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TOWN OF STILLWATER DGEIS

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT

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1.0 EXECUTIVE SUMMARY

I. Project Overview and Purpose

The purpose of this Draft Generic Environmental Impact Statement (DGEIS) is to evaluate the potential impacts of growth on certain resources and facilities located in the Town of Stillwater, Saratoga County, New York. This document examines the impacts of land development projected to occur from 2007-2017 on the Town's infrastructure including highways (traffic), water supply and distribution systems, wastewater collection and treatment system, as well as the Town's open spaces, farmland, and recreational facilities.

This DGEIS evaluates the cumulative impacts of land development (new homes, commercial/industrial development) on the town's infrastructure and community character as defined by farmland and open space. The level of detail in a GEIS is usually provided at a reduced (conceptual) level of detail and presented in broader scale/prospective. The DGEIS focuses on a range of issues and cumulative (or incremental) impacts. The evaluation of cumulative impacts is not typically addressed in detail in site specific EIS's, but is a major focus of a DGEIS. Over time, cumulative impacts can have significant and often irreversible impacts on community character and resources.

The Town of Stillwater is concerned that uncontrolled or poorly managed growth will have a significant adverse impact to community character, open space and agricultural resources, its highway system, as well as its water and wastewater facilities and has therefore caused the preparation of this document.

II. Project Purpose and Need

The primary purpose of this DGEIS is to evaluate the cumulative impacts of future development on land use and community character, the natural environment, infrastructure community services in the Town of Stillwater. Evaluation of the major impacts will enable the Town to be proactive in guiding future development, develop mechanisms to manage and mitigate the effects of development; preserving a high quality of life for Town residents.

Future development in the Town will impact many resources. The Town currently requires developers to pay for project specific improvements when impacts to specific resources/facilities are identified, quantified and improvements to facilities are necessary to achieve their (project specific) goals. As long as the incremental improvements are proportionate with the level of development and all impacts of individual projects are addressed, this process is adequate. However, this is not always the case and this DGEIS is being prepared to ensure that the need for major improvements to the Town's facilities are identified, properly planned for, and that the financial burden for any necessary improvements is distributed equitably among all parties.

The equitable distribution of mitigation costs is a key element in the DGEIS. Most mitigation has a high cost, and through SEQR, all those who benefit should pay, including a public share. As a component of the approval of the LFTC PDD, the project sponsor (SEDC) acknowledged the

growth inducing aspects of the project required further evaluation. Specifically, the LFTC PDD GEIS Findings Statement acknowledged the need for the Town to further evaluate the impacts of the full buildout of the LFTC on the Town and identify appropriate growth management strategies.

III. Project Location

The study area, for the purpose of the DGEIS, is the entire Town of Stillwater, which includes 22,865 acres of residential, commercial, agricultural, vacant, and recreational land. The Town is located in the Hudson Valley of eastern New York, approximately 25 miles north of Albany. It is bordered on the east by the Hudson River, and the Town of Saratoga to the north, Malta to the west, and the Town of Halfmoon to the south. The Village of Stillwater is enveloped by the Town and is located east of the Town adjacent to the Hudson River. While the Village of Stillwater was not a part of this study, certain roadways and the Village water supply system is discussed in the content of the DGEIS.

Stillwater is primarily a residential and agricultural community. Residential uses make up 28% of the Town, while 13% of the Town's total land is used for farming. Farming historically is concentrated in the rural areas with agriculturally compatible soils. Stillwater continues to be a community with a significant amount of agricultural land in active agricultural use in part because of its fertile soils. Agriculture is also a foundation for the community's identity and comprises a significant portion of its scenic open space.

Less than 2% of Stillwater's total land area is used for commercial purposes. Commercial properties are primarily located along U.S. Route 4 with some scattered along other major roads in the Town. Industrial development in Stillwater is also negligible with a total of 101 acres or less than 0.40% of the Town's total land area, used for industrial purposes.

IV. Proposed Action

This DGEIS analyzes the overall impacts of land development under an anticipated growth scenario ("Proposed Action") within the Town. A buildout analysis of the entire Town was completed. A buildout analysis is an estimate of the overall development potential of a land area under a set of assumptions and constraints. The buildout estimate provides the basis for estimating growth that will occur in the Town over a ten (10) year period (2007-2017). Utilizing the Town's zoning regulations, as well as environmental and regulatory constraints, estimate of the total number of residential dwelling units and the floor area of commercial/industrial space was prepared.

A total of 3,868 units of single family housing could be constructed in the Town based on the current zoning regulations and the assumptions and constraints utilized. Based on the anticipated expansion of water and sewer service area this number increases to 4,071 homes. Similarly up to 1.2 million square feet of commercial/retail space and 2.6 million square feet of industrial square feet could be constructed in the Town. These figures are in addition to the facilities planned on the LFTC.

V. Growth Projections

The growth projection utilizes the buildout estimate as the starting point for estimating the growth rate. Based on an analysis of local building permit trends, the inventory of approved subdivisions, and a discussion paper provided by the Capital District Regional Planning Commission (CDRPC) regarding regional growth rates, a local growth rate was established.

Historically, the Town has issued an average of 42 single family permits per year. This growth is predicated on the success of projects like the LFTC. Based on the analysis of CDRPC projections, a regional evaluation of growth and local trends, it' estimated that 600 new homes, 10,000 SF of commercial space and 50,000 SF of new industrial facilities will be constructed during the 2007-2017.

In order to perform certain projections (i.e., traffic) the anticipated development was distributed geographically throughout the Town. Projected development was assigned to a planning area (Traffic Planning Area) based on a review of the historic development patterns, the availability of infrastructure, and the location of approved lots.

VI. Summary of Existing Conditions, Potential Impacts and Mitigation Measures

This section summarizes the existing environmental conditions, potential impacts of the action, and proposed mitigation measures as appropriate for major issues that have been identified.

A. Soils & Geology

The bedrock of Stillwater region generally consists of shale, siltstone, sandstone, and limestone. The shale formations are very thick or deep in their vertical extent and are not noted for their water-producing abilities. Stillwater's surficial geology is the result of glacial action that occurred nearly 15,000 years ago. There are a number of other lacustrine (lake) deposits within the Town and some other glacial fringe deposits.

There are approximately 7,422 acres of Prime Farmland within the Town of Stillwater (29% of total soils) and 8,065 acres of Farmland of Statewide Importance (31% of total soils). Less than 3% of Stillwater's soils can be characterized as hydric soils

Development within the Town of Stillwater has the potential to result in adverse impacts with respect to soils and geology. Erosion of soils and resultant siltation of water bodies is a potential impact. Loss of productive agricultural soils is also a potential impact. Many development constraints can be overcome through implementation engineering practices, implementation of state and local regulations and use of best management practices. The local review process (i.e., site plan and subdivision review) is a means to ensure implementation of existing (state/local) environmental regulations. Preventing the loss of agricultural lands is a more difficult matter.

B. Water Resources

The Town of Stillwater has several notable surface water resources; the Mechanicville Reservoir, Saratoga Lake, the Anthony Kill, and the Hudson River. Saratoga Lake and the Hudson River are important recreational and aesthetic resources. Mechanicville reservoir serves as a regional water supply.

Groundwater resources are limited in there aerial extent within the Town. Two (2) private water supply companies: The Saratoga Glen Hollow Water Supply Corporation and the Saratoga Water Service Corporation both operate wells and treatment facilities on the western perimeter of the Town and serve a number of developments in close proximity to Saratoga Lake.

Construction activities associated with potential buildout over the 10-year evaluation period could expose soils to erosion, which would in turn lead to sedimentation in downstream water bodies, including streams, wetlands, ponds, and lakes. Uncontrolled development has the potential to further degradate/encroach on regulated (and unregulated) wetlands impacting their value for habitat, flood storage, and stormwater recharge.

Compliance with standard best management practices, state and local regulatory programs will ensure that waters are protected from potential adverse impacts of stormwater and construction-related runoff. Additional regulatory and policy improvements are included in the land use and zoning sections of the DGEIS.

C. Locally Significant Habitat and Species

The Town of Stillwater supports a variety of mature and successional forested, meadow, and wetland areas. The Natural Heritage Program maintains a database of New York State's rare, threatened, and endangered species and has identified several important species within Stillwater. The Northern Harrier (NYS Threatened Specie) is know to breed in the marsh and grasslands located in northern portions of the Town. Several vascular plants listed as threatened or endangered are also know to exist within the Town.

Growth within Stillwater over the 10-year buildout period will result in a reduction in the amount of undisturbed land and potentially a reduction of sensitive ecosystems and wildlife habitat. Approximately 1,100 acres of land within the Town could be converted to development during this time, most of which would impact agricultural and forested land. The Town should ensure that consultation with the NYSDEC Natural Heritage Program as well as the USF&WS occurs during the review of local projects as a means of reducing the unintended loss of these resources. Additional (or enhanced) land use policies are recommended and identified in the land use and zoning section.

D. Land Use and Zoning

Land uses in Stillwater include a mixture of rural residential, agricultural, undeveloped, suburban residential, commercial, industrial, and institutional uses. Single-family homes are the predominant residential use in Stillwater. Very limited areas of the Town have been developed

for non-residential purposes. Approximately 3200-3600 acres of Stillwater is utilized for agricultural purposes. The Town has identified at least 76 parcels in agricultural use, encompassing 16 % of the Town's total land area. Saratoga National Historical Park encompasses over 2790 acres and represents one of the most significant cultural and historic resources in the Town and County.

The Town utilizes a traditional zoning scheme regulating land use. The Town is divided into eight districts and also allows for use of a floating Planned Development District (PDD).

E. Community Character

The Town adopted a new Comprehensive Plane in June 2006. The Town's Vision Statement successfully captures what is important to the Town and its residents:

> "*Stillwater aspires to retain and strengthen its rural character, open space resources and agricultural traditions. It seeks to manage growth and change in a manner that protects and enhances the community's historic and aesthetic attributes, improves community quality of life, stimulates economic activity, and supports social and civic institutions for this and future generations of Stillwater residents*."

The Town has undertaken a number of important community planning efforts in addition to the Comprehensive Plan including The Stillwater U.S. Route 4 Corridor Plan (an amendment to the Comprehensive Plan) and the Farmland Protection Green Infrastructure Plan that further elaborate on the important characteristics of the Town that shape its character.

From 1990 to 2000, Saratoga County's population grew by 10.7 %. From 1982 to 1997, over 425,000 acres of land in Upstate New York was converted from rural uses (mostly agricultural and forest land) to urban development. In Stillwater, it is estimated that approximately 1100 acres of land could be developed by 2017. Based on Stillwater's projected growth rates and current zoning regulations, 92 % of that growth is likely occur in the Town's most fertile or forested areas.

The *Stillwater Comprehensive Plan* calls for a series of policy changes to address these impacts including historic preservation measures, design guidelines, and context sensitive/low impact design methods among them.

Both the *Stillwater Comprehensive Plan* and the *Stillwater Farmland Protection & Green Infrastructure Plan* recommend the creation of a local Purchase of Development Rights (PDR) program as a means of enhancing the State/County PDR programs while allowing for local control. PDR programs are designed to facilitate the sale and acquisition of willing landowners' site-specific development rights for conservation purposes. Once the development rights are purchased, a site's existing uses are permitted to continue, but the development of the property is prohibited in perpetuity.

By aggressively implementing the *Stillwater Farmland Protection & Green Infrastructure Plan*, the Town could mitigate many of the adverse affects on natural and agricultural resources that are associated with rampant growth. Specific land preservation goals are outlined in the Farmland/Open Space section of this document.

F. Transportation

The Town of Stillwater roadway system consists of a network of local, County, State, and U.S. roadways. Major arterial roads include U.S. Route 4, NYS Route 32, and NYS Route 67. A series of County highways and local roadways constitute the balance of the local roadway network. . Interstate I-87 and NYS Route 9 are two major arterial roads in the region and are located just west of Stillwater in the Town of Malta. A number of roadway improvements are in the planning stages including access improvements to the LFTC.

The traffic impact study include in the DGEIS evaluated eleven (11) intersections and nine (9) roadway segments. Traffic growth projected to occur as a result of the 10 year growth projections is not anticipated to significantly effect the operation of an intersection or road segment with one exception. The intersection of Route 9P and Lake Road (CR76) project is projected to operate at a LOS F under the build condition and will require mitigation. Traffic largely associated with the construction of the LFTC and the Saratoga Lake Hotel will impact this intersection. The installation of a traffic signal at this intersection was projected after completion of Phase 3 of the LFTC buildout. As a result of the analysis in this DGEIS, this mitigation will be required prior to that time. The Town (and the LFTC project sponsor) should review the timing of this mitigation and assign implementation accordingly.

G. Water Supply & Distribution Systems

Properties within the Town of Stillwater are serviced with potable water by a variety of means including Town Water Districts, private water companies, outside users to neighboring municipal water systems, and individual wells. The Town purchases water for each of its four water districts from either the Village of Stillwater or the City of Mechanicville. The Town of Stillwater does not own a water supply source or facility. Two private water companies, the Saratoga Glen Hollow Water Supply Corporation and the Saratoga Water Services Corporation, supply select geographic areas with drinking water.

Potential Future Service Areas

The water supply evaluation completed in the DGEIS identified three (3) potential new service areas. While there are no plans for extension of services, the Town believes that each of the areas have the potential for service. These potential service areas are the Route 4 service area, Viall Avenue service area, and the Route 67 service area- all described below.

Route 4 Service Area

This area generally extends north from the Village of Stillwater to just south of Hanehan Road and includes properties east of Route 4. This service area would connect to and purchase water from the Village of Stillwater system.

Viall Avenue Service Area

The proposed Viall Avenue Service Area generally extends north on Viall Avenue from Water District #3 and includes properties east and west of Viall Avenue. Water to the service area would be supplied by the City of Mechanicville and would require the construction of an elevated water storage tank. Approximately 8,000 linear feet of water main would be required to service this extension.

Route 67 Service Area

The proposed Route 67 Service Area would extend west on Route 67 from George Thompson Road to just east of Farley Road and includes properties north and south of Route 67. The service area would connect to the existing water main at the intersection of Route 67 and George Thompson Road. Approximately 8,000 linear feet of water main would be required to service this area.

The Water Supply Report included in the DGEIS provides detailed calculations of estimated water demand for the Town's potential residential and non-residential buildout. Estimates for the cost of constructing the distribution infrastructure required to service each of the potential service areas are as follows.

- Route 4 Service Area ~$2,078,000
- Viall Avenue Service Area ~$4,277,000
- Route 67 Service Area ~$1,041,100

Cost feasibility varies with each of the planned districts, with the Route 4 currently not feasible. Establishment of new water facilities can be initiated by the Town or a private party. In the case of a privately sponsored project, the project sponsor will seek the approval of the formation of the district, construct the facilities, and dedicate the facilities to the Town for operation. It is envisioned that any of the three (3) new service areas described in the Water Supply Report will be constructed when a combination of market forces or public demand create significant demand for water service.

H. Wastewater Collection and Treatment Systems

The Town of Stillwater does not operate any wastewater treatment facilities. The southern portion of the Town of Stillwater, with the exception of the Village of Stillwater, is within the Saratoga County Sewer District No. 1 (SCSD). The SCSD within the Town of Stillwater extends from the Hudson River west to Saratoga Lake. Properties within the SCSD, if permitted, can

discharge wastewater to the SCSD collection and treatment facilities. The SCSD operates a 21.3-mgd wastewater treatment facility located off of NYS Route 4 in the City of Mechanicville.

The Town of Stillwater currently administers four sewer districts, designated as Sewer Districts No. 1, No. 2, No. 3 and No. 4. which convey wastewater to the SCSD or the Village of Stillwater wastewater treatment plant. There are additional properties within the Town that dispose of wastewater through private connections to the aforementioned municipal systems or through individually owned and maintained wastewater disposal systems.

Sewer District No. 1

The Town of Stillwater Sewer District No. 1 generally lies in the southeastern portion of the Town and encompasses properties along Castle Drive. Approximately 79 residential properties convey wastewater to the Village of Stillwater Wastewater Treatment Facilities.

Sewer District No. 2

The Town of Stillwater Sewer District No. 2 generally lies in the southeastern portion of the Town and encompasses properties along Gurba Drive and Kellogg Road. Wastewater is collected and conveyed to the SCSD Wastewater Treatment Facilities.

Sewer District No. 3

The Town of Stillwater Sewer District No. 3 lies in the southeastern portion of the Town and encompasses the Revolutionary Heights Planned Development District (RHPDD). Wastewater from Sewer District No. 3 will be collected and conveyed to the sanitary sewer system servicing Sewer District No. 2 with eventual conveyance to the Gurba Estates Pump Station.

Sewer District No. 4

The Town of Stillwater Sewer District No. 4 lies in the southeastern portion of the Town and encompasses Hillside Colony Mobile Home Park (HCMHP).. Construction of the wastewater facilities were completed around 1970. The Town of Stillwater has formed Sewer District No. 4 to include the HCMHP property and permit the eventual conveyance of wastewater to the Town of Stillwater Sewer District No. 3. When approved by the Town of Stillwater and the SCSD, wastewater from HCMHP would be diverted to the Town of Stillwater wastewater conveyance system and eventually to the SCSD collection and treatment systems.

Riverside Neighborhood

The Riverside neighborhood in the southeastern portion of the Town is within the SCSD, but not within a Town Sewer District. The Turning Point Subdivision is located in the southeastern portion of the Town between County Route 75 and Brickyard Road and includes properties along Finish Line Court, Battery Boulevard, Musket March and Sirchia Road. The Turning Point Subdivision is within SCSD, but not within a Town Sewer District.

Saratoga Lake Service Area

Properties along the eastern shore of Saratoga Lake within the Town of Stillwater are serviced by the SCSD.

Planned Facility Improvements

The Town of Stillwater is undertaking a project to improve Town and SCSD wastewater collection and pumping system infrastructure to facilitate the acceptance of the additional flow from Sewer Districts No. 3 and No. 4.

Potential Sewer Service Areas

There are four (4) geographic areas that are considered likely to have sewer service over the 10-year buildout period based on the current availability of municipal water service and the potential for municipal water service to be expanded. The four areas are VanNess Road, Viall Avenue, Brickyard Road, and Route 4. It is anticipated that sanitary sewer infrastructure could be expanded to serve each of these areas and that all wastewater from the new service areas would be directed to the Saratoga County Sewer District Wastewater Treatment Facility which reportedly has adequate exces capacity.

VanNess Road Service Area

The Van Ness Road Service Area generally extends west from the Sewer District No. 1 boundary on Van Ness Road to County Route 75. Wastewater facilities servicing the area would consist of approximately 10,500 feet of gravity sewer main along Kellogg Road, Van Ness Road, Flike Road and Brickyard Road. The wastewater collection system would provide municipal sewer service to a portion of Stillwater Water District No. 4 which is currently unsewered, as well as to a large area of a Low Density Residential Development District on Van Ness Road.

Viall Avenue Service Area

The service area would provide municipal sewer to all of the Town of Stillwater Water District No. 3 as well as additional Low Density Residential District lots. Wastewater from this service area would be conveyed by gravity sewers to an existing SCSD sanitary sewer manhole on Saratoga Avenue.

Brickyard Road Service Area

The Brickyard Road Service Area includes the majority of Water District No. 4 with the balance of Water District No. 4 serviced by the Van Ness Road Service Area. Approximately 8,500 feet of gravity sewer and 5,500 feet of forcemain (and associated pumping stations) would convey wastewater to the SCSD.

Route 4 Service Area

The Route 4 Service Area generally extends south from the Village of Stillwater to the northern limits of the Riverside neighborhood. The collection system servicing the Route 4 Service Area would include approximately 19,000 feet of gravity sewer, 7,000 feet of forcemain and three pump stations.

The Wastewater Report includes construction budgets that estimate the cost of constructing the collection infrastructure required to service each of the potential service areas. Financing scenarios were developed to finance the estimated construction costs for each of the potential service areas.

The NYS Comptroller 2007 threshold for Town districts is $568 per home. The annual user costs presented are based upon project financing through conventional means. Based on the buildout analysis for the *Stillwater Comprehensive Plan* and the available capacity within the SCSD Wastewater Treatment Facility, it appears that extension of sewer service to new service areas is feasible.

I. Community Services

There are presently four (4) police agencies providing the full range of law enforcement services within the Town of Stillwater. These agencies represent the local, county, state and federal levels of government and include the Stillwater (Town) Police Department, the Saratoga County Sheriff's Office (County Sheriff) , the New York State Police (NYSP), and Park Rangers at the Saratoga National Historical Park. The Town of Stillwater is served by 2 volunteer fire departments and 1 rescue squad. In addition, under certain conditions, fire/EMS services are provided through mutual aid agreements with agencies in neighboring towns in Saratoga County as well as other nearby counties.

Increased population will result in additional calls for service. Preliminarily, theses agencies may accommodate these impacts through additional tax revenues.

Stillwater is serviced by four school districts: the Stillwater Central School District, the Mechanicville City School District, the Shenendehowa Central School District, and the Schuylerville Central School District. The Stillwater Central School District is the primary school district for the Town and the entire Village. The Stillwater Central School District is at capacity. The Stillwater Central School District is a centralized facility, and any expansion would require the acquisition of nearby land. It will be necessary for the Stillwater Central School District to secure funds for future growth related needs.

The Town of Stillwater is provided with library services from the Stillwater Free Library on Hudson Avenue in the Village of Stillwater and the Media/Library Center on the campus of the Stillwater School Complex. The Saratoga National Historical Park maintains a library on the park site. Increases in population will likely result in increased usage of library facilities and

resources. It will be necessary for the Stillwater Free Library to secure funds for its future growth related needs.

J. Parks & Recreation

The Town of Stillwater completed an inventory of existing park and recreation facilities as a component of the Town's Comprehensive Plan. The DGEIS included an assessment of the condition of these facilities and evaluated future parks and recreation needs.

A variety of recreational programs lack facilities within the Town proper. Soccer, Little League/baseball, and lacrosse facilities for instance are inadequate or non-existent. The Town has a variety of other facilities that are generally inadequate to meet future needs. The Town lacks a centralized multi purpose facility that could serve the diverse needs of the community in an economically sound fashion. Additionally, are no public boat launches or swimming areas in the Town. Fortunately the Town has developed a series of plans to improve its network of parks and facilities.

As a component of several recent community planning efforts the Town has also identified future linear trail (on and off road) improvements to meet motorized (i.e., snow mobile) and non-motorized (i.e., equestrian, pedestrian) needs. A large, centrally located multi-use indoor/outdoor facility in the Town of Stillwater would provide space for all the current and future recreational needs. The construction of a multi-use indoor/outdoor recreational facility would cost approximately $1 million; however, it would not satisfy all of the Town's anticipated recreational needs. The Town's overall recreational needs are estimated at $5.6 million.

The future cost for recreational services was divided proportionally between, existing development and projected residential development. Based on the number of existing residential units, the ten (10) year growth projection represents an approximately 9.8 percent increase within the Town. The future growth share is 9.8 percent of the total recreational cost, or approximately $548,000.

- Existing Residential Units 3,054
- Projected Residential Development 600
- Percent Increase 9.8 %
- 9.8 % of Recreational Cost (total) $548,000

Commercial/Industrial development often drives residential growth and recreational demand due to increases in localized labor and customer visitation, it is recommended that such development shoulder a proportion of the recreational costs as well. Ten (10) year projected non-residential growth in Stillwater is approximately 150,000 square feet . Based on a survey of neighboring municipalities, reasonable recreational fees for commercial development is $0.80 per square foot construction, which would generate and $120,000 in recreational fees.

The residential share of recreational cost estimates is approximately $913 per single-family detached home. Mitigation fees can be collected at the issuance of each building permit, or, as an alternative, collected in thirds: one third at the stamping of final plans; one third at the first building permit; and one third at the first issuance of Certificate of Occupancy.

K. Farmland and Open Space

The Town's Farmland and Open Space resources serve to define the character, landscape and history of the Town. The Town developed the *Stillwater Farmland Protection & Green Infrastructure Plan* recognizing the importance of these resources.

New York State's Agricultural Districts Law was enacted in 1971 and Stillwater is part of Saratoga County Consolidated Agricultural District No.1, As of 2005, there were 36 parcels – totaling 3,263 acres – enrolled in Stillwater's 15,740 (+/-) acre portion of the agricultural district.

Based on USGS National Atlas Forest Fragmentation Census data, National Land Cover Database information, and New York State orthographic imagery, there are over 17,000 acres of unfragmented forests within Stillwater. The majority of these lands are within the Plum Brook and Saratoga Lake watersheds, and Saratoga National Historic Park. According to Saratoga County Real Property Tax Service (2007) data, there are over 3,316 acres of land that are taxed under Section 480-a of the Real Property Tax Law.

