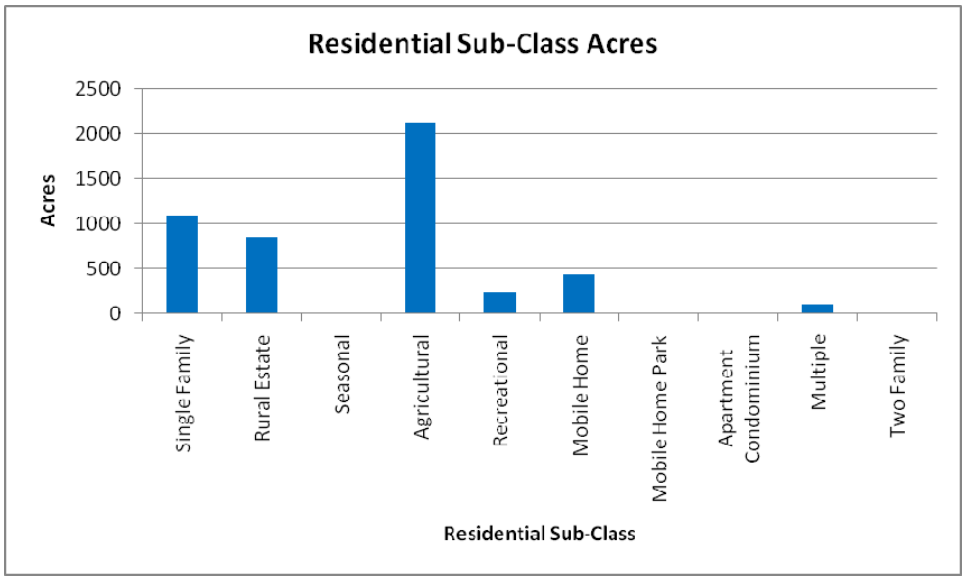


Figure 13. Acres of Residential Uses in Minden, 2009

Eleven parcels are considered commercial use. These uses were for storage/distribution, auto sales, junkyard, and multipurpose. This does not include home occupations or businesses conducted as part or on a farm operation.

Table 34. Parcels and Acres of Commercial Land Uses in Minden, 2010

Commercial Sub-Class	Number of Parcels	Acres	Percent of Land Area
Storage and Distribution	5	15.88	0.05%
Auto	2	6.81	0.02%
Junkyard	2	33.97	0.11%
Multipurpose	2	9.85	0.03%
Total	11	66.51	0.21%

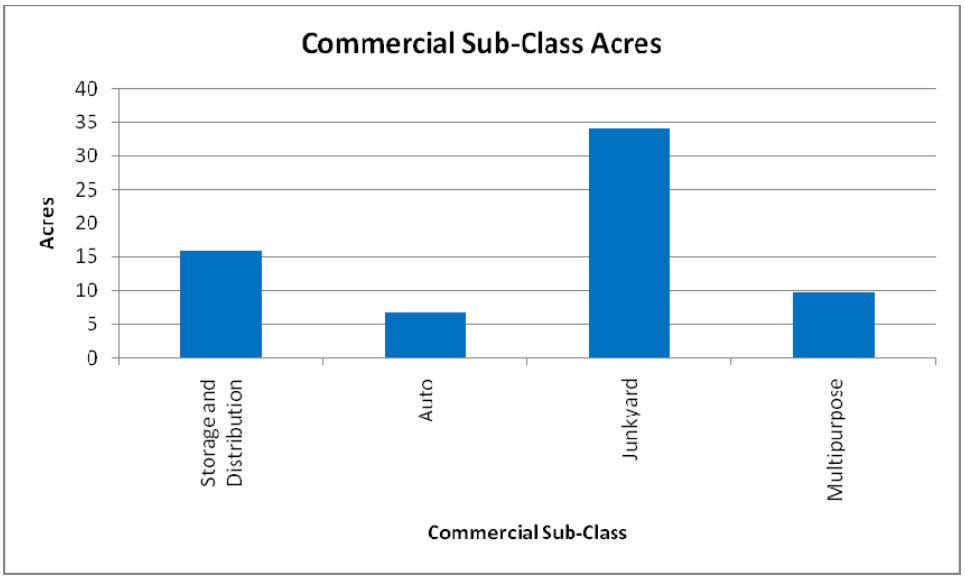


Figure 14. Acres of Commercial Uses in Minden, 2009

The only industrial use in Minden is a pipeline. Fifteen parcels are considered community services, and these are predominanted by religious or cemetery uses.
Other minor land uses in Town include those for electric and gas facilities, recreation, private and public parks. Vacant parcels are the classified use on 342 parcels of land (10% of the total town base) and are mostly vacant lands related to residential uses.

Table 35. Sub-Class Parcels and Acreage in Minden, 2010

Industrial Sub-Class	Number of Parcels	Acres	Percent of Land Area
Pipelines	1	4.85	0.02%
Total	1	4.85	0.02%

Community Services Sub-Class	Number of Parcels	Acres	Percent of Land Area
Government	1	5.52	0.02%
Protection	2	18.9	0.06%
Educational	1	5.05	0.02%

Transportation	1	4.55	0.01%
Cultural and Recreational	1	25.46	0.08%
Social Welfare	1	5.34	0.02%
Religious	5	10.61	0.03%
Cemetery	3	13.45	0.04%
Total	15	88.88	0.28%

Public Services Sub-Class	**Number of Parcels**	**Acres**	**Percent of Land Area**
Transportation	3	634.22	2.0%
Electric and Gas	2	23.91	0.1%
Total	5	658.13	2.1%

Recreation and Entertainment Sub-Class	**Number of Parcels**	**Acres**	**Percent of Land Area**
Social	1	22.74	0.1%
Total	1	22.74	0.1%

Wild, Forested, Conservation Lands and Public Parks Sub-Class	**Number of Parcels**	**Acres**	**Percent of Land Area**
Public Park	1	54.57	0.2%
Private	7	357.95	1.1%
Total	8	412.52	1.3%

Vacant Land Sub-Class	**Number of Parcels**	**Acres**	**Percent of Land Area**
Residential	270	2421.21	7.6%
Rural	65	778.17	2.4%
Commercial	6	169.86	0.5%
Agricultural	1	4.74	0.01%
Total	342	3373.98	10.5%

Budgets

Between 2006 and 2010, the Highway appropriations have consistently hovered around 60% of the Town budget.

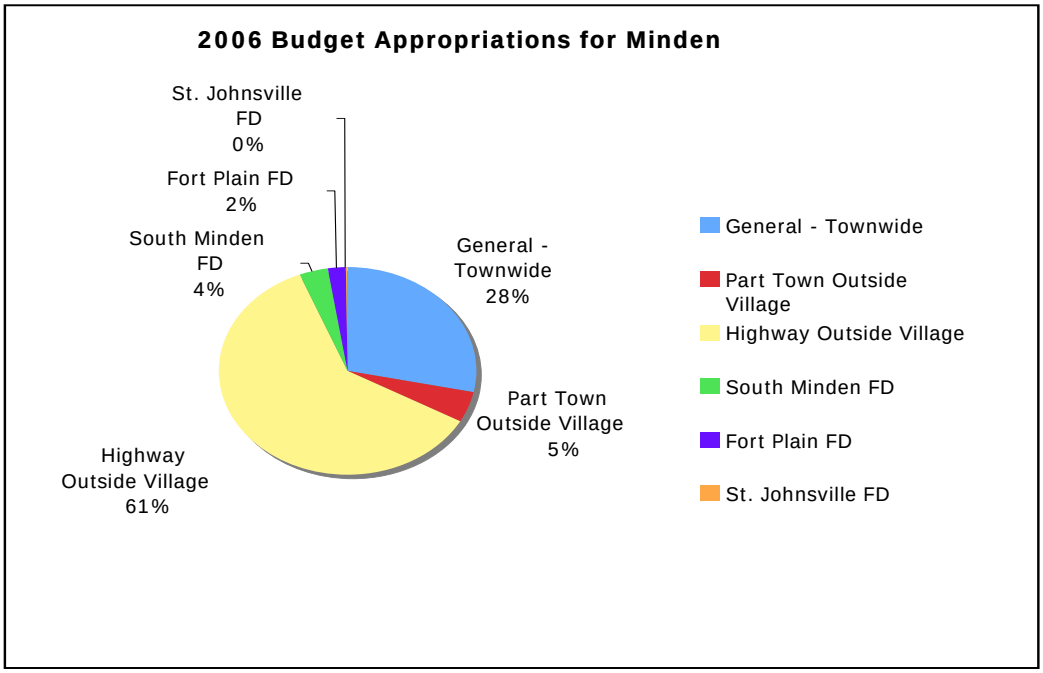


Figure 15: 2006 Town of Minden Appropriations

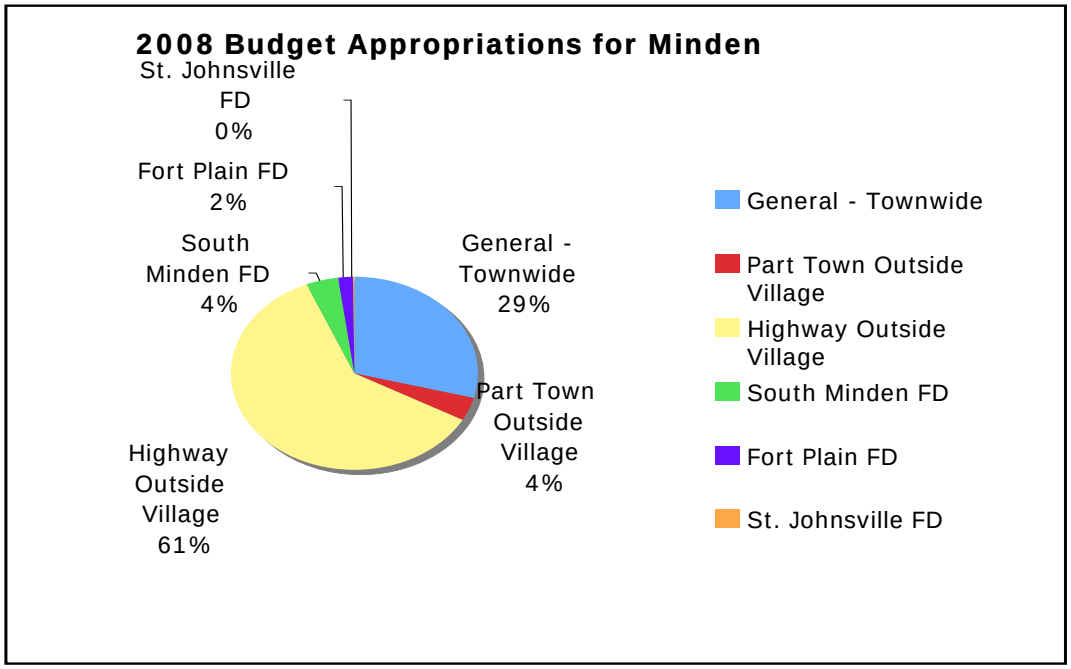


Figure 16: 2008 Town of Minden Appropriations

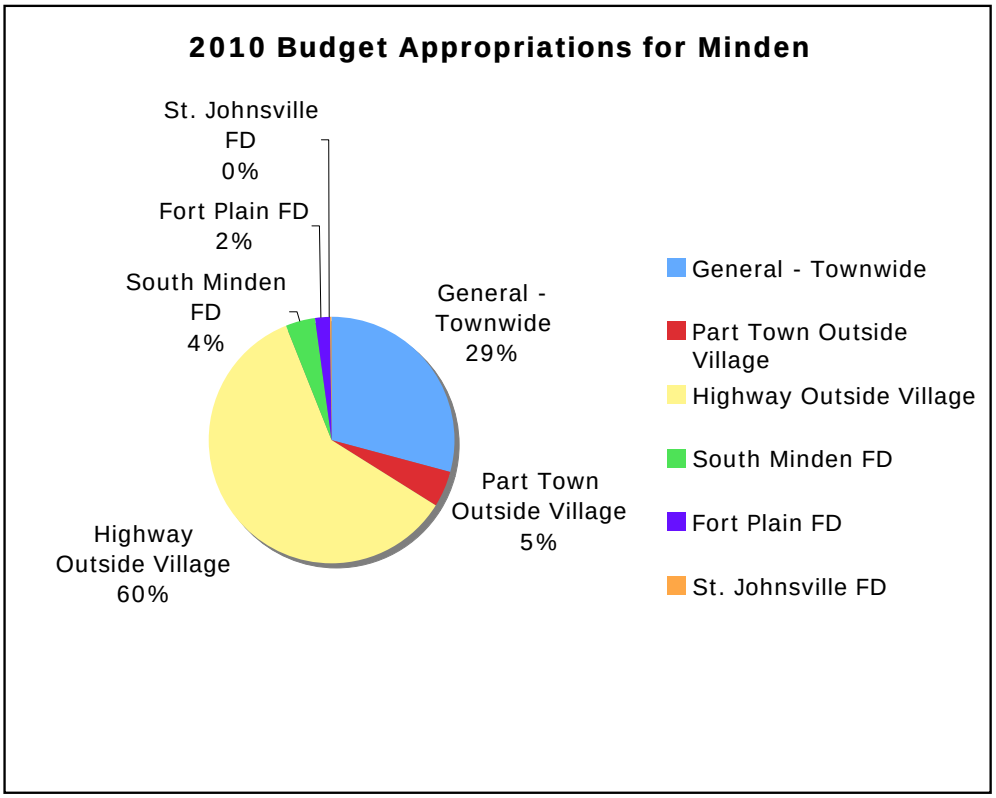


Figure 17: 2010 Town of Minden Appropriations

Part V Public Input

In 2009, the Town of Minden Planning Board conducted a survey of residents. About 33% of residents responded to this survey. The questions and answers are as follows:

Question	#Yes	#No	# No Opinion
Given the fact that farms create our rural character, do you feel that preserving farmland should be a priority in our town?	76	15	10
Do you understand the Ag and Market laws as they apply to your property?	30	60	11
Should the Town consider zoning ordinances which would limit the density of housing?	56	31	13
Would you like to see additional commercial development n the Town?	80	14	6
Would you like to see additional industrial development in the Town?	76	19	6
If there is more commercial and industrial development, should that development be confined to specific zone areas?	76	17	7
Give the availability of stores around Minden and surrounding areas, do you feel we need service stores in the Town of Minden?	51	38	20
Do you feel a need for smaller stores in the Town of Minden? For example, a general or country store. Please explain.	50	30	20
Do you feel businesses related to agriculture should be allowed to be established within the Township?	82	9	9
Do you think the Building Codes in the Town of Minden are being adequately enforced? Ex; septic systems, lot sizes, buildings, property maintenance, etc	47	29	23
Are you in favor of increasing the minimum lot size from the Towns present 2 acre requirement?	19	68	14
Are you in favor of seeing residential development in or near the existing hamlets of the Town (Fordsbush, Freybush, Mindenville, etc) for the preservation of our agricultural land?	47	29	23
Do you see a need for green space development?	37	38	26
Should residential development be encouraged near the Village of Fort Plain due to the possible use of services?	68	15	17
Do you see a need for senior housing development in our Town?	62	24	13
Should the Town consider the individual developments of	30	37	33

water and sewer districts?			
Do we have adequate police protection in our Town?	71	14	15
Do we have adequate fire protection in our Town?	86	5	9
Do you feel the Towns infrastructure (Roads, bridges, etc) are adequate and in good condition?	49	39	4
Should the Town consider shared services of men and equipment with other area governmental bodies?	77	13	9
Should the Town consider shared services of Offices and Buildings with other area governmental bodies?	73	17	10
Should a greater effort be made to identify and encourage preservation of historical sites? For example, houses, barns, canals, family cemeteries	69	17	14
Do you feel the Town should consider establishing a historical waterfront park along the Mohawk River and the Erie Canal? Ex. Lock 33?	64	23	13
Would you like to see tourism encouraged in our Town?	74	12	13
Should the Town provide for waste disposal?	54	25	21

In summary, the survey resulted in an understanding that:

Over 75% of respondents feel that:

- Preserving farmland should be a priority for the Town
- Wants to see additional commercial development in Town but confine it to specified zoning areas
- Wants to see additional industrial development in Town but confine it to specified zoning areas
- Ag-related businesses should be allowed to be established within the Town
- Minden already has adequate fire protection
- Minden should consider shared services of men and equipment with other area governmental bodies.
- They would like to see tourism encouraged in Town.

Between 51% and 74% of respondents feel that:

- They do not understand Ag and Markets Laws as they apply to their property
- Support limiting density of housing
- Minden should consider shared services of offices or buildings with other area governmental bodies.
- The minimum lot size should not be increased from the current 2 acre requirement.
- Residential development should be encouraged near the Village of Fort Plain due to possible use of services.
- There is a need for senior housing development in Town.
- There is adequate police protection.
- The Towns infrastructure is adequate and in good condition.
- Minden should make an effort to identify and encourage preservation of historical

sites.
- Minden should consider establishing a historical waterfront park along the Mohawk River and Erie Canal
- The Town should provide for waste disposal.

47% to 50% of respondents feel that:

- There is a need for smaller stores like a general or country store
- There is a need for service stores in the Town
- Building codes are being adequate enforced
- Residential development should not be in or near the existing hamlets for the preservation of agricultural land

Equal Numbers of Participants Said 'Yes", "No", and "No Opinion":

- There is a need for green space development.
- Minden should consider individual developments of water and sewer districts.

Other public input included two focus group meetings with area farmers (January and February 2011) and a public workshop (April 2011). The following document the information learned at those meetings:

1. 1/18/11 Meeting

About the Amish Farms: Average Amish farm is about 150 acres and 50 to 60 cows – mostly Holsteins. There are a few that are organic. Majority of land is owned. A few make hay to sell
No processing or creameries but they would like to have one. They feel produce farming is an area that will be up and coming

They have many home occupations, small stores, welding, woodworking shops that are not necessarily agriculture. They feel there will be more requests for small businesses set up on farms to support their families. As owners get older, they will want to add a small side business. Some of these stores support Amish, others non-Amish. Most will be on the farm and will be small – no more than 5,000 to 6,000 sf. They want to keep these small scale. Most of these businesses are usually not recognized or highly visible. They agree that structures having small businesses on them must "look" like they belong on the farm.