Growth has the potential to further encroach on and fragment the Town's farmland and open space resources. Residential development within the Town's agricultural core impinges on the ability to actively cultivate lands and conduct farming practices. It is estimated that future residential development could consume approximately 1,100 acres of land. A majority of the growth would occur areas that are Stillwater's most fertile farmland and unfragmented forests.

From 1982 to 1997, over 425,000 acres of land in Upstate New York was converted from rural uses (mostly agricultural and forest land) to urban development. In additional to the impact to the Town's agricultural resources future growth could impair Stillwater's ecological health through loss of habitat, natural recharge/buffer areas, and increased non-point source pollution storm and surface water runoff.

The *Stillwater Farmland Protection and Green Infrastructure Plan* provides a variety of recommendations to conserve Stillwater's agricultural, natural, cultural, and recreational resources and establishes some specific goals for land protection:

- Create a Conservation Advisory Council or other entity to lead this effort
- Continue Public Education process

- Amend local land use regulations (zoning and subdivision) – incorporate techniques recommended in this plan, such as:
    - Conservation subdivision design
    - Environmental overlay district
    - Local wetland protection regulations
    - Scenic overlay for viewshed of Saratoga National Historical Park
    - Agricultural zoning
    - Tree clearing regulations for new development
- Develop a local Purchase of Development Rights (PDR) Program
- Consider establishment of a Lease of Development Rights (LDR) Program
- Additional recommendations are included in the plan

Active protection of agricultural resources through purchase of development rights (PDR) and lease of development rights (LDR) programs is an essential element of the *The Stillwater Farmland Protection and Green Infrastructure Plan* (Plan). The *Stillwater Farmland Protection and Green Infrastructure Plan* Advisory Committee established a goal to preserve 2,000 acres of high quality agricultural and natural resources lands by the year 2017 through a local Purchase of Development Rights (PDR) Program.

Using the average of $6,500/acre, the total cost of preserving 200acres is approximately $13,000,000. This cost can be distributed to existing residents (tax revenues), new development (mitigation fees), and the balanced raised through other means (grants, gifts, County/State initiatives, etc.)

The cost attributable to future development (or 28 %) is estimated at $3,640,000. Utilizing these figures, a $3,159.72 per acre of disturbance-mitigation fee would be assessed. By adopting these fees, Stillwater would be able to generate part of the necessary cost for strategic land acquisition. Stillwater should consider certain actions exempt from mitigation fees, including affordable housing projects and family member uses.

L. Cultural Resources

The Town is rich in cultural and historic resources. The Saratoga National Historic Park (SNHP) and the Champlain Canal are two locations in Stillwater listed on the State/National Register of Historic Places (NRHP). Each of these historic sites/features played a pivotal role in early American History.

The NYS Office of Parks Recreation and Historic Preservation (OPRHP) lists 37 sites currently characterize as known archeological sites with Historic, Prehistoric, and Precontact significance. Of these sites, only one has been determined to not eligible for NRHP status. .

The New York State Historic Preservation Office (SHPO) Archeological Sensitivity Maps for New York State are, "defined areas within the state where the discovery of archeological sites is predicted" According to SHPO Archeological Sensitivity Maps, over 14,300 (+/-) acres are within archeological sensitive areas, which is approximately 56 percent of the Town's overall land area.

Without conducting a site specific investigation it is difficult to predict any and all impacts to the cultural resources within Stillwater as a result of development. Regardless, because Stillwater is so rich in history, it is evident that the development of certain parcels and/or archeological sensitive areas of the Town without further research could result in the destruction of cultural resources. The Town's Comprehensive Plan and the Farmland Green Infrastructure Plan recommend several policy related initiatives:

- Develop a local historic preservation ordinance;
- Develop historic area overlay district;
- Examine Special design guidelines or review criteria;
- Form a historic preservation commission: and
- Coordinate cultural resources preservation efforts with the Saratoga National Historical Park and the National Park Service,

In addition to these recommendations, existing state and federal laws are in place, which, when implemented, are designed to avoid, minimize and mitigate impacts to historic and archeological resources. Therefore, the Town should require all potential development within the Study Area to be conducted in accordance with these procedures

VII. Significant Adverse Unavoidable Impacts

Future growth and development within Town of Stillwater will have some adverse impacts on the community's resources that cannot be avoided. Loss of land and increase impacts on the community services among them. The Town is able to manage the harmful effects of these impacts by ensuring that all development comply with existing environmental regulatory programs as well as enhancing local policies and practices. The Town's agricultural resources and its associated character are threatened not only by development but by the increasing burden on the agricultural community at a state and national scale. Town leaders, the agricultural community, and its citizenry will need to form a strategic partnership to preserve the character of the Town that makes Stillwater unique.

VIII. Alternatives

The action being evaluated in this document is the growth of the Town over a ten year planning period (2007 to 2017) assuming 600 new single family homes and 150,000 SF of non residential (Commercial/Industrial) space, in addition to the LFTC facilities. Two alternative growth scenarios were examined: the Town could grow at a slower rate consistent with historic trends (Linear Growth Rate) or could grow at a much more rapid rate (Hyper Growth Rate).

If the Town were to grow at a rate consistent with historic rates (slower rate) the environmental impact would be reduced proportional to the growth rate. The Town's technical team dismissed this alternative after evaluating regional growth projections, examining the current trends and considering the LFTC development.

The Capital District Regional Planning Commission (CDRPC) in its "Effects of Alternative Development Scenarios in the Capital District" evaluated a series of potential growth rates including the Trend Hyper- Growth Rate. Under this scenario development would occur at a rate and scale consistent with that seen in other parts of the U.S (resulting in a 21.3% population increase to the Town). If growth at this rate were to occur the resultant impacts of this alternative would be accelerated and moderate increases in the impacts to the Town's open space/agricultural resources would be realized. Monitoring of growth is an important mitigation measure

IX. Growth Inducing Impacts

The impetus of developing this Stillwater DGEIS was to evaluate the growth induced by the development of the LFTC and the chapters of the DGEIS describe those impacts. The projected residential and commercial development describe in this DGEIS will certainly result in some growth inducing impacts of its own. The DGEIS contemplates the need for additional services as a result.

X. Irreversible commitment of resources

Based on the growth projections and the distribution of this growth 92 % of development is likely to occur in the Town's most fertile or forested areas. The conversion of agricultural and open space resources for development would have a profound impact on Stillwater's rural community character and its natural environment.

The *Stillwater Comprehensive Plan*, *Stillwater US Route 4 Corridor Plan*, and the *Stillwater Farmland Protection and Green Infrastructure Plan* all call for a change in Stillwater's current land use paradigm. Stillwater's existing zoning regulations are currently more favorable to suburban oriented development.

XI. Future SEQR Actions

As future development is proposed within the Town, the Lead Agency for each proposed action will be responsible for carrying out the requirements of SEQR.

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 Introduction

The purpose of this Generic Environmental Impact Statement (GEIS) is to evaluate the potential impacts of growth on certain resources and facilities located in the Town of Stillwater, Saratoga County, New York. This document primarily examines the impacts of land development projected to occur from 2007-2017 on the Town's infrastructure including highways (traffic), water supply and distribution systems, wastewater collection and treatment system, the Town's open spaces, farmland and recreational facilities. A ten year term (2007-2017) was selected as a reasonable timeframe because it coincides with the planned buildout of the first pod of the Luther Forest Technology Campus (LFTC). Given the uncertain nature of the development of the LFTC Campus and the changing nature of the local real estate market; a longer term forecast becomes increasingly more speculative.

A GEIS is the appropriate planning tool for this effort as it allows for the comprehensive evaluation of a number of impacts associated with growth focusing on the consequences these impacts may have on Stillwater's natural and built environment. This GEIS evaluates the cumulative impacts of land development (new homes, commercial/industrial development) on the town's infrastructure and community character as defined by farmland and open space.

Site specific EISs are commonly prepared for large(r) or controversial development projects where project specific design details have been identified for the purpose of the site plan or subdivision review. The level of detail provided in a site specific EIS is geared toward identifying site construction and operational related impacts on a site specific or localized context. In contrast, the level of detail in a GEIS is usually provided at a reduced (conceptual) level of detail and presented in broader scale/prospective. The GEIS focuses on a range of issues and cumulative (or incremental) impacts. The evaluation of cumulative impacts is not typically addressed in detail in site specific EIS's, but is a major focus of a GEIS. Over time, cumulative impacts can have significant and often irreversible impacts on community character and resources.

The level of detail of provided in the associated technical studies and evaluations will vary within a GEIS depending on the type of action, the availability of information, the scope of the project and the planned use of the GEIS. For example, the adoption of a comprehensive plan generally does not include detailed engineering studies to evaluate the impacts of the plan on community character and growth. Conversely, if a community decides to evaluate the potential cumulative impacts of a series of commercial developments in a transportation corridor, then a greater level of detail is required, especially if the desired outcome is the identification of mitigation measures such as highway improvements or design guidelines.

The Town of Stillwater is concerned that uncontrolled or poorly managed growth will have a significant adverse impact to community character, open space and agricultural resources, its highway system, as well as its water and wastewater facilities and has therefore caused the preparation of this document.

2.2 Project Purpose and Need

The primary purpose of this GEIS is to evaluate the cumulative impacts of future development on land use and community character, the natural environment, infrastructure and to a limited extent, community services in the Town of Stillwater. The major impacts of growth are evaluated and will enable the Town to be proactive in guiding future development and preserving a high quality of life for Town residents.

Future development in the Town will impact many resources. The Town currently requires developers to pay for project specific improvements when impacts to specific resources/facilities are identified and improvements to facilities are necessary to achieve their (project specific) goals. As long as the incremental improvements are proportionate with the level of development and all impacts of individual projects are addressed, this process is adequate. However, this is not always the case and this GEIS is being prepared to ensure that the need for major improvements to the Town's facilities are identified, properly planned for, and that the financial burden for any necessary improvements is distributed equitably among all parties.

The equitable distribution of mitigation costs is a key element in the GEIS. Most mitigation has a high cost, and through SEQR, all those who benefit should pay, including a public share. Using growth projections, a detailed analysis is conducted for those services provided by the Town. This may include roads, water and sewer infrastructure, recreation and other public open space. The GEIS will help to create a capital improvements program for the Town using a ten year planning period, and will provide a mitigation fee structure to pay for planned improvements required as a result of anticipated growth.

Project specific environmental impact analysis often overlooks incremental/cumulative impacts on local resources. A townwide GEIS can be an effective tool to examine and evaluate the impacts of growth on the community. As a component of the approval of the LFTC PDD GEIS, the project sponsor (SEDC) acknowledged the growth inducing aspects of the project required further evaluation. Specifically, the GEIS Findings Statement acknowledged the need for the Town to further evaluate the impacts of the full buildout of the LFTC on the Town and identify appropriate growth management strategies

The Town of Stillwater has decided to evaluate the cumulative impacts of growth to proactively plan for the future so as to preserve community character, a high quality of life and maintain appropriate levels of service in the community.

The preparation of a Town-wide GEIS:

Allows for an evaluation of the cumulative impacts of growth that cannot be ascertained from site specific EIS's to be identified; all development (or nearly all) can be quantified/evaluated at some level.

- Provides a means to manage growth in an effort to protect important community resources; allowing a community to plan for such growth.

- Allows for the establishment of potential growth management thresholds for impacts that may be inconsistent with community character and vision.

- Establishes a process by which future projects can be evaluated. Some development projects may not require intensive scrutiny under SEQRA if the impacts have been fully evaluated within the context of this GEIS. Some projects will require further evaluation including preparation of a Supplemental (Project Specific) EIS.

- The typical scenario of the "last in development pays," is eliminated. Cumulative impacts are identified up front and the costs of major improvements are distributed more evenly among developers and the broader community.

2.3 Project Location

The study area, for the purpose of the GEIS, is the entire Town of Stillwater, which includes 22,865 acres of residential, commercial, agricultural, vacant, and recreational land. The Town is located in the Hudson Valley of eastern New York, approximately 25 miles north of Albany. It is bordered on the east by the Hudson River, and the Town of Saratoga to the north, Malta to the west, and the Town of Halfmoon to the south. The Village of Stillwater is enveloped by the Town and is located east of the Town adjacent to the Hudson River. While the Village of Stillwater was not a part of this study, certain roadways and the Village water supply system is discussed in the content of the GEIS. A site location map is presented as Figure 2-1.

Stillwater is primarily a residential and agricultural community. Residential uses make up 28% of the Town, while 13% of the Town's total land is used for farming. Farming historically is concentrated in the rural areas with agriculturally compatible soils. Due to the presence of significant amounts of land containing agriculturally compatible soils, Stillwater continues to be a community with a significant amount of agricultural land in active agricultural use. In addition to being an important component of Stillwater's economic base, agriculture is also a foundation for the community's identity and comprises a significant portion of its scenic open space. Continuing to enhance the agricultural sector will help sustain these investments, expand the economic potential of farming, and maintain the quality of life in Stillwater.

Less than 2% of Stillwater's total land area is used for commercial purposes, comprising 1.69% of Stillwater's total land area. Approximately 43 acres of this commercial land is located in the Village of Stillwater; the remainder is located within the Town. Commercial properties are primarily located along U.S. Route 4 with some scattered along other major roads in the Town. Industrial development is minimal in Stillwater. There are currently a total of 101 acres or less than 0.40% of the Town's total land area, used for industrial purposes.

The Village Marketplace with its distinct character, historic sites and structures, provides a unique environment. Village services include a variety of small retail stores and restaurants including pizzerias, a convenience store, a funeral home, and the post office.

Stillwater bears greater resemblance to the rural communities bordering the Town to the north (Saratoga) and the east across the Hudson River (Schaghticoke) than it does to the communities

bordering I-87 (Wilton, Malta, and Clifton Park). This is displayed in its rural land use patterns, local economic influences, and demographics.

Figure 2-1 Site Location

2.4 Proposed Action

This GEIS analyzes the overall impacts of land development under an anticipated growth scenario ("Proposed Action") within the Town. As a means to quantify this anticipated development, a buildout analysis of the entire Town was completed. The buildout analysis is a means to identify the development potential under the Town's current zoning and land use regulations, and existing development patterns. The purpose of this analysis was to quantify and illustrate the implications of continued growth and utilize this estimate as the first step in quantifying projected growth.

A buildout analysis is an estimate of the overall development potential of a land area under a set of assumptions and constraints. The analysis in this case is the buildout potential of the entire Town of Stillwater. The buildout estimate will provide the basis for estimating growth that will occur in the Town over a ten (10) year period (2007-2017). Utilizing the Town's zoning regulations, as well as environmental and regulatory constraints an estimate of the total number of residential dwelling units and the floor area of commercial/industrial space was prepared.

The buildout analysis was performed utilizing ESRI ArcGIS (geographic information software) and data supplied by the Town, Saratoga County and the NYS GIS Clearinghouse. It should be understood that the data available for this analysis is not detailed enough to allow parcel specific estimates but is suitable for preparing this 'landscape level' estimate. Details with regard to build-out methodology and results are provided in Appendix A.

Figure 2-2 presents the development constraints utilized for this evaluation. A complete discussion of the buildout analysis and the assumptions utilized are more fully described in Appendix A. Individual

The buildout analysis identified the development potential for residential, commercial and industrial uses within the study area. A total of 3,868 units of single family housing could be constructed in the Town based on the current zoning regulations and the assumptions and constraints utilized. Based on the anticipated expansion of water and sewer service area (outlined in Section 3.6 and 3.7) this number increases to 4,071. Similarly up to 1.2 million square feet of commercial/retail space and 2.6 million square feet of industrial square feet could be constructed in the Town. Table 2-1 presents a summary of the residential development potential and Figure 2-3 illustrates the buildout of the town utilizing a dot density map.

Table 2-1: Potential Residential Units

Zoning Symbol	Zoning District	Total Potential Residential Dwelling Units
LDR	Low Density Residential District	1,488.5
	With Water And Sewer	12.8
	With Water OR Sewer	303.0
RM	Moderate Density Residential District	4.7
	With Water And Sewer	60.3
	With Water OR Sewer	52.1
R-R	Rural Residential District	1,933.7
RRD	Residential Resort District	12.6
	Total	3,867.8

Figure 2-2 Development Constraints

Figure 2-3 Dot Density Map

2.5 Growth Projections

As discussed, the buildout analysis is an estimate of the total potential for development; it does not reflect the rate or location of growth that could occur. The growth projection utilizes the buildout estimate as the starting point for estimating the growth rate. In developing the growth projections a number of factors were evaluated including local building permit trends, the inventory of approved subdivisions, and a discussion paper provided by the Capital District Regional Planning Commission (CDRPC) regarding regional growth rates.. A brief summary of the method follows.

Historical Development Trends

The Town of Stillwater tracks building permit construction and reports information to the US Census Bureau. A summary of building permits issued for the years 1990-2006 for single family homes was evaluated as a part of this analysis and is presented below.

Table 2-2 Summary of Building Permits 1990-2006

Year	No. of Dwelling Units
1990	44
1991	59
1992	17
1993	44
1994	64
1995	35
1996	23
1997	25
1998	53
1999	27
2000	40
2001	35
2002	38
2003	36
2004	62
2005	70
2006	50
Total	722
Average	42

Construction during this time period consisted overwhelmingly of single family homes. Only 14 of the 635 dwelling units reported were constructed as part of duplex or multi-family projects. On average the Town issued 42 building permits per year with a peak of 64 Single Family permits issued in 1994. Data prior to this time was not consistently reported however, a record of 76 single family permits was issued in 1989. The Town's permit records do not include a breakdown of commercial/industrial space constructed during this period.

Approved Subdivisions/Projects under Municipal Review

Another factor influencing the rate of residential growth is the available inventory of approved residential subdivision lots. Several residential subdivision projects have been approved in recent years but have not yet been fully constructed. A summary of the projects and their status is presented as Table 2.5-1. A total of 427 units of Single family housing have been approved or are pending approval. Given that the Town has, on average, issued 42 building permits per year, there is an ample inventory of lots (~10 years) ready for residential construction.

Table 2-3: Subdivision/Land Development Projects

Project	Category	No. of Lots	Status
Battle Ridge	SFR	7	Approved
Brown's Beach Resort	PDD	--	Pending
Grozniak	SFR	12	Approved
Luther Forest Technology Campus	PDD	30	Pending
Revolutionary Heights	SFR	160	Proposed
Saratoga Glen Hollow	PDD	21	Approved
Saratoga Lake Cluster	SFR	29	Application Pending
Stillwater Woods	SFR	47	Approved
Stonybrook	SFR	12	Pending
Turning Point PDD	PDD	80	Pending
White Sulphur Springs	SFR	29	Approval Spring 2007
Total	**--**	**427**	

SFR: Single Family Residential
PDD: Planned Development District

CDRPC Growth Projections

The Capital District Regional Planning Commission (CDRPC) prepares population projections for the Capital District area on a regular basis. The CDRPC's 40 year (2000-2040) population projections were included in the Town's 2006 Comprehensive Plan. According to the CDRPC estimates, Stillwater's population is expected to grow by 1,476 people from 7,522 (2000 Census) to 8,998 over the next 40 years. This represents a 19 % increase or <0.5% per year. From 1990-2000 Stillwater's population increased at a similar rate (<0.45 % per year).

CDRPC Alternative Development Scenarios

The CDRPC working with the Capital District Transportation Committee (CDTC) and the Center for Economic Growth (CEG) recently assisted in the preparation of "Effects of Alternative Development Scenarios in the Capital District" ("Alternative Development Report"). The Alternative Development Report, issued as a draft September 2006, was prepared in part to

assess the impacts of new growth that could occur in the Capital District as a result of a project such as the Luther Forest Technology Campus (LFTC).

The Alternative Development Report presents four (4) development scenarios for discussion. They are:

Scenario 1 - Status Quo Trend- The baseline scenario is based on the CDRPCs 2040 population projections. This scenario assumes growth will occur consistent with local historic trends and patterns.

Scenario 2 - Concentrated Growth – This scenario utilizes the 2040 population projections however growth is distributed/allocated to a locale in proportion to its current population.

Scenario 3 - Trend Hyper-Growth - This scenario assumes that growth in the Capital District will occur at a rate equal to the overall U.S. rate of growth. Growth is distributed consistent with the baseline scenario methodology.

Scenario 4 - Concentrated Hyper-Growth – Utilizing the Scenario 3 growth rates growth is allocated to locale based on current population centers (similar to Scenario 2.)

Each of the various scenarios is discussed and evaluated in the context of the report and was prepared (in part) as a means to stimulate debate regarding the Capital District's land use policies.

The CDRPC report estimated that future growth rates could vary from 2.6% to 9.5% under the different scenarios. A summary of Stillwater's projected population under the various scenarios is presented in Table 2-4.

Table 2-4: Alternative Growth Scenarios Population Projections 2010 & 2020

	2010		2020	
	Population	Net Increase	Population	Net Increase
Scenario 1	7920	4.6%	8303	4.8%
Scenario 2	7823	4.0%	8031	2.6%
Scenario 3	8992	19.5%	10911	21.3%
Scenario 4	8338	10.8%	9256	11.0%

Stillwater's 2000 Population: 7522

The CDRPC did not prepare estimates of housing growth by individual municipality; they did prepare projections of households. The number of housing units can be extrapolated from the household projections by dividing the number of households by a housing unit vacancy rate. Housing vacancy for Stillwater was reported at 91% in the 2000 Census-and the NYS average was reported at 92 %. Equivalent housing units (EHU) were calculated from the household projections utilizing this 92 % vacancy rate. The number of new housing units is presented as change in the number of units over the past reported figure. The results are presented in Table 2-5.

Table 2-5: Alternative Growth Scenarios
Household Projections & Equivalent Housing Units 2010 & 2020

Scenario	2010				2020				New Homes (2007-2017)
	HH	EHU	Change	Increase	HH	EHU	Change	Increase	
1	3046	3311	257 (77.1)	8.4%	3295	3581	270 (189)	7.5%	266.1
2	3008	3270	216 (64.8)	7.0%	3187	3464	194 (135.8)	5.6%	200.6
3	3458	3759	705 (211.5)	23.0%	4331	4708	949 (664)	20.2%	875.5
4	3206	3485	431 (129.3)	14.1%	3674	3993	508 (355)	12.7%	484.3

HH: Households
EHU: Equivalent Housing Units

Notes: Stillwater Census 2000: 3054 Housing Units
Number presented in parentheses represents the increase in EHUs that may occur during the study period (2007-2017).
Household projections were prepared by the CDRPC for the "*Effects of Alternative Development Scenarios in the Capital District"* and adapted for this effort.

The projections were extrapolated to coincide with the GEIS evaluation period (2007-2017) and the resultant new home construction was projected to vary from 200 to 875 homes.

All of the above information was utilized by representatives of the Town in an effort to estimate the amount of residential (and non-residential) growth that is anticipated to occur during the GEIS study period. Table 2-6 presents a summary of the various growth projection values. After evaluating this information, the Town's Technical team projected that 600 new homes would be constructed in this town by 2017.

Table 2-6: Summary of Residential Projections

CDRP Alternative Development Scenarios		Average	Best Year x 10	Estimated 10 Year Development (2007-2017)
Scenarios 1 & 2	Scenario 3 & 4			
200-266 DU	484-875 DU	420	760	600

D.U.: Dwelling Unit

Non- Residential Growth

Historically, commercial/industrial growth within the Town has been negligible. Based on the anticipated demand for local services it was estimated that 50,000 square feet of retail/commercial space and up to 100,000 square feet of industrial space will be constructed during the GEIS study period (See Table 2.7).

Table 2-7: Summary of Commercial/Industrial Projections

Category	Buildout Potential	Estimated 10 Year Development 2007-2017
Commercial/Office/Retail	0.9-1.2 MSF	50,000 SF
Industrial	1.9-2.6 MSF	100,000 SF

MSF: Million Square Feet

The growth projections were arrived at after considerable deliberation by the Town's GEIS Technical team. These figures provide the basis for projecting traffic growth (Section 3.5), forecasting future water/wastewater demands, and evaluating the impact to the town's landscape.

Distribution of Growth

In order to perform certain projections (i.e., traffic) the anticipated development was distributed geographically throughout the Town. The anticipated residential development was assigned to a planning area (Traffic Planning Area) based on a review of the historic development patterns, the availability of infrastructure, and the location of approved lots. Table 2-8 Distribution of Growth and Figure 2-4 Traffic Planning Areas provide a summary of the geographic assignment of growth.

Table: 2-8: Distribution of Growth

Traffic Planning Area	Potential Residential Dwelling Units	Approved Lots	Growth Distributed
1	926.9	0	65
2	--	--	--
3	826.8	240	240
4	668.2	58	70
5	454.2	0	35
6	294.2	76	80
7	273.3	0	25
8	260.5	0	25
9	367.3	29	60
10	--	--	
Total	4,071.4	403	600

Figure 2-4 Traffic Planning Areas

3.0 EXISTING CONDITIONS, POTENTIAL IMPACTS, AND PROPOSED MITIGATION MEASURES

This section of the document identifies the existing environmental conditions, potential impacts of the action, and proposed mitigation measures as appropriate for major issues that have been identified. The potential significant impacts resulting from the proposed project to both natural and human resources are evaluated in both a quantitative and qualitative manner, including cumulative impacts and secondary effects, if applicable. Potential impacts resulting from the proposed project are presented both graphically and in text format. Impacts that cannot be mitigated are specifically identified and the magnitude of those impacts evaluated.

This section is organized into the following categories:

3.1 Soils & Geology

This section examines the existing geology and soils within Stillwater. Of particular interest is the prevalence of agriculturally suitable soils. The potential impact of the projected growth within Stillwater to these resources is considered and proposed mitigation measures, if any, are described.

3.1.1 Existing Conditions

Much of the information contained in this section was obtained or adapted from the *Town of Stillwater Comprehensive Plan* adopted by the Town in 2006.

Stillwater is located in the Hudson Valley region and more specifically in the Hudson-Mohawk Lowlands physiographic region. The bedrock of the region generally consists of shale, siltstone, sandstone, and limestone. The bedrock underlying Stillwater had its origins approximately 500 million years ago and consists of shale from the Austin Glen, Mount Merino, and Canajoharie formations. Shale is a fine-grained sedimentary rock, dark gray to black in color that is easily eroded. The shale formations are very thick or deep in their vertical extent and are not noted for their water-producing abilities.

Stillwater's surficial geology is expressed in its rolling topography and diversity of unconsolidated deposits (see Figure 3.1-1, Surficial Geology). These deposits are the result of glacial action that occurred nearly 15,000 years ago. Stillwater was located on the fringe of Glacial Lake Albany and was subject to a variety of depositional environments, due to the repeated advance and retreat of the glaciers as well as the ebb and flow of Lake Albany and its tributaries. The dune deposits located in the western portion of the town are the result of accumulation of sands on the lake's bottom and subsequent wind action after the retreat of Lake Albany. Dune sands are generally well-sorted or clean sands, lacking fine grains. Dune sands are generally suitable for agricultural and land development activities.

There are a number of other lacustrine (lake) deposits within the Town. Small lacustrine delta deposits are found on the western perimeter of Stillwater, with broader deposits of lacustrine sand and lacustrine silt and clay. Development suitability of these deposits varies and is further described below.

Along Stillwater's eastern boundary, bedrock is exposed at the surface at some areas along the Hudson River. More recent alluvial deposits can also be found along the river, with broader areas of alluvium in the northern portion of the Town. Glacial till is found over a large area of the northern portion of the Town near Route 32 and Route 423. Till is a heterogeneous mix of silt, sand, clay and rock and is often formed at the front of a glacier. It is the result of the glacier's gathering and grinding of material. Till can be very difficult to excavate and generally has poor qualities for farming, as well as for on-site wastewater disposal.

Figure 3.1-1 Surficial Geology

Soils

Information on soils is provided from the Soil Survey of Saratoga County, N.Y., a product of the USDA Natural Resources Conservation Service (NRCS). Figure 3.1-2 Soils Map, including their properties and distribution, is essential to land use planning. Soil characteristics often determine the suitability of land for development. A summary of the ten (10) most predominant map units is presented in Table 3.1-1.

Table 3.1-1: Predominant Soils

Soil Symbol	Soil Name	Acres*	%
OaC	OAKVILLE LOAMY FINE SAND, ROLLING	1,834	14
OaB	OAKVILLE LOAMY FINE SAND, UNDULATING	1,653	13
HuD	HUDSON SILT LOAM, HILLY	1,482	11
BnB	BERNARDSTON-MANLIUS-NASSAU COMPLEX, UNDULATING	1,450	11
RhB	RHINEBECK SILT LOAM, 3 TO 8 % SLOPES	1,402	11
HuB	HUDSON SILT LOAM, 3 TO 8 % SLOPES	1,293	10
BnC	BERNARDSTON-MANLIUS-NASSAU COMPLEX, ROLLING	1,044	8
RhA	RHINEBECK SILT LOAM, 0 TO 3 % SLOPES	994	8
Wa	WAREHAM LOAMY SAND	958	7
WnB	WINDSOR LOAMY SAND, UNDULATING	957	7
	Total of Predominant Soils	13,068	51
	Total Soils	25,652	100

*Acreage does not include water bodies.

Agriculturally Significant Soils

The USDA Natural Resources Conservation Service recognizes two classes of agriculturally significant soils in Saratoga County: 1) Prime Farmland Soils; and 2) Farmland of Statewide Importance. Figure 3.1-3, Agriculturally Significant Soils, presents the aerial extent of these soils in the Town of Stillwater. Prime Farmland is land that has three characteristics of optimum quality, which can economically sustain high-yield crops. These characteristics include soil quality, growing season, and moisture supply. Soils designated as Prime Farmland Soils are well drained and located on a gentle slope. Farmland of Statewide Importance is land other than Prime Farmland that also has a good combination of physical and chemical characteristics for the production of crops. These soils may be located on steeper slopes or diminished ability to retain water. If conditions are favorable, some soils could produce yields as high as Prime Farmland soils. There are approximately 7,422 acres of Prime Farmland within the Town of Stillwater (29 % of total soils) and 8,065 acres of Farmland of Statewide Importance (31 % of total soils).

Figure 3.1-2 Soils Map

Figure 3.1-3 Agriculturally Significant Soils

Figure 3.1-4 Hydric Soils

Topography

The topography of the towns is characterizes by gently rolling hills and valleys that trend north/south parallel to the Hudson River. Because of is geology and relationship to the River the Town does not have areas of significant (or steep) slopes. Slopes in excess of 15 % are generally limited to those areas bordering streams and rivers located in the Town.. Table 3.1-2 summarizes the distribution of slopes.

Table 3.1-2 Slopes Distribution

Slope	Acres
0-10 %	20,773
10-15%	2,674
>15%	3,446

Hydric Soils

Hydric soil are soils that formed under conditions of saturation, flooding or ponding long enough during the growing season, that in turn, support the growth and regeneration of hydrophytic vegetation (plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content). Figure 3.1-5, Hydric Soils, illustrates the potential location of this type of soil. There are approximately 755 acres of hydric soils in Stillwater (3% % of all soils). Hydric soils and soils with hydric inclusions are significant because of the potential to be regulated as wetland areas. Use of these lands may be restricted by either Federal or State regulations. The use and/or development of Prime Agricultural Farmland or Farmland of Statewide Significance for other than agricultural purposes may be further restricted by the Agricultural and Markets Law.

3.1.2 Potential Impacts and Mitigation Measures

Development within the Town of Stillwater has the potential to result in adverse impacts with respect to soils and geology. Steep slopes (>15%), wet or poorly drained soils, and shallow depth to bedrock all represent development constraints. Clearing, grading and construction activities on areas identified as constrained may also result in on- and off-site erosion and sedimentation. Soils that have poor drainage are not suitable for receiving septic system effluent, while those with loose sand and gravel or fractured rock may result in inadequate filtering of effluent prior to reaching potential ground water supplies. Wet soils and soils with shallow bedrock are somewhat less limiting. Wetness, which includes flooding, slow percolation, or a high water table, can result in surface or groundwater contamination.

Many development constraints can be overcome through engineering practices of varying cost and effectiveness, depending on site-specific conditions. While development on steep slopes can be engineered to some extent, such development should be avoided to the greatest extent possible to reduce potential impacts and to preserve the visual character of such areas within the Town.

The ability to use on site wastewater disposal practices (i.e. septic systems) is highly dependent on soil conditions. In areas with poorly or excessively drained soils, provision of centralized/municipal sewer service may avoid the potential impacts to these soils. In areas without sewer service, careful site-specific investigations are needed to ensure that an appropriate wastewater disposal system can be designed and installed. Development density is limited by the suitability of soils for septic as well. Other specific techniques or conditions may be imposed based on site-specific characteristics to ensure protection of sensitive areas and minimization of potential off-site impacts.

The Town of Stillwater Zoning Code (Article 8, Section 8.4) outlines soil and erosion control standards and/or regulatory procedures. The Town requires, with the exception of approved existing subdivisions, site plan review where proposed construction is within a fifty-foot (50') of slopes greater than 15 %, when the removal or excavation of one-hundred (100) cubic yards or more of rock, soil or vegetation is planned. The Town also requires site plan review when there is proposed construction of privately owned driveways, roads or right-of-ways on slopes greater than 10 %.

Applicants are required to obtain approval from the Planning Board as part of a Site Plan Review or Subdivision process, at which time they are required to prepare a plan that specifically addresses mitigation measures associated with impacts to steeply sloped areas. Such plans should identify the location of any slopes greater than 15 % and identify the temporary and permanent soil erosion control measures that will be implemented to assure that impacts are minimized to the maximum extent practical.

If a parcel is brought to the Town with a specific project, during the individual Site Plan Review process, the Town may require the owner/operator of a construction site to prepare an effective Erosion and Sediment Control Plan, which provide appropriate, site-specific details and specifications. Such plans are prepared in conformance with the "New York State Standards and Specifications for Erosion and Sediment Control," by the Empire State Chapter, Soil and Water Conservation Society. The Phase II regulations for stormwater management institutes new requirements for the implementation of a stormwater pollution prevention plan (SWPPP) and erosion and sediment control plans, including regular inspections by a qualified professional (P.E. or Certified Professional Erosion Control CPESC).

For projects that are not subject to the discretionary review of the Town, the New York State Pollutant Discharge Elimination System (SPDES) requires the development of a SWPPP that includes Best Management Practices (BMPs) that are designed to mitigate the impact of soil erosion for construction activities that disturb one (1) acre or more of undeveloped lands, with some exceptions for agricultural projects, silviculture projects and maintenance activities. Projects that are less than one (1) acre, that are not subject to Town review must comply with Article 8, Section 8.1, of the Town Zoning Code, which limits the amount of clear cutting and grading that is allowed within each Zoning District.

Shallow bedrock may prevent proper system installation and cause septic flows to surface without adequate filtering. Fill and/or mounded systems will often allow for suitable placement of discharge systems in these instances. If a specific project is reviewed by the Town's Planning

Board during the Subdivision or Site Plan Review process, the Planning Board will determine whether the site is mapped as containing any of the soils with a shallow depth to bedrock, as listed in Table 3.1-1, "Predominant Soils". For those sites with the potential for shallow depth to bedrock soils, the Town may require the individual applicant to conduct a more detailed assessment of the depth to bedrock. This site condition evaluation should include identification of the depths to bedrock on the site, identification of the areas where bedrock removal will be required, and describe BMP's to minimize impacts to surrounding landowners.

The requirements for control of stormwater under this regulatory program are discussed in Section 3.2, Water Resources. Agriculturally-significant soils are often attractive soils for development. Discussion of preservation goals and methods for such soils is included in Section 3.10, Open Space and Farmland. Impacts to hydric soils or soils with the potential for hydric inclusions are discussed in Section 3.3, Ecological Communities and Wildlife Resources.

3.2 Water Resources

This section evaluates the existing conditions of surface water, floodplains, wetlands, and groundwater resources located within the Town of Stillwater. These conditions are evaluated based on mapping provided by the Federal Emergency Management Agency (FEMA), US Fish and Wildlife (USFWS), National Wetlands Inventory (NWI), and the New York State Department of Environmental Conservations (NYSDEC). The potential impact of the projected growth within Stillwater on these resources is considered and proposed mitigation measures, if any, are described.

3.2.1 Existing Conditions

Surface Waters

The Town of Stillwater has several notable surface water resources; the Mechanicville Reservoir, Saratoga Lake, the Anthony Kill, and the Hudson River are principal among them. The Old Champlain Canal is also a significant water feature.

Surface water features are assigned classifications for best uses and standards of quality and purity by the NYSDEC. Classifications are based on water quality at the time of sampling, as well as recommended best usage, which is determined by natural conditions and past, current, and desired uses of the water. Class A and AA waters are suitable for drinking water; Class B waters are suitable for primary contact recreation, such as swimming; Class C waters are suitable for fish propagation; and Class D waters are suitable for secondary contact recreation, such as boating. A Class D designation does not necessarily imply that the water is polluted. These are waters that may not have been sampled or are small or intermittent in character, and, therefore, unsuitable for fish propagation. The symbol (T) after any class designates that the waters are trout waters and the symbol (TS) after any class designates that the water are suitable for trout spawning.

Most of the streams and water bodies within Stillwater are designated Class C or C(T) with the exception of Plum Brook. Plum Brook and its tributaries feed the Mechanicville reservoirs and

are designated as A or A(T). These resources function together to create the Plum Brook watershed and a number of secondary watersheds within Stillwater. Surface water resources also provide excellent opportunities for passive and active recreational opportunities. Figure 3.2-1, Water Resources, illustrates the location of Stillwater's water resources. A brief description of the Town's principle waterways are described below.

Mechanicville Reservoir

The Mechanicville Reservoir is located in the southwestern portion of the Town. It is located on lands owned by the City of Mechanicville which utilizes it as its drinking water supply. The Mechanicville Reservoir has an estimated storage capacity of approximately 65 million gallons and is located at the headwaters of Plum Brook. The Mechanicville watershed is protected through municipal control (ownership) of a limited land area immediately adjacent to the reservoir and uses within the watershed are protected by the Town with its Aquifer Overlay District.

Figure 3.2-1 Water Resources

Saratoga Lake

Saratoga Lake, located partially within the Town of Stillwater, has approximately 2.94 miles of its total 12.1 miles of shoreline located within the Town. Saratoga Lake is approximately 4,000 acres in area and measures 4.5 miles long and an average of 1.5 miles wide (Hardt 2001). The lake depths are variable, with the northeast section of the lake measuring an average of 95 feet deep and the southern section approximately 51 feet deep. The Kayaderosseras Creek is the primary inlet to the lake with several smaller inlets also providing water. Fish Creek at the northern end of the lake is the only outlet. The Saratoga Lake watershed includes 210 square miles of land area and portions of 10 Saratoga County communities, including Stillwater and all of the Town of Milton, City of Saratoga Springs, and Village of Ballston Spa.

Hudson River

The Hudson River runs along the eastern edge of the Town and Village of Stillwater. There are approximately 2.84 miles of shoreline associated with the Hudson River within the Village of Stillwater and an additional 9.62 miles within the Town. There are several streams that run through Stillwater, for a total of approximately 327,640 linear feet or 62.05 miles.

Regulation & Protection of Surface Waters

Stillwater has established local regulations to protect surface water resources through the adoption of an overlay district. The overlay district is intended to address water supply and quality issues. Surface water features are protected by the NYSDEC through the water quality classification system previously discussed. The assigned classification to the surface water is used to regulate discharges into these water bodies in accordance with the State Pollutant Discharge Elimination System (SPDES) permit.

The U.S. Army Corps of Engineers (ACOE) serves to protect aquatic resources, including wetlands. An ACOE permit is necessary for any work, such as construction and dredging, in navigable waters of the US, including the Hudson River. Should adverse impacts to the aquatic environment be identified by the ACOE, these impacts are offset by mitigation requirements, which may include restoring, enhancing, creating and preserving aquatic functions and values.

In addition, Section 404 of the Clean Water Act regulates the discharge of dredged or fill materials into all waters of the U.S.; while Section 401 of the Clean Water Act regulates the quality of the discharge.

Groundwater

Groundwater resources are limited within the Town. While there are a great deal of residents that utilize individual wells as a source of drinking water, the potential yields are a constraint to development. That being said, there are at least two (2) private water supply companies that have developed significant water supply sources from unconsolidated deposits adjacent to Saratoga Lake. There are no known primary or principal source aquifers within the Town.

The NYSDOH regulates drinking water supplies within New York State. The NYSDOH defines a public system as a facility that supplies "at least 5 service connections or that regularly serves an average of at least 25 people daily for at least 60 days out of the year". Public water systems are further categorized as community and non-community. Community systems are typically operated by municipalities or private developments and include mobile home parks. Non-community systems generally are operated to serve public/private operations such as schools, hospitals, or factories with their own water supply.

Several community water supplies located within the Town obtain water from groundwater sources. They include:

- The Saratoga Glen Hollow Water Supply Corporation;
- The Saratoga Water Service Corporation;
- The Saratoga National Historical Park, and
- The Hillside Colony Mobile Home Park.

The Saratoga Glen Hollow Water Supply Corporation and the Saratoga Water Service Corporation both operate wells and treatment facilities on the western perimeter of the Town in close proximity to Saratoga Lake. These private "Transportation Corporations" were established primarily to supply water to residential development within a limited geographic area. Given the limited groundwater resources in the Town these two entities have grown over time as the need for potable water has grown. Saratoga Water Service recently expanded the limit of its water service area (franchise area) as a prelude to expanding its distribution systems. The Saratoga National Historical Park operates its own wells and facilities to supply water to visitors to the park. Additional discussion on water resources is provided in the Section 3.6.

Wetlands

Wetlands within the Town of Stillwater are currently regulated at the state and federal level. NYSDEC is the regulatory agency at the state level and the ACOE at the federal level. Each organization establishes its own set of rules for identifying or delineating wetlands and each organization has unique regulatory programs.

The NYSDEC produces maps on USGS Quadrangles that identify regulated wetlands. The ACOE does not produce maps of federally regulated wetlands. However, the U.S. Fish & Wildlife Service (USFWS) does produce maps under the National Wetlands Inventory (NWI) program, which are useful in evaluating the presence of federally regulated wetlands. These mapping products are for informational purposes and do not replace the need for on-site wetland delineations.

Figure 3.2-2, Wetlands, presents the compilation of wetlands mapping as provided by the NYSDEC and the NWI maps. There is a strong correlation (as might be expected) between the mapped wetlands and the occurrence of hydric soils (as presented previously in Figure 3.1-5).

Floodplains

Moderate to steep slopes keep most of Stillwater well drained and free of significant flooding problems. Floodplain areas, as defined by the Federal Emergency Management Agency (FEMA) and illustrated on the Flood Insurance Rate Maps (FIRM), are shown in Figure 3.2-1, Water Resources. The properties within the 100-year flood zone are primarily along the Hudson River and Plum Brook. The 100-year floodplain resulting from the Hudson River extends west of U.S. Route 4 and State Route 32 to the old Champlain Canal. Much of the Village of Stillwater is located within this flood zone. Most of the properties along the Hudson River are residential properties. However, most of the properties along the Plum Brook are privately-owned and strictly protected due to the designation of the stream and use as a water supply source.

Limited areas surrounding Saratoga Lake and Anthony Kill are also located within the 100-year flood zone.

3.2.2 Potential Impacts and Mitigation Measures

The NYSDEC requires that water quality standards be maintained in any water body, regardless of its regulatory status, at all times. This means that no turbidity, sedimentation, or pollutants of any type should be allowed to enter these waters. Conservation Officers of the NYSDEC have the authority to cite anyone responsible for contravening these standards.

For any project that requires a permit from the ACOE, which impacts more than 200 linear feet of stream, or which impacts more than 0.1 acre of wetlands, a Clean Water Act Section 401 Water Quality Certificate will be required from the NYSDEC.

Surface Water

Construction activities associated with potential buildout over the 10-year evaluation period could expose soils to erosion, which would in turn lead to sedimentation in downstream water bodies, including streams, wetlands, ponds, and lakes. Sedimentation could adversely affect the aquatic environment and could also change the physical characteristics of the water body.

Stormwater discharges from construction activities on areas of one acre or more are regulated under the State Pollution Discharge Elimination System (SPDES) General Permit GP-02-01. Authorization of discharges under this permit indicates that the discharges will neither cause nor contribute to a violation of water quality standards contained in 6 NYCRR 700 through 705.

Figure 3.2-2 Wetlands

Therefore, in order to be authorized under GP-02-01, the project must submit a Stormwater Pollution Prevention Plan (SWPPP) that outlines compliance with the requirements of the General Permit and technical standards identified by the NYSDEC for erosion and sediment control. Section 3.1, Soils and Geology, describes some erosion and sediment control measures that are likely to be required in accordance with standard construction procedures and permit requirements.

In addition to potential impacts related to erosion and sedimentation, stormwater runoff can pick up contaminants from impervious surfaces and adversely affect water quality from a chemical perspective. Therefore, it is important to limit the amount of impervious surface areas in new developments and to ensure appropriate treatment of stormwater quality before it is released offsite. Furthermore, rapid runoff from sites can cause offsite erosion and potentially result in flooding to downstream properties. Another important goal of stormwater management is therefore reduction in runoff flow rate and volume.

Compliance with standard best management practices as outlined in the NYS Stormwater Design Manual (2001), as well as erosion and sediment control practices identified in the project-specific SWPPPs that are prepared for development proposals, will ensure that waters are protected from potential adverse impacts of stormwater and construction-related runoff.

Groundwater

Potential impacts to groundwater from new development include reduction in groundwater recharge due to the increase in impervious surface area on a site, the direct impacts of groundwater extraction for water supply, and potential offsite draw-down impacts that could result from groundwater pumping. Another consequence of increasing the amount of impervious surface area is the potential to contaminate groundwater from pollutants that accumulate on the surface, migrate offsite in stormwater, and infiltrate into aquifers. The Town should consider limiting the types of land uses and developments that are allowed on sites that directly overly important groundwater sources.

Wetlands

Impacts to State- and federally-regulated wetlands should be avoided within Stillwater to the greatest extent possible. However, some impacts to wetlands may be unavoidable due to the configuration of the wetlands onsite, the shape of the parcel, or other issues. In many cases, wetland disturbances are small enough that they fall below the threshold for requiring State or federal permits. Issuance of an individual permit for wetland disturbance requires the evaluation of wetland mitigation to offset the impacts of the proposed wetland disturbance, if avoidance is not possible. The State also regulates a 100-foot adjacent area to NYSDEC-regulated wetlands and requires mitigation for disturbance within this buffer area. Due diligence will be required to ensure that no state or federal wetlands occur on any property to be developed.

Floodplains

The areas affected by 100-year floodplains within the Town of Stillwater are relatively small and include areas along the Hudson River and Plum Brook. Development within the flood plain is generally discouraged, but development that is proposed within the flood plain must adhere to FEMA regulations and applicable Town standards regarding protection of properties from on-site and downstream flooding. The Town should encourage protection of the flood plain to the greatest extent possible by restricting development within the flood plain and enforcing development setbacks.

3.3 Locally Significant Habitat and Species

This section examines the existing local habitat and species within Stillwater. The potential impact of the project growth within Stillwater to these natural resources is considered and proposed mitigation measures, if any, are described.

3.3.1 Existing Conditions

The Town of Stillwater supports a variety of mature and successional forested, meadow, and wetland areas. The NYSDEC Division of Fish, Wildlife & Marine Resources operates the Natural Heritage Program in partnership with The Nature Conservancy. The Natural Heritage Program maintains a database of New York State's rare, threatened, and endangered species and has identified the following important species within Stillwater.

Table 3.3-1: NYS Endangered and Threatened Species in the Town of Stillwater

Species	NYS Status	Description/General Location
Birds		
Northern Harrier (*Circus cyaneus)*	Threatened	This species breeds in marshes, grasslands, meadows, and cultivated fields
Vascular Plants		
Drummond's Rock-cress (*Arabis drummondii)*	Endangered	This species can be found in various habitats, such as on the sides of hills, basic or circumneutral ledges, gravels, and thickets
Green Rock-cress (*Arabis missouriensis)*	Threatened	This species can be found on moist or dry rocky or sandy woods and hills and circumneutral bluffs, ledges, or rocky woods
Dwarf Bulrush (*Lipocarpha micrantha)*	Endangered	This species can be found along sandy borders of ponds and streams
Hookers Orchid (*Platanthera hookeri)*	Endangered	This species can be found in dry to moist woodlands and forests; seems to prefer forested areas with open understories or successional forest, particularly those dominated by poplar and pine
Swamp Smartweed (*Polygonum setaceum var interjectum)*	Endangered	This species can be found in lake margins and swampy forests

There are also numerous wetlands and streams throughout Stillwater and the Town shares its eastern boundary with the Hudson River. Saratoga Lake is also located within the Town of Stillwater. These water resources provide important habitat for wildlife and support a variety of plant species.

3.3.2 Potential Impacts and Mitigation Measures

As with any development, growth within Stillwater over the 10-year buildout period will result in a reduction in the amount of available wildlife habitat onsite. Approximately 1,100 acres of land within the Town could be converted to development during this time, most of which would occur to agricultural and forested land. Consequently, some loss of forested areas, agricultural land, meadows, brush areas, and other types of vegetative cover will occur. This loss of habitat could potentially result in permanent impacts to wildlife and a potential reduction in vegetative species diversity.

In addition to potential permanent impacts, construction activities will temporarily disturb some species of wildlife, which will be displaced during construction and may return to some extent after construction is complete. The revegetation of cleared areas on development sites will provide habitat for species to return to or for new species to inhabit. Revegetation of disturbed sites, particularly with native vegetative species, should be encouraged to the maximum extent practicable. The use of vegetative species with high wildlife value, such as those that produce fruit or nuts, should also be encouraged.