Feels these side businesses should be allowed – perhaps by size (suggested 2400 square feet) if there are acres to support that building. This is the biggest issue they face – need to allow more than farming and residences on the parcel of land. Suggested you can regulate by the building size and how it looks.

Two issues are the definition of home occupation and what will be allowed. The c current definition is too restrictive. They need small businesses to support their farms

and families – want to create lots of shops so they can be self-sufficient. Ultimately, they want more than one principal use on the property – need allowance for a farm-supported business. Would prefer to have businesses at their home and thus there is the issue of needing to subdivide that land into a different parcel for the business.

4-wheelers can be a problem.
They do not normally get help from Cooperative Extension, but the produce farmers do take advantage of that.
Their farms are likely to stay small.
Concerned about residential growth in town.
They like Minden due to the local businesses close by, that the Town helped them with produce section.
Another issue raised was the two-family house issue. What is currently allowed? Address this issue – if a single structure has 2 connected dwellings is this an accessory apartment or a two-family home?
Another issue was signs – it is not clearly identified how signs will be handled for these small businesses. Needs some review.
They suggested we get samples of farm-supported business regulations. Lancaster, PA has very strict ones, but there are many others (note from Nan).

Summary – How to allow secondary businesses on farm properties without overdoing business development, changing the ability to farm, and impacting the broader community. There must be a balance that can be incorporated into the zoning.

2. 2/18/11 Meeting

Farms represented at the meeting included dairy farms, horse breeding, crop/hay, elk and other livestock, heritage livestock.

Farmers indicated they need both the land they own and rented land to support their operations. A lot of land they rent is for sale and that could impact their businesses.

It is hard to deal with non-farm landowners: farmers felt that dealing with those from urban areas are difficult because they don't understand the concepts of farming. Farmers in attendance have had problems with both non-farm neighbors and non-farm landowners of their rented land. Manure spreading is one of the prevalent issues that raises concern. It was mentioned that there is little knowledge of the ag district rules and procedures.

It was mentioned that there are situations however, when farmers can improve their own image by better manure spreading and hauling. It was stated "we don't understand their perspective and they don't understand ours". Farmers must understand their perspective however and should show more respect for others in the non-farm community. Farmers need to promote their image and do away with carelessness in some daily farm operations. For example, there must be better management of equipment on roads.

It was pointed out the need to recognize that the town needs more education and better road management to accommodate farm equipment in order to sustain farms.

Roads need to be able to handle farm traffic. Some felt that small country roads were not maintained appropriately for farms. Farmers indicated that there needs to be adequate infrastructure for area farms. It was pointed out that town doesn't have any control over County roads, that the county has no money, and that 53 of the 83 miles of roads in Minden are county roads. Road maintenance, especially ditch work is badly needed.

The example of how St. Johnsville is promoting farming in that community was brought up. They re-defined ag land to better reflect what is on the ground and have stricter parameters for subdivision and building to protect actively farmed lands. They try to maximize the amount of ag land and limit development on the best lands suited for ag.

A participant mentioned he was concerned about loss of landowner rights.

It was discussed that there is a need and desire to have more than 1 business on the farm. That is what will sustain farm operations. Town has lost dairy farms and will continue to do so. As farms go, so do local businesses. Town has not replaced local businesses lost over the years. There is recognition that there is a need for finding an appropriate location for business development in Town, but nothing has been mapped yet. Future industrial locations must have a location that can tap into water and sewer – maybe closer to St. Johnsville. Minden needs to identify these opportunities. It was stated that we need infrastructure before development will come and the Town needs to local infrastructure or extend it and then find places for development.

It was stated that the community needs to be more attractive place and that conditions in Fort Plain are problematic.

Concern for ag is that there is not a critical mass enough to support agri-businesses in town. Vets are still here but that is about it. It was felt that there will never be enough farmers to support a tractor dealership but there needs to be other types of businesses to support ag. The trend is that a lot of farm land is being used by fewer farmers. There is really no need any more for more families and businesses to be in Minden to support farming.

Tourism was felt to be an important opportunity. The town should think about ways of promoting more tourism. The Amish could be a part of that. It was pointed out that there is no overnight lodging and there is already a need now – especially related during horse show season or for the motor-cross.

Promote agri-tourism. Dairy type agriculture is not sustainable. Town needs to look towards promoting mixed farms that have a variety of operations going on (not just dairy): meat, on farm sale of dairy products, vegetables, grain, retail at farm, etc. In other words, there is need for farm diversification. Need alternative crops and young

people to get involved. Also need community kitchens, slaughterhouses, and more education of young farmers.

They discussed Transfer of Development Rights and use of conservation easement programs as ways to allow farmers to get full market value of the land AND keep it in agriculture. Use of density bonuses to allow more intensive infrastructure and development in certain areas could incentivize the process.

It was felt that state regulations (and processing fees for meat) were obstacles to farming.

It was suggested that more hops be farmed. It was also noted that Ag must have support of NYS to excel. Having a buy local program is a good idea. It was felt that the entrepreneurial spirit of people will revitalize the area and that the Town should not put roadblocks up to prevent that. Allowing second businesses on farm is important to diversify. Town needs to be freer with home-based businesses. However, there is a need to separate out different home occupations – decide which ones should be allowed, which ones should have a special use permit, and which should be prohibited.

Ag also needs alternative fuel solutions. They want to have opportunities for solar, wind, ethanol, water power etc. Thinks that an ethanol plant would support agriculture if alternative crops were needed for that. A comment was made that the archaeological map included in the profile and inventory should not be used to restrict farmers ability to farm or build. Farmers did not want to see wetland rules expanded.

3. Public Workshop

I. Assets

A. Individual Assets Identified by Workshop Participants

Ag Land Usage
Ag related businesses
Agricultural district
Agriculture
Agriculture – countryside
Amish Farms/Businesses
Beauty
Bike trail
Convenient to travel
Emergency personnel and equipment
Farm community
Farm lands and farms
Four seasons
Good place to raise children
Good school system
Historic

Historic churches and barns
Historic Otsquago bridge
Historic sites
Historic Sites/Areas
History
Influx of Amish buying farms
Infrastructure
Keep agriculture in township/open spaces
Light population
Location
Low Crime Rate
No traffic
Open land
Open Space
Open space/countryside
Parks
Peace and quiet
Peaceful setting
People
Privacy
Reasonable land prices
Recreational – hunting, fishing, snowmobiling
Rural area
Rural areas
Rural feeling
Scenery
Scenery
Scenery
Scenery
Scenic Views/vistas
School
School
School
School
School
Small town feel
Small town feeling
Town government
Town of Minden outshines the village
Town roads
Town roads better than county
Very active school system
Wildlife

B. Assets Identified and Prioritized by All Participants at Table

Positive Feature of Minden	# Priority Stickers Received
School system – education	4
Rural nature/farm country	3
Ag related businesses	2
Farms	2
Landscape and scenery	2
Open Space	2
Historic sites/parks	1
Infrastructure	1
Low crime rate	1
Peaceful setting	1
Recreational	1
Amish farms and businesses	
Bike Trail	
Convenient to travel	
Scenery	
Small town community	

C. Ideas Offered to Maintain Positive Features in Minden

Continue Ag Districts
Having good people in government who care about the townspeople
Provide cost effective education
Maintain open communication with emergency personnel
Use subdivision and site plan review to protect open spaces
Use subdivision and site plan review to protect ag lands, offer incentives
Form a historical consortium to protect historical resources
Maintain land uses for wildlife
Maintain land uses for scenery
Allow u se of land for recreational purposes (hunting, fishing, snowmobiling)
Use zoning to keep ag in town
Attract young people to area
Promote Minden at certain times of the year to show off scenery
Advertise parks and have events at them
Develop a farmland protection plan
Develop a plan to protect scenic vistas
Develop historic site zones where current historic sites are located
Keep up roads, keep after county for roads and bridges
Encourage agriculture
Don’t knock historic bridge down (Otsquago)

II. Liabilities

A. Individual Liabilities Identified by Workshop Participants

Abandoned houses
Agriculture is not here anymore
Bedroom community not the answer
Bright night lighting
Camper permits
Code enforcement is affecting us negatively
County roads
Creek regulations
Do not market our natural resources
Do not market our natural tourist route to Cooperstown
Excessive junk on property
First impressions of our village (Fort Plain)
Garbage along roads
High property taxes
I pods an canvas structures instead of buildings
Junk
Junkyards
Lack of ag-related businesses
Lack of business (small)
Lack of incentives for environmentally green businesses
Lack of jobs
Lack of jobs
Lack of recreation for teens
Lack of using historical assets
Limited to no opportunity for children
Littering of roadway
Losing our farm community
Mess at homes – garbage piling up
Messy looking farms
Need for good paying jobs
Need new tax base
Negatives of Village of Fort Plain spread to town
No community events
No comprehensive real plan
No cut off for HUD homes
No industry (including windmills and cell towers)
No jobs/shopping
No larger commercial properties
No local shopping for clothing to house wares
No or minimal water sources in rural area

Noise, odor, dust, etc.
Not a lot of recreation facilities
Not attractive to young professionals
Not business friendly
Not enough commercial business
Not enough commercial property
Not ready for global foundries, bedroom communities
Poor road conditions
Poor road maintenance off of 80 and 163
Poor roads
Poorly maintained roadsides – overgrowth
River front development – double locks
Road side dumping
Rundown and neglected properties
Rundown roads including paving and mowing
Speed limits enforced
Substandard housing
Substandard roads
Taxes
Taxes – school and county
Unattended property
Unmarked slow moving vehicles
Visual negative – viewscapes
Want commercial areas to be introduced but carefully to avoid over-industrialization
Want to avoid over-development of property – keep rural aspect
We are a depressed area
We are crisscrossing services Town and County

B. Liabilities Identified and Prioritized by All Participants at Table

Negative Feature of Minden	# Priority Stickers Received
Lack of commercial space, not enough businesses, not business friendly	5
Poor roads – substandard and overgrowth	5
Creek too highly regulated	2
Negatives of Village spreading to Town, first impression of Village	2
Unkempt, unsightly properties, junk and garbage	2
Lack of ag related businesses	1
Lack of good paying jobs	1
Not attracting young people	1
Avoid over development – keep rural	
Bright night lights	

Change needed in zoning for part time residents using temporary housing re: campers	
Lack of incentives for environmentally green businesses	
Lack of using historical assets	
Messy Farms	
Small business	
Speed limits enforced	
Substandard housing	
Taxes	
Unmarked slow moving vehicles	

C. Ideas Offered to Fix or Enhance Negative Features in Minden

Adopt a local law on unmarked slow moving vehicles
Allow commerce to come into area and allow for smaller building lots to raise houses and cluster neighborhoods
Apply for additional federal housing monies to improve substandard housing
Bring businesses to town for tax base
Bring sewers and water outside of Village to get larger commercial businesses
Buy land from state to avoid river front development
Deregulate stream regulations
Develop a marketing plan to address Global Foundries
Direct more tax money to DPW
Divert more money to machinery to upkeep roads
Do not over assess nice workmanship in buildings to encourage nice buildings
Educate, enforce and recycle to get rid of junk
Encourage beautification
Encourage light industry
Encourage small businesses without too many regulations
Enforce a cut off to raise overall income levels to support local businesses is a way to address HUD houses
Enforce laws already in place to address messy homes
Enforce zoning laws
Fix and pave roads, not just patch
Give tax breaks to those that want to develop their land
Have a garbage collection once a month to allow garbage drop off
Have Village improve its image (less welfare)
Keep rural aspect of Town through zoning
Keep sales taxes in Montgomery county
Keep up enforcement of unattended property
Local commercial zoning to increase commercial properties
Locate a Wal-Mart or target to Palatine Bridge Plaza
Make land in country best suitable for farming or animal grazing
Market area for industry
Market history and agriculture
More economic development including incentives

Need Mine zoning for little industry
Offer beautification incentives for improving the look of farms
Regulated lights to avoid bright lights
Restructure zoning to be more business friendly
Shared services with rotational repair/rebuild vs. patchwork for improving road conditions
Simplify camper permits
Use tax incentives for attracting ag related businesses
Use zoning to address junkyards, abandoned houses, noise and odors
Zoning, comp plan should avoid over-development and concentrate development

Vision Statements

Twenty-three participants attended the planning workshop and were asked to develop statements that reflect what they would want the Town of Minden to be like in the future. The following details those thoughts.

These statements should be considered in the context of:

In the future, the Town of Minden will be described as follows:

Table 1: We have preserved the overall character of the Town while being business friendly. We have maintained and preserved the existing agricultural base, and the quiet and open spaces. We have decreased taxes, addressed agricultural needs, and increased youth involvement.

Several topics and specific features were included in the long-range vision for Minden. The future Minden will have or be:

1. Education – great school, maintain school system.
2. Family –oriented – bedroom community, the people, low crime rates, quiet, working residents.
3. Business Friendly Including Agriculture – maintain peaceful setting, farming, outdoors, the farms, be business friendly.
4. Important Features include open country-side, clean and orderly, a green community, clean and eye-appealing, wow factor with clean nice roads.
5. Overall Value – Historic, encourages tourism, thriving small businesses of all types.

Table 2: We have an open rural feeling, are an agricultural-friendly community with improved infrastructure that embraces new technology, and we have preserved important historic features. We have numerous job, career, business opportunities and entertainment possibilities for young and old.

Several topics and specific features were included in the long-range vision for Minden.

The future Minden will have or be:

1. Career/Jobs –job opportunities for residents to supplement the farmers with smaller farms, opportunities are available for youngsters to remain in our town and pursue careers here, and we have well-kept homes.
2. Entertainment – we have golf courses and recreation areas, and recreation for teens and adults.
3. Infrastructure – quality rural roads, a nursing home or adult community for assisted living that allow people to stay here, plenty of open green space, public transportation such as trains or buses. We possibly drilling for natural gas, use windmills for electric or solar.
4. Agriculture –preserved small farms, and vacant farmland has become useable and working farms.
5. Technology – free high speed internet.

Table 3. We have better housing and lower taxes and use green energy. We maintain and build on activities and celebrations and take advantage of our natural attractiveness and encourage tourism. We attract small business and light industry, build infrastructure, have gotten rid of HUD, and encourage people with jobs to move into town of Minden. We maintain an excellent school system and give kids an appreciation of the history of our area.

Several topics and specific features were included in the long-range vision for Minden. The future Minden will have or be:

1. Schools – good school system, where kids in local and surrounding schools are educated in local history, with larger graduating classes, and state of the art schools.
2. Income – is higher than average, lower HUD percentage, and prosperity.
3. Business and Farming – stores and light industry including warehouses are located outside the village. We have more small businesses, employment, some infrastructure, small profitable farms, a mix of farm and industry, light industry, small chain hotels and restaurants, and small businesses where people know you and can help you.
4. Recreation - the parks and museums have expanded. People of the Town work together to create activities for people to enjoy. We have beautiful open spaces (farms and agricultural spaces), tourism, safe and attractive neighborhoods where people can walk and play without fear, friendly people helping each other, and a safe town.
5. Housing and Taxes – We have well maintained homes and properties, new housing developments, low taxes, well kept properties, and where new houses are built to take advantage of our spectacular scenery. We have availability of green energy and good roads.

Table 4. We have agriculture, good roads, historical assets, open space and recreation, and a self-sustaining economy.

Several topics and specific features were included in the long-range vision for Minden. The future Minden will have or be:

1. We have good roads
2. We use historical assets.
3. We have cost effective schools and government.
4. It is a great place to raise a family.
5. We are energy efficient, have small businesses here, but no chains. We have good jobs for honest days of work available.
6. We have more parks and recreation areas, family recreation that join families together, and use of open space.
7. Active farms exist. Agri-businesses (milk plant, nursery) exist, and we have great views with successful agriculture; we maintain our agricultural land assets.

Table 5. We have opportunities, are scenic, have equality, and low taxes.

Several topics and specific features were included in the long-range vision for Minden. The future Minden will have or be:

1. We have low taxes.
2. We keep our rural landscape.
3. Buildings and properties are painted and maintained.
4. Small businesses are flourishing and the middle class wants to move into the area because of great schools and family opportunities.

Part VI Models and Examples

A. Density Bonus

The following example is language that could be included in the Minden Zoning Law to allow for density bonuses. This example gives bonuses for open space protection, agricultural land protection, provision of senior citizen housing, protection of historic, cultural, or archaeological features, or public access and recreation. The process includes approval by both the Town Board and the Planning Board. This process could be altered to allow for cash in lieu of providing the benefit if that was desired by the Town of Minden.

A. Purpose.

Pursuant to Section 261-b of the New York State Town Law, the Town of Minden hereby establishes a program of incentives to encourage the preservation of open space, agricultural lands, and facilities and amenities that would benefit the Town in accordance with its adopted Comprehensive Plan. These amenities include open space, provision of senior citizen housing, preservation of historic, archaeological, or cultural features of the Town of Minden, and provision of public recreational access.

B. Applicability.

An applicant that has submitted a residential subdivision, special use permit or Site Plan application may apply for incentives to achieve community benefits or amenities.

C. Types of Incentives.

Single incentive bonuses shall be subject to the maximums set forth below based on the total number of allowed dwelling units as determined by the Planning Board as calculated from the Dimensions Table of this Zoning Law. No combination of incentives shall together exceed thirty percent (30%) of the total number of dwelling units allowed pursuant to the Dimensions Table. The following residential density incentives are established:

1. Open space/agricultural land preservation. A residential density bonus may be granted when a conservation subdivision design is proposed, a small on-site centralized wastewater disposal facility is planned, and when at least fifty percent (50%) of the parcel is permanently preserved pursuant to this Local Law. The maximum residential density bonus that may be granted for the protection of open space shall not exceed fifteen (15%) percent.

2. Senior citizen housing. A residential density bonus may be granted for providing senior housing. A maximum residential density bonus of up to twenty-five percent (25%) of the proposed senior citizen housing units being created may be approved. The density bonus may be applied to the construction of senior or non-senior dwelling units.