Guidance on the minimal level of due diligence that should be performed by sponsors of individual land development projects is provided as follows:

1. Where practical, site-specific habitat investigations should be recommended by the planning board prior to approval of individual development proposals. The NYSDEC Natural Heritage Program and the USFWS should also be contacted to request information on rare, threatened, and endangered species in the vicinity of proposed developments. The Town should encourage the maintenance of habitat connectivity and movement corridors to avoid fragmentation.

2. Project sponsors should screen and perform preliminary investigations to determine potential impacts resulting from the proposed project. Work will be performed, as detailed below and in general conformance with the criteria contained in the NYSDOT Environmental Procedures Manual (available on the NYSDOT website https://www.nysdot.gov) and the joint U.S. Fish and Wildlife Service and National Marine Fisheries Service Endangered Species Consultation Handbook to determine whether further detailed site specific analysis or study is required. The results of these screenings and preliminary investigations will be summarized and presented within project application materials and/or SEQR Environmental Assessment Form (EAF).

3. Project sponsor will evaluate the nature, extent, and significance of potential impacts (including impacts during construction) of a project on fish, wildlife, and habitat. This analysis will include general determinations of the amount and type of vegetation to be disturbed, special habitats that might be damaged, and possible interruption of fish and wildlife movements (e. g., interruption of deer movement by fences, etc.).

4. For projects with any Federal and/or State involvement, consultation with the USFWS, the NYS Natural Heritage Program (NYNHP), and NYSDEC is required under the Endangered Species Act (ESA). As such, project sponsors will coordinate with involved State and Federal resource agencies (NYSDEC, USFWS, National Marine Fisheries Service NMFS). As a

function of Federal or State permits and/or funding, project sponsor must determine whether any listed, proposed, or candidate species (i.e. threatened or endangered) are likely to occur within a proposed project area based on the given location.

5. Information regarding Federal and State threatened, endangered, and candidate species are listed by county, and project sponsors must contact the NYNHP and the NYSDEC Regional Office for additional information on such species. If a proposed project was in a county that had no known listed or candidate spices, additional coordination would not be necessary; however, because listed species are present within both the Town of Stillwater and Saratoga County, project sponsors must determine whether any threaten or endangered species are likely to occur within the proposed project area based on site-specific habitat conditions.

6. Information provided by the NYNHP and NYSDEC will help determine if a proposed project area has any potential for listed species habitat. Preliminary site surveys will determine if more detailed surveys are necessary (e.g. Phase 1 surveys). If there are no listed species or listed species habitat identified within the proposed project area, no further coordination is necessary. If there are listed species or listed species habitat present, the results of Phase 1 surveys must be provided for agency consultation. This includes a detailed description of the proposed project, the projects areas natural characteristics, a description of the area to be impacted, and a USGS 7.5 Minute Topographic Quadrangle map that identifies the proposed project location. Based on the results of the habitat survey and proposed project description, the involved agencies may determine:

- The proposed project will result in no impact to any threatened or endangered species;
- Additional information is requires to determine whether any threatened or endangered species are likely to occur within the proposed project area; or
- The proposed project “may affect” a threatened or endangered species and continued consultation with involved agencies is required.

7. For projects not authorized, funded or carried out by a Federal and/or State agencies, consultation with the USFWS, the NYNHP, and NYSDEC is not required. However, the prohibitions provided under the ESA still apply. More specifically, no person is authorized to “take” (i.e. kill, injure, harass, etc.) any listed species without appropriate authorizations from the USFWS. As such, a project sponsor must determine whether any listed, proposed, or candidate species (i.e. threatened or endangered) are likely to occur within a proposed project area based on the given location or site-specific habitat conditions.

As such, letters will be obtained from involved agencies to help determine the likely presence or absence of endangered, threatened, or rare species in the project area; these letters will be included with the EAF submitted with the project application package. Based on the results of agency contacts, involved and/or lead agency(s) will determine whether further surveys are warranted. Further information regarding these processes is available at the USFWS website (http://www.fws.gov). These procedures should reflect any future modifications made by the involved regulatory agencies to the above outlined review process.

3.4 Land Use and Zoning

This section describes the existing land use and zoning designations within Stillwater. The potential impact of the projected growth within Stillwater to these characteristics is considered and proposed mitigation measures, if any, are described.

3.4.1 Existing Conditions

Land uses in Stillwater include a mixture of rural residential, agricultural, undeveloped, suburban residential, commercial, industrial, and institutional. Development occurs at suburban type densities along Saratoga Lake and within the Village of Stillwater. The balance of Stillwater is predominantly low density. Existing land use is identified in Figure 3.4-1, Land Use, and was derived from the Saratoga County Real Property Office. Figure 3.4-1 reveals development patterns and trends in Stillwater. The most intensive levels of development were historically located along Route 4 which runs through the Town and the Village along the Hudson River.

Table 3.4-1 below identifies the total acreage of each land use type for the Town and Village individually and combined. This table is based on assessment information, which is not always 100 % complete or accurate for the purpose of describing land use. For example, land used for agricultural purposes such as hayfields or grazing may be categorized as vacant. The Wild, Forested, Conservation Lands and Public Parks, which is the third largest land use category in Stillwater, can be a misleading category as it includes over 2,790 acres associated with the federally-owned Saratoga National Historical Park.

Table 3.4-1: Land Use - Town & Village of Stillwater

Property Class	Village		Town		Village and Town Combined	
	Acres	% Total	Acres	% Total	Acres	% Total
Agricultural	14.45	1.92%	3,568.00	14.24	3,582.45	13.88%
Commercial	42.87	5.71%	393.5	1.57	436.37	1.69%
Community Services	113.80	15.15%	56.69	0.23	170.49	0.66%
Industrial	4.87	0.65%	95.94	0.38	100.81	0.39%
Public Services	11.41	1.52%	475.14	1.90	486.55	1.89%
Recreation and Entertainment	19.32	2.57%	300.88	1.20	320.21	1.24%
Residential	236.03	31.42%	7,101.56	28.35	7,337.59	28.44%
Vacant Land	278.08	37.02	6,967.21	27.81	7,245.30	28.08%
Wild, Forested, Conservation Lands And Public Parks	30.32	4.04	6,093.77	24.32	6,124.09	23.73%
Total	751.14	100%	25,052.70	100%	25,803.84	100%

Figure 3.4-1 Land Use

Residential

As noted above, residential land is the largest use in Stillwater, accounting for 7,337 acres, or 28 % of the Town and Village. Single-family homes are the predominant residential use in Stillwater, however, other housing types exist such as two and three family dwellings, farm workers housing, mobile homes, and accessory apartments.

Commercial/Industrial

There are a total of 436 acres of land used for commercial purposes, comprising 1.69 % of Stillwater's total land area. Approximately 43 acres of this commercial land is located in the Village of Stillwater; the remainder is located within the Town. Commercial properties are primarily located along U.S. Route 4 with some scattered along other major roads in the Town.

Industrial development is minimal in Stillwater. There are currently a total of 101 acres, or less than 0.40 % of the Town's total land area, used for industrial purposes.

Village Marketplace

The Village Marketplace with its distinct character, historic sites and structures, provides a unique environment for both residents and visitors alike. Village services include a variety of small retail stores and restaurants including pizzerias, a convenience store, a funeral home, and the post office.

Agricultural

Agriculture has played, and continues to play, an important role in Stillwater's economy. Farming has historically been concentrated in the rural areas of Stillwater, where agriculturally compatible soils are dominant. The abundance of agriculturally compatible soils within Stillwater (as discussed in Section 3.1) continues support a significant amount of agricultural activities and/or uses within the community.

The Town's Tax Assessor identified 76 parcels in agricultural use, encompassing 16 % of the Town's total land area. However, for the Stillwater Agricultural Protection and Green Infrastructure Plan, several steps were taken to inventory the Town's agricultural lands more accurately. The results of the inventory singled out field crops and other agriculturally productive lands as the prominent agricultural land use within Stillwater (3,105 (+/-) acres). Livestock, such as equestrian and dairy, and residential properties with agriculture activity accounted for nearly 50 % of the farming, while "Specialty Farms" (mostly sod production) accounted for 4 % of agricultural land.

In addition to being an important component of Stillwater's economic base, agriculture is also a foundation for the community's identity and comprises a significant portion of its scenic open space. Continuing to enhance the agricultural sector will help sustain these investments, expand

the economic potential of farming, and maintain the quality of life in Stillwater. DGEIS Section 3.9 Parks, Recreation, Open Space, Farmland is further devoted this discussion.

Saratoga National Historic Park

Located in the Northeast corner of the Town, the Saratoga National Historic Park (SNHP) Fee Boundary encompasses over 2,790 acres of land. The park preserves sites associated with the American Revolution's Battle of Saratoga. The battlefield was made part of the national park system in 1938 when SNHP was authorized by the United States Congress[1]. Today, over 100,000 people visit the park annually. In addition to the park's historically significant attributes, it serves as an agricultural, recreational, and ecological resource as well. A more complete discussion about SNHP is included in DGEIS Section 3.10 Open Space, and Farmland.

Zoning

The Town of Stillwater is divided into eight zoning districts. Additionally, the Town allows land to be rezoned to Planned Development District (PDD) if a developer can demonstrate the land meets design criteria and will be beneficial to the Town. Figure 3.4-2, Existing Zoning Districts, illustrates the location of each of the districts within the Town. Each district is identified in Table 3.4-2 and a summary of the permitted uses for each district follows.

Table 3.4-2: Zoning Districts - Town

District Code	District Name
RR	Rural Density Residential District
LDR	Low Density Residential District
RM	Moderate Density Residential District
RRD	Residential Resort District
B-1	Neighborhood Business District
B-2	General Business District
BP	Business Park
ID	Industrial District
PDD	Planned Development District

Rural Density Residential District (RR) – Single and two-family dwellings, farm worker housing, mobile homes, bed and breakfasts, agricultural uses, animal harboring, mobile homes, and home occupations, public and semi-public uses, small animal hospital or kennel, sand/gravel/soil removal and processing, and commercial greenhouses. Minimum lot size is 2 acres.

Low Density Residential District (LDR) – Single and two-family dwellings, farm worker housing, bed and breakfasts, commercial greenhouses, farms, animal harboring, and home

[1] Saratoga Histroical National Park General Management Plan (2004)

occupations, boarding houses, public and semi-public uses, sand/gravel/soil removal and processing, and small animal hospital or kennel. The minimum lot size is 2 acres without public water and sewer and 1.5 acres with either public water or sewer, and one (1) acre with both public water and sewer.

Moderate Density Residential District (RM) – Single family, two-family dwellings, three and four family dwellings, home occupations, boarding houses, and public and semi-public uses. Minimum lot size is one acre for 1, 2, and 3 family homes without public water and sewer, 20,000 square feet with either public water or sewer, and 10,000 square feet with both public water and sewer.

Residential Resort District (RRD) – Single family dwelling, bed and breakfasts, restaurants, taverns, seasonal dwelling, parks, private recreational areas, and places of worship. Minimum lot size is 21,750 square feet.

Neighborhood Business (B-1) – Retail stores, personal services, offices, banks, gasoline stations, shopping plazas, studios, enclosed entertainment facilities, restaurants, taverns, commercial garages, public and semi-public uses, funeral homes, and single or two-family homes. Minimum lot size is 10,000 square feet for business uses and one acre for residential uses.

General Business (B-2) – Non-residential uses permitted in B-1, movie theaters, amusement uses, motor vehicle service and sales, bed and breakfasts, commercial greenhouses, convenience stores, day care centers, farm and construction equipment sales, commercial garages and carwashes, fast food restaurants, funeral homes, galleries, hotels and motels, social clubs and organizations, and wholesale businesses and storage. Minimum lot size is 6,000 square feet.

Business Park (BP) – Office uses, business incubation, light industrial manufacturing and processing, research and development, warehousing, and public and semi-public uses. Minimum lot size is 1 acre.

Industrial District (ID) – Auto body shops, asphalt plants, bulk storage, freight or trucking terminals, heavy and light industrial manufacturing or processing, research and development, sand/gravel/soil removal and processing, warehousing, bulk fuel storage, adult uses, contractors yards, and junkyards. Uses that exceed environmental contamination thresholds established in the performance standards are prohibited. Minimum lot size is one (1) acre.

Planned Development District (PDD) – This district requires rezoning by the Town Board and enables land use to be more flexible and permits a greater mix of uses, primarily to enable a higher density of structures on the property in order to provide larger green space in the remaining portions of the property. However, uses may include residential, commercial and industrial; design requirements are intended to provide a unique and beneficial development community.

Figure 3.4-2 Existing Zoning Districts

Community Character

The Town adopted a new Comprehensive Plane in June 2006. The Comprehensive Plan process included the establishment of a steering committee comprised of a variety of stakeholders to guide the effort. The Comprehensive Plan followed a traditional plan development process:

- Issue Identification
- Visioning/Vision Statement Goals
- Objectives and Implementation

The Steering Committee developed the following Vision Statement:

> *Stillwater aspires to retain and strengthen its rural character, open space resources and agricultural traditions. It seeks to manage growth and change in a manner that protects and enhances the community's historic and aesthetic attributes, improves community quality of life, stimulates economic activity, and supports social and civic institutions for this and future generations of Stillwater residents.*

The Vision Statement helped the community identify more specific Comprehensive Plan goals as follows:

- Preserve and enhance the rural, historic character and small hometown feel of Stillwater. This character and feel is defined by its large areas of open and agricultural lands, its compact Village and crossroads hamlets, the Saratoga Battlefield and Hudson River, and the beauty and quality of the natural environment.
- Sustain a balanced tax base by balancing appropriate commercial development and farmland and open space conservation.
- Allow for a diversity of housing sizes and types to meet the changing needs of an aging population and smaller households; and to provide more options for affordable workforce housing
- Protect sensitive natural features such as wetlands, stream corridors, steep slopes and floodplains.
- Focus well-designed and appropriately scaled mixed-use development in the Village, and in the hamlets and other compact development nodes identified in this plan.
- Promote efficient, flexible, and compact development design that protects environmentally sensitive areas, conserves open space, respects historic resources, and which uses infrastructure more cost-effectively than conventional development patterns.

- Invest in the expansion and long-term maintenance of public water and sewer infrastructure in areas of the community where growth is desired, and limit such investment in areas where development is not desired.

- Work with neighboring communities, the county, and the region to address issues that transcend municipal boundaries and to explore the possibilities for shared community services when appropriate.

These recommendations are included here as they provide a point of reference for the community's desired forward thinking efforts, the community's perceptions and overall sensitivity to preserving its character and managing growth.

The *Stillwater Comprehensive Plan* provides a series of land use recommendations. The following are examples that are relevant to this discussion:

- Perform a comprehensive review and evaluation of Stillwater's planning and zoning regulations, paying particular attention to historic preservation, agricultural and rural development, design guidelines, and context sensitive/low impact design methods.

- Improve the land use regulations for the protection of sensitive environmental and historic resources including floodplain, watershed, stream corridors, wetlands and viewsheds.

- Provide a balance of land use types (residential, commercial, industrial) in order to improve and stabilize the local property tax base.

- Examine the impact of development on infrastructure & services.

- Explore the development of an Incentive Zoning Regulation for the preservation of Farmland and Open Space.

- Examine enhancing the state and county conservation programs with tools of its own (i.e. Transfer of Development Rights (TDR), Purchase of Development Rights (PDR), etc).

Stillwater U.S. Route 4 Corridor Plan

The Stillwater U.S. Route 4 Corridor Plan (2006) was conceived during the development of the Town and Village of Stillwater Joint Comprehensive Plan in 2005. A comprehensive evaluation of this main thoroughfare was recommended in the Comprehensive plan. The project was funded by the Capital District Transportation Committee's (CDTC) Community and Transportation Linkage Planning Program. A Study Advisory Committee was established to oversee the development of the plan. The Study Advisory Committee held several meetings and sponsored public workshops during the process of developing this Corridor Plan.

As a result, one of the two main products of the study is a set of design guidelines for development in the corridor. The guidelines will help to ensure that over time new construction and redevelopment activities improve the aesthetic and functional qualities of the built environment. The second product is a series of transportation recommendations, broadly defined to include vehicular, pedestrian, bicycle and public transportation improvements. These recommendations are focused on safety and community character, and they emphasize techniques such as access management and traffic calming.

3.4.2 Potential Impacts

From 1990 to 2000, Saratoga County's population grew by 10.7 %. By 2040, it is anticipated that there will be an additional 58,000 persons living in Saratoga County. According to projections by the Capital District Regional Planning Commission, by the year 2015, more than half of the new households in the capital region are expected to be built in Saratoga County.[2]

It is estimated that approximately 600 new single family homes and up to 150,000 square feet of new commercial, office, retail, and industrial space could be constructed in the Town of Stillwater by 2017 (See Table 3.4-4). The 10 year projections would equal 14.2 % of Stillwater's total potential residential buildout. If each new home built was a there (3) bedroom, single-family detached unit, it could generate an additional 1,836 new residents – which would equal a 22 % increase population. A complete discussion about the Stillwater growth projections is included in Appendix A.

Growth at this rate could significantly impact Stillwater's historical development patterns, community character and overall development scheme. The majority of (land area) Stillwater is zoned as either Low Density Residential (LDR) or Rural Residential (RR). Current zoning regulations allow for a one (1) to two (2) acre minimum lot size within these districts (depending on the presence of sewer and/or water). Development at such a density within these districts could strain existing municipal infrastructure (i.e. transportation, sewer, water, etc.) and have a negative impact on the Town's natural resource, agricultural community, and its rural character. Furthermore, inappropriate development within business zoning districts along the Route 4 corridor could equally strain existing municipal infrastructure and community character. The land use implications will largely depend on the implementation of the *Stillwater Comprehensive Plan* design and access management guidelines set-forth by the *Stillwater U.S. Route 4 Corridor Plan*.

The potential impact to Stillwater's agricultural and natural resources as a result of future growth are significant. From 1982 to 1997, over 425,000 acres of land in Upstate New York was converted from rural uses (mostly agricultural and forest land) to urban development. During that same period the number of acres in cultivated cropland declined by 20 %, or roughly 675,000 acres.[3] Mirroring these State-wide trends, nearly 19,000 acres of farmland was converted in

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[2] Green Infrastructure Plan for Saratoga County

[3] Rolf Pendall, "Sprawl Without Growth: The Upstate Paradox"

Saratoga County from 1982 to 1997, which represents 20 % of its active farmland.[4] [In Stillwater, it is estimated that 1,055 acres of land could be developed by 2017. Based on Stillwater's projected growth rates and current zoning regulations, 92 % of that growth is likely occur in the Town's most fertile or forested areas.

Table 3.4-3: Buildout Analysis Projections

Category	Buildout Potential	Estimated 10 Year Development 2007-2017
Residential	3,867 Units	600 Units
Commercial/Office/Retail	0.9-1.2 MSF	50,000 sq.ft.
Industrial	1.9-2.6 MSF	100,000 sq.ft.

MSF: Million Square Feet

Regional Considerations

The impact of growth can extend far beyond a community's political boundary. For example, development can lead to excessive stormwater runoff from impervious surfaces, increasing the likelihood of erosion and non-point source pollution – impairing both local and regional waterways. This can also be said for most any development within a stream's riparian corridor. In addition, local development can impact regional traffic and/or business patterns, taxes, community services, and even quality of life. The following list provides a small example of land use related issues that have regional connotations:

Affordable Housing
Stormwater Management
Water Protection & Conservation
Transportation Patterns & Infrastructure
Zoning Districts Boundaries & Ordinances
Economic Development Policies
Agricultural Policies
Green Infrastructure

[4] Green Infrastructure Plan for Saratoga County

Figure 3.4-3 Buildout Analysis Map

3.4.3 Proposed Mitigation

The *Stillwater Comprehensive Plan* calls for a complete review of the Town's planning and zoning regulations, paying particular attention to historic preservation, agricultural and rural development, design guidelines, and context sensitive/low impact design methods. In order to mitigate the impact of future development in the community, it is recommended that Stillwater revise it current zoning policies to reflect the *Stillwater Comprehensive Plan*, *Stillwater Agricultural Protection & Green Infrastructure Plan*, and *Stillwater U.S. Route 4 Corridor Plan*.

Land use recommendations provided in the *Stillwater Comprehensive Plan*, include the establishment of buffers between incompatible land uses to protect agricultural lands form infringing development. Such new buffers would require that any new residential development adjacent to agricultural lands incorporate a minimum setback and a landscaped strip along lands abutting agricultural lands.

The *Stillwater Comprehensive Plan* also calls for the establishment of a conservation subdivision regulation. Conservation subdivisions begin with a design approach that identifies the agricultural and natural resources present on the site to be developed. Identified resources then form the basis for designating conservation lands in the new subdivision. Once designated, homes are then designed into the development areas of the site in a creative fashion, thereby preserving large portions of the site and allowing for flexible designs.

The Comprehensive Plan also suggests that the Town consider the use of a Transfer of Development Rights program (TDR). Communities undertake transfer of development rights (TDR) programs to use the market to implement and pay for development density and location decisions. TDR programs allow landowners to sever development rights from properties in government-designated low-density areas (i.e. "sending" zones), and sell them to purchasers who want to increase the density of development in areas that local governments have selected as higher density areas (i.e. "receiving" zones).

Both the *Stillwater Comprehensive Plan* and the *Stillwater U.S. Route 4 Corridor Plan* recommend well-designed and appropriately scaled mixed-use development within the more settled areas of the Town. Such recommendations are intended to offset the impacts associated with undesirable and haphazard development in undeveloped areas by providing ample opportunity for growth in already developed portions of the Town, namely the U.S. Route 4 corridor.

Although it does not specifically focused on land use, the *Stillwater U.S. Route 4 Corridor Plan's* design guidelines and transportation concepts both complement and reaffirm the *Stillwater Comprehensive Plan* vision of preserving and enhancing the rural, historic character and small hometown feel of Stillwater. Sidewalk extension and/or improvements, access management guidelines, traffic calming measures, multimodal transportation opportunities, village center, commercial, and rural residential design guidelines would undoubtedly enhance the overall land use patterns throughout the corridor – encouraging both private investments and supporting the Town's revitalization efforts.

Both the *Stillwater Comprehensive Plan* and the *Stillwater Farmland Protection & Green Infrastructure Plan* recommend the creation of a local Purchase of Development Rights (PDR) program. PDR programs are designed to facilitate the sale and acquisition of willing landowners' site-specific development rights for conservation purposes. Once the development rights are purchased, a site's existing uses are permitted to continue, but the development of the property is prohibited in perpetuity.

The *Stillwater Farmland Protection & Green Infrastructure Plan* also recommends the establishment of a Lease of Development Rights Program, which reduces tax assessments for farmers that are willing to sign five (5) to 25 year deed restrictions. The Plan also recommends that Stillwater adopt a sliding scale zoning ordinance in agricultural and natural resources areas, a riparian buffer and environmental overlay ordinance for wetland and stream corridor protection, and a viewshed ordinance that is designed to protect the cultural and natural resources that are associated with the Saratoga National Historic Park. Additional discussion on PDR, LDR programs are provided in Section 3.10.

Because of potential impact of future growth and development on Stillwater's agriculture and natural resources, GEIS Section 3.9, Parks and Recreation, is devoted to that discussion. Section 3.9 outlines several tools and/or recommendations for farmland and open space preservation. By aggressively implementing the *Stillwater Farmland Protection & Green Infrastructure Plan*, the Town could mitigate many of the adverse affects on natural and agricultural resources that are associated with rampant growth.

3.5 Transportation

This section examines the existing transportation network within Stillwater. The potential impact of the projected growth to this resource is considered and proposed mitigation measures, if any, are described.

3.5.1 Existing Conditions

The vast majority of transportation needs are met by the use of motor vehicles on the existing roadway network. Existing public transportation opportunities and pedestrian and bicycling infrastructure are described later on in this section.

Roadways

The Town of Stillwater roadway system consists of a network of local, County, State, and U.S. roadways. Major arterial roads include U.S. Route 4, NYS Route 32, and NYS Route 67. Major collector roads include NYS Route 9P and NYS Route 423. Important county routes include CR 70, CR 75, and CR 76. Interstate I-87 and NYS Route 9 are two major arterial roads in the region and are located just west of Stillwater in the Town of Malta. Both NYS Route 9P and NYS Route 67 provide easy access to these major arterials from Stillwater. In addition, the Town has an extensive network of local Town roads. A brief description of each of the noted roadways follows.

US Route 4 is a rural principle arterial running north-south along the eastern edge of the Town of Stillwater, generally parallel to the Hudson River, from the City of Mechanicville to the Town of Saratoga. It is a two-lane roadway with paved shoulders varying in width from two to eight feet. The posted speed limit is 40 mph south of the Village line and 30 mph within the Village to Stratton Lane. From there to the northern Village line, the speed limit returns to 40 mph for 0.7 miles before becoming 55 mph.

Route 4 serves a dual role: first as a regional transportation route providing access from Rensselaer and Albany Counties (to the south) to points north in Saratoga County; and also as a "Main Street," running directly through the Village of Stillwater on the eastern edge of the Town.

State Route 67 is a two-lane rural minor arterial in the Town of Stillwater running east-west at the southern edge of the Town, from the City of Mechanicville to the Town of Malta. The roadway is two 11-foot wide travel lanes with paved shoulders varying in width from 2 to 4 feet. The posted speed on Route 67 is 45 mph from the City of Mechanicville west to Sawmill Hill Road where it changes to 55 mph to the Malta town line. Route 67 is designated by NYSDOT as an Access & Qualifying Highway, allowing the use of 53-foot trailer combinations. Allowable trailer combinations are restricted to 48 feet on all other State roadways.

State Route 9P is a north-south rural principal arterial that runs around the east side of Saratoga Lake in the Town of Stillwater. Route 9P connects to Route 9 in the Town of Malta to the south and again to Route 9 to the north in Saratoga Springs. The roadway is one 10 foot wide travel lane in each direction with 2-4 foot shoulders and with a posted speed limit is 35 mph

State Route 423 (Battlefield Road) is an east-west rural major collector road in the northern part of the Town, connecting Route 32 to Route 9P and has one 10 foot travel lane in each direction with 3-4 foot shoulders. There is no posted speed limit and accordingly Route 423 is governed by the statewide speed limit of 55 mph.

State Route 32 is generally a north-south rural minor/principal arterial with one 10-11 foot wide travel lane in each direction with 3-4 foot paved shoulders. Route 32 overlaps U.S. Route 4 from the southerly town line to its split in the Bemis Heights area of the Town, where it overlaps Route 423 heading west until it splits again heading north into the Town of Saratoga. There is no posted speed limit after the Route 4/ Route 32 split in Bemis Heights, and accordingly Route 32 is governed by the statewide speed limit of 55 mph.

County Road 70 (Jack Halloron Road) is a north-south roadway under the jurisdiction of Saratoga County, running north from State Route 423 into the Town of Saratoga. There is one 10-11 foot travel lane in each direction with 2-3 foot wide shoulders (some paved).

County Road 75 (Viall Avenue/ Meeting House Road) is a north-south roadway under the jurisdiction of Saratoga County that connects State Route 67 to State Route 423. There is one10-11 foot travel lane in each direction, with 2 -4 foot paved shoulders, and a posted speed limit of 45 mph from the southerly town line until the intersection with County Road 76. After County Road 76, the speed limit is not posted and is governed by the statewide speed limit of 55 mph.

County Road 76 (Lake Road) traverses east-west with one 11 foot travel lane and variable 2- to 4-foot paved shoulders in each direction. CR 76 connects U.S. Route 4 and Route 9P and is under the jurisdiction of Saratoga County. The posted speed limit is 35 mph in the Village of Stillwater, changing to 45 mph as it leaves the Village until the intersection with County Road 75. After County Road 75 the speed limit is not posted and is governed by the statewide speed limit of 55 mph.

Cold Springs Road, a Town road, is a 25 foot wide, gravel roadway extending north-south between Joyce Road and Lake Road. Cold Springs Road is an extension of Fitch Road and Farley Road, with the overall travel route providing the connection between NYS Route 67 to Lake Road (CR 76). The posted speed limit is 45 mph from Joyce Road until ½ mile prior to County Road 76 where a local area speed limit is established for 35 mph. An access connection for LFTC with Cold Springs Road is part of the overall LFTC development plan.

Intersections

Route 4 at Route 32: This three way intersection, north of the Village, terminates the Rte 4 and Rte 32 overlap with Rte 32 branching off to the west. The re-alignment of this intersection was recently completed in 2006 by NYSDOT under Contract # D259684. All traffic now enters and leaves Route 4 via a traditional "T" configuration. The Rte 32 approach is under stop sign control.

Route 4 at Stillwater Bridge (CR 125): This is a four-way intersection, in the Village of Stillwater, with CR 125 intersecting Rte 4 from the east and a Stewart's Shop driveway forming the westerly leg. The intersection is controlled by a flashing traffic signal with 8" indications and a stop sign on the Stillwater Bridge road approach. NYSDOT conducted a signal warrant investigation at this location in 2006 with the result that the warrants for signalization are not met by current traffic volumes and conditions.

Route 4 at Lake Street (CR 76): This is a three-way or "T" intersection in the Village of Stillwater. Lake Street approaches Route 4 from the west and is controlled by a stop sign. Each route has a posted speed limit of 30mph within the Village limits. NYSDOT conducted a signal warrant investigation at this location in 2006 with the result that the warrants for signalization are not met by current traffic volumes and conditions.

Route 67 at Farley Road: Farley Road approaches Rte 67 from the north at this three-way intersection. Farley Road is under stop sign control. This intersection is expected to be impacted by the LFTC development.

Fitch Road / Cold Springs Road at Joyce Road: This is a three-way intersection with Fitch Road approaching from the south, Joyce Road from the west, and Cold Springs Road from the north. Joyce Road is under stop sign control. Fitch Road and Cold Springs Road are in direct north-south alignment and form the main roadway at this intersection. This intersection is also expected to be impacted by the LFTC development.

Cold Springs Road at Elmore Robinson Road: Elmore Robinson road approaches Cold Springs Road from the east and is under stop sign control. This three-way intersection is also expected to be impacted by the LFTC development.

Cold Springs Road at Future LFTC Access Road: As currently planned, the LFTC project will construct an access roadway from the LFTC campus to Cold Springs Road. This access road will be located 2000' to 2500 'north of Elmore Robinson Road with the new access approaching from the west. Current plans call for a three-way "T" intersection with the LFTC approach under stop sign control.

Cold Springs Road at Lake Road (CR76): Cold Springs Road intersects Lake Road (CR 76) from the south at this three-way-intersection. The Cold Springs Road approach is under stop sign control. This intersection is proximate to the Route 9P and Lake Road (CR76) intersection just to the west. This intersection will figure significantly in the future, handling LFTC traffic from the north and east.

Route 9P at Lake Road (CR 76): Lake Road (CR 76) intersects Route 9P from the east at the southern portion of Saratoga Lake. The Lake Street approach of this three-way intersection is under stop sign control. This intersection will figure significantly in the future, as a gateway to LFTC.

Route 9P at Route 423: Route 423 approaches Rte 9P from the east and at the intersection splits into two legs, one for traffic heading north and the second for traffic headed south. Both Route 423 legs, each under stop sign control, are on skewed alignments to Route 9P.

Lake Road (CR 75) at Meeting House Road (CR 76): This intersection is under four-way stop control. The intersection is a main intersection for north-south / east-west travel in the geographic center of the Town.

Waterways

The location of the Town of Stillwater on the western boundary of the Hudson River and the Champlain Canal System provides regional waterway connections. The Hudson River has served as a transportation corridor for hundreds of years and continues to provide this function today.

Public Transportation

The availability of public transportation is limited for the residents of Stillwater, consisting only of access to bus and train services at locations outside of the Town. The Capital District Transportation Authority (CDTA) does not provide bus service in the Town of Stillwater, nor are there any Park and Ride facilities for CDTA in the Town. CDTA does provide bus service to/from the Albany-Schenectady areas from other locations in Saratoga County. CDTA Route 50 provides daily bus service to Schenectady from Ballston Spa. The CDTA Northern Express (formerly Upstate Transit) provides limited weekday service between specific pick-up points in Saratoga Springs, Round Lake, and Mechanicville to a variety of locations in Albany, and to Park & Ride facilities at I-87 (Northway) Exits 11, 12, and 15.

The *Stillwater Route 4 Corridor Plan*, prepared under the direction of the Capital District Transportation Committee (CDTC) for the Town and Village of Stillwater, examined local public transportation needs and noted CDTA is currently working on a regional transit development plan. Based on the plan, Route 4 in Stillwater does not contain the density of potential riders to be a high priority for new public transportation service and it is unlikely that public transportation will be available for the Route 4 corridor in the near future. Since the Route 4 corridor is the most densely populated portion of the Town, it is even more unlikely for public transportation to be extended to the other, more rural portions of the Town.

Amtrak provides intercity train service from Saratoga Springs to locations north and south via Fort Edward, Schenectady, and Rensselaer.

Pedestrian and Bicycle Facilities

Pedestrian facilities are limited to the Village of Stillwater; there are no sidewalks in the Town. The entire length of Route 4 in the Town of Stillwater is part of designated New York State Bike Route 9. This designation indicates that this route is appropriate for experienced cyclists who are comfortable sharing the roadway with motorized vehicles and with traveling at higher speeds. This designation is not an indication for recreational use.

Off-road multi-use trails such as Stillwater's portion of the planned Champlain Canal Trail, which will run north/south on the west side of the Hudson River, should someday become part of a multi-county trail system.

Existing Traffic Conditions

To study and analyze the existing conditions on the Town of Stillwater's roadway network, information was collected from the following sources:

- New York State Department of Transportation (NYSDOT)
- Saratoga County Department of Public Works
- The Luther Forest Technology Campus Traffic Impact Study, dated November 4, 2002 prepared by Creighton Manning Engineering, LLP
- Saratoga Lake Hotel Resort & Marina Project (Brown's Beach) Traffic Impact Study, dated September, 2006, prepared by GTS Consulting.
- White Sulpher Springs Estates Traffic Impact Study, dated March 28, 2005, prepared by Creighton Manning Engineering, LLP
- The Stillwater Woods Traffic Impact Study, dated December 1, 2004, prepared by Creighton Manning Engineering, LLP

The information collected from these sources included: existing traffic volumes, functional classification of roadways, traffic signal operations, and accident histories for the selected roadways and intersections. Field reviews were undertaken on selected roadways in the Town of Stillwater to identify existing features such as travel lane width, shoulder width, traffic control, speed limits, pavements markings, signing, and other pertinent roadway characteristics.

Existing Intersection and Roadway Operation Analysis

The operational characteristics of a roadway system are evaluated through the use of Level of Service (LOS) analyses for the intersections and roadway segments studied. A list of intersections and roadways within the study area was identified based on discussions with the Town's Highway Superintendent, field reviews of the roadway network, and review of recent transportation studies for other projects in the area. Table 3.5-1 lists the intersections and roadways within the project study area. They are shown on Figure 3.5-1, Traffic Study Locations.

The existing operational characteristics are based on traffic volumes from several sources, including manual counts conducted by TCC, traffic volume information obtained from NYSDOT and Saratoga County, and specific project studies for other projects noted previously. Where necessary, traffic volumes were adjusted to 2006 by the application of appropriate growth factors.

Table 3.5-1: Study Area Intersections and Roadway Segments

Intersection		Roadway Segment	
1	Route 4 and Route 32	1	Route 4 North of Route 32
2	Route 4 and Stillwater Bridge (CR 125)	2	Route 4 between Stratton Ln. and Stillwater School
3	Route 4 and Lake St. (CR 76)	3	Route 4 North of Route 67
4	Route 67 and Farley Rd.	4	Route 67 between George Thompson Rd. and Farley Rd.
5	Fitch Rd./Cold Spring Rd. and Joyce	5	Route 32 North of Route 423
6	Cold Spring Rd. and Elmore Robinson Rd.	6	CR 76 Between Grace Moore Rd. and Brightman Rd.
7	Cold Spring Rd. and LFTC (Future Access)	7	CR 76 East of Filke Rd.
8	Cold Spring Rd and CR 76	8	CR 75 between Mc Dermott Rd. and Jolly Rd.
9	Route 9P and CR 76	9	Rte 9P Between CR 76 and Rte 423
10	Route 9P and Route 423		
11	CR 75 and CR 76		

Figure 3.5-1 Traffic Study Locations

Traffic Volumes

The existing traffic volumes obtained from NYSDOT, Saratoga County DPW, and the information sources noted above were supplemented with manual traffic counts and turning movement counts conducted by The Chazen Companies at the following locations: US Route 4 & Lake Road (CR 76) intersection, Lake Road (CR 76) & Meeting House Road (CR75) intersection, and the intersection of US Route 4 and NYS Route 32. In addition, the traffic volumes from the traffic studies noted above were reviewed for selected locations. Traffic volumes from 2005 or earlier were adjusted utilizing an appropriate growth factor to bring these volumes up to the 2007 time frame.

Figures 3.5-2 and 3.5-3 present the existing AM and PM peak period traffic volumes for the studied intersections and roadways, respectively. The Average Annual Daily Traffic (AADT) volumes are also provided.

The Town's roadway network experiences the highest volume of traffic during the typical commuter peak hours of 7:00 to 9:00 AM and 4:00 to 6:00 PM. Individual intersections experience their actual peak hour at different intervals within the noted two-hour time periods. According to the NYSDOT 2003 Highway Sufficiency Ratings, heavy vehicles account for 7 % of annual vehicle traffic on the State Highways in the Town of Stillwater.

Figure 3.5-2 Existing Traffic Volumes - AM Peak

Figure 3.5-3 Existing Traffic Volumes - PM Peak

The methodology employed follows standard traffic engineering procedures by using the existing intersection and roadway volumes as the foundation data to which projected growth is applied to arrive at the future volumes for the study year. The projected growth information employed accounted for general background growth and specific developments of single family residential units, such as the White Sulpher Springs Estates and the Stillwater Woods projects. In addition the traffic volumes associated with the Saratoga Lake Hotel and Marina Project (Brown's Beach) were analyzed and added as a surcharge to the future volumes.

Intersection levels of service are based on vehicle delay experienced and depend on the type of traffic control at an intersection, i.e. signalized or un-signalized (stop control), as well as intersection geometry, traffic volumes and intersection capacity. All intersections in the Town of Stillwater are un-signalized, stop controlled intersections. While the intersection of Route 4 with CR 125 (Stillwater Bridge Road) has a flashing signal, it functions as a stop-controlled intersection. LOS for un-signalized intersections are based on the LOS for the individual critical movements, i.e. left turns from the main road and all movements from the side roads. Un-signalized intersections operating under LOS A experience less than 10 seconds delay and exhibit very good service, while those operating under LOS F are characterized by delays of more than 50 seconds and exhibit poor service. Table 3.5-2 summarizes the level-of-service (LOS) criteria for un-signalized intersections. Critical movements for one-way and two-way stop controlled intersections are defined as left turns from the major roadway and all movements from the minor roadway. For the case of four-way stop controlled intersections, all movements are considered critical.

Table 3.5-2: Un-signalized Intersection Levels of Service Definitions

LOS	Control Delay Per Vehicle (seconds)
A	Less than or equal to 10
B	Greater than 10 and less than or equal to 15
C	Greater than 15 and less than or equal to 25
D	Greater than 25 and less than or equal to 35
E	Greater than 35 and less than or equal to 50
F	Greater than 50

Roadway segment LOS for two-lane highways are based on two criteria, % time spent following and average travel speed, depending on the class of highway. Two lane highways are either Class I or Class II. Class I highways are those on which motorist expect to travel at relatively high speeds. Most arterials are Class I highways. Class II highways are those on which motorists do not necessarily expect to travel at high speeds. Most collectors and local roads are Class II highways.

Based on the functional classifications provided in the 2003/2004 NYSDOT Highway Sufficiency Ratings, all the roadways in the Town of Stillwater are Class II highways, except for two segments. The only Class I highway segments in the Town of Stillwater are the section of Route 4 from the southern town line to the Village of Stillwater and the very eastern section of Route 67 before it enters the City of Mechanicville.

Tables 3.5-3 and 3.5-4 summarize the level of service measures for two-lane highways, Class I and Class II. Efficient mobility is more important on Class I highways and therefore LOS is defined by both % time spent following and average speed. Only % time spent following is used to define LOS on Class II highways since mobility is less critical. In addition, due to the general use of the two highway classes, a higher level of % time spent following will be tolerated by drivers on Class II highways.

Table 3.5-3: Two-Lane Highways Class I Level-of-Service

LOS	% Time Spent Following	Average Travel Speed (mph)
A	35 or less	greater than 55
B	35 to 50	50 to 55
C	50 to 65	45 to 50
D	65 to 80	40 to 45
E	greater than 80	40 or less
F	See note	See note

Note: LOS F applies whenever the flow rate exceeds the segment capacity

Table 3.5-4: Two-Lane Highways Class II Level-of-Service

LOS	% Time Spent Following
A	40 or less
B	40 to 55
C	55 to 70
D	70 to 85
E	Greater than 85
F	See Note

Note: LOS F applies whenever the flow rate exceeds the segment capacity

The existing conditions at each of the study intersections and roadway segments were analyzed using the HCS 2000 Highway Capacity Software by McTrans, which is based on the procedures of the Highway Capacity Manual. The results are presented in Table 3.5-5 for intersections and 3.5-6 for roadway segments, and are briefly summarized here.

As noted, LOS for un-signalized intersections is defined by the vehicle delay for the critical movements at the intersection. All the intersections studied show very acceptable LOS of either A or B for the critical movements, with the exception of two intersections. Cold Springs Road at Lake Road (CR 76) exhibits a LOS C (15.6 seconds of delay) for the northbound left and right turning movements during the PM peak period. The intersection of Route 9P and Lake Road (CR 76) exhibits a LOS C (18.6 seconds of delay) for the westbound left/right during the AM peak

period, and a LOS D (25.2 seconds of delay) for same movement for the PM peak period. All of the intersection levels of service are acceptable under existing conditions.

All roadway segments analyzed also exhibit good LOS of A or B with the exception of two segments. The first segment is Route 4 north of Route 67 with LOS of E during both the AM and PM peak periods. This segment is a Class 1 roadway and the determination of LOS takes into account both % of time spent following and average travel speed. The LOS E exhibited is a result of a reduced travel speed of below 40mph. Another contributing factor is the higher number of access points along Route 4 in this segment. If only the criteria of % of time spent following was used, the LOS would be C. The second roadway segment exhibiting a reduced LOS is CR 76 (Lake Road) between Grace Moore Road and Brightman Road. This segment exhibits LOS C during both the AM and PM peak periods based on the % of time following, the criteria for Class 2 roadways. All roadway segment LOS are acceptable with the exception of the segment of Route 4 north of Route 67.

Table 3.5-5: Existing Intersection Levels of Service

No.	Intersection	Movement	LOS	
			AM Peak	PM Peak
1	Routes 4 @ Route 32	NB Left	A/7.6	A/7.4
		EB Lt/Rt	A/9.4	A/9.0
2	Route 4 @ Stillwater Bridge (CR 125)	NB LTR	A/7.7	A/7.6
		SB LTR	A/7.7	A/8.2
		EB LTR	B/10.6	B13.8
		WB LTR	B/14.8	B/17.4
3	Routes 4 @ Lake St. (CR 76)	NB Left	A/8.3	A/7.8
		EB Lt/Rt	B/14.4	B/14.2
4	Route 67 @ Farley Rd.	EB Left	A/7.6	A/7.6
		SB Lt/Rt	B/10.2	A/9.9
5	Fitch Rd./Cold Springs Rd. @ Joyce Rd	NB Left	A/7.2	A/7.2
		EB Lt/Rt	A/8.5	A/8.6
6	Cold Springs Rd @ Elmore Robinson Rd	SB Left	A/7.2	A/7.2
		WB Lt/Rt	A/8.3	A/8.6
7	Cold Springs Rd @ LFTC	N/A	N/A	N/A
8	Cold Springs Rd @ CR 76	WB Left	A/7.5	A/7.8
		NB Lt/Rt	B/12.0	B/10.5
9	Routes 9P @ CR 76	SB Left	A/7.6	A/8.4
		WB Lt/Rt	B/10.0	C/15.6
10	Route 9P @ Route 423	SB Left	A/7.4	A/7.8
		WB Left	A/9.7	B/11.7
		WB right	A/8.8	A/9.8

11	CR 75 @ CR 76	NB LTR	A/8.3	A/7.2
		SB LTR	A/8.1	A/8.6
		EB LTR	A/8.2	A/7.6
		WB LTR	A/8.3	A/9.9

Note 1: A / 7.6 = LOS / Seconds of delay
Note 2: Cold Springs Road @ LFTC is not an existing intersection.

Table 3.5- 6: Existing Roadway Segment Levels of Service

No.	Roadway Segment		LOS	
	Location	Class	AM Peak	PM Peak
1	Route 4 North of Rte 32	2	A / 31.7 See Note 1	A /25.7
2	Route 4 Between Stratton Ln. and Stillwater School	2	B /48.1	B /47.6
3	Route 4 North of Rte 67 (See Note 2)	1	E /64.5	E /65.8
4	Route 67 Between George Thompson Rd. and Farley Rd.	2	B /46.4	B/53.6
5	Route 32 North of Route 423	2	A /33.8	A /31.2
6	CR 76 Between Grace Moore Rd. and Brightman Rd.	2	C /57.8	C /59.9
7	CR 76 East of Filke Rd.	2	B /49.1	B /53.8
8	CR 75 Between Mc Dermott Rd. and Jolly Rd.	2	A /35.2	A /33.4
9	Route 9P Between CR 76 and Route 423	2	B /42.3	B / 54.6

Note 1: A / 31.7 = LOS / % Time Following
Note 2: Class 1 roadways LOS determined by both % Time Following and Average Travel Speed

3.5.2 Potential Impacts and Mitigation Measures

Future Traffic Projections

Traffic projections were formulated for the year 2017 and are analyzed and then compared to the existing conditions to facilitate an understanding of the impact of growth in the Town. Future traffic volumes will increase due to growth within and outside of the Town, resulting in traffic traveling into or through the Town. The Luther Forest Technology Campus will be a significant contributor to both sources of future traffic.

Growth Projections

Town of Stillwater

The growth projections for the build year (2017) developed from the buildout analysis/growth projections described in Section 2.0, Description of the Proposed Action, and included as Appendix A. Working with the Town's technical advisory team the Town anticipates 60 to 70 homes per year could be constructed in any given year and 600 residential units could be constructed over the next 10 years (2017). Additionally it is anticipated that an additional 50,000 square feet of retail/commercial space and that up to 100,000 square feet of industrial space will be constructed during the study period.

For the purpose of conducting the traffic analysis, the Town was divided into smaller planning areas (traffic planning areas). The advisory committee distributed the projected growth to the traffic planning areas based on a number of factors including location of approved projects, the availability of infrastructure and developable land. Figure x-x shows the traffic planning areas developed and the projected growth within each area.

Outside the Town of Stillwater

In addition to future traffic generated by new homes and businesses within the Town of Stillwater, traffic from general growth outside of the Town will also add to the traffic volumes on the Town's highway system. Future traffic from outside the Town will come from the south, east, and north, and will have destinations in Town or pass through Town to outside destinations. A 0.5% per year increase in traffic on the Town's roadways will be assigned to take into account traffic passing through the Town from locations outside the Town due to general growth.

Luther Forest Technology Campus

A substantial number of trips is expected to be generated by LFTC during the peak periods of the local roadway system, and assigned to LFTC's future access driveway on Cold Springs Road. Volumes from the LFTC DGEIS/TIS were utilized for this location. For this study, it is estimated that 25 % of traffic attributed to the Cold Springs entrance will originate in the Town of Stillwater. The remaining 75 % of this traffic will originate outside the Town to the south, east and north. This traffic will use the local highway network to get to LFTC via Cold Springs Road.

Trip Generation

Trip generation provides an estimate of the volume of traffic expected to travel to and from a specific site or location. As noted above, new trips will be generated from several sources, including new homes and businesses within the Town, background growth outside of the Town, and traffic generated by LFTC. Also as noted, the traffic generated from LFTC can be assigned as originating from within the Town and from outside the Town. To determine the trips generated from each source, several methods were employed.

Figure 3.5-4 Traffic Planning Areas

Town of Stillwater

For new homes and businesses projected as part of the buildout in the Town, trip generation is based on historical generation figures for the particular land use. The Institute of Transportation Engineers (ITE) provides traffic and transportation professionals with a source document as a guide to trip generation rates for all land uses and building types. This document, Trip Generation Manual[5], 7th Edition, is updated periodically and details rates developed for the average weekday, and Saturday and Sunday, during the peak hours of the generator and during the peak hours of the adjacent roadway traffic.

Based on the projected growth for each Planning Area (as shown in Figure 3.5-4), the number of trips was estimated using ITE figures for the appropriate land uses. Table 3.5-7 presents the trips generated by the anticipated overall growth within the Town of Stillwater by 2017 for each Traffic Planning Area. The figures include approved and/or proposed residential projects such as White Sulpher Springs Estates and Stillwater Woods. The figures do not include the Saratoga Lake Hotel Resort & Marina project, which will be analyzed and considered separately.