3. Cultural, archaeological, historic facilities or other unique features that are to be deeded to the Town or to qualified not-for-profit agencies. For properties in any zoning district, a residential density bonus up to fifteen percent (15%) may be approved for the permanent preservation of cultural, archaeological, historical, or other unique features in the Town of Minden.

4. Public access and recreation. A residential density bonus of up to twenty-five percent (25%) may be approved for the creation of public recreational lands or trails, public access to streams, railroad rights-of-way, or open space land, or for the provision of public fishing/hunting rights.

D. General Provisions

1. Where an application seeks both subdivision and special use permit and/or Site Plan approval, the project shall be considered in its entirety and incentives shall not be granted separately for both approvals. A density bonus may only be approved if adequate water and waste treatment capacity is shown.

2. Incentives shall be granted only if the Planning Board determines that the offer of community benefits or amenities would otherwise not be required or those benefits or amenities would not likely result from the applicable planning or State Environmental Quality Review process.

3. Where a parcel falls within two or more contiguous zoning districts, the Planning Board may approve an incentive representing the cumulative density as derived from summing all residential lots allowed in all such districts together with the incentive density, and may authorize actual construction to take place in all or any portion of one or more such districts.

4. Bonus units shall be similar in appearance and location to non-bonus units, shall contain on average the same number of bedrooms as the non-bonus units in the development, and shall be compatible with the design or use of the remaining units in terms of appearance, materials, and finish quality.

5. Community benefits may be provided for, either within the parcel being developed or off site at a different location, by:

    a. Use of agricultural or other permanent conservation easements.

    b. Donations of land for conservation and other community benefit purposes.

    c. Construction of amenities, serving a Town-wide need, accessible to the general public, above and beyond that required to mitigate proposed impacts in accordance with SEQRA and the Town law.

    d. Construction or improvement to public works above and beyond that required to mitigate proposed impacts in accordance with SEQRA and the Town law.

6. The community benefit may be located on the parcel to be developed and to which the incentive would be applied, or off-site.

E. Procedures and criteria for approval of incentives.

1. Submission of application. Applications for density incentives shall be submitted simultaneously to the Town Board and to the Planning Board. An applicant is encouraged to present its plans to the Town Board as early in the process as possible. The Town Board may schedule an informal workshop to discuss the incentive application and share information between the applicant, the Planning Board, the Town Board and the public.

2. Narrative statement. A narrative statement shall be submitted with the following information:

   a. A description of the incentive being requested.

   b. A description of the community amenity or benefit being offered to the Town.

   c. A current estimate of the market value, as applicable, or construction value of the proposed benefit.

   d. A preliminary indication that there is adequate infrastructure for the density being proposed. This infrastructure evaluation should include wastewater treatment, water supply, transportation facilities, school capacity, waste disposal, and emergency service protection facilities. The statement should also indicate if, in the zoning district in which the proposal is located, there is capacity to handle the additional demands the incentive density and amenity may place on these facilities beyond the demand that would be placed on them without the incentive density.

   e. An explanation as to how the amenity helps implement the physical, social or cultural policies of the Town of Minden Comprehensive Plan.

3. The Town Board must approve an incentive bonus request prior to the granting of either preliminary plat approval or Site Plan approval by the Planning Board. Applicants may seek non-binding input from the Town Board as to whether the proposal is worthy of consideration prior to making a application or at any stage of the application process prior to the formal report issued by the Planning Board pursuant to subsection 6 below. Before approving an incentive bonus request, The Town Board must determine for each zoning district in which the incentive bonus density is to be located, that the district contains adequate resources, environmental quality and public facilities, including adequate transportation, water supply, waste disposal and fire protection. Further before approving an incentive bonus request, the Town Board shall also determine that there will be no significant environmentally damaging consequences and that such incentives or bonuses are compatible with the development otherwise permitted.

4. Applications for incentive zoning shall be processed concurrently and with the same procedures applicable to subdivisions and/or special use/Site Plan approvals as set forth in this Zoning Law and the subdivision regulations of the Town of Minden.

5. All applicable requirements of the State Environmental Quality Review Act shall

be complied with as part of the review and hearing process before the Town Board. Consistent with the regulations implementing SEQRA, a coordinated review shall be conducted.

6. Prior to granting approval of the preliminary plat, Site Plan, or special use permit based on an incentive proposal but after at least one public hearing has been held, the Planning Board shall issue an advisory report regarding the incentive zoning to the Town Board. The Planning Board's report shall include the following:

    a. The Planning Board's recommendations regarding the proposal, including an evaluation of the adequacy with which the benefit and incentives fit the site and how the development relates to adjacent uses and structures.

    b. A SEQRA evaluation as to whether the density bonus would result in any potential significant impacts on the environment and necessary mitigation measures and conditions necessary to ensure that the impacts of the proposal will be mitigated to the maximum extent practicable.

    c. An assessment that adequate water supply, wastewater treatment, transportation, waste disposal and emergency protection facilities exists to serve the development, and that such development will not substantially and deleteriously impact upon the future development of adjoining properties.

    d. A statement that the benefit would not otherwise result without the granting of incentive zoning.

7. Within 45 days of receipt of the Planning Board's report, the Town Board shall hold a public hearing on the incentive zoning application. Notice of the hearing shall be published in the official newspaper at least ten (10) days prior to the date of the hearing. The Town Board may provide for further notice as it deems appropriate.

8. As required by NYS Town Law Section 261-b(3) (g), the Town Board shall evaluate the impact such incentives would have upon the potential development of affordable housing.

9. The Town Board shall render its decision within forty five (45) days of the close of the public hearing. The Town Board's decision shall be in writing and shall include the reasons supporting its decision.

10. To approve incentive zoning, the Town Board shall determine that the community benefit provides sufficient public benefit to provide the requested incentive. No applicant for an incentive density bonus shall have any entitlement to a bonus and in no instance shall the Town Board be compelled to approve any incentive zoning request. The approval of incentive density bonus application shall be with the sole and absolute discretion of the Town Board. The Town Board may approve, approve with modifications or conditions or deny any incentive zoning application. Failure to render a determination within the forty five (45) day period shall be deemed a denial.

11. After the Town Board has rendered a decision, the record of decision shall be referred to the Planning Board for preliminary and/or final approval of the application with or without incentives, as prescribed by the Town Board. If the Town Board resolves to permit incentive zoning, no subsequent approval or permit, or approval by any official, board or agency of the Town, shall materially alter any condition imposed by the Town Board. In the event that any permit or approval by any agency within or without the Town materially alters any such condition, the project may not proceed until and unless the Town Board approves in writing, in its sole discretion, the modification of the condition.

12. The Town Board may engage consultants or an attorney as needed to assist in review of the application. Reasonable costs incurred by the Planning Board for private consultation fees, fees for technical and engineering services, legal fees, or other expenses in connection with the review of an incentive bonus application shall be charged to the applicant. Such reimbursable costs shall be in addition to any fee as established by the Town Board. The Planning Board shall make a reasonable estimate of the amount of expenses that it expects to incur during the course of each application for an incentive bonus application. The amount so determined by the Planning Board shall be deposited by the applicant in escrow with the Town Clerk prior to the Planning Board's commencing any review of the application. If the amount so deposited is exhausted or diminished to the point that the Planning Board determines that the remaining amount will not be sufficient to complete the review of the application, then the Planning Board shall notify the applicant of the additional amount that must be deposited with the Town Clerk. If the applicant fails to replenish the escrow account or there are unpaid amounts for which the applicant is responsible pursuant to this provision, the Planning Board, in its discretion, may cease review of the application until such amounts are paid or deny the application. In no event, however, shall any incentive bonus approval be made until such sums have been paid in full.

13. Compliance with SEQRA. All applicable requirements of the State Environmental Quality Review Act shall be complied with as part of the review and hearing process. The applicant will pay a proportionate share of the cost of preparing a generic environmental impact statement as prepared by the Town Board in enacting or amending this section.

B. Conservation Subdivision Model

The following language is based on a conservation subdivision from another town in upstate New York. It is a good example of language typically included in a conservation subdivision. This model is not intended to be the exact language to be incorporated into Minden's zoning and subdivision laws. The Town Board can use this as a starting place for discussions.

Conservation and Clustered Subdivisions

Section 1 Purposes

1.1 A purpose of this section is, through regulation of the subdivision of land, to plan for the orderly, economic, aesthetic, environmentally sound and efficient development of the Town consistent with its community character and the continuing needs of its people for conservation of natural and cultural resources, quality residential building sites and enjoyable open space. The Town of Minden is home to important agricultural lands, significant scenic viewsheds, historic architecture, natural beauty, and rural landscapes. This section has been carefully designed in recognition of the need to protect such resources as part of the land development process. A purpose of this section of the Local Law is to uphold the Town of Minden Comprehensive Plan and achieve the following goals and policies of the Comprehensive Plan:

a. To protect and conserve elements of the Town's rural character and to conserve open land, including those areas containing unique and sensitive natural features such as but not limited to steep slopes, streams, stream sides, floodplains, and wetlands, by setting them aside from development when major subdivisions are proposed.

b. To provide greater design flexibility and efficiency in the siting of services and infrastructure, including the opportunity to reduce length of roads and the amount of paving required.

c. To provide for a diversity of lot sizes and housing choices to accommodate a variety of age and income groups.

d. To conserve a variety of resource lands as established in the Town of Minden Comprehensive Plan.

e. To protect agricultural areas by conserving blocks of land large enough for continued agricultural operations.

f. To create neighborhoods with direct visual or physical access to open land and that have strong neighborhood identity that is consistent with the rural character of Minden.

g. To provide standards reflecting the varying circumstances and interests of individual landowners and the individual characteristics of their properties.

2 Applicability

2.1 Pursuant to Section 278 of the New York State Town Law, the Planning Board is authorized to require a conservation subdivision layout in any land use district when, in their discretion, they determine that the project or parcel contains environmental resources or unique features that contribute to community or neighborhood character that should be protected. In determining if a conservation subdivision design is to be required, the Planning Board shall also consider whether one or more of the following are relevent:

a. The parcel is included and mapped as a critical environmental area.

b. More than twenty five percent (25%) of the site is occupied by a floodplain or flood hazard area as mapped by the Federal Emergency Management Agency.

c. More than twenty five percent (25%) of the site is occupied by steep slopes having a grade of twenty percent (20%) or higher.

d. More than twenty five percent (25%) of the site is occupied by Federal or State wetlands.

e. A portion of the site is occupied by active agricultural lands.

f. The development proposed for the site is a residential development proposing ten (10) or more individual single-family dwelling units

3. Compliance with Other Laws

This section of the Local Law shall function in coordination with all provisions of the Town of Minden Subdivision Law. Whenever the circumstances of a proposed development or application requires compliance with this Conservation Subdivision sub-section, the Town of Minden Subdivision Regulations and/or with any other local law, local law or requirement of the Town, to the extent reasonably practicable, the Planning Board shall integrate or run in parallel as many of the applicable procedures and submission requirements as is reasonably practicable so as not to delay review and decision-making.

4 Dimensional Standards

The permitted number of dwelling units in a conservation subdivision shall not exceed the number of units that would be permitted according to the density requirements of the Town of Minden Density and Dimension Table. The Planning Board shall allow alteration of lot dimensions within a conservation subdivision in order to properly accomplish the purposes of the Town of Minden Comprehensive Plan and this local law to preserve the maximum amount of open space when a major subdivision is planned. Lots shall be arranged in a way that preserves open space, agriculture, and promotes land conservation as described in this sub-section.

a. A major subdivision must preserve at least fifty percent (50%) of the parcel's acreage as open space land.

b. Minimum street frontage per lot shall be fifty (50) feet.

c. Minimum lot size. The minimum lot size in major subdivisions where individual wells and septic systems are required shall be equal to that required by the New York State Department of Health to meet standards for water and septic system approvals. For lots in major subdivisions that do not need individual well and septic systems, the minimum lot size shall be fifteen thousand (15,000) square feet, on average. Up to twenty percent (20%) of the lots may be reduced to a minimum of ten thousand (10,000) square feet.

d. Maximum impervious surface shall be thirty (30%) on each lot.

e. Maximum height of any building or structure to be placed on a lot shall be thirty-five (35) feet.

f. Setbacks from cropland or pasture land shall be one hundred (100) feet. The setback from barnyards housing livestock shall be three hundred (300) feet.

g. Stream setbacks. There shall be a minimum 25' undisturbed vegetated buffer along all streams. If native vegetation is not present within the minimum 25' streamside vegetated buffer areas, then a planting plan to establish native vegetation, preferably trees, to create a vegetated buffer is required. There shall be a 100' buffer established along all streams, wetlands, vernal pools and other hydrologically sensitive areas where there shall be no structure, soil removal or disturbance, clearing, filling or vegetation disturbance.

5 Sketch Plan And Site Analysis

a. All requirements and procedures of the Town of Minden Subdivision Law shall be followed in addition to this section.

b. Sketch Plan. The following additional information shall be submitted by the applicant as a basis for informal discussions with the Planning Board regarding the design of a proposed major subdivision. The Planning Board shall evaluate the proposed subdivision during the sketch meeting. The Planning Board shall determine whether the Sketch Plan meets the purposes of this section. Complete and complex engineered plans and architectural drawings are premature and not required at this phase. The sketch plan shall contain:

(1) The subdivision name or title, if any; the scale, which shall be no less than one (1) inch equals one hundred (100) feet; North direction, which shall be oriented toward the top of the plan; the plan date; and the label "Concept Plan."

(2) The subdivision boundaries and the owners of all contiguous properties.

(3) The zoning classification and tax map number(s) of the property to be subdivided.

(4) The total acreage of the subdivision and the proposed number and locations of lots. Lots shall be generally located using the five-step design process of

Section 6.

(5) All existing streets, mapped or built, adjacent to the tract.

(6) All existing restrictions on the use of land, including easements and covenants, if any.

(7) All existing structures, general location of agricultural fields and wooded areas, watercourses, and other significant physical features of the parcel and within two hundred (200) feet of the parcel boundaries.

(8) If applicable, the location and required setbacks, if any, as may be required by this Local law, the Town of Minden Floodplain Law, or State or Federal laws from watercourses, wetlands, and floodplains.

6 SITE DESIGN

a. Step 1. Do Site Analysis

(1) Site Analysis. A site analysis shall include an identification of primary and secondary conservation lands within a parcel(s), as defined below. The site analysis shall include a Site Analysis Map with the information listed below. Conditions beyond the parcel boundaries may be generally described on the basis of existing published data available from governmental agencies, or from aerial photographs. The applicant shall review all Minden maps, plans and studies including but not limited to the Comprehensive Plan in conducting its site analysis. The applicant may obtain advice and assistance from an accredited land trust or environmental organization when preparing the site analysis. The site analysis is not intended to be a highly engineered or exact document, but a general sketch and description illustrating the location and type of environmental features that are present on the site including features such as:

a. Areas having slopes of fifteen percent (15%) or greater.

b. Wetlands, areas of hydrological sensitivity including but not limited to aquifer and aquifer recharge areas, flood-prone areas as shown on Federal Emergency Management Agency maps, lakes, and streams, if any. The Site Analysis Map shall delineate the 100’ required stream buffer and the minimum 25’ required streamside vegetated buffer.

c. Agricultural lands including farmland within, and adjacent to, a New York State certified Agricultural District, soils classified as being prime farmland or soils of statewide significance, if any, and the Land Prioritization Score found on the Town of Minden Farmland Prioritization Map.

d. Sites where community sewer, community water, or community water and sewer are available or planned, if any.

e. Lands within, or contiguous to, a Critical Environmental Area designated pursuant to Article 8 of the New York State Environmental Conservation Law, if any.

f. Lands contiguous to publicly owned or designated open space areas, or privately preserved open spaces, if any.

g. Historic structures or areas of national, state or local importance, if any, and specifically identifying those structures which are listed on either the federal or New York State Register of Historic Places.

h. Sites in, or bordering on, known scenic locations identified in the Town's Comprehensive Plan, if any.

i. Areas with rare vegetation, significant habitats, or habitats of endangered, threatened or special concern species, or unique natural or geological formations, if any.

j. General description and locations of the vegetative cover on the property according to general cover type including cultivated land, grass land, old field, hedgerow, woodland and wetland, and showing the actual line of existing trees and woodlands.

k. Lakes, ponds or other significant recreational areas, or sites designated as such in the Town's Comprehensive Plan, if any.

l. Existing trails, inactive railroad beds, bikeways, and pedestrian routes of Town, State or County significance or those indicated in any Town, County or State plan for future trail development, if any.

m. Location of all existing streets, roads, buildings, utilities and other man-made improvements.

n. All easements and other encumbrances of property which are or have been filed of record with the Otsego County Clerk's Office.

o. In addition to compliance with the requirements of this law, all other procedures and requirements of the Town of Minden Land Subdivision Regulations related to Preliminary and Final Plat Approvals shall be followed. The Planning Board shall refer the Sketch Plan to the Minden Conservation Advisory Council for review and an advisory opinion about the completeness of the Sketch Plan and the potential effects the subdivision may have on the environment.

b. Step 2: Delineate Open Space Areas*.* Proposed open space areas shall be designated as follows:

(1) Primary Conservation Areas shall be delineated and designated on a map. House lots shall not encroach upon Primary Conservation areas.

(2) Secondary Conservation Areas shall be delineated and designated on a map. In delineating Secondary Conservation Areas, the applicant shall prioritize natural and cultural resources on the parcel in terms of their highest to least suitability for inclusion in the proposed open space in consultation with the Planning Board. Secondary Conservation Areas shall be delineated on the basis of those priorities and practical considerations given to the parcel's configuration, its context in relation to resource areas on adjoining and neighboring properties, and the applicant's

subdivision objectives. These features shall be clearly noted, as well as the types of resources included within them, on the map. Calculations shall be provided indicating the applicant's compliance with the acreage requirements for open space areas on the parcel.