Table 3.5-7: Trip Generation from Projected Town Growth

Traffic Planning Area	New Homes	AM Peak Trips	PM Peak Trips
1	65	49	66
2 (Village)	N/A	N/A	N/A
3	240	180	242
4	70	53	71
5	35	26	35
6	80	60	81
7	25	19	25
8	25	19	25
9	60	45	61
10 (LFTC)	N/A	N/A	N/A
Total New Homes	600	451	606
Traffic Planning Area	New Industrial	AM Peak Trips	PM Peak Trips
1	81,000 SF	92	98
3	41,000 SF	46	49
Total - Industry	122,000 SF	138	147
Total Trips		589	753

Outside the Town of Stillwater

[5]*Trip Generation Manual, 6th Edition*, Institute of Transportation Engineers, 1997.

For the background growth outside the Town a 0.5 % per year increase was applied to the existing traffic volumes on the local highway network. Since a ten-year study period is being examined, an overall 5 % increase in traffic will result. For the purpose of the study, this traffic will enter/leave the Town via either Route 4, Route 9P or Route 67.

Luther Forest Technology Campus

The traffic generation estimates from the LFTC Traffic Impact Study (TIS), prepared in 2002 by Creighton Manning Engineering, P.C., were utilized for this analysis. The LFTC project is expected to consist of four nanotechnology facilities and up to 2 million SF of ancillary development. The nanotechnology facilities are anticipated to be the anchor land use of LFTC, with ancillary development of research and development, office, manufacturing and other support land uses. Employees of the nanotechnology manufacturing facilities typically work 12-hour shifts beginning at 6:00 AM and 6:00 PM. These are times when the traffic on the local roadway system is relatively low or not at peak. Accordingly, the LFTC TIS identified and analyzed "the two peak hours of operation for the ancillary development which coincide with the AM and PM peak hours of the adjacent street traffic."

The LFTC TIS assigned 28 % of the ancillary trips generated by LFTC to Cold Springs Road and therefore to the Town of Stillwater's roadway network. The balance of LFTC-generated traffic will access the LFTC campus from areas outside of Stillwater. The LFTC TIS (2002) analyzed traffic based on four phases of build-out: Phase 1 in 2005, Phase 2 in 2011, Phase 3 in 2018, and Phase 4 in 2025, each phase corresponding to the development of one nanotechnology facility and 500,000 SF of ancillary development. Based on the time elapsed to date the Town of Stillwater DGEIS study year of 2017 can be equated to the LFTC Phase 2 completion (LFTC TIS year of 2011) in regards to trip generation and traffic volumes. Table 3.5-8 provides the trips generated by LFTC at the Cold Springs Road access for the AM and PM peak periods, as provided in the LFTC TIS.

Table 3.5-8: LFTC Trip Generation – Cold Springs Access Road

LFTC-Generated Trips (2017 – Phase 2 Complete)						
	Entering			Exiting		
	Rights	Lefts	Total	Rights	Lefts	Total
AM Peak	200	80	280	16	40	56
PM Peak	52	20	72	200	80	280

Trip Distribution and Assignment

Generated trips are assigned to the roadway network and distributed to specific roadways based on the origin and destination of the trips and the expected travel route. New trips are traditionally assigned to a roadway network based on existing travel patterns unless some specific circumstance dictates revised travel patterns. For this study, a method of trip distribution was employed that combined the effects of projected Town growth, normal background growth outside the Town, and the Luther Forest Technology Campus project. This trip distribution methodology is further defined as follows:

1. First, the trips generated due to background growth outside the town were distributed based on existing travel patterns (please refer to Figures TA - 1 and TA - 2 in the TIS in Appendix B for these trips). The trips due to background growth also include the trips generated by the Saratoga Lake Hotel Resort & Marina project.

2. Next, the trips generated by LFTC at Cold Springs Road were distributed and assigned in two steps, based on 25 % of the trips originating in the Town of Stillwater and 75 % originating outside the Town.

3. The LFTC Cold Springs Road trips originating outside of the Town were distributed to the three main access routes – US 4, NYS 9P, and NYS 67 – based on existing travel patterns. These trips were then further distributed and assigned to Town roadways based on the most likely ways to arrive at LFTC via Cold Springs Road from these three routes. See Figures TA - 3 and TA - 4 in Appendix B for these trips.

4. The LFTC Cold Springs Road trips originating within the Town were first distributed to the Traffic Planning Areas base on the projected increase in homes in each area. These trips were then assigned to the Town's roadway system based on the most likely route to LFTC via Cold Springs Road. See Figures TA - 5 and TA - 6 in Appendix B for these volumes.

5. The remaining new trips generated from growth within the Town, i.e. the total anticipated generated trips minus the LFTC generated trips, were then assigned to/from each area based on existing travel patterns.

The end result of this process provided the overall distribution and assignment of all new trips generated to 2017 from the sources previously discussed. These volumes were then combined with the existing traffic volumes to arrive at the future traffic volumes for 2017. See Figures 3.5-5 and 3.5-6 for the total project-generated traffic volumes in the AM and PM peak hours, respectively. Figures 3.5-7 and 3.5-8 show the total buildout traffic volumes for the year 2017 in the AM and PM peak hours, respectively.

Projected Traffic Volumes

The 2017 projected traffic volumes, or 2017 Build volumes, are arrived at by combining the 2007 existing volumes with the total of all new trips generated to 2017.

Tables 3.5-9 and 3.5-10 present the existing (2007) and 2017 traffic volumes for the study area intersections and roadways, respectively (also see Figures 3.5-7 and 3.5-8). Traffic increases are more significant for Cold Springs Road and the several intersections on Cold Springs Road due to traffic generated by LFTC and for Route 9P and the intersection of Route 9P & Lake Road due to the traffic generated by the Saratoga Lake Hotel Resort project.

Table 3.5-9: Projected Intersection Traffic Volumes – AM and PM Peak

	Intersection	2007 Volume		Generated Volume		2017 (build) Volume	
		AM	PM	AM	PM	AM	PM
1	Routes 4 @ Rte 32	261	225	59	94	320	319
2	Route 4 2 CR 125 (Stillwater Bridge)	579	771	155	170	734	941
3	Routes 4 @ Lake St. (CR 76)	611	759	107	243	718	1002
4	Route 67 @ Farley Rd.	265	332	156	266	421	598
5	Fitch Rd./Cold Spring Rd. @ Joyce Rd	19	29	76	123	95	152
6	Cold Spring Rd @ Elmore Robinson Rd	9	29	169	190	178	219
7	Cold Spring Rd @ LFTC	N/A	N/A				
8	Cold Spring Rd @ CR 76	355	387	253	261	608	648
9	Routes 9P @ CR 76	466	572	385	583	851	1155
10	Route 9P @ Route 423	203	403	147	203	350	606
11	CR 75 @ CR 76	363	450	159	121	522	571

Table 3.5-10: Projected Roadway Segment Traffic Volumes – AM and PM Peak

	Roadway Segment	2007 Volume		Generated Volume		2017 (Build) Volume	
		AM	PM	AM	PM	AM	PM
1	Route 4 North of Route 32	185	232	68	98	253	330
2	Route 4 Between Stratton Ln. and Stillwater School	272	283	50	95	332	378
3	Route 4 North of Route 67	673	721	91	156	764	877
4	Route 67 Between George Thompson Rd. and Farley Rd.	264	268	192	306	456	574
5	Route 32 North of Route 423	77	94	17	14	94	108
6	CR 76 Between Grace Moore Rd. and Brightman Rd.	329	362	117	122	446	484
7	CR 76 East of Filke Rd.	223	257	102	127	325	384
8	CR 75 Between Mc Dermott Rd. and Jolly Rd.	144	140	123	175	267	315
9	Route 9P Between CR 76 and Route 423	203	170	220	403	423	573

Planned Roadway Improvements

Currently there are no NYSDOT or Saratoga County roadway projects underway in the Town of Stillwater. However two projects have been programmed by NYSDOT in conjunction with the Luther Forest Technology Campus project. One project will involve the reconstruction of Farley Road, Fitch Road, and Cold Springs Road from Route 67 to 1/8th mile south of Lake Road (CR76); and another focuses on Elmore Robinson Road from George Thompson Road (CR 75) to Cold Springs Road. This project is currently in the design stage and will provide a paved roadway section with surface drainage.

It is anticipated that a project to address the intersection of Route 9P and Lake Road will be initiated in a time frame as defined by the progress of completion of LFTC development. The LFTC TIS indicates that a traffic signal will be warranted after the completion of LFTC Phase 3.

Corridor Studies

The Stillwater U.S. Route 4 Corridor Plan assessed existing conditions along the Route 4 corridor and provided recommendation for future action, including transportation improvements. Recommendations included the extension of the sidewalk in the village north to the school complex, and various traffic calming and pedestrian initiatives to promote safety and more efficient traffic flow in the Village.

The *Stillwater Comprehensive Plan*, provides a policy guide for the Town. It identified specific goals, objectives, and strategies to preserve aspects of the community worthy of protection and to promote change where change is desired. Recommendations include the following related to transportation:

- Identification of key locations for traffic calming improvements and pedestrian improvements.
- Examination of re-establishment of mass transit and use of “Park and Ride.
- Coordination with local/state/federal transportation officials to plan for the traffic impact as a result of the LFTC.

Operational Analysis – Future Conditions

As noted previously, the operational characteristics of a roadway system are evaluated through the use of Level of Service (LOS) analyses for the intersections and roadway segments studied. Intersection and roadway segment analyses of the Town’s future conditions were performed based on the projected 2017 Build traffic volumes. Tables 3.5-11 and 3.5-12 present the AM and PM Peak LOS for the intersections and roadway segments, respectively, for existing and 2017 traffic volumes.

Based on the operational analysis, only one location, the intersection of Route 9P and Lake Road (CR 76), requires mitigation due to increases in traffic volumes. During the PM peak period the LOS for the westbound (Lake Road) approach degrades to a failing LOS F. This is principally attributable to the combined increases from LFTC and the Saratoga Lake Hotel project. During the AM peak period the same approach drops from LOS B to LOS C. None of the roadway segments are forecast to experience a decline in LOS to a point requiring mitigation.

For all other locations, the Levels of Service for the Build Year 2017 traffic conditions do not indicate the need for mitigation. Although some of the analyzed locations will experience large increases in traffic compared to existing volumes, these increases are not of the scale that results in degradation of a LOS requiring mitigation. Most of the intersections and roadway segments will retain the same good to excellent LOS that is exhibited for the Existing conditions.

Several study area locations are discussed below to illustrate the very limited drop in LOS from Existing to 2017 conditions that is characteristic of the results of the operational analysis. As noted previously, LOS for un-signalized intersections is based on seconds of vehicle delay, while LOS for roadway segments is based on the %age of time following another vehicle.

At the intersection of Route 4 and Stillwater Bridge (CR 125), the westbound approach LOS drops from a B/14.8 to a C/20.3 in the AM Peak, and from a B/17.4 to a D/25.5 in the PM Peak. It is noted that the 25.5 seconds of vehicle delay in the 2017 PM Peak is only 0.6 seconds above LOS C. During the PM peak period the Route 423 left turn movement onto Route 9P drops from LOS A/7.6 to C/15.6.

The roadway segment of Route 67 between George Thompson road and Farley Road LOS drops from a B to a C for both the AM and PM Peaks. These drops are based on an increase in "% time following" of 12 % and 10 % for the AM and PM peaks, respectively.

Table 3.5-11: Year 2017 Intersection Levels of Service

Intersection		Movement	LOS/Seconds of Delay			
			Existing		2017	
			AM Peak	PM Peak	AM Peak	PM Peak
1	Route 4 @ Route 32	NB Left	A/7.6	A/7.4	A/7.7	A/7.5
		EB Lt/Rt	A/9.4	A/9.0	A/9.7	B/10.1
2	Route 4 @ Stillwater Bridge (CR 125)	NB LTR	A/7.7	A/7.6	A/7.8	A/7.8
		SB LTR	A/7.7	A/8.2	A/7.9	A/8.7
		EB LTR	B/10.6	B13.8	B/11.3	C/15.8
		WB LTR	B/14.8	B/17.4	C/20.3	D/25.5
3	Routes 4 @ Lake St. (CR 76)	NB Left	A/8.3	A/7.8	A/8.6	A/8.1
		EB Lt/Rt	B/14.4	B/14.2	C/16.7	C/15.8
4	Route 67 @ Farley Rd.	EB Left	A/7.6	A/7.6	A/7.8	A/7.9
		SB Lt/Rt	B/10.2	A/9.9	B/10.9	B/13.2
5	Fitch Rd./Cold Spring Rd. @ Joyce Rd	NB Left	A/7.2	A/7.2	A/7.3	A/7.4

		EB Lt/Rt	A/8.5	A/8.6	A/8.9	A/9.2
6	Cold Spring Rd @ Elmore Robinson Rd	SB Left	A/7.2	A/7.2	A/7.4	A/7.4
		WB Lt/Rt	A/8.3	A/8.4	A/9.0	A/9.6
7	Cold Spring Rd @ LFTC	N/A	N/A			
8	Cold Spring Rd @ CR 76	WB Left	A/7.5	A/8.0	A/7.9	A/8.0
		NB Lt/Rt	B/12.0	B/10.5	B/13.2	B/14.7
9	Routes 9P @ CR 76	SB Left	A/7.6	A/8.4	A/8.1	A/9.2
		WB Lt/Rt	B/10.0	C/15.6	C20.7	F/59.8
10	Route 9P @ Route 423	SB Left	A/7.4	A/8.6	A/7.5	A/8.3
		WB Left	A/9.7	A/7.6	A/9.8	C/15.6
		WB right	A/8.8	A/9.9	A/9.0	B/10.0
11	CR 75 @ CR 76	NB LTR	A/8.3	A/7.2	A/9.5	A/9.3
		SB LTR	A/8.1	A/8.6	A/8.8	A/8.9
		EB LTR	A/8.2	A/7.6	A/9.1	B/10.9
		WB LTR	A/8.3	A/9.9	A/9.5	A/8.9

Table 3.5-12: Year 2017 Roadway Segment Levels of Service

No.	Roadway Segment		LOS			
			Existing		2017	
	Location	Class	AM Peak	PM Peak	AM Peak	PM Peak
1	Route 4 North of Rte 32	2	A /31.7	A /25.7	A/36.8	B/41.1
2	Route 4 Between Stratton Ln. and Stillwater School	2	B /48.1	B /47.6	B/52.4	B/53.6
3	Route 4 North of Route 67 (See Note 2)	1	E /64.5	E /65.8	E/67.2	E.71.0
4	Route 67 Between George Thompson Rd. and Farley Rd.	2	B /46.4	B/53.6	C/58.0	C/62.9
5	Route 32 North of Route 423	2	A /33.8	A /31.2	A/34.4	A/32.3
6	CR 76 between Grace Moore Rd. and Brightman Rd.	2	C /57.8	C /59.9	C/60.8	C/62.9
7	CR 76 East of Filke Rd	2	B /49.1	B /53.8	C/57.4	C/61.0
8	CR 75 between McDermott Rd. and Jolly Rd.	2	A /35.2	A /33.4	B/45.7	B/50.0
9	Route 9P Between CR 76 and Route 423	2	B /42.3	B / 54.6	C/57.9	C/58.7

Note 1: A / 31.7 = LOS / % Time Following
Note 2: Class 1 roadways LOS determined by both % Time Following and Average Travel Speed

Mitigation

Traffic mitigation is traditionally based on improvements recommended at specific locations, such as traffic signals, or additional travel lanes to address capacity or operational issues. These recommendations are based on LOS analyses comparing existing versus future conditions and the changes in traffic operations resulting from increased traffic. Traffic volumes may increase as a result of normal (background) growth, induced growth, or may be attributed to a specific land development. As discussed in this section, traffic volumes are expected to increase in the Town of Stillwater as a result of several sources.

Based on the LOS analyses for the 2017 projected (build) conditions, traditional mitigation is not required at any of the intersections/roadway segments studied with minor exception. The Route 9P/Lake Road (CR 76) intersection does show degradation in level of service from LOS C to LOS F for the PM Peak period at the Build Year 2017. This can be directly attributed to the LFTC and Saratoga Lake Hotel Resort & Marina generated traffic. Otherwise, the overall increase in traffic on the Town's roadway network does not degrade intersection or roadway segment LOS to levels that require specific mitigation.

Roadway improvements are planned as a component of LFTC project. The reconstruction of Farley Road, Fitch Road and Cold Springs Road from Route 67 to 1/8th mile south of Lake Road (CR 76), as well as Elmore Robinson Road from George Thompson Road (CR75) to Cold Springs Road, will include an asphalt pavement section with surface drainage.

The Luther Forest Technology Campus (LFTC) Draft Generic Environmental Impact Statement (GEIS) prepared by C.T. Male Associates, P.C. (2003) called for the installation of a traffic signal at the intersection of NYS Route 9P and County Route 76 (Lake Road) after completion of Phase 3 of the LFTC buildout, which is projected to occur in 2018. Based on the analysis presented herein, the decline in LOS at the NYS Rte 9P/CR 76 intersection will occur well in advance of the construction of Phase 3 of the LFTC. We recommend that the Town/Project sponsors should review the timing of this mitigation and assign/coordinate implementation accordingly.

While the need for traditional mitigation measures is limited, growth within the Town will trigger an overall increase in the maintenance of its existing and new roadways. This mitigation is more difficult to define in terms of cost than conventional mitigation.

Traffic volumes for the studied intersections and roadways will increase 53 % between 2007 and 2017. A significant portion of this volume can be attributed to the planned LFTC and the Saratoga Lake Hotel Resort & Marina projects. As a result, the associated traffic volumes will be concentrated in the western portion of the Town.

3.6 Water Supply & Distribution Systems

This section describes the existing water supply infrastructure within Stillwater. The potential impact of the projected growth within Stillwater to this infrastructure is considered and proposed mitigation measures, if any, are described.

3.6.1 Existing Conditions

Properties within the Town of Stillwater are serviced with potable water by a variety of means including Town Water Districts, private water companies, outside users to neighboring municipal water systems, and individual wells. The Town purchases water for each of its four water districts from either the Village of Stillwater or the City of Mechanicville. The Town of Stillwater does not own a water supply source or facility. Two private water companies, the Saratoga Glen Hollow Water Supply Corporation and the Saratoga Water Services Corporation, supply select geographic areas with drinking water. The properties served by the private water suppliers are not located within a Town Water District. Figure 3.6-1, Existing Water Districts and Service Areas, illustrates the location of the water districts, private water supply areas, and outside users. The following sections describe the Town's water districts, private water suppliers, and existing water supplies.

Town of Stillwater Water Districts

Water District #1

Water District #1 is located between the Village of Stillwater and the City of Mechanicville along NYS Route 4, just west of the Hudson River. Water District #1 purchases water primarily from the Village of Stillwater, with a backup connection to the City of Mechanicville. The District has approximately 520 service connections and provided an average flow of approximately 95,100 gallons per day (gpd) to customers in 2006. The maximum daily demand in 2006 within Water District #1 was 141,300 gallons.

Water District #3

Water District #3 is located in the southern portion of the Town generally along Viall Avenue (County Route 75) and has approximately 150 service connections. Water usage in District #3 is measured in combination with Water District #4 and is described below. The City of Mechanicville is the water source for this District.

Water District #4

This District is located in the southeastern portion of the Town, generally along Brickyard Road between Water Districts #1 and #3. Water District #4 purchases water from the City of Mechanicville and serves approximately 98 service connections. In 2006, Water Districts #3 and #4 together purchased a total of 15,139,500 gpd of water, which equates to an average daily flow

of 41,500 gpd. The maximum daily demand of both Districts in 2006 was approximately 98,200 gpd.

Figure 3.6-1 Existing Water Districts and Service Areas

An expansion to Water District #4 (Expansion No. 1) is proposed to include the Revolutionary Heights Planned Development District (RHPDD). This expansion area is located north of Water District #4 and will serve the proposed 140-unit subdivision. As of this writing, the development is still in the design and permitting process.

Water District #5

Water District #5 is located along Stratton Lane in the central eastern portion of the Town. This District purchases water from the Village of Stillwater and serves customers through approximately 12 service connections. Metered water usage data is not available for Water District #5.

Table 3.6-1 summarizes the Town's existing water districts and current water demands.

Table 3.6-1: Water District Summary

Existing Water District	Number of Connections	Estimated Average Daily Demand (gpd)	Estimated Average Daily Demand per User (gpd)	Water Source
No. 1	520	95,000[1]	183	Village of Stillwater
No. 3	150	25,100[1]	167	City of Mechanicville
No. 4	98	16,400[1]	167	City of Mechanicville
No. 4, Ext. No. 1	140	24,500[2]	175	City of Mechanicville
No. 5	12	2,100[2]	175	Village of Stillwater

[1] Flow data obtained from the Town of Stillwater 2006 Water Quality Report.

[2] Flow data is estimated based upon an assumed 175 gpd per unit.

Private Water Companies

Saratoga Glen Hollow Water Supply Corporation

The Saratoga Glen Hollow Water Supply Corporation is a contract supplier serving approximately 117 service connections within the Saratoga Glen Hollow Subdivision. Water supplied to the Corporation comes from a groundwater wellfield which is supplied by two groundwater wells. Under the current NYSDEC Water Supply Application, the approved water supply is 200,000 gpd. The system's peak water usage of 95,000 gpd reportedly occurred on July 4, 2004. Therefore, approximately 105,000 gpd is available for additional users, based on the total approved supply of 200,000 gpd.

Using the NYSDEC Design Standards for Wastewater Treatment Works estimated design flow of 400 gpd for a three-bedroom single family home, the 105,000 gpd of available water supply could serve 263 homes. Using the average water usage for typical single family homes in Stillwater of 200 gpd, the available 105,000 gpd could serve approximately 525 homes.

Saratoga Water Services Corporation

The Saratoga Water Services Corporation is a contract supplier whose water source is groundwater. This private water supplier services approximately 35 users in the Town of Stillwater and 1,968 users in the Town of Malta. The water system includes two water storage tanks with a 300,000-gallon and 752,000-gallon capacity. The system is approved by the NYSDEC to supply 3,060,000 gpd. Based on record data from 2005 and 2006, the average daily demand of the Saratoga Water Services system is approximately 425,250 gpd. The peak daily flow over the period of record is 1,004,000 gallons. Therefore, there is an available reserve capacity of 2,056,000 gpd (although the actual capacity could be limited by current well pumping rates).

Using the NYSDEC Design Standards for Wastewater Treatment Works estimated design flow of 400 gpd for a three-bedroom single family home, the 2,056,000 gpd of available water supply could serve 5,140 additional homes. Using the average water usage for typical single family homes in Stillwater of 200 gpd, the available 2,056,000 gpd could serve approximately 10,280 homes. There are reportedly approximately 300 approved residential units in the Saratoga Water Services service area that are not yet on line.

Table 3.6-2 summarizes the current water supply and demand from private water companies.

Table 3.6-2: Private Water Company Summary

Private Water Company	Number of Existing Connections	Estimated Average Daily Demand (gpd)	Estimated Average Daily Demand per User (gpd)
Saratoga Glen Hollow	117	25,000	214
Saratoga Water Services	35 (T. Stillwater) 1,968 (T. Malta)	425,250	212

Outside Users

There are two areas within the Town of Stillwater that are not part of a Town Water District and are considered outside users to either the City of Mechanicville or the Village of Stillwater water systems. Approximately 28 homes along Route 67 in the southern portion of the Town are outside users to the City of Mechanicville. The Hillside Colony Mobile Home Park on Lake Road west of the Village of Stillwater, which consists of approximately 188 units, is serviced by the Village water system.

Luther Forest Technology Campus

Saratoga County is undertaking a regional water supply and distribution project to expand the service area of the County and to augment the water supply to the proposed Luther Forest Technology Campus (LFTC). The raw water source for the regional water supply would be the Hudson River, with the intake and treatment plant located in the Town of Moreau. Approximately 28 miles of transmission lines would be installed in the Towns or Cities of Moreau, Greenfield, Wilton, Saratoga Springs, Milton, Ballston, Malta, and Stillwater and would

terminate at the LFTC in the Towns of Malta and Stillwater. The water storage tank is proposed to be located in the northwestern portion of the Town of Stillwater.

Public Water Supplies

City of Mechanicville

As previously mentioned, the Town of Stillwater does not operate its own water supply source or facility. It purchases water from the City of Mechanicville and the Village of Stillwater. The City of Mechanicville obtains water from two surface water reservoirs, which are located in the Town of Stillwater. The Mechanicville Reservoir is the primary source of water and has a storage capacity of 65 million gallons. The Terminal Reservoir, located along George Thompson Road, has a capacity of 2.5 million gallons.