(3) The primary and secondary conservation areas, together, constitute the total open space areas to be preserved, and the remaining land is the potential development area.

c. Step 3. Specify Location of House Sites. Building envelopes shall be tentatively located within the potential development areas. House sites should generally be located not closer than one hundred (100) feet from Primary Conservation Areas and fifty (50) feet from Secondary Conservation Areas, taking into consideration the potential negative impacts of residential development on such areas.

d. Step 4. Align Streets and Trails. After designating the building envelopes, a street plan shall be designed to provide vehicular access to each house, complying with the standards identified in this Local Law and bearing a logical relationship to topographic conditions. Impacts of the street plan on proposed open space lands shall be minimized, particularly with respect to crossing environmentally sensitive areas such as wetlands, traversing steep slopes, and fragmenting agricultural lands. Existing and future street connections are encouraged to eliminate the number of new cul-de-sacs to be developed and maintained, and to facilitate access to and from homes in different parts of the tract and adjoining parcels. Cul-de-sacs are appropriate only when they support greater open space conservation or provide extensive pedestrian linkages. All applicable requirements of the Town of Minden Highway Law shall be met.

e. Step 5. Draw Lot Lines. Upon completion of the preceding steps, lot lines are then drawn as required to delineate the boundaries of individual residential lots.

f. Alternate Design Process. The Planning Board is authorized to require use of traditional neighborhood design (TND) if such layout is appropriate for the parcel proposed to be developed and if it will result in a more effective open space design. For those subdivisions designed to be a TND, the design process shall be a variation on a conservation subdivision outlined in this local law. Just as with non-TND developments, the first step is to identify open space lands, including both Primary and Secondary Conservation Areas. However, in TND's, where traditional streetscape is of greater importance, steps 2 and 3 above may be reversed, so that streets and squares are located before house sites specified. TND's typically have higher density of development, reduced lot sizes, narrow front setbacks, narrow streets, sidewalks, and have a clear demarcation between built and unbuilt lands at the edge of the neighborhood.

7 SITE DESIGN CRITERIA

a. Residential structures in a major subdivision should be located according to the following guidelines, which are listed in order of significance. If any of the guidelines below conflict with each other on a particular site, the Planning Board may use its discretion to resolve such conflicts. The lots, house sites, roads and other infrastructure in a proposed subdivision shall avoid or minimize adverse

impacts by being designed:

(1) On the least fertile agricultural soils and in a manner which maximizes the usable area remaining for agricultural use.

(2) Away from the boundaries of any farm preserved with a conservation easement or other permanent protection, to reduce conflicting uses in areas where farmers have made long-term commitments to continue to farm.

(3) So that the boundaries between house lots and active farmland are well buffered by vegetation, topography, roads or other barriers to minimize potential conflict between residential and agricultural uses.

(4) To cause the least practicable disturbance to natural infiltration and percolation of precipitation to the groundwater table by avoiding placement of impervious surfaces where water is most likely to infiltrate and recharge the groundwater.

(5) To avoid disturbance to streams and drainage swales, floodplains, vernal pools, wetlands, and their buffers. Native vegetation shall be maintained to create a buffer of at least 25' and no other disturbance shall take place within 100' of wetlands and surface waters, including creeks, streams, springs and ponds.

(6) All grading and earthmoving on slopes greater than fifteen percent (15%) shall be minimized and shall only be to create a house site, driveway and area for a septic system. Such grading shall not result in cut and fills whose highest vertical dimension exceeds eight (8) feet. Roads and driveways shall follow the line of existing topography to minimize the required cut and fill.

(7) To avoid disturbing existing cultural and scenic features. Views of house lots from exterior roads and abutting properties shall be minimized by the use of changes in topography, existing vegetation, or additional landscaping. The layout shall leave scenic views and vistas unblocked or uninterrupted, particularly as seen from public thoroughfares. Where these scenic views or vistas exist, a deep non-vegetated buffer is recommended along the road where those views or vistas are prominent or locally significant.

(8) To be as visually inconspicuous as practicable when seen from state, county and local roads, and in particular, from designated scenic routes. The subdivision shall preserve woodlands along roadways, property lines, and lines occurring within a site such as along streams, swales, stone fences, and hedgerows to create buffers with adjacent properties. Preservation shall include ground, shrub, understory and canopy vegetation.

(9) To minimize the perimeter of the built area by encouraging compact development and discouraging strip development along roads. House lots shall generally be accessed from interior streets, rather than from roads bordering the parcel. New intersections with existing public roads shall be minimized. Although two (2) access ways into and out of subdivisions containing twenty (20) or more dwellings are generally required for safety, proposals for more than two (2) entrances onto public

roads shall be discouraged if they would unnecessarily disrupt traffic flow or unduly impact the environment.

(10) On suitable soils for subsurface sewage disposal (where applicable).

(11) Within woodlands, or along the far edges of open agricultural fields adjacent to any woodland to enable new residential development to be visually absorbed by the natural landscape.

(12) Around and so as to preserve sites of historic, archeological or cultural value insofar as needed to safeguard the character of the feature.

(13) To protect biodiversity and wildlife habitat areas of species listed as endangered, threatened, or of special concern by either the United States Department of the Interior or the New York State Department of Environmental Conservation, or critical habitats listed on the DEC Minden Habitat Summary or the Minden Biodiversity Map.

b. Open space standards:

(1) The required open space land consists of a combination of Primary Conservation Areas and Secondary Conservation Areas. The proposed subdivision design shall strictly minimize disturbance of these environmentally sensitive areas. The lot layout shall show how those sensitive areas will be protected by the proposed subdivision plan. Secondary Conservation Areas shall be included in the required open space area to the greatest extent practicable such that protecting these resources will, in the judgment of the Planning Board, achieve the purposes of this section.

(2) Open space lands shall be laid out in general accordance with the Town's Comprehensive Plan to better enable an interconnected network of open space and wildlife corridors. Open space lands shall also be laid out in such a manner that preserves ecological systems that may be present on the site including, but not limited to, preserving wetlands.

(3) Active agricultural land with farm buildings may be used to meet the minimum required open space land. Access to open space land used for agriculture may be appropriately restricted for public safety and to prevent interference with agricultural operations. Land used for agricultural purposes shall be buffered from residential uses, either bordering or within the parcel.

(4) Open space land shall, to the maximum extent practicable, be contiguous to avoid fragmentation and to create a critical mass of land either available for agriculture or left in a natural state.

(5) Open space lands shall be designated as one or more individual conservation lots owned in common, or designated and included as part of one or more house lots. A portion of any house lot five (5) acres or more in size may be used for meeting the minimum required open space land provided that there is a permanent restriction enforceable by the Town that states the future use shall be restricted to open space such as undisturbed wildlife habitat, managed agricultural field, or managed forest, and that prevents development of, or use as, a mowed lawn on that portion of the parcel, and

that is contiguous to other lands to form unfragmented open spaces. Any house lot less than five (5) acres does not qualify as contributing to open space.

(6) Walkways, trails, play areas, drainage ways leading directly to streams, historic sites or unique natural features requiring common ownership protection may be included in the preserved open space lands.

(7) The required open space may be used for community septic systems.

(8) Stormwater management ponds or basins and lands within the rights-of-way for underground utilities may be included as part of the minimum required open space.

(9) Recreation lands such as ball fields, golf courses, and parks shall not be considered part of the required open space unless such land is open to the public. Such recreational lands with access only to residents shall not be counted towards the open space requirements, but shall be counted towards any recreation land requirement as per the Town of Minden Land Subdivision Regulations.

(10) Open space shall be directly accessible or viewable from as many home sites as possible.

8 STREETS, DRIVEWAYS AND TRAILS

a. Common driveway access may be provided. A pedestrian circulation and/or trail system shall be sufficient for the needs of residents, unless waived by the Planning Board.

b. New streets shall meet the Town Highway Specifications. Where appropriate, the Planning Board shall work with the Highway Department to ensure that the Town of Minden Highway Specifications, normally applicable to conventional subdivisions, do not impact or detract from the rural and environmental character of a conservation subdivision.

c. Whenever appropriate, street systems should produce terminal vistas of open space in accordance with the conservation emphasis of the subdivision design and to positively contribute to the Town's open space goals.

d. Bike paths and other pedestrian trails are encouraged.

9 PROTECTION OF OPEN SPACE

a. All required open space shall be depicted and noted on the site plan as protected open space and restricted from further subdivision through one of the following methods to be proposed by the applicant and approved by the Planning Board:

(1) A permanent conservation easement, in a form acceptable to the Town and recorded at the County Clerk's Office. Due to the enforcement responsibilities carried out by easement grantees, this is the preferred method of ensuring permanent protection.

(2) A declaration of covenants or deed restriction, in a form acceptable to the Town, and

recorded in the County Clerk's Office.

(3) A fixed-term conservation easement, in a form acceptable to the Town and recorded at the County Clerk's Office.

b. Open space land may be held in any form of ownership that protects its conservation values, such as where the open space is owned in common by a homeowner's association (HOA).

(1) Open space may also be dedicated to the Town, County or State governments, transferred to a qualified non-profit organization including a land trust, or held by single or multiple private owners. The applicant shall provide proof that the receiving body agrees to accept the dedication.

(2) The Town seeks to ensure long-term maintenance of privately-owned lots dedicated to open space. When open space lands are proposed to be privately owned on a lot dedicated for open space use, and such lands are not subject to a conservation easement or are not to be transferred to a qualified non-profit organization or municipality, such lands shall be owned by an HOA, or shall be designated as a house lot allowing only one residence. This house lot shall be considered part of, and not in addition to, the allowed density the parent parcel is eligible for. Any development permitted in connection with the setting aside of open space land shall not compromise the conservation or agricultural value of such open space land.

(3) If the open space is to be owned by an HOA, the HOA must be incorporated before the final subdivision plat is signed. The applicant shall provide the Town with a description of the organization of the proposed association, including its by-laws, and all documents governing ownership, maintenance, and use restrictions for common facilities.

(a) If land is held in common ownership by a homeowners association, such ownership shall be arranged in a manner that real property tax claims may be satisfied against the open space lands by proceeding against individual owners and the residences they own. The HOA must be responsible for liability insurance, local taxes and the maintenance of the conserved land areas. The HOA shall have the power to adjust assessments to meet changing needs. The Planning Board shall find that the HOA documents satisfy the conditions above.

(b) The homeowners association shall be operating before the sale of any dwelling units in the development. The proposed homeowners association shall be established by the applicant and shall comply with the requirements of Section 352-e of the New York State General Business Law, and have an offering plan for the sale of lots in the subdivision approved by the New York State Department of Law, if required. In the event that the NYS Department of Law grants an exemption from the requirement of an offering plan, the applicant shall have in place a maintenance agreement acceptable to the Town that ensures perpetual maintenance of the open space.

(c) Membership in the HOA must be mandatory for each property owner within the

subdivision and for any successive property owners in title.

(d) The association shall be responsible for liability insurance, local taxes and maintenance of open space land, recreational facilities and other commonly held facilities.
(e) The association shall have adequate resources to administer, maintain, and operate such common facilities.

c. The conservation easement, declaration of covenants or deed restriction, or approved subdivision plan shall permanently restrict development of the open space and shall specify the use of such space only for agriculture, forestry, recreation or similar purposes. The Planning Board shall approve the form and content of any easement, declaration, restriction, or subdivision plan. Regardless of which method of protecting the required or designated open space is selected, the restriction shall be made a condition of the final plat approval.

d. A conservation easement will be acceptable if:

(1) The conservation organization is acceptable to the Town and is a *bona fide* conservation organization as defined in Article 49 of the New York State Environmental Conservation Law.

(2) The conveyance contains appropriate provisions for proper reverting or re-transfer in the event that the conservation organization becomes unwilling or unable to continue carrying out its functions.

(3) A maintenance agreement acceptable to the Town is established between the owner and the conservation organization to insure perpetual maintenance of the open space.

(4) The conservation easement or other legally binding instrument shall permanently restrict the open space from future subdivision, shall define the range of permitted activities, and, if held by a conservation organization, shall give the Town the ability to enforce these restrictions.

10 MAINTENANCE STANDARDS

a. The owner of the open space shall be responsible for raising all monies required for operations, maintenance, or physical improvements to the open space.

b. Failure to adequately maintain any improvements located on the undivided open space and keep them in reasonable operating condition is a violation of the Local Law. Upon appropriate authority or process, the Town may enter the premises for necessary maintenance/restoration, and the cost of such maintenance by the Town shall be assessed ratably against the landowner or in the case of an HOA, the owners of properties within the development, and if unpaid, shall become a tax lien on such property.

11 FUTURE SUBDIVISIONS

When an applicant includes only a portion of landowner's entire parcel, a sketch layout according to this section shall be included showing future potential subdivision of all the contiguous lands belonging to the landowner to ensure that subdivision may be accomplished in accordance with this section and to allow the Planning Board to adequately assess segmentation under the State Environmental Quality Review Act. Subdivision and review of the sketch plan of those locations at this stage shall not constitute approval of the future subdivision shown thereon.

Part VII Groundwater Study

GROUNDWATER RESOURCES STUDY

for the

TOWN OF MINDEN
MONTGOMERY COUNTY, NEW YORK

February 2012

Prepared by:

Steven Winkley
New York Rural Water Association

Prepared for:

Town of Minden

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(24x36-inch maps located in back)

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1.0 INTRODUCTION

1.1 Goals and Objectives

Ground water is a valuable resource in the Town of Minden. Virtually all residents and businesses in Town rely upon ground water for drinking water. In addition, ground water contributes a significant portion of water to local streams, wetlands, and ponds. Unfortunately, groundwater contamination can and does occur as a consequence of a variety of land use activities. In addition, excessive groundwater withdrawals can lead to objectionable consequences, such as depletion of water resources.

In order to preserve the groundwater resources of Minden for today and the future, the following Groundwater Resources Study has been prepared by the New York Rural Water Association (NYRWA). This report inventories and maps the groundwater resources and aquifers of Minden, identifies the vulnerability of groundwater to pollutants, and outlines potential protection planning strategies.

1.2 Scope and Methods

New York Rural Water Association has utilized a variety of published and unpublished data sources for this report and plan. All data were inputted into a Geographical Information System (GIS). This is a computer system that allows one to visualize, manipulate, analyze, and display geographic (spatial) data.

Well data was collected from a variety sources, including the United States Geological Survey's Water Data Site Inventory System and the New York State Department of Environmental Conservation's Water Well Program. In addition, test borings from the New York State Department of Transportation were compiled. Details of compiled subsurface data are summarized on Plate 1 contained within this report. NYRWA also interviewed water well drillers to learn about local drilling conditions.

A number of published and unpublished geologic maps were reviewed. A digital version of the Montgomery County Soil Survey and the New York State Geologic Map were utilized for analyses and mapping. Plate 5 from the United States Geological Survey Water-Resources Investigations Report 88-4091 was digitized. In addition, elevation data for Minden were taken from digital elevation models (DEMs). This information was then used to derive slope data and hillshading images. Parcel mapping was provided by Community Planning and Environmental Associates. Other digital data were downloaded from the New York State GIS Clearinghouse. Finally, New York Rural Water Association conducted on-site activities in Minden to map surficial geologic materials and unconsolidated aquifers. A global positioning system (GPS) device was used to capture the geospatial coordinates of such features.

2.0 SETTING

2.1 Topography and Physiography

As illustrated on Figures 1 and 2, Minden spans three different physiographic regions: the Appalachian Plateau, the Appalachian Uplands, and the Mohawk Valley. Each of these physiographic regions has distinctive topographic relief, landforms, and geology. The Appalachian Plateau occupies the southwest corner of Minden. Here, elevations range from 1,100 to 1, 600 feet above sea-level. The boundary of the Appalachian Plateau is a steep slope known as the Onondaga-Helderberg Escarpment. This feature has formed from more resistant limestone bedrock (see Section 2.3 below). Most of the Appalachian Plateau in Minden is occupied by slopes exceeding 25 percent.

The Appalachian Uplands are a broad region that comprises the majority of Minden. The topography of this region is highly variable. Elevations increase westerly from 295 feet at the mouth of Otsquago Creek at Fort Plain to as much as 1,100 feet above sea level at the base of the Onondaga-Helderberg Escarpment. The region has been deeply dissected by Otsquago Creek and its tributaries. Steepest slopes occur along the Otsquago Creek valley and along NW-SE trending hills that have been streamlined by glacial erosion.

The Mohawk Valley Physiographic Region occupies the northern portion of Minden. This region is characterized by steep northeast-facing slopes in excess of 25 percent that lead to a narrow flat flood plain along the Mohawk River. Elevations range from 850 feet along NYS Route 5S to 300 feet above sea-level along the Mohawk River.

2.2 Drainage

The Town of Minden resides within the Mohawk River Basin. Approximately 63 percent of the Town's land area drains into the Otsquago Creek (Figure 3). This stream has its headwaters in the Appalachian Plateau region of the Town of Springfield in Otsego County and the Town of Stark in Herkimer County. It flows into the Mohawk River at Fort Plain. About 25 percent of Minden eventually drains into Canajoharie Creek (Figure 3). This Mohawk River tributary has its origins in the Otsego County towns of Cherry Valley and Springfield as well as the Town of Sharon in Schoharie County. It flows into the Mohawk at Canajoharie. The remaining 12 percent of Minden either drains directly into the Mohawk River or through small tributaries that reach the Mohawk River (Figure 3).

2.3 Bedrock Geology

2.3.1 Beekmantown, Trenton, and Black River Groups

Figure 4 is a map of the bedrock formations underlying the Town of Minden. These formations are also shown on the Figure 2 cross-section. The oldest rocks that outcrop in Minden are those of the Beekmantown, Trenton, and Black River Groups. These rocks outcrop in the northern portion of the Town, near the New York State Thruway. Fisher (1970) shows a number of faults intersecting these rocks, indicating that these formations are at complex relations locally. The

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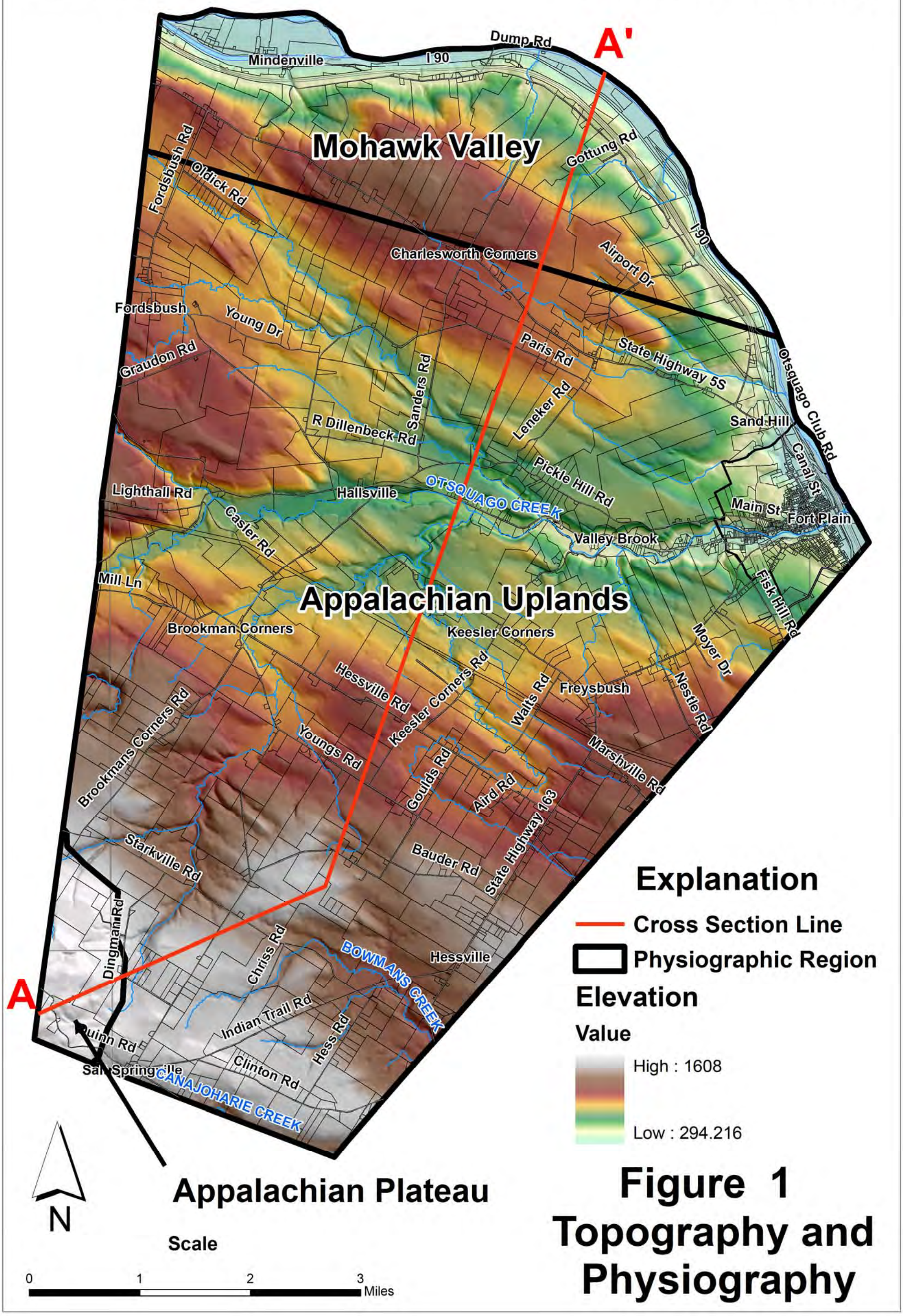

Figure 1
Topography and Physiography

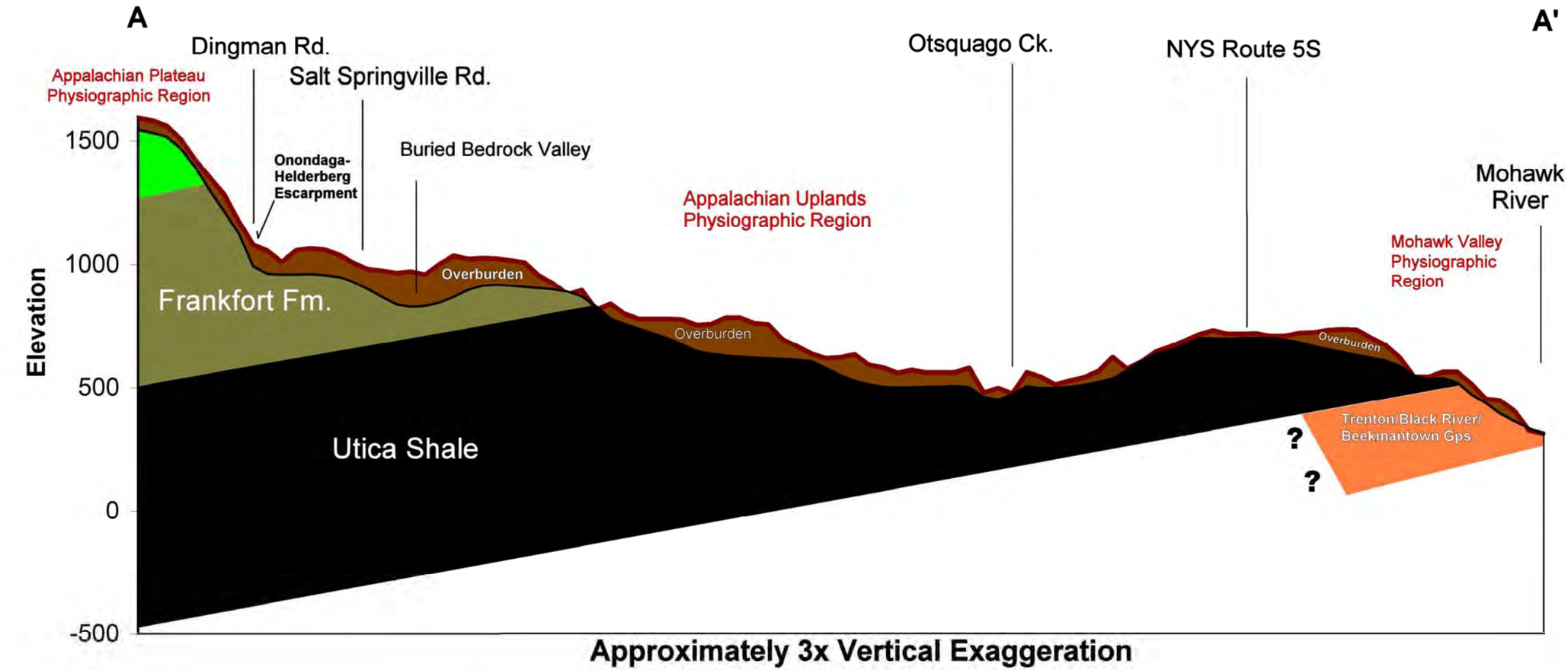

Figure 2. Generalized Geologic Cross-Section

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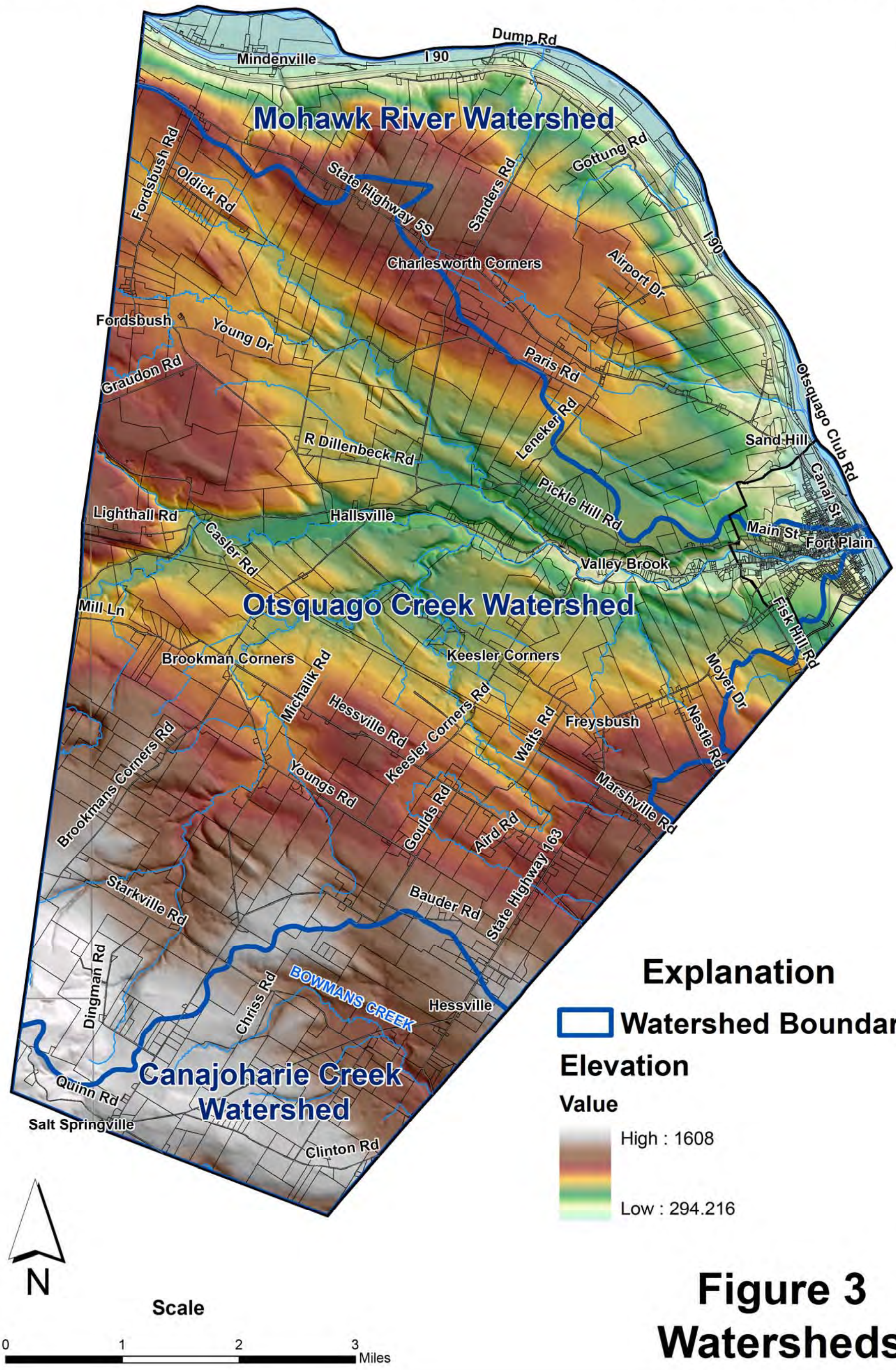

Figure 3
Watersheds

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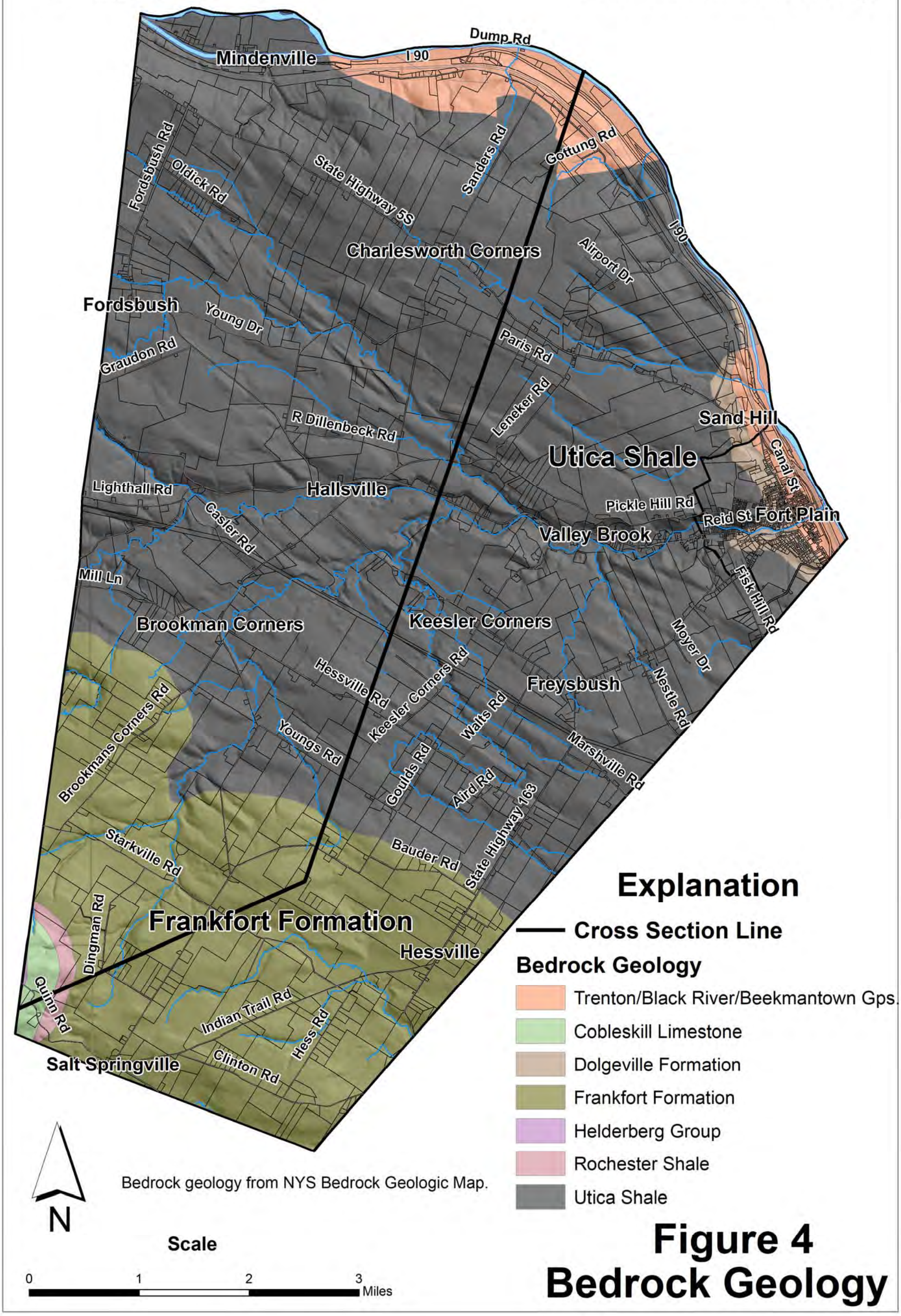

Figure 4
Bedrock Geology

Beekmantown, Trenton, and Black River Groups consist of various limestone and dolostone formations.

2.3.2 Utica Shale

Overlying the carbonates of the Beekmantown, Trenton, and Black River Groups is the Upper Ordovician Utica Shale. As shown on Figures 2 and 4, the Utica Shale is found beneath much of Minden and dips to the southwest. The Utica Shale measures approximately 700 to 800 feet thick in the Minden area and is comprised of three different members. In order from bottom to top (older to younger) these are the Flat Creek Member, the Dolgeville Member, and the Indian Castle Member.

The Flat Creek Member is dominantly dark gray to black shale and is believed by many to have the most natural gas reservoir potential due to its higher organic content (see discussion below). The Flat Creek has numerous fractures, many occurring as filled calcite veins (Selleck et al., 2011). The Flat Creek Member also has "sand injectite dikes" (Selleck et al., 2011). These are seams of volcanic ash, sand, and other materials that filled fractures and other openings.

The overlying Dolgeville Member has thin beds ("ribbons") of limestone alternating with dark shale. The uppermost member, the Indian Castle, starts as interbedded shale with limestone and finishes as black shale. The Indian Castle has been reported to have thin layers of fossil and other debris.

It is important to note that there are several cemented to partially-cemented volcanic ash beds throughout the Utica Shale. These are found in all three members and can be traced laterally considerable distances.

Much interest has centered on the Utica Shale as a potential natural gas reservoir. Extraction of natural gas from the Utica Shale would involve horizontal drilling and high volume hydraulic fracturing (HVHF). These techniques differ significantly from so-called "conventional" methods that involve vertical drilling and hydraulic fracturing using significantly less water.

One of the important factors regarding natural gas production is the depth of burial of the organic-rich sediments. Organic sediments must be buried at significant enough depth for the organic material within the rocks to be "cooked" into natural gas. The Utica Shale is found at depths between 0 and 2,100 feet below the land surface in Minden. A literature search by NYRWA found that a depth of burial of 2,000 to 4,000 feet has been stated as necessary for favorable natural gas production. If this is true, if would appear that the Utica Shale is too shallow across Minden, even in the Appalachian Plateau region.

Another factor that may influence future drilling in shale is the degree of environmental review and analysis that would be necessary. The NYSDEC's proposed GEIS for horizontal drilling and HVHF indicates that a site-specific environmental review would be necessary for any HVHF operation of less than 2,000 feet depth. The proposed GEIS also states that site-specific review is necessary if fracturing operations were to occur less than 1,000 feet below the base of the fresh water supply. As this report documents, the Utica Shale is the most widely utilized source of

local drinking water. Given the Utica Shale's relatively shallow depth and use of a local water source in Minden, natural gas development would likely proceed in other places in New York State first.

2.3.3 Frankfort Formation

Overlying the Utica Shale is the Frankfort Formation. It outcrops in elevations generally above 850 feet above sea-level in the Appalachian Uplands region. The Frankfort Formation consists of interbedded shale, siltstone, and fine sandstone. The Frankfort Formation is believed to be nearly 600 feet thick in Minden.

2.3.4. Rochester Shale and Cobleskill Limestone

The Rochester Shale and the Cobleskill Limestone are only exposed within the Appalachian Plateau region. The Rochester Shale consists of gray to black shale with interbedded dolostone. Locally, the Cobleskill Limestone is actually a shaly dolostone.