The City operates a surface water filtration treatment plant located on George Thompson Road. Treatment involves flocculation, clarification, and filtration. The treated water is then chlorinated and stored in two steel storage tanks with a combined storage capacity of 2.5 million gallons. The average daily flow from the City's water filtration plant in 2006 was 354,301,000 gallons or approximately 971,000 gpd. According to the City of Mechanicville water treatment plant supervisor, there is an additional capacity of approximately 150,000 gallons in the City's water system.

Using the NYSDEC Design Standards for Wastewater Treatment Works estimated design flow of 400 gpd for a three-bedroom single family home, the 150,000 gpd of available water supply could serve 375 additional homes. Using the Town of Stillwater's average water usage for single family homes of 200 gpd, the available 150,000 gpd could serve approximately 750 homes. These projections include the RHPDD subdivision (140 units) in the proposed expansion to Town Water District #4.

Village of Stillwater

The Village of Stillwater treats drinking water from five groundwater wells that are located on a wellfield at the northeast end of Ferry Lane in the Village. The Village's water treatment plant treats iron, manganese, turbidity, and sulfur. Water is aerated, settled, rapid filtered, disinfected, and pumped to multiple storage facilities in the Town of Stillwater.

The Village stores 688,000 gallons of finished water in its distribution system, consisting of a 200,000-gallon storage tank in the vicinity of the Hillside Colony Mobile Home Park and a 488,000-gallon storage tank on Dick Lynch Road in the northwestern portion of the distribution system. In addition to the Village storage, the Town has a 180,000-gallon elevated storage tank in the Riverside neighborhood. The Hillside Colony Mobile Home Park also stores 160,000 gallons.

Based upon discussions with the Village operating staff, the water system can safely produce 300 gpm for 12 hours per day, resulting in a total of 216,000 gpd. Any additional draw may impact the function of the water treatment plant. An evaluation of the 2006 water production data shows

an average daily demand of approximately 295,000 gpd, with a maximum flow of 437,000 gpd. Considering the water production limitations of the Village's system and the current demands, increasing system demand by servicing additional users in the Town of Stillwater is not recommended until the water system can safely produce greater volume.

3.6.2 Potential Impacts

The water supply evaluation prepared for the Town of Stillwater looked at the provision of water service to property owners within existing water districts who are not currently served, as well as to users in three potential new service areas, which were identified as likely to have water service within the next 10 years based on input from the Town's GEIS Steering Committee and the Town Water Superintendent. These potential service areas are the Route 4 service area, Viall Avenue service area, and Route 67 service area (see Figure 3.6-2, Proposed Service Areas). Each potential new service area is described below.

Potential Route 4 Service Area

This area generally extends north from the Village of Stillwater to just south of Hanehan Road and includes properties east of Route 4. This service area would connect to and purchase water from the Village of Stillwater system. A connection to the existing water distribution system would be made at the northern portion of the Village at the intersection of NYS Route 4 and Stratton Lane. The extension would run north on Route 4, terminating south of Phillips Road. Properties fronting Wrights Loop, Labrador Lane, Price Road and Riverside Court would be serviced within this area. Approximately 20,000 linear feet of water main would be required as well as a meter pit at the connection point.

The potential Route 4 service area encompasses properties that are zoned Low Density Residential Development District along the Hudson River, as well as the largest General Business District in the Town of Stillwater.

Potential Viall Avenue Service Area

The proposed Viall Avenue Service Area generally extends north on Viall Avenue from Water District #3 and includes properties east and west of Viall Avenue. This area would connect to an existing water main on Viall Avenue at the northern end of Water District #3. Water to the service area would be supplied by the City of Mechanicville and would require the construction of an elevated water storage tank. The proposed water main would run north on Viall Avenue to the intersection of Vanness Road. The water main would also run east of Vanness Road and west on Graves Road to service additional lots. Approximately 8,000 linear feet of water main would be required to service this extension.

The elevated water storage tank would have a capacity of approximately 1 million gallons and would include controls and remote monitoring. The tank would likely be located along the higher elevation areas of Viall Avenue, with final location determined during land owner negotiations/final design.

Figure 3.6-2 Proposed Service Areas

Properties within the Viall Avenue service area are zoned Low Density Residential with an average lot size of more than 20 acres.

Potential Route 67 Service Area

The proposed Route 67 Service Area would extend west on Route 67 from George Thompson Road to just east of Farley Road and includes properties north and south of Route 67. The service area would connect to the existing water main at the intersection of Route 67 and George Thompson Road. The existing main carries water from the Mechanicville Filtration Plant to the two Mechanicville storage tanks on Devoe Road. A meter pit located at the intersection of Route 67 and George Thompson Road would be required as part of this extension. The water main would run west along Route 67 to Farley Road and include service to Sweeney Road. Approximately 8,000 linear feet of water main would be required to service this area.

Water Demand and Supply Comparison

Table 3.6-3 summarizes the amount of residential and non-residential development expected in each existing water district and in each potential new service area. The table also identifies the water source, either the Village of Stillwater or City of Mechanicville, which would serve the potential users. The methodology for preparing the buildout analysis is described in Appendix A.

Table 3.6-3: Growth in Water Service Areas

Water Service Area	Additional Dwelling Units	Additional Non-Residential Building Square Footage	Water Source
Water District #1	84	317,374	Village of Stillwater
Water District #3	97	0	City of Mechanicville
Water District #4	37	939,371	City of Mechanicville
Water District #5	0	10,519	Village of Stillwater
Existing Water District Subtotal	218	1,267,264	--
Route 4 Service Area	24	195,894	Village of Stillwater
Viall Avenue Service Area	297	11,755	City of Mechanicville
Route 67 Service Area	91	281,012	City of Mechanicville
Potential New Service Area Subtotal	412	488,661	--
TOTAL	630	1,755,925	--

Based on the buildout analysis and the above table, areas within the Town that are currently or potentially served by the Village of Stillwater water supply could see up to 108 new residential units and 523,873 SF of non-residential development, including an estimated 84 residential units and approximately 327,900 SF of non-residential development within Water Districts #1 and #5. The Village of Stillwater has essentially no reserve capacity in its water system, since it is already producing at a rate that exceeds its safe yield in order to meet its current average daily demand. Thus, the Village would not even be able to serve existing properties within the water

districts without capital improvements to augment its production capacity. Alternatively, the Town of Stillwater would need to pursue other sources of water to service the remaining properties within the districts, as well as users in the potential new service areas.

Areas currently or potentially served by the City of Mechanicville water supply could see up to 522 new residential units and 1,242,657 SF of non-residential development, including 134 residential units and 939,371 SF of non-residential development within Water Districts #3 and #4. Additional water district users would require between approximately 120,737 gpd and 145,537 gpd of water, depending on the flow rate used for single-family homes. As mentioned earlier, the City of Mechanicville has a reserve water capacity of approximately 150,000 gpd, which is very close to the additional amount of water that could be needed within Water Districts #3 and #4. Very little reserve capacity would remain to service users in the Viall Avenue Service Area or the Route 67 Service Area. The Town of Stillwater would need to investigate alternative sources of water, or the City of Mechanicville would need to undertake capital improvements to augment its water production.

The Water Supply Report included in Appendix C provides detailed calculations of estimated water demand for the Town's potential residential and non-residential buildout.

Cost Considerations

The Water Supply Report includes construction budgets that estimate the cost of constructing the distribution infrastructure required to service each of the potential service areas. The construction budget for the Route 4 Service Area is ~$2,078,000, for the Viall Avenue Service Area it is estimated at ~$4,277,000, and for the Route 67 Service Area it is $1,041,100. Financing scenarios were developed to finance the construction costs for each of the potential service areas. The amount of non-residential water demand was converted into an "equivalent dwelling unit" (EDU) factor for the purpose of evaluating financing scenarios. The overall cost per EDU in each service area was then calculated, based on the total residential and non-residential water demand in each area. Two different costs per EDU were developed, one based on a 200-gpd flow and one based on a 400-gpd flow. The debt retirement calculations assume a 30-year bond period at 5% interest.

The following tables summarize the different costs per EDU for each potential service area. Details about the calculations are provided in Appendix C.

Table 3.6-4: Route 4 Service Area Cost

	Scenario 1 (400-gpd flow)	Scenario 2 (200-gpd flow)
Total Project Cost	$2,078,000	$2,078,000
Estimated Annual Cost per EDU (including O&M and usage)	$2,733	$1,544

Table 3.6-5: Viall Avenue Service Area Cost

	Scenario 1 (400-gpd flow)	Scenario 2 (200-gpd flow)
Total Project Cost	$4,277,000	$4,277,000
Estimated Annual Cost per EDU (including O&M and usage)	$1,430	$793

Table 3.6-6: Route 67 Service Area Cost

	Scenario 1 (400-gpd flow)	Scenario 2 (200-gpd flow)
Total Project Cost	$1,041,100	$1,041,100
Estimated Annual Cost per EDU (including O&M and usage)	$1,060	$531

The NYS Comptroller's Office annually establishes an *Average Estimated Costs for County and Special District Improvement Districts*. The NYS Comptroller's approval is required for the establishment of a special district when municipal borrowing is involved and the cost to "a typical one or two family home" exceeds the average estimated cost as published by the Comptroller. This cost threshold is typically utilized a method of determining the "affordability" or cost feasibility of a project, although projects exceeding this average cost can be constructed.

Based on the buildout projections and the financing scenarios summarized above, the Route 4 Service Area is not considered viable due to high costs. With few residential units projected in the service area and an estimated cost of over $2 Million, the cost per EDU is excessively high with respect to the 2008 Comptrollers average of $613 per EDU. The Viall Avenue District is marginally affordable at $793 per EDU. The Route 67 District does fall below the Comptroller's threshold and judge to be feasible form a cost perspective.

3.6.3 Proposed Mitigation

The provision of water service in the Town is typically initiated with the establishment of a special district as specified in NYS Town Law (Articles 12/12A) and as further regulated by the NYS Comptroller. Establishment of new water facilities can be initiated by the Town or a private party. When the Town initiates this process, initial funding for the district formation and the improvements is typically initiated through some borrowing practice and a tax levy (or capital charge) and the delivery and maintenance of the district is funded through the imposition of a user fee. In the case of a privately sponsored project, the project sponsor will seek the approval of the formation of the district, construct the facilities, and dedicate the facilities to the Town for operation. The capital costs are absorbed by the project sponsor and passed along or recovered through the sale cost of the development benefiting from the facilities. In either case those benefiting from the establishment of the new facilities bear the cost of constructing and maintaining the facilities. Therefore mitigation is not necessary.

It is envisioned that any of the three (3) new service areas described in the Water Supply Report will be constructed when a combination of market forces or public demand create significant

demand for water service. This is also influence by environmental considerations and the viability of providing water to individual users through individual on-site wells.

3.7 Wastewater Collection and Treatment Systems

This section describes the existing wastewater infrastructure within Stillwater. This section also evaluates the potential impacts of projected growth within Stillwater over the buildout period with respect to current infrastructure and future needs. Proposed mitigation measures, if necessary, are described.

3.7.1 Existing Conditions

The Town of Stillwater does not operate any wastewater treatment facilities. The southern portion of the Town of Stillwater, with the exception of the Village of Stillwater, is within the Saratoga County Sewer District No. 1 (SCSD) as shown on Figure 3.7-1. The SCSD within the Town of Stillwater extends from the Hudson River west to Saratoga Lake. Properties within the SCSD, if permitted, can discharge wastewater to the SCSD collection and treatment facilities.

Within the SCSD, the Town of Stillwater administers four sewer districts, designated as Sewer Districts No. 1, No. 2, No. 3 and No. 4, as shown on Figure 3.7-1. In addition to Town sewer districts which convey wastewater to the SCSD or Village of Stillwater wastewater treatment plants, properties within the Town dispose of wastewater through private connections to the SCSD or the Village of Stillwater wastewater collection systems or through individually owned and maintained wastewater disposal systems.

SCSD Wastewater Collection Facilities

Two areas of the Town of Stillwater are served by the SCSD collection system: the western portion of the Town adjacent to Saratoga Lake and the southeastern portion just west of the Hudson River. Properties along the eastern shore of Saratoga Lake which are serviced by the wastewater facilities are within the SCSD boundaries, not within Town Sewer Districts. The SCSD wastewater collection facilities located just west of the Hudson River include gravity sewers and force mains, along with the Riverside I Pump Station located on NYS Route 4 and the Riverside II Pump Station located on Mulberry Avenue.

SCSD Wastewater Treatment Facility

The SCSD operates a 21.3-mgd wastewater treatment facility located off of NYS Route 4 in the City of Mechanicville. The wastewater treatment facility receives flows from a number of municipalities in Saratoga County and is regulated under New York State Department of Environmental Conservation State Pollution Discharge Elimination System (SPDES) Permit Number 002-8240 with discharge to the Hudson River.

Figure 3.7-1 Existing Sewer Districts

The SCSD wastewater treatment facility currently has a reserve capacity of 8.3 mgd, which is expected to satisfy the short-term needs of the LFTC and other approved projects within the County's service area. According to the report prepared for the Saratoga County Economic Development Corporation by C.T. Male Associates, "Water and Sewer Service Feasibility Report, Luther Forest Technology Campus", dated October 17, 2002, there is sufficient land area to further increase the capacity of the plant if warranted.

The principal source of future wastewater flows to the SCSD wastewater treatment facility will be the LFTC and preliminary projections indicate that flows may reach 10 mgd over the next 25 years.

Town Sewer Districts

As previously stated, the Town of Stillwater currently administers four sewer districts, designated as Sewer Districts No. 1, No. 2, No. 3 and No. 4. Each of these is described below.

Sewer District No. 1

The Town of Stillwater Sewer District No. 1 generally lies in the southeastern portion of the Town and encompasses properties along Castle Drive. Approximately 79 residential properties are included within this District.

The Stillwater Sewer District No. 1 is serviced by a series of 8-inch diameter gravity sewers which convey wastewater east to a pump station. The pump station and force main discharge wastewater north to the Village of Stillwater municipal system, which is eventually conveyed to the Village of Stillwater Wastewater Treatment Facilities.

Sewer District No. 2

The Town of Stillwater Sewer District No. 2 generally lies in the southeastern portion of the Town and encompasses properties along Gurba Drive and Kellogg Road.

Wastewater is collected from 65 sewer connections via existing gravity sewer mains and is conveyed to a Town-owned pumping station known as the Gurba Estates Pump Station. Wastewater from the station is pumped through approximately 8,000 feet of 6-inch diameter force main along the abandoned railroad bed which runs parallel to Route 4. The force main discharges into the SCSD collection system at a gravity sewer manhole on Mulberry Avenue upstream of the Riverside II Pump Station. Wastewater from Sewer District No. 2 is treated at the SCSD Wastewater Treatment Facilities.

Sewer District No. 3

The Town of Stillwater Sewer District No. 3 lies in the southeastern portion of the Town and encompasses the Revolutionary Heights Planned Development District (RHPDD) and the property of Mr. William Carley (WC). PHPDD and WC are currently vacant properties.

Engineers for the RHPDD are in the process of designing wastewater collection facilities to service the RHPDD. Upon their construction, they will be conveyed to the Town of Stillwater at no cost and eventually to the SCSD. Wastewater from Sewer District No. 3 will be collected and conveyed to the sanitary sewer system servicing Sewer District No. 2 with eventual conveyance to the Gurba Estates Pump Station. RHPDD reportedly will include 140 single family homes.

Sewer District No. 4

The Town of Stillwater Sewer District No. 4 lies in the southeastern portion of the Town and encompasses Hillside Colony Mobile Home Park (HCMHP). HCMHP fronts Lake Road in the Town of Stillwater. Ultimately, 366 mobile homes are permitted to occupy the park, with current occupancy at 188 mobile homes. Wastewater is currently collected through gravity sewers and is treated on-site at an existing activated sludge wastewater treatment plant located at the southern portion of the park. Construction of the wastewater facilities were completed around 1970.

The owner of the wastewater treatment plant is under consent order from the NYSDEC to address SPDES permit non-compliance. The Town of Stillwater has formed Sewer District No. 4 to include the HCMHP property and permit the eventual conveyance of wastewater to the Town of Stillwater Sewer District No. 3. HCMHP has constructed a gravity sewer interconnection to the infrastructure planned to service Sewer District No. 3.

When approved by the Town of Stillwater and the SCSD, wastewater from HCMHP would be diverted to the Town of Stillwater wastewater conveyance system and eventually to the SCSD collection and treatment systems. The treatment plant servicing the HCMHP would then be abandoned. The SCSD has approved the conveyance of wastewater discharge from the HCMHP to the SCSD.

The HCMHP is also currently undertaking an I/I reduction project within their sanitary sewers. Engineers for HCMHP estimate the post improvement peak hourly flow at 219-gpm. The Town of Stillwater and SCSD require verification of I/I reduction prior to connection to their systems.

Other Sewer Service Areas

Additional sewer service within the Town is provided by out-of-district contracts or individual user contracts as well as private arrangements, as described below.

Riverside Neighborhood

The Riverside neighborhood in the southeastern portion of the Town is within the SCSD, but not within a Town Sewer District. There are approximately 168 connections within this area, which flow to the Riverside I Pump Station located on NYS Route 4. Wastewater is pumped from the Riverside I Pump Station via approximately 2,800 feet of 6-inch diameter force main to a gravity sewer manhole on East Street. Approximately 2,000 feet of gravity sewers convey wastewater from East Street to the SCSD Riverside II Pump Station on Mulberry Avenue.

Many of the homes within the Riverside neighborhood are served by old sewer pipes which are subject to I/I. The Riverside I Pump Station has a reported pumping rate of 300 gpm.

Turning Point Subdivision

The Turning Point Subdivision is located in the southeastern portion of the Town between County Route 75 and Brickyard Road and includes properties along Finish Line Court, Battery Boulevard, Musket March and Sirchia Road. The Turning Point Subdivision is within SCSD, but not within a Town Sewer District. There are approximately 299 approved connections within the subdivision.

Wastewater from the Turning Point Subdivision is collected by a gravity collection system. The gravity sewer leaves the southeastern portion of the subdivision and crosses Brickyard Road to Mulberry Avenue. At Mulberry Avenue, the gravity sewer runs north and connects to the SCSD Riverside II Pump Station.

Saratoga Lake Service Area

Properties along the eastern shore of Saratoga Lake within the Town of Stillwater are serviced by the SCSD. Wastewater from the included properties is directed to a series of gravity sewers and pump stations along NYS Route 9P. These properties are not within a Town Sewer District.

Planned Facility Improvements

The Town of Stillwater is undertaking a project to improve Town and SCSD wastewater collection and pumping system infrastructure to facilitate the acceptance of the additional flow from Sewer Districts No. 3 and No. 4. The Gurba Estates pump station owned by the Town of Stillwater and the Riverside II pump station owned by SCDC are being replaced with larger-capacity pumps stations sized for the increased flow from the two districts. The existing 6-inch force main from Riverside II is also being replaced with a 10-inch diameter force main to accommodate the increased pump rate from Riverside II. The construction of the sanitary sewer improvements are expected to be complete by the fall of 2007.

Potential Sewer Service Areas

In association with the buildout projections established for the Town of Stillwater, select areas of the Town were identified that are likely to have sewer service within the next ten years. The areas were defined based upon input and direction from the Town's GEIS Steering Committee and the Town's Water Superintendent and also by evaluating topography, proximity to existing service areas, existing land use patterns, and the anticipated growth. The service areas were generally selected by providing sanitary sewer service to the portions of the Town that currently have municipal water service but not sanitary sewer service and also by extending sewer service to some areas projected by the GEIS Water Supply Evaluation (see Appendix C) to have water service within the next ten years. The potential sewer service areas are shown on Figure 3.7-2.

Figure 3.7-2 Potential Sewer Service Areas

Vacant properties that will be subdivided in the future will require site-specific design of the sanitary sewer system servicing the subdivision.

VanNess Road Service Area

The VanNess Road Service Area generally extends west from the Sewer District No. 1 boundary on VanNess Road to County Route 75. Wastewater facilities servicing the area would consist of approximately 10,500 feet of gravity sewer main along Kellogg Road, VanNess Road, Flike Road and Brickyard Road. The wastewater collection system would provide municipal sewer service to a portion of Stillwater Water District No. 4 which is currently unsewered, as well as to a large area of a Low Density Residential Development District on VanNess Road. Wastewater from this service area would flow entirely by gravity to the existing Gurba Estates Pump Station and then to the SCSD system.

Viall Avenue Service Area

The Viall Avenue Service Area generally extends north on Viall Avenue to Graves Road and would consist of approximately 8,500 feet of gravity sewer main. The service area would provide municipal sewer to all of the Town of Stillwater Water District No. 3 as well as additional Low Density Residential District lots. Wastewater from this service area would be conveyed by gravity sewers to an existing SCSD sanitary sewer manhole on Saratoga Avenue.

Brickyard Road Service Area

The Brickyard Road Service Area generally extends north from the City of Mechanicville and would consist of approximately 8,500 feet of gravity sewer, 5,500 feet of forcemain and three pump stations along Brickyard Road. Wastewater from this service area would be conveyed to the SCSD Riverside II Pump Station.

The Brickyard Road Service Area includes the majority of Water District No. 4 with the balance of Water District No. 4 serviced by the VanNess Road Service Area.

Route 4 Service Area

The Route 4 Service Area generally extends south from the Village of Stillwater to the northern limits of the Riverside neighborhood. The collection system servicing the Route 4 Service Area would include approximately 19,000 feet of gravity sewer, 7,000 feet of forcemain and three pump stations. Wastewater from this service area would be conveyed to the SCSD Riverside I Pump Station in the Riverside neighborhood.

A capacity evaluation of the Riverside I Pump Station and associated force main would be necessary prior to accepting flow from the Route 4 Service Area. This evaluation and the presentation of any costs associated with necessary improvements to the Riverside I Pump Station and associated force main are not part of this wastewater evaluation.

3.7.2 Potential Impacts and Mitigation Measures

Projected Wastewater Flows

The buildout analysis completed as a component of the DGEIS was utilized as the basis for estimating wastewater flows from future users within existing service areas and the potential service areas.

Existing Service Areas

The first step in projecting future wastewater flows was to forecast buildout within areas already serviced with sanitary sewer. Tables 3.7-1 and 3.7-2 summarize the residential and non-residential buildout in existing sewer service areas, respectively. For residential uses, the NYSDEC Design Standards for Wastewater Treatment Works estimate the design flow from a 3-bedroom single family home to be 400-gpd. The typical usage for single family homes in the Town of Stillwater is 200-gpd. Therefore, estimates using both rates are shown in the table. For office buildings, the NYSDEC Design Standards for Wastewater Treatment Works suggest a design average daily flow of 0.1 gpd per square foot; however, please note that the wastewater generation may vary based upon the actual property use and occupant.

Table 3.7-1: Projected Residential Buildout and Wastewater Flow Generation in Existing Service Areas

		Estimated Flow Generation (GPD)	
Existing Sewer Service Area	Additional Dwelling Units per Buildout Analysis	At 400-gpd Design Flow	At 200-gpd Typical Flow
SCSD #1 (east of Saratoga Lake)	24	9,600	4,800
SCSD #1 (Riverside neighborhood)	55	22,000	11,000
SCSD #1 (Turning Point)	2	800	400
Sewer District #1	0	-	-
Sewer District #2	3	1,200	600
Sewer District #3	12	4,800	2,400
Sewer District #4	50	20,000	10,000

Table 3.7-2: Projected Non-Residential Buildout and Wastewater Flow Generation in Existing Service Areas

Existing Sewer Service Area	Additional Non-Residential Building Square Footage per Buildout Analysis	Estimated Flow Generation (GPD)
SCSD #1 (east of Saratoga Lake)	91,500	9,150

SCSD #1 (Riverside neighborhood)	204,300	20,430
SCSD #1 (Turning Point)	8,000	800
Sewer District No. 1	0	0
Sewer District No. 2	0	0
Sewer District No. 3	0	0
Sewer District No. 4	0	0

Based on the above buildout projections and wastewater generation estimates, the following total flow estimates can be expected within existing sewer service areas:

Table 3.7-3: Total Estimated Flow Generation in Existing Service Areas

Existing Sewer District	Residential Flow Generation (GPD)	Non-Residential Flow Generation (GPD)	Total Flow Generation (GPD)
SCSD #1 (east of Saratoga Lake)	4,800 – 9,600	9,150	13,950 – 18,750
SCSD #1 (Riverside neighborhood)	11,000 – 22,000	20,430	31,430 – 42,430
SCSD #1 (Turning Point)	400 – 800	800	1,200 – 1,600
Sewer District #1	0	0	0
Sewer District #2	600 - 1,200	0	600 - 1,200
Sewer District #3	2,400 – 4,800	0	2,400 – 4,800
Sewer District #4	10,000 – 20,000	0	10,000 – 20,000

Potential New Service Areas

As described above, there are four areas that are considered likely to have sewer service over the 10-year buildout period based on the current availability of municipal water service and the potential for municipal water service to be expanded (see Section 3.6 of the GEIS). The four areas are VanNess Road, Viall Avenue, Brickyard Road, and Route 4.