2.4 Surficial Geology

Surficial deposits are geologic materials that are found at or near the land surface. The unconsolidated deposits above the bedrock originated within the past 15,000 years and actually continue to be formed today. A detailed map of surficial deposits has been completed by NYRWA (see Figure 5 and Plate 2). This map was derived from examination of digital soils mapping, existing mapping by the United States Geological Survey, topographic expression of the various deposits, water well data, and site reconnaissance.

Surficial geologic maps have many different potential uses for planning purposes. One of the most frequent uses is to help identify sand and gravel aquifer boundaries. Surficial geologic maps are also important for identifying economically important deposits such as sand and gravel for aggregate. Surficial geologic maps are also important to study environmental issues such as the potential for migration of groundwater contaminants. Finally, surficial geology maps are useful for planning site development activities such as designing and locating septic systems, building new roads, excavating foundations, etc.

2.4.1 Till

The principal material left by the advancing glacial ice sheet was glacial till. Till is commonly found in upland areas and underlies other deposits in valleys. Lodgement till was deposited beneath moving glacial ice. It is a dense and compact mixture of clay, silt, sand, cobbles, and boulders. The other type of till that is depicted on Figure 5 and Plate 2 is known as ablation till. It is looser and less compact. It formed from material that was within or on top of glacial ice and was deposited as the ice melted. It generally contains less clay and silt than lodgement till.

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This map shows the type and distribution of geologic materials found at or near the land surface. These materials are unconsolidated (loose) sediments that overlie solid rock (bedrock). The surficial materials were mapped by Steven Winkley of NYRWA based upon soil survey data, USGS Water-Resources Investigations Report 88-4091, field observations, and subsurface data.

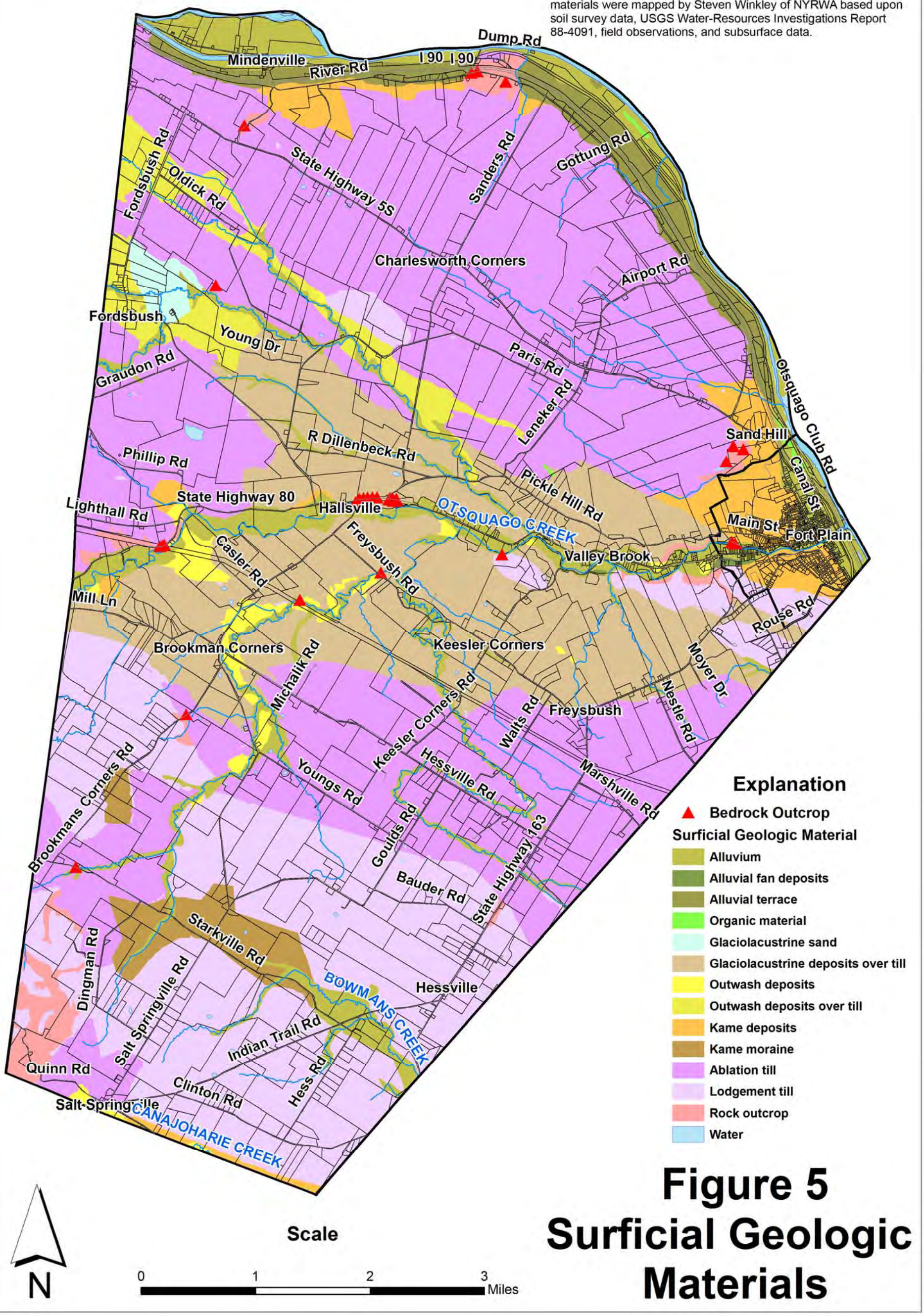

Figure 5 Surficial Geologic Materials

2.4.2 Stratified Deposits

Some surficial materials formed as a result of deposition from glacial meltwater. These include kame deposits and outwash. Outwash is sand and gravel deposited on flat plains or deltas by meltwater beyond the ice margin. Accumulations of outwash deposits occur along Otsquago Creek and its tributaries. Kames are hills underlain by sand and gravel deposited by glacial meltwater in contact with glacial ice. Kame deposits occur along the Mohawk valley near Mindenville, Sand Hill, and Fort Plain. Kame moraine deposits are highly variable, composed of sand and gravel beds with boulders and lenses of silt and clay. These deposits mark the former position of a glacial ice margin.

As the glacial ice receded, a glacial lake formed in the Mohawk Valley and extended into the Otsquago Creek Valley. Silt and clay sediments were deposited into this lake, eventually draping existing till deposits to depths of up to 20 feet. In some locations, meltwater streams built small outwash deltas into this lake.

After deglaciation, modern-day drainage patterns developed. Alluvium, consisting of sand, gravel, and silt formed along floodplains. Some of these floodplains were above present-day levels. This is evident along the Mohawk River. Alluvial fans formed at the mouths of some upland streams. These consist of silt, sand, and boulders that accumulate in fan shaped landforms.

3.0 GROUNDWATER OCCURRENCE

Ground water is subsurface water that fills (saturates) all the voids in the rock or soil. Ground water is found between in the pore spaces between individual grains that range in size from clay to gravel. This is referred to as primary porosity. Ground water also occurs in cracks (fractures) found in rock. This is known as secondary porosity. Most of the water in bedrock is found in fractures.

3.1 Bedrock

Since 2000, 83 percent of water wells in Minden have been completed in bedrock. In bedrock, steel casing is set through the overburden (unconsolidated deposits) and into the first few feet of sound rock. The remainder of the well is left as an open borehole in the rock. Although the median depth of bedrock wells in Minden is 153 feet, bedrock well depths range from 40 to 500 feet (see Figure 6).

3.1.1 Bedrock Well Yields

The median yield of bedrock wells in Minden is 5 gallons per minute (gpm) and 42 percent of wells yield less than the 5 gpm required by FHA for new home loans (Figure 7). Seventeen percent of bedrock wells yield 1 gallon per minute or less (Figure 7). NYSDOH does not recommend the use of wells with yields of 1 gallon per minute or less for any homes with four or more bedrooms.

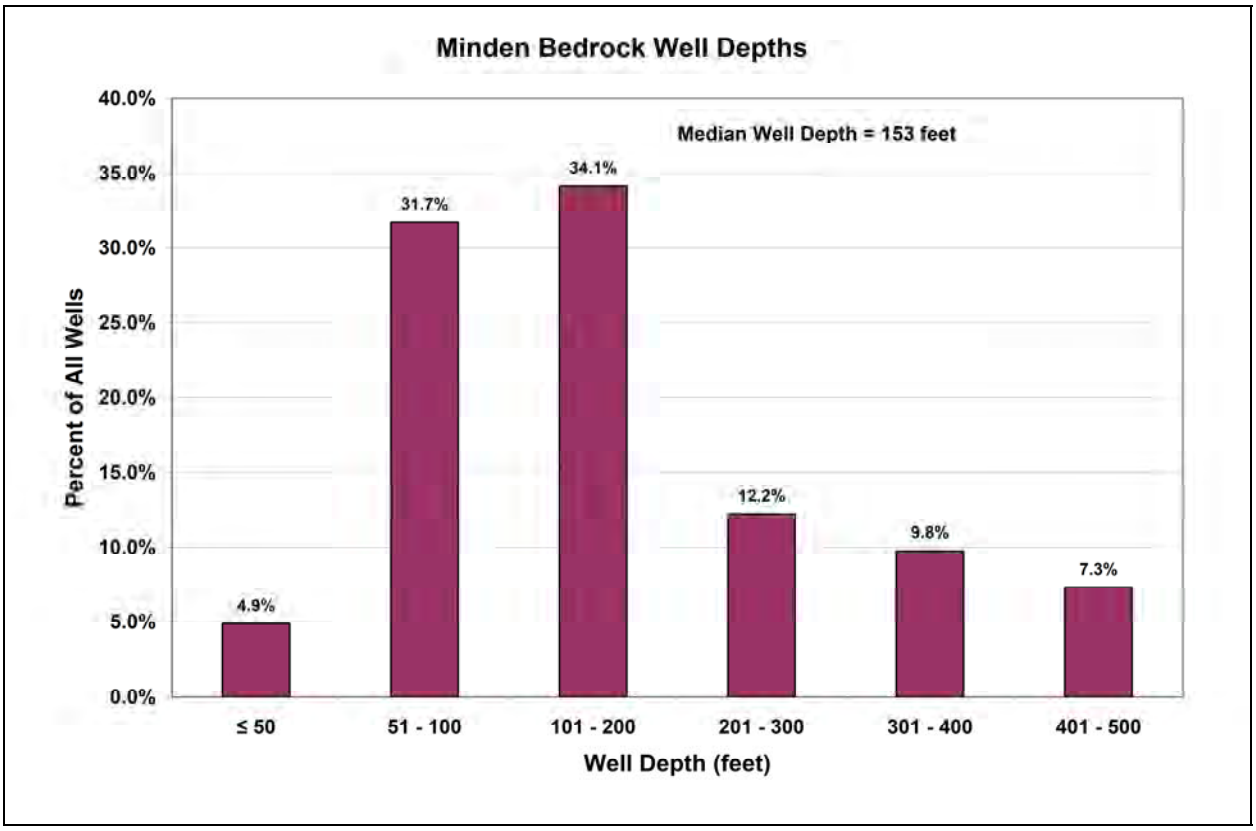

Figure 6. Bedrock Well Depths

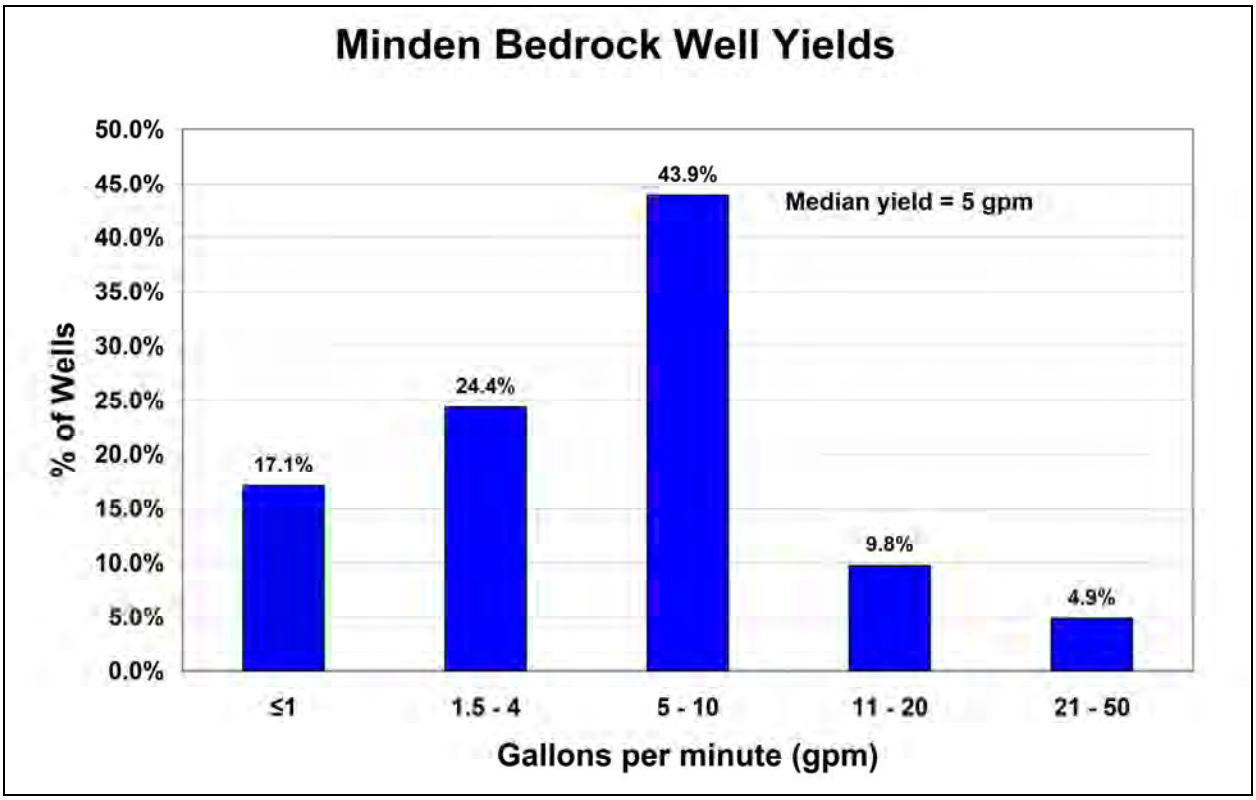

Figure 7. Bedrock Well Yields

As indicated on Figure 8, there is variation in bedrock well yields across Minden. Typically, this variation is largely due to the type of bedrock. However, in Minden, the median yield of each bedrock formation is the same (5 gpm). Instead, differences in well yield in Minden appear to be related more to the degree of fracturing of the local bedrock. Topographic lows in the top of bedrock surface often mark these areas of concentrated bedrock fractures. Linear features visible on aerial photography, satellite imagery, and topographic maps also can coincide with bedrock fracture zones. These features have been mapped on Figure 8.

Two notable areas of lower than average well yields have been documented by NYRWA based upon the available well data (Figure 8). The largest of these areas is situated along NYS Route 5S between Otsquago Creek and the Mohawk River. This area coincides with a high in the local topography of the top of the bedrock surface (Figure 9). Another area of lower than average well yields in situated between the hamlets of Hessville and Freysbush (Figure 8). This also corresponds to a local high in the bedrock surface topography (Figure 9). Lee Prime of Prime Well Drilling and Gerry Girard of American Well Drilling confirmed to NYRWA that yields in the vicinity of Hessville have historically been poor.

Well yields in the local bedrock vary considerable however based upon the local fracture distribution. For example, just one mile southwest of the poor yield area between Hessville and Freysbush lies an area of relatively high yields. This area corresponds to an apparent buried bedrock valley in the vicinity of Starkville Road (see Figure 9). Both Lee Prime and Gerry Girard noted the curious appearance of gravel seams within the shale bedrock here. This highly unusual occurrence may be indicative of highly fractured zones and/the injectite dikes that were previously described.

3.1.2 Bedrock Water Quality

Unfortunately little quantitative data exists on water well quality. Water quality analyses are not required for residential wells. Lee Prime and Gerry Girard discussed the water quality with NYRWA. Like yields, water quality in the bedrock is highly variable. In general, about one-half of wells drilled locally have issues with “sulfur”. This issue refers to the natural occurrence of hydrogen sulfide (rotten egg odor). Water can be hard in some places, depending upon the carbonate content of the rocks. Water softeners are in common use. Most problematic is the localized presence of salt and methane in some wells. Salt and methane have been reported in some wells located near Salt Springville and the Dingman Road areas. These locales are situated at the base of the Appalachian Plateau and the Onondaga-Helderberg Escarpment. It is possible that the more mineralized water here is the result of a regional groundwater discharge zone. Deeper groundwater from the Appalachian Plateau region may be forced upwards towards the land surface in this area.

3.2 Unconsolidated Aquifers

Comparatively few wells in Minden are completed in unconsolidated (sand and gravel) aquifers. Unconsolidated aquifers are not as widely distributed and many household well drillers prefer to complete wells in the underlying bedrock. Wells that are completed in the unconsolidated deposits for private, residential use are typically left as open ended casing. The casing is

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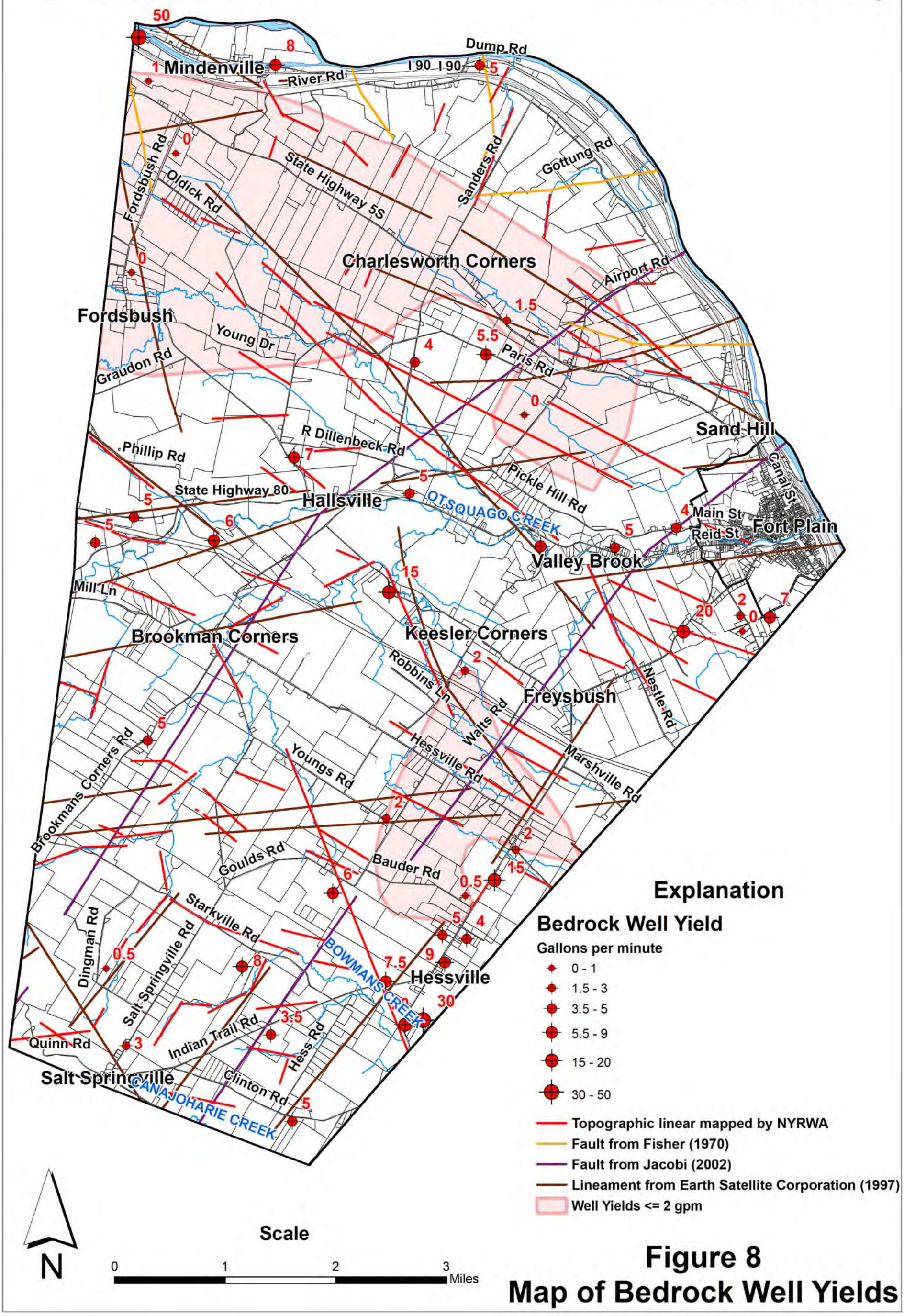

Figure 8
Map of Bedrock Well Yields

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Steven Winkley of NYRWA derived this map from water well data, test boring data (Plate 1) and bedrock exposures (Plate 2).

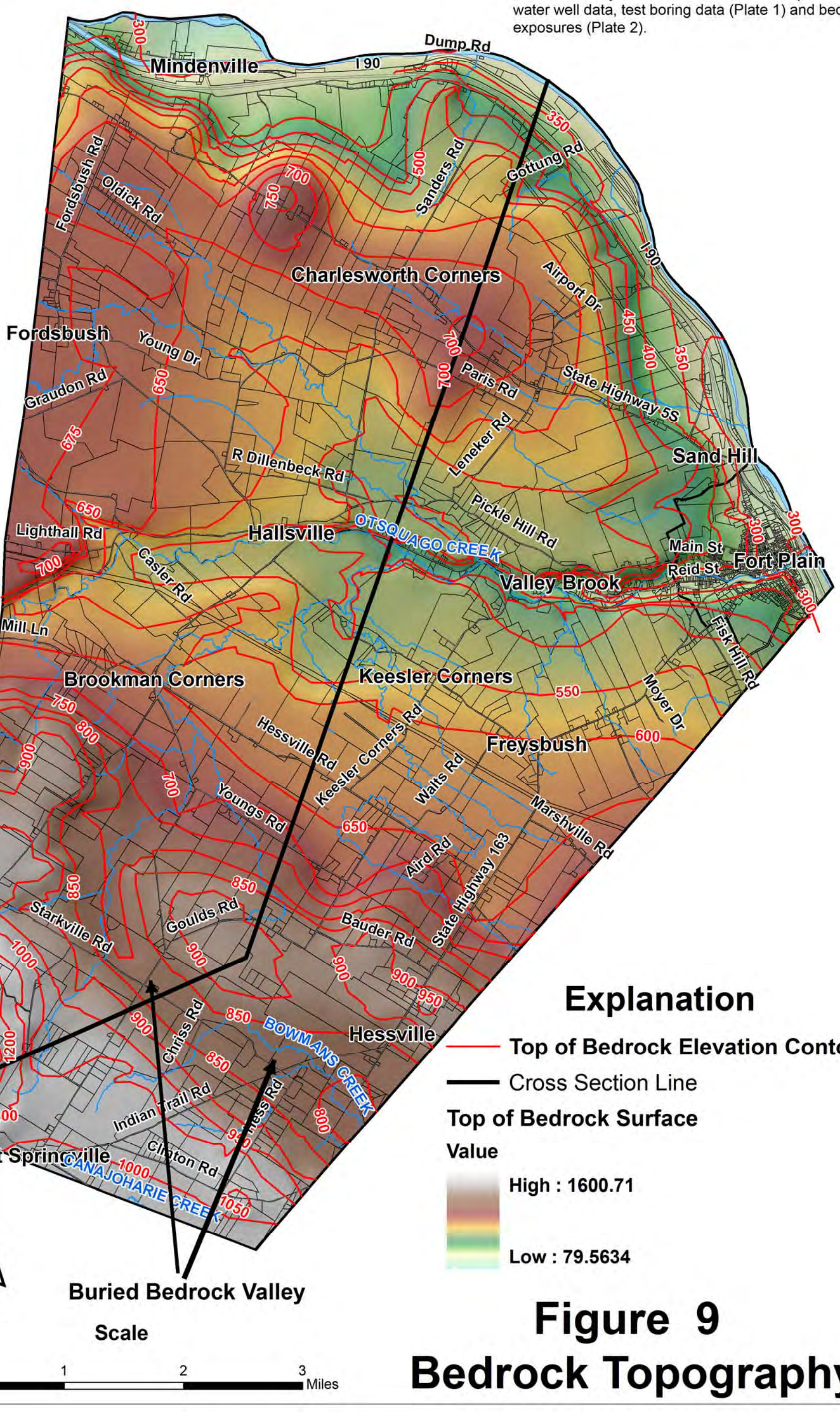

Figure 9
Bedrock Topography

terminated in the water-bearing material. Such construction is sufficient for many purposes. The median yield of such wells is 15 gpm. However, unconsolidated deposits are capable of producing very high yields if wells are finished with a properly sized and developed screen. A well screen is a filtering device that permits water to enter the well but prevents the unconsolidated material (sand, etc.) from entering the well. Screening is placed in the well and the casing is generally pulled back to expose the screen to the unconsolidated material. Screens are typically made of stainless steel and have openings referred to as slots. Public water supply wells in sand and gravel are typically fitted with screens. Such wells are usually capable of producing hundreds of gallons per minute. For example, the Village of Fort Plain has a set of shallow screened wells situated off Witter Street in the Village.

The distribution of water-bearing unconsolidated deposits is generally limited to areas along or near the valleys in Minden. On Figure 10 and Plate 3, NYRWA has mapped the distribution of unconsolidated aquifers in the Town of Minden. The boundaries of these aquifers were delineated by NYRWA on the basis of surficial geologic boundaries (see Plate 2) and available subsurface data.

There are two types of unconsolidated aquifers: unconfined and confined. In a confined aquifer, the coarser-grained water-bearing deposits are overlain by finer-grained sediments such as clay, silt, or till. In Minden, such aquifers are located in bedrock channels that have been buried by a variety of glacial sediments. The buried bedrock valley in the Starkville Road is an example of a local confined aquifer. In contrast, unconfined aquifers are shallower and lack an overlying layer of fine-grained sediments. Unconfined aquifers in Minden are typically associated with outwash or kame deposits. Note that in some locales it is likely that both types of aquifers exist.

Areas of deeper sand and gravel deposits of sufficient distance from both surface water and potential sources of contamination have the highest potential for municipal well development.

4.0 HYDROGEOLOGIC ANALYSES

4.1 Hydrogeologic Sensitivity

The *hydrogeologic sensitivity* of a location is defined by NYRWA as a relative measure of the ease and speed with which a contaminant could migrate into and within the upper-most water-bearing unit. High to very high hydrogeologic sensitivity ratings indicate that, in general, ground water could be readily impacted by surface activities. Development activities that could contaminant ground water include nitrates and bacteria from septic systems, nutrients from fertilization and irrigation of lawns, salts from deicing, and volatile organics and other contaminants from leaks and improper disposal of petroleum and other fluids. If possible, higher-risk land uses should be steered away from areas of high to very high hydrogeologic sensitivity.

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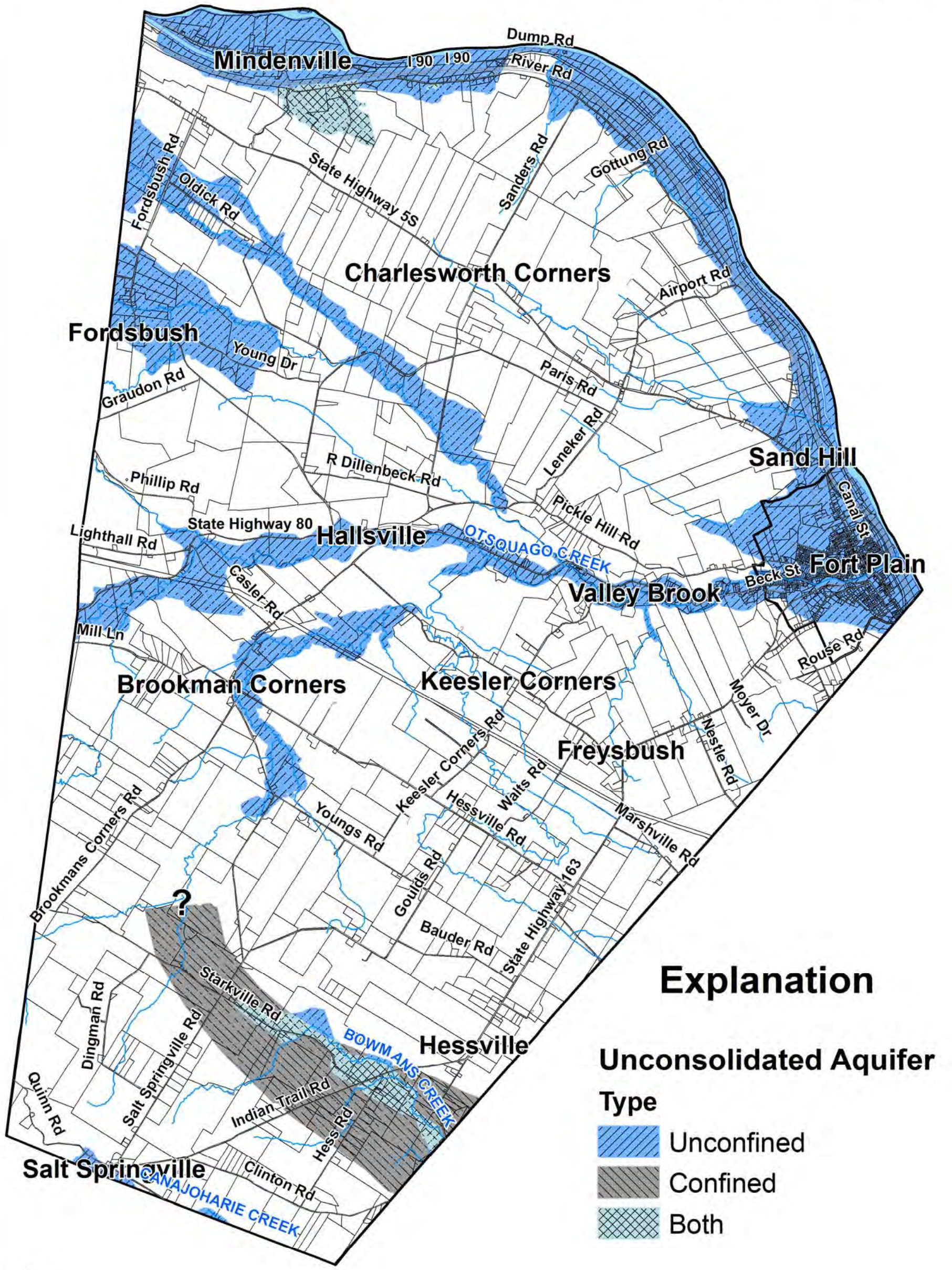

Figure 10
Unconsolidated Aquifers

The hydrogeologic sensitivity is a function of the naturally occurring hydrogeologic characteristics of an area. The nature and extent of potential sources of groundwater contamination are not factored into hydrogeologic sensitivity ratings. Instead, the two factors controlling the hydrogeologic sensitivity are the site's geologic materials (the hydraulic characteristics of the uppermost water-bearing unit and the local rate of recharge) and the site's topographic position (the slope of the land surface and the relative topographic position). Resultant hydrogeologic sensitivity ratings based upon geologic materials and topographic position ratings are mapped on Figure 11. Very high sensitivity is found chiefly in relatively flat topographic highs underlain by unconfined sand and gravel aquifers or carbonate bedrock. Lowest hydrogeologic sensitivities are found in steeply sloping or low-lying areas underlain by glacial till or fine-grained glaciolacustrine sediments.

4.2 Recommended Minimum Lot Sizes

Future development in Minden will be largely in the form of residential construction with individual septic systems and private wells. Excessive nitrate loading of ground water can occur if there is too high a density of septic systems in a given area. To avoid excessive nitrate loading, the spacing of homes must be large enough for natural groundwater recharge to adequately dilute the effluent from septic systems to acceptable levels.

The chief variable in determining adequate lot sizes to avoid nitrate loading is the annual groundwater recharge rate. NYRWA has calculated the estimated annual groundwater recharge rate across Minden based upon stream base flow estimates and mean annual runoff in the region. Base flow is the component of stream flow that can be attributed to groundwater discharge into streams. The commonly-held assumption is that water that discharges to a stream as base flow originated as local shallow groundwater recharge. The United States Geological Survey (USGS) has calculated a variable known as the base flow index (BFI) for the watersheds of each of its stream gages. BFI is the ratio of base flow to total flow, and values were computed using an automated hydrograph separation computer program called the BFI program. BFI values for current and historical USGS stream gages in the conterminous U.S. are available from Wolock (2003a). BFI values are available for two local streams: Otsquago Creek and Canajoharie Creek (BFI values of 0.278 and 0.309 respectively).

Working in the Great Lakes Basin, Neff et al. (2005) developed an empirical relation between measured base flow characteristics at gaging stations and the surficial geologic materials in the surrounding drainage area. In this study, a value of BFI was assigned to each surficial geologic material. The total BFI for the gage watershed could then be calculated based upon multiplying the area for each surficial geologic material by its BFI value. By studying watersheds in the region that have BFI data and iteratively comparing the surficial geology percentages of these watersheds, local mean values of BFI were determined by NYRWA for each surficial geologic materials:

Mean annual groundwater recharge for Minden was calculated by NYRWA by multiplying a grid of local base flow index (BFI) surficial geologic materials values by a grid of local mean annual runoff values generated from Cohen and Randall (1998). The resulting map of estimated annual groundwater recharge is Figure 12.

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NYRWA defines hydrogeologic sensitivity as a relative measure of the ease and speed with which a contaminant could migrate into and within the upper-most water-bearing unit. Hydrogeologic sensitivity is a function of the site's recharge potential, underlying aquifer, slope, and topographic position.

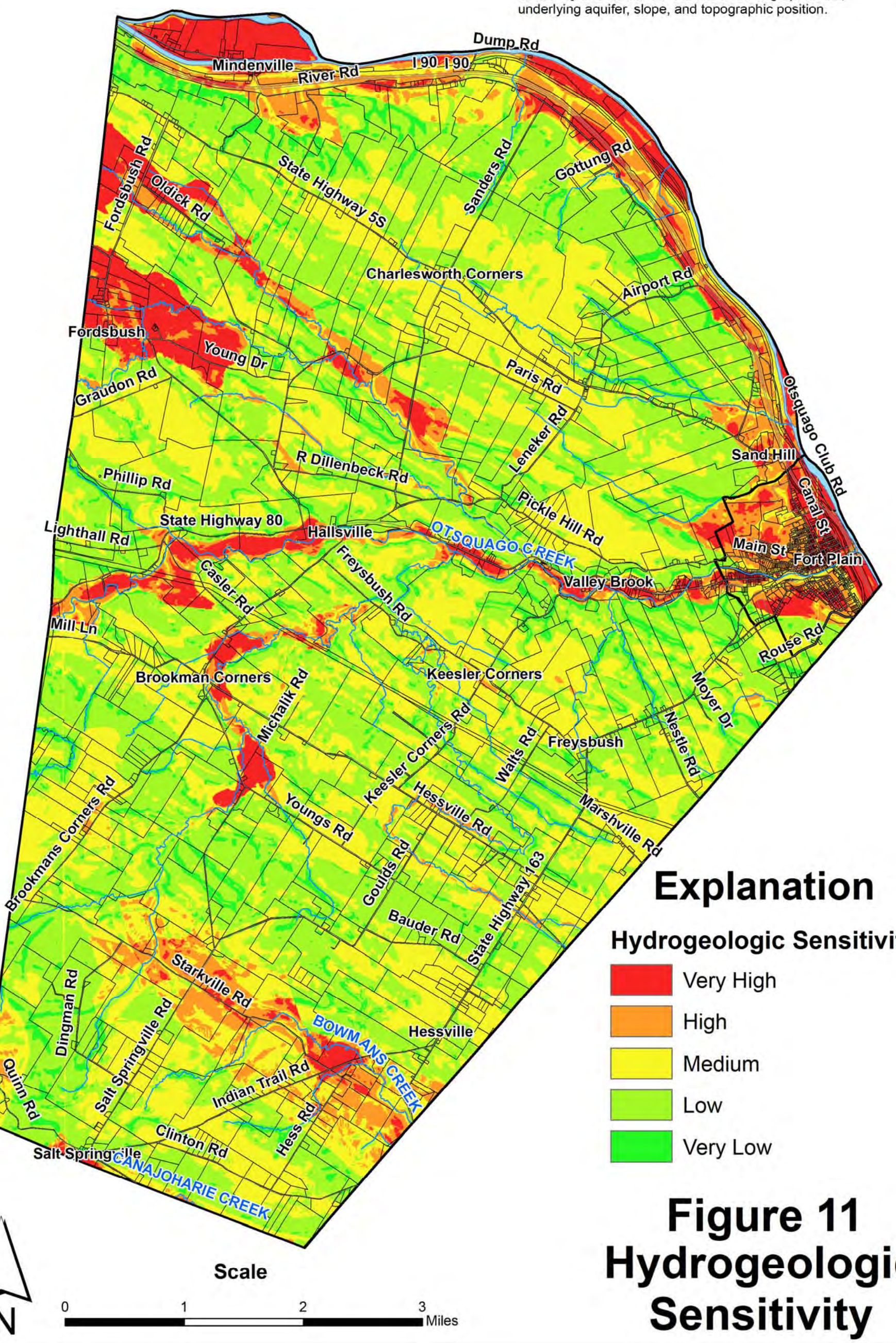

Figure 11 Hydrogeologic Sensitivity

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Annual groundwater recharge rates were estimated by Steven Winkley of NYRWA using a method that takes into account local base flow indices (BFI), annual runoff rates in the region, and surficial geologic materials.

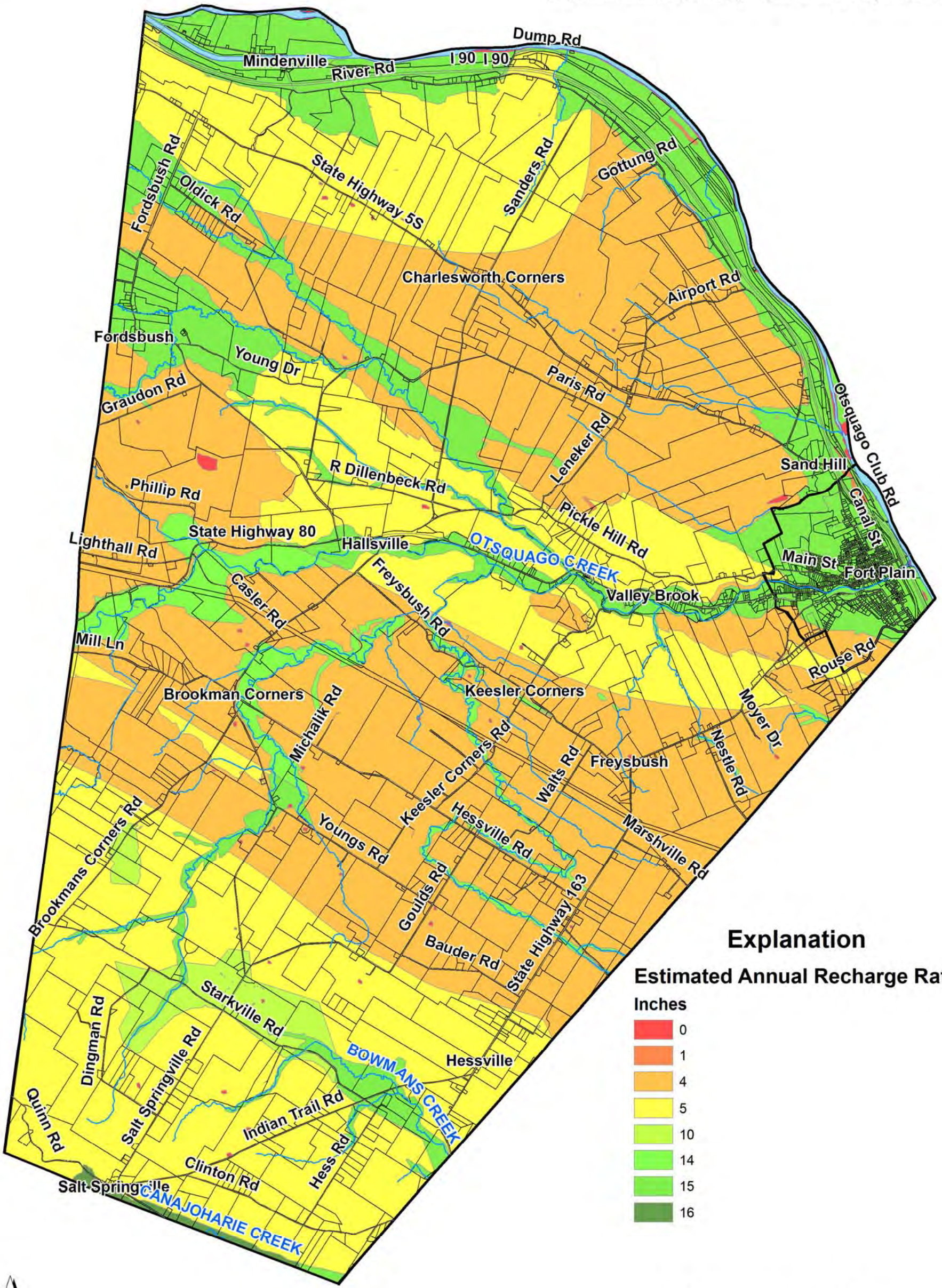

Figure 12
Recharge Rates

For each computed annual recharge rate, NYRWA calculated the lot size that is necessary to dilute levels of nitrate to a level of 5 mg/l. The methodology to calculate this necessary lot area is an equation known as the modified Trela-Douglas nitrate dilution equation (Hoffman and Canace, 2001).

Based upon the nitrate loading analysis, three different minimum lot sizes are recommended for various areas of Minden. These lot sizes are two, five, and six acres. The distribution of the recommended minimum lot sizes for future development is shown in Figure 13. Note that the minimum lot size specified in the current zoning is two acres. Note that areas with building constraints such as steep slopes, wetlands, flood hazards, surface water are not shown on Figure 13. Existing lots that are completely developed are also not shown on Figure 13.

5.0 GROUNDWATER PROTECTION STRATEGIES

It is important to develop and implement effective groundwater protection measures in order to protect water resources and encourage future development where it is best suited. There are a number of groundwater protection measures that can be chosen. Some of these are regulatory in nature. Others are non-regulatory. The Town of Minden must determine which measures are acceptable given local socioeconomic and political conditions. These measures could include: promulgation of land use regulations, environmental review, further studies, and education.

5.1 Land Use Regulations

Subdivision Regulations

Subdivision regulations relate to how land is to be divided into lots and what improvements such as streets, lighting, fire protection, utilities, drainage, and parks are made to service the lots. Subdivision regulations in Minden could be amended to optimize protection of groundwater resources. For example, the following elements could be required for conditional approval:

- Location of any existing wells onsite and other proposed lot wells in relation to: local topography, lot lines, roads, on-site sewage system components or sewer lines, petroleum storage tanks, surface water and other drainage features, stormwater conveyance systems, and other applicable features.
- Copies of New York State Department of Environmental Conservation Well Completion Reports for completed well(s) (including the well log and pump test data).
- Any and all water quality testing results.
- Proposed individual water supply system details such as pumps, storage, treatment, controls, etc.
- A completed hydrogeological study, if required.

Such details should be in the plats and documents for final approval as well.

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This map shows the recommended minimum lot sizes for remaining developable areas within the Town of Minden. The minimum lot sizes are recommended in order for groundwater recharge to acceptably dilute the effluent from the lot's septic system. Areas with building constraints such as steep slopes, wetlands, flood hazards, surface water are not shown. Existing lots that are completely developed are also not shown.

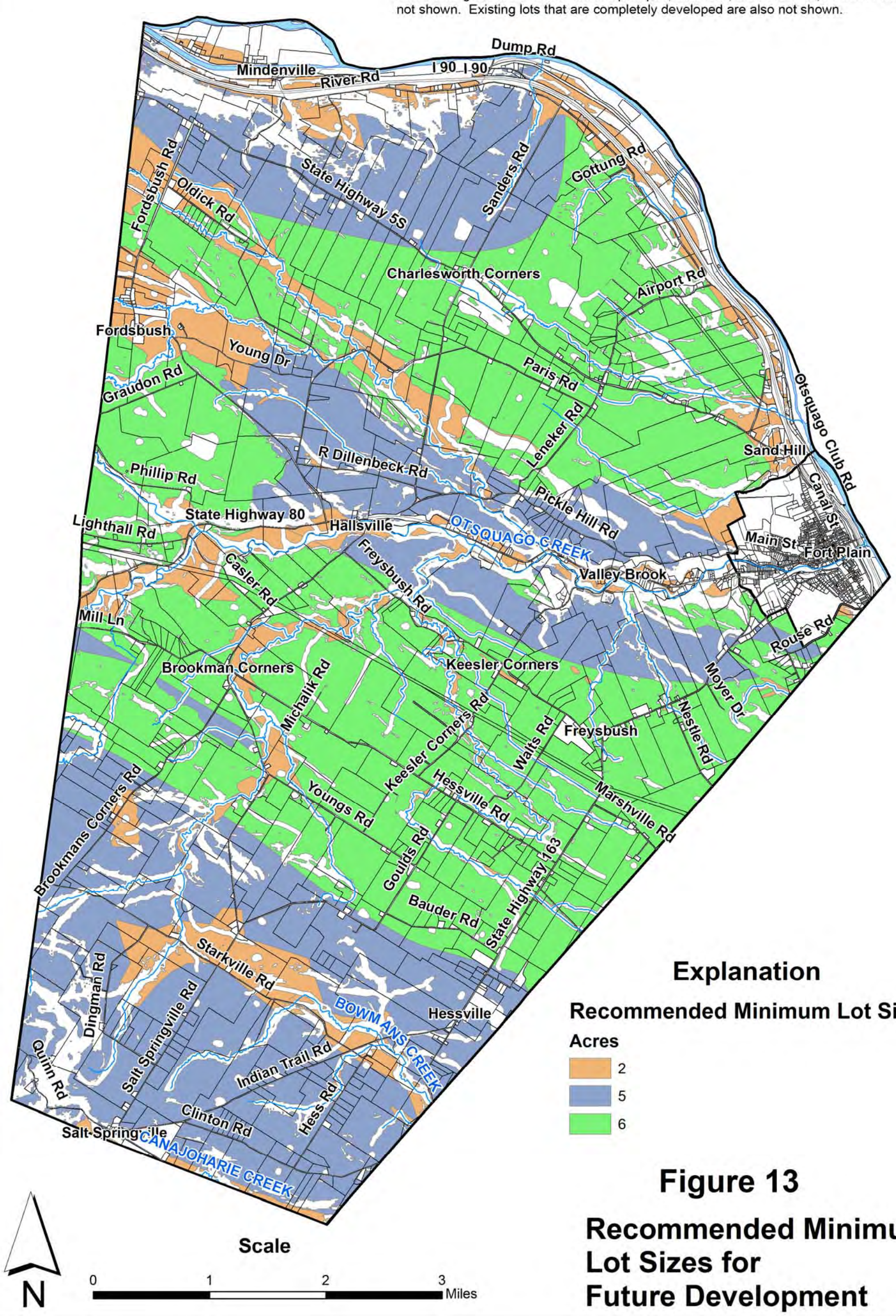

Figure 13

Recommended Minimum Lot Sizes for Future Development

A hydrogeological study could be required for any new subdivision of a certain size. A hydrogeological study could also be performed for new subdivisions that overlie the lower well yield area as detailed in this report.

In addition, standards may be added to subdivision regulations that specifically cover wells. These standards can specify the following:

A. Well locations. Existing and proposed wells are located at minimum separation distances from on-site and off-site potential sources of contamination as specified in Appendix 5-B of 10 NYCRR Part 5.

B. Supply suitability. A representative number of well(s) indicate that the available quantity and quality of on-site groundwater resources are suitable for household purposes.

C. Adverse impacts. For proposed subdivisions requiring a hydrogeological study, the determination has made that the subdivision avoids adverse impacts to existing or future groundwater users and/or surface waters within 1,500 feet of the subdivision. If adverse impacts cannot be avoided, the applicant must provide adequate mitigation of such impacts. An adverse impact to ground water can be defined as any reductions in groundwater levels or changes in groundwater quality that limit the ability of a groundwater user to withdraw ground water. An adverse impact to surface water would be any reductions in the level of flow or water quality needed for beneficial uses such as protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, cultural and aesthetic values, drinking water supply, agriculture, electric power generation, commercial, and industrial uses.

Many communities are now encouraging the use of so-called conservation subdivisions. A conservation subdivision is essentially a cluster-type development that is planned around the open space protection of conservation areas. These conservation areas can include areas that are regulated such as wetlands and floodplains as well as other elements such as steep slopes, mature woodlands, prime farmland, meadows, wildlife habitats, stream corridors, historic and archeological sites, scenic views, and of course groundwater recharge areas. Conservation subdivisions also use the similar principles of low-impact development and better site design. In the case of the ground water, the guiding design standard is to maintain or replicate the predevelopment hydrologic functions of storage, infiltration, and groundwater recharge. This can be done by using stormwater retention and detention areas, reducing impervious surfaces, lengthening flow paths and runoff time, and preserving environmentally sensitive site features.

Low-impact development and better site design are primarily stormwater management concepts. Wastewater management is also a very important consideration. On-site septic systems recharge ground water. Properly located, installed, and operated on-site septic systems should be encouraged in order to return water to the subsurface. Sewers not only export wastewater away that can be recharged, they also export ground water and storm water as well since most sewers are prone to inflow from these sources.

Conservation subdivisions do pose a concern with respect to onsite wastewater disposal. By clustering homes on smaller lots, there is the possibility that the density of individual disposal systems will lead to excess nitrate loading. If individual disposal systems and wells are planned, the density of households across the parent parcel or parent tract should not exceed those indicated on Figure 13. Alternatively, a small on-site centralized wastewater disposal facility could be constructed for the subdivision as long as it is carefully located with respect to ground water and surface water. If there are existing wastewater discharges in the area, these should be considered in order to prevent excess nutrient loading.

Site Plan Review

Site plan review is a local regulatory process that involves municipal review and approval of how development is to occur on a *single* parcel of land. In this way, site plan review differs substantially from subdivision regulations. Site plan review does not prohibit certain land uses. However, it does regulate how development will take place by specifying the arrangement, layout and design of the proposed use.

NYRWA recommends the following site plan elements are added to the site plan submission requirements:

- Copies of New York State Department of Environmental Conservation Well Completion Reports for completed well(s) (including the well log and pump test data).
- Any and all water quality testing results.
- The location(s) of all public water systems and other groundwater users within 1,500 feet of the proposed development boundaries;
- A description of the pollution control measures proposed to prevent ground water or surface water contamination; and
- A statement as to the degree of threat to water quality and quantity that could result if the control measures failed.

Submittal of a site plan *and* a hydrogeological study could be required for any proposed project in Minden that has projected on-site groundwater withdrawals and/or on-site sewage disposal flows equal to or exceeding an average of 1,000 or 2,000 gallons per day (gpd). These types of projects could include, but are not limited to, recreational developments (golf courses, water theme parks, etc.), multi-family housing (apartments, condominiums, townhouses, etc.), industrial, or commercial developments.

The basis and standards for approval of a site plan could include the following additional criteria:

- Adequacy of control measures to prevent ground water or surface water contamination.

- The proposed use will not result in reductions in groundwater levels or changes in groundwater quality that limit the ability of a groundwater user to withdraw ground water.

Zoning

Zoning regulates land uses, the density of land uses, and the siting of development. While considering amending current zoning, there are several points that the Town of Minden should consider with respect to groundwater resources. First, the recommended minimum lot size for dilution of septic effluent should be consulted. Second, uses of land with a higher-risk of groundwater contamination should be "steered-away" from areas of high hydrogeologic sensitivity as well as unconsolidated aquifers. This could be accomplished using overlay zoning. Overlay zoning creates a set of regulations for a given area that are in addition to the regulations in the standard "underlying" zoning districts.

5.2 Environmental Review

In New York, all state and local government agencies are required by the State Environmental Quality Review Act (SEQR) to consider environmental impacts prior to making decisions to approve, fund, or directly undertake an action. Types of decisions or actions that are subject to SEQR include approval or direct development of physical projects, planning activities that require a decision, and adoption of rules, regulations, procedures and policies. Note that so-called Type II actions do not require environmental review because they either do not significantly impact the environment or are specifically precluded from environmental review under SEQR. However, all other so-called Type I or Unlisted Actions do require a determination of significance. If an action is determined to have potentially significant adverse environmental impacts, an Environmental Impact Statement (EIS) is required.

One way to insure that agencies take an area of critical environmental importance into account when making discretionary decisions is for a local municipality to designate a specific geographic area within its boundaries as a critical environmental area (CEA) under SEQR. An aquifer, watershed, wetland, etc. would meet the SEQR criteria for a CEA. The consequence of designating a CEA is that all government agencies (local or state) must consider the potential impact of any Type I or Unlisted Action on the environmental characteristics of the CEA when determining the significance of a project.

The Town of Minden may wish to consider naming unconsolidated aquifer areas, sensitive hydrogeologic areas, etc. as CEAs.

5.3 Education

Public education can be an excellent non-regulatory tool to minimize potential contamination and conserve water resources. There are several instances where education may be effective. These include:

- Informing officials, residents, contractors, and developers about the results of this study;
- Educating homeowners on proper operation and maintenance of onsite wastewater treatment systems and wells;
- Encouraging the use of water saving devices within homes;

- Promoting natural landscaping and other lower demand vegetation;
- Educating homeowners on proper fertilizer/pesticide application rates and practices; and
- Supporting proper waste disposal (i.e. recycling).

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