Table 3.7-4 presents a summary of the ultimate number of residential users in each potential service area projected by the buildout analysis and the associated flow generation. The ultimate number of residential users is defined as the existing homes within each service area plus the additional single family homes predicted by the buildout analysis.

The NYSDEC Design Standards for Wastewater Treatment Works estimate the design flow from a 3-bedroom single family home to be 400 gpd. The typical usage for single family homes in the Town of Stillwater is 200 gpd, so the table includes projections using both factors.

Table 3.7-4: Residential Dwelling Units and Estimated Flow Generation within Potential Service Areas

		Estimated Flow Generation (GPD)	
Potential Service Area	Dwelling Units(1)	At 400-gpd Design Flow	At 200-gpd Typical Flow
VanNess Road Service Area	155	62,000	31,000
Viall Avenue Service Area	254	101,600	50,800
Brickyard Road Service Area	95	38,000	19,000
Route 4 Service Area	268	107,200	53,600

(1) Existing dwelling units plus additional dwelling units projected by the ultimate buildout analysis

Table 3.7-5 presents the total estimated non-residential buildout and estimated flow generation within the four potential sewer service areas. A design average daily flow rate of 0.1 gpd per square foot was used for office buildings. Please note that the wastewater generation may vary based upon the property use and occupant.

Table 3.7-5: Non-Residential Building Square Footage and Estimated Flow Generation within Potential Service Areas

Potential Service Area	Total Non-Residential Building Square Footage per Buildout Analysis (1)	Estimated Flow Generation (GPD)
VanNess Road Service Area	0	0
Viall Avenue Service Area	115,885	11,589
Brickyard Road Service Area	436,706	43,671
Route 4 Service Area	86,551	8,655

(1) Existing non-residential building square-footage plus additional non–residential building square footage projected by the ultimate buildout analysis.

Table 3.7-6 summarizes the total estimated buildout and wastewater generation within the potential sewer service areas, based on existing development and future buildout potential.

Table 3.7-6: Potential Sewer Service Area Wastewater Flow Summary

Potential Service Area	Residential Flow Generation (GPD)	Non-Residential Flow Generation (GPD)	Total Flow Generation (GPD)
VanNess Road Service Area	31,000 - 62,000	0	31,000 - 62,000
Viall Avenue Service Area	50,800 – 101,600	11,589	62,389 – 113,189
Brickyard Road Service Area	19,000 – 38,000	43,671	62,671 – 81,671
Route 4 Service Area	53,600 – 107,600	8,655	62,255 – 116,255

It is anticipated that sanitary sewer infrastructure could be expanded to serve the four potential service areas within the Town of Stillwater, and that all wastewater from the new service areas would be directed to the Saratoga County Sewer District Wastewater Treatment Facility, which is expected to have adequate capacity to service all potential service areas. The costs of providing the needed infrastructure are presented below.

Cost Considerations

Based on the above buildout and flow generation projections, an estimated budget and the resulting probable per-user user cost of constructing the wastewater collection infrastructure were derived for each potential service area. The Wastewater Report (see Appendix D) includes construction budgets that estimate the cost of constructing the collection infrastructure required to service each of the potential service areas. Financing scenarios were developed to finance the estimated construction costs for each of the potential service areas. The amount of non-residential water demand was converted into an "equivalent dwelling unit" (EDU) factor for the purpose of evaluating financing scenarios. The overall cost per EDU in each service area was then calculated, based on the total residential and non-residential water demand in each area. For all potential service areas except the VanNess Road area, two different costs per EDU were developed, one based on a 200-gpd flow and one based on a 400-gpd flow. The VanNess Road area includes residential development only and therefore the EDU equals the actual projected number of residential units. The debt retirement calculations assume a 30-year bond period at 5 % interest.

Table 3.7-7 presents the estimated budget, number of EDUs, and cost per EDU for each potential service area. Additional details about the calculations are provided in Appendix D.

Table 3.7-7: Estimated User Costs of Collection Infrastructure Improvements

Service Area	#1	#2	#1	#2	#1	#2
Vanness Rd	$1,218,600	--	155	--	$706	--
Viall Ave	$1,570,400	$1,570,400	283	312	$555	$522

Brickyard Rd	$1,979,100	$1,979,100	204	327	$826	$521
Route 4	$4,470,500	$4,470,500	290	311	$1,198	$1,130

The NYS Office of the State Comptroller has an established threshold for annual user costs for a typical single-family home, above which approval of the State Comptroller is necessary for district establishment. The 2007 threshold for Town districts is $568 per home. Several of the annual user cost scenarios presented in Table 3.7-7 are above the State Comptroller threshold. The annual user costs presented are based upon project financing through conventional means. While the annual user costs may be considered high, they should be reevaluated at the project inception based upon availability of grant and/or low interest loan funding, which could lower the per-user costs to below the State Comptroller threshold.

Based on the buildout analysis for the *Stillwater Comprehensive Plan* and the available capacity within the SCSD Wastewater Treatment Facility, it appears that extension of sewer service to new service areas is feasible, depending on the ultimate user costs of providing the collection infrastructure.

3.8 Community Services

This section examines community services provided within the Town of Stillwater. The potential impact of the project growth within Stillwater to these services is considered and proposed mitigation measures, if any, are described.

3.8.1 Existing Conditions

Law Enforcement Services

There are presently four police agencies providing the full range of law enforcement services within the Town of Stillwater. These agencies represent the local, county, state and federal levels of government and include the Stillwater (Town) Police Department, the Saratoga County Sheriff's Office (County Sheriff) , the New York State Police (NYSP), and Park Rangers at the Saratoga National Historical Park. Brief description of each agency follows.

Stillwater Police Department

The Stillwater Town Police Department (Town Police) is located in the Town of Stillwater. It is a part time operation with officers routinely on patrol during the day and evening shifts.

The Town Police Department is currently staffed by six (6) regular and seven (7) alternate officers who alternate in order to provide coverage during vacations, special events, and sick leave. There is also one vacant position on the day shift. The ranks

include one Chief, 2 Sergeants, and 11 officers. All officers, both regular and alternate, are fully certified by the NYS Bureau for Municipal Police. There is one part time civilian position which provides administrative support. The Town Police Department operates two (2) patrol vehicles and it also has one (1) four wheeled drive (4WD) vehicles which it uses for both patrol and specialized operations.

Coverage by Town Police patrols is routinely provided from Monday – Thursday to town residents during days and evenings (from Midnight – 7AM coverage is provided by the NYSP/County Sheriff). On Friday - Saturday Town Police coverage ends from 2AM – 3AM until the start of the day shift during which time the other departments in the town provide coverage. On Sunday the Town Police Department focuses on specialized patrols e.g. seat belt enforcement, DWI road checks, and speed enforcement.

The Town Police Department's annual budget (2007) is approximately $200,000 with personal services accounting for the largest share of the budget. Funding is derived from Town property taxes, State/Federal grants, and Saratoga County under the provisions of the STOP DWI program.

If requested, the Town Police will work jointly with other police agencies providing services in the town, as well as the Mechanicville Police Department.

Saratoga County Sheriff's Office

The Saratoga County Sheriff's Office (County Sheriff) maintains a Resident Deputy Station at Village Hall in the Village of Stillwater. As of 2006, there were 3 Deputies assigned to the Town of Stillwater by the County Sheriff. In effect, a deputy is on duty in Stillwater each shift, every day of the year. Calls for police services, fire services and EMS services places via landline for 911 are dispatched by the Sheriff's Office.

The County Sheriff has a variety of specialized services which it does employ in Stillwater. These can take the form of a Sheriff's Office only initiative, or it can be a cooperative undertaking with other departments. Some of these services include K9, navigation patrol, criminal investigation, accident reconstruction, and commercial vehicle enforcement.

New York State Police

The following Information regarding the New York State Police was compiled during the Stillwater Comprehensive Plan (2006) planning process. Requests for more current information to the New York State Police were not responded to.

Coverage of Stillwater is provided by the New York State Police (NYSP) from its station located on State Route 9 in Malta. Stillwater falls within NYSP Post #718 which includes adjoining towns as well. The post is covered 24 hours a day 7 days a week. The service area for this post can extend 50 miles from one end to the other based on staffing, with response times lengthening as the post's size increases.

The NYSP operates a Bureau of Criminal Investigation at the Malta Station whose members can be called upon in cases of serious crimes or other incidents. The investigative, support/technical and patrol resources are available in the event these are needed in Stillwater. These resources are available from Division Headquarters in Albany, and from Troop Headquarters in Loudonville.

National Park Service Ranger

The following Information regarding the National Park Service Rangers was compiled during the Stillwater Comprehensive Plan (2006) planning process

In the very northeast corner of Stillwater is the Saratoga National Historical Park which is operated by the National Park Service of the United States Department of the Interior. The Park's Fee Boundary includes over 2,700 acres of federally protected lands. Policing of this property in the town is the responsibility of Park Rangers.

There are currently 3 full time Park Rangers assigned to policing the Park; they are typically on duty 12 hours per day, although that can increase depending on local circumstances and events scheduled at the Park. On occasion there will be 1-5 part time officers assigned to the Park for special events. The Rangers are on duty throughout the year.

The Rangers provide a variety of services to protect its more than 100,000 annual visitors and Park resources. These take the form of daily patrols, investigating violations, providing education about preserving lands and archeological matters, assisting lost/injured visitors, and maintaining safety through traffic monitoring and foot patrols, and traffic control at the many special events held each year at the Park.

Fire and Emergency Services

The Town of Stillwater is served by 2 volunteer fire departments and 1 rescue squad. In addition, under certain conditions, fire/EMS services are provided through mutual aid agreements with agencies in neighboring towns in Saratoga County as well as other nearby counties.

Newland Wood Fire Company

The following Information regarding the Newland Wood Fire Company was compiled during the Stillwater Comprehensive Plan (2006) planning process. Requests to the Newland Wood Fire Company for more current information were not returned

The Newland Wood Fire Company is referred to as the Stillwater Fire Company. It is located at Village Hall on School Street in the Village of Stillwater. Its primary jurisdiction is the village itself; however, under Mutual Aid it can respond to incidents throughout the town and in fact across the Hudson River in both Washington and Rensselaer counties.

There are presently 35 volunteer members of the Department. New member recruitment is basically limited to a 2 mile radius from the School Street facility so that timely responses to incidents can be assured. In addition, there is a Junior Program for persons 16-17 years of age. Junior members have limited responsibilities until they reach their 18th birthday at which time they can become full fledged members. Typical response time to incidents during the evenings and nights is in the vicinity of 3 minutes. During days the response times are between 3-5 minutes on average. The Department has 3 fire trucks and a 75 HP motor boat which is used primarily on the Hudson River. The Department's annual budget is approximately $20,000-$30,000 with additional funding from the Legislature/Governor's Office. This latter funding is used primarily for equipment acquisition.

Arvin Hart Fire Company

The following Information regarding the Arvin Hart Fire Company was compiled during the Stillwater Comprehensive Plan (2006) planning process. Requests to the Arvin Hart Fire Company for more current information were not returned.

The Arvin Hart Fire Company provides response throughout the Town from one of its four strategically located stations. These 4 stations are as follows:

- Station 1 – Considered the Central Station, this station is located on Campbell Road on the outskirts of the Village of Stillwater.
- Station 2 – Located on George Thompson Road on the western edge of the Town
- Station 3 – This station is located on Route 423 in the mid-section of the town.
- Station 4 – This station is located in the Riverside section of town, in the southeast area which is close to the Mechanicville city line.

Arvin Hart Fire Company has 55 active members between the ages of 18 and 88, all of whom are unpaid volunteers. The Department, similar to Newland Wood, has a Junior Program. The department has five (5) engines, one rescue truck, a 4WD vehicle, two (2) utility vehicles and an air boat. Mutual aid agreements ensure coverage in those incidents requiring supplemental resources.

Primary dispatch is through the Sheriff's Communications Center. In the event of a power outage at the Saratoga Sheriff's Office the Arvin Hart Company can itself perform dispatch functions. The new station on Campbell Road will provide for improved communications capability.

The Company responds to motor vehicle accidents where the Rescue Squad is likewise responding and to other incidents as circumstances dictate and as so advised by dispatch personnel. Typical response time is approximately two (2) minutes (i.e. from the time the

call is received to the time of arrival at the scene). Response times tend to increase corresponding to increased distance from the squad's station.

In a typical year Arvin Hart handles somewhere between 150 to 200 calls of all types.

Stillwater Rescue Squad

The following Information regarding the Stillwater Rescue Squad was compiled during the Stillwater Comprehensive Plan (2006) planning process. Requests to the Stillwater Rescue Squad for more current information were not returned.

The Stillwater Ambulance Fund, Inc. is commonly known as the Stillwater Rescue Squad. The Stillwater Rescue Squad station is located on North Hudson Ave. (Route 4) in the village of Stillwater. The Squad's jurisdiction encompasses the second largest township in Saratoga County in terms of square mileage.

The Squad is staffed by two paid, full time EMTs who are on duty at the station from 6:00 AM – 6:00 PM, Monday-Friday. From 6:00 PM – 6:00 AM (Monday-Friday) the squad relies upon volunteers. Volunteers are also exclusively used on weekends. At the present time there are 15 volunteers in the Squad who responded to 550-600 incidents per year during each of the past several years. There are two vehicles for incident response purposes.

Calls from the public for rescue services are processed through the Sheriff's 911 Center. It contacts the Rescue Squad with the specifics about the incident and within 5 minutes a unit responds to the scene. Routinely both Fire and Rescue respond to calls involving structure fires/motor vehicle accidents, regardless of which agency initially receives the alert from the 911 Center.

The 911 Center will know if a Mutual Aid situation exists as it closely monitors the status of Stillwater Rescue Squad mobile units. If such a condition does exist, the 911 Center will contact an "outside agency" to handle the incident when Stillwater's units are already committed to other calls. Stillwater Rescue personnel are certified EMTs; they do not have paramedic level training/certification/equipment. The 911 Center will know if a situation requires the presence of a paramedic. If so, a paramedic from a neighboring agency will be contacted and will respond to the scene in his/her own vehicle, or the paramedic will be picked up by Stillwater Rescue.

Saratoga County EMS

The following Information regarding the Stillwater Rescue Squad was compiled during the Stillwater Comprehensive Plan (2006) planning process.

Saratoga County EMS Council provides coordinated mutual aid benefits to each Corps in Saratoga County. Saratoga County EMS Council is charged with coordinating

Emergency Medical Services in Saratoga County. Every ambulance service provider in the County holds membership in the EMS Council.

The Saratoga County EMS Mutual Aid ensures that emergency service is dispatched if a request for assistance is not met by the local EMS Corps. The design of the plan prevents geographic depletion of resources by mapping multiple alternative ambulance preferences.

School Districts

Stillwater is serviced by four school districts: the Stillwater Central School District, the Mechanicville City School District, the Shenendehowa Central School District, and the Schuylerville Central School District. The Stillwater Central School District is the primary school district for the Town and the entire Village. The following Information regarding the community's schools was compiled during the Stillwater Comprehensive Plan (2006) planning process

Stillwater Central School District

Public education in Stillwater is provided primarily by the Stillwater Central School District. The Stillwater Central School District also serves portions of the Towns of Saratoga and Easton. There are three schools in the Stillwater Central School District: Stillwater Elementary School, Stillwater Middle School, and Stillwater High School. The school district enrolls about 1,275 students in grades K-12. The district's comprehensive educational program includes an award-winning Character Education Program, a variety of athletic and co-curricular activities, and offers a Distance Learning Program through Hudson Valley Community College in which senior students may earn 23 college credits. The district operates with an approximate $18 million budget and employs over 225 people.

Mechanicville City School District

The southeastern corner of Stillwater is within the Mechanicville Central School District. There are three schools in the Mechanicville Central School District: Mechanicville Elementary School, Mechanicville Middle School, and Mechanicville High School.

Shenendehowa Central School District

The southwest corner of Stillwater is within the Shenendehowa Central School District. There are eleven schools in the District: Tesago Elementary School, Skano Elementary School, Orenda Elementary School, Okte Elementary School, Karlgon Elementary School, Chango Elementary School, Arongen Elementary School, Koda Middle School, Gowana Middle School, Acadla Middle School, and Shenendohowa High School.

Schuylerville Central School District

The northeast corner of Stillwater is within the Schuylerville Central School District. There are two schools in the District: Schuylerville Elementary School and the Schuylerville Junior-Senior High School.

Library Services

The Town of Stillwater is provided with library services from the Stillwater Free Library on Hudson Avenue in the Village of Stillwater and the Media/Library Center on the campus of the Stillwater School Complex. The Saratoga National Historical Park maintains a library on the park site.

Stillwater Free Library

The Stillwater Free Library, under the guidance of its Director and its Board of Trustees, is a community resource for reference services, young adult books, preschool story times, book clubs for the youth and adults, video tapes, newspapers and magazines, Internet access, books on tape, community bulletin board, large type books, summer reading program, bestsellers, poetry, and more. The Stillwater Free Library participates in an inter-loan library program allowing users access to a much broader range of resources. It also provides wireless internet access, five (5) public computers, DVDs, and an Infant Literacy Program.

During 2006 the Stillwater Free Library circulated 15,458 of its various holding to the public. Total inventory at the end of the year included 9,579 printed materials for young adults/adults, 6,282 juvenile printed materials, 1,428 non-print/audiovisual holdings, and 2,033 “other” holdings for a total inventory in excess of 19,322 items of all types. The library was visited by 7,528 persons in 2006. A total of 72 special programs were offered that year with program attendance being 669 individuals. Currently the library has approximately 1,136 registered borrowers. The library was staffed by three (3) members, including the director, and is assisted by three (3) active volunteers and a host of others as needed.

Stillwater Central School
Middle/High School Library-Media Center

The Stillwater Middle/High School Library-Media Center is located on the second floor at the school complex on Routes 4 and 32. While technically “open to the public” the library is in fact a library primarily for the almost 1,300 students at the school. In addition to traditional library services, the library offers programs such as Pre-School Reading, skills development in preparing for the job market, data base training for staff and teachers, adult education classes, resource sharing with the Stillwater Free Library, book fairs and others. The library is a member of a five county regional organization which serves 31 school districts and which is run by BOCES.

3.8.2 Potential Impacts and Mitigation

Ten (10) year growth projections for the town estimate that the Stillwater could have approximately 600 new single family homes and up to 150,000 square feet of new commercial, office, retail, and industrial space constructed by 2017. It is also estimated that there could be and an additional 1,200-1,800 new residents. Various community service providers were provided this information, and were asked to please consider their capacity and/or requirement to provide sufficient coverage and services within the Town based on these projections.

Police Services

The New York State Police did not respond to notification of the Stillwater growth projections. The Saratoga County Sheriff provided information regarding existing coverage, staff, and equipment, but did respond to notification of the buildout analysis as well. The Stillwater Town Police Department provided information regarding existing coverage, staff, and equipment. The Town Police Department indicated that in order to provide necessary coverage over the next ten (10) year planning window, it would cost approximately $350,000 to $357,294 annually for 24 hour service with an all part time staff. In general, it is anticipated that as growth occurs, state, county, and local funds will be used to finance the increased needs for police protection as result of future growth.

Fire Services

Neither the Arvin Hart Fire Company nor the Newland Wood Fire Company responded to notification of the growth projections. However, it is anticipated that as growth occurs, funds will be used to finance the increased demand for fire services as result of future growth.

Emergency Services

For the purposes of this study, only the Stillwater Rescue Squad was contacted. However, they did not respond to notification of the buildout analysis. Regardless, it is anticipated that future growth will result in an increase in emergency service calls and emergency service provider needs. In order to recoup some of the cost of operating the Stillwater Rescue Squad, those receiving services can be billed by the Squad. In many cases one's insurance carrier will cover the cost of medical services provided; however, the recipient may pay some of the cost if there is a gap between the cost of the service and the portion covered by insurance. It is anticipated that as growth occurs, finances will be sought after to ensure adequate emergency service coverage.

Educational Services

For the purposes of this study, only the Stillwater Central School District was contacted. Currently, the Stillwater Central School District is at capacity. Any significant student population increase would necessitate the expansion of its existing facilities. The

Stillwater Central School District is a centralized facility, and any expansion would require the acquisition of nearby land. It will be necessary for the Stillwater Central School District to secure funds for future growth related needs.

Library Services

For the purposes of this study, only the Stillwater Free Library was contacted. The key issue confronting the library is handicap accessibility and increased parking. However, the library has purchased an adjoining empty lot to rectify this. Regardless, the resources, demands and expectations of the Free Library are growing but the facility in which it is housed may not offer room for expansion. It will be necessary for the Stillwater Free Library to secure funds for its future growth related needs.

3.9 Parks & Recreation

This section examines the existing parks and recreation facilities within Stillwater. The potential impact of the projected growth within Stillwater to these resources is considered and proposed mitigation measures are described.

3.9.1 Parks & Recreation Existing Conditions

The Town of Stillwater completed an inventory of existing park and recreation facilities as a component of the Town's Comprehensive Plan. As a component of the GEIS the Town performed an assessment of the condition of these facilities and evaluated the parks and recreation needs. To undertake this task the Town established a working group of citizen representatives knowledgeable of local facilities and programming of recreational activities. The members of the working group conducted a roundtable discussion of issues concerning existing facilities, current usage, known deficiencies, and anticipated demands. Follow-up interviews were conducted with the Director of Building Planning and Development, the Town's Committee for Parks & Recreation, and the athletic director for Stillwater Central School, as well as various representatives of non-scholastic teams and sports clubs. These efforts resulted in the Recreation Needs Assessment presented in Appendix E, and are summarized herein.

Existing Recreational Facilities

Figure 3.9-1 Recreational Resources identifies the location of current and planned recreational facilities. Table 3.9-1 provides a summary of Stillwater's existing recreational facilities. The following is a description of existing and proposed facilities.

Table 3.9-1: Summary of Town's Recreational Facilities

Location	Size (acres)	Notes	Facilities					
			Baseball	Basketball	Football	Play-ground	Soccer	Volleyball
Existing Facilities								
American Legion		Multi-Use field needs renovation. Lacks parking and changing facilities	1		1		1	
Cambridge Court	6	New		2.5			1/2	1
Community Center	2.5	Indoor facilities		1	1	1		
Gurba North	4	Facilities degraded, property partially reverting to wetlands		1				
Riverside Veterans Park	2.5	Playground is new. Basketball and softball field need renovation. Additional parking is proposed.		1		1		

American Legion- The American Legion owns one multi-use field located at American Legion Road. The facilities are owned and managed by the American Legion and are used for a variety of sports throughout the year including football, soccer, baseball and softball. The condition of the field is poor. The facility also lacks parking and changing facilities.

Cambridge Court- Cambridge Court is a newly built neighborhood park completed in 2007 and is located on Cambridge Court. The site is approximately 6 acres and includes the following amenities: two (2) half-court basketball courts, one (1) half-field soccer field, one (1) sand volley ball court and playground equipment with swings and slides. The park serves the neighborhood in which it is located. It is not an adequate facility for organized team sports.

Gurba North - The site is located at Gurba Drive North and is approximately 4.06 acres in area some of which is wetland. There is a basketball court in poor condition on the site. The site is not large enough for adding facilities for team sports.

Riverside Veteran's Park - Riverside Veteran's Park is located on East Street in the Town of Stillwater. It is approximately 2.5 acres in area and consists of a playground with multi use jungle gym (including swings and a slide), a softball field, a basketball court and a Veteran's monument/memorial. The playground was recently refurbished with new children's play equipment, benches and picnic tables. The parking area has been expanded and paved. An irrigation system has been added to a portion of the park. The softball field and basketball court are still in poor condition. The softball field is used by

the girls' softball league for practices. This park could be improved by refurbishing the softball field and adding irrigation. If the basketball court is not used, this would also be a good location for a tennis court given that there is parking and residents throughout the Town can use the park. A comfort station is also needed at this facility.

Stillwater Community Center - The Community Center is located on Palmer Street on a 2.52 acre parcel. The Center is housed in the former Stillwater Elementary building and is operated by an independent not-for-profit organization. The Center is home to many community based organizations and activities including after school sports. A new playground has been added in front of the Center. A field in back of the Center is used for "Battle" football. However, the field is in poor condition. An indoor basketball court is used in the winter.

Figure 3.9-1 Recreational Resources

Planned Recreational Facilities

The following recreational facilities/sites are in various stages of planning and/or construction.

- The Boilerhouse Site - The Town has taken "temporary incidence of ownership" of 1.23 acres of land known as "Boiler House" located directly east of Riverside Veteran's Park. The Town received funds from the New York State Environmental Restoration Program (ERP) (a.k.a. Brownfields Program) and has largely completed site clean-up activities. The Town desires to convert the site to a park to support activities in the Riverside Veteran's Park. A concept plan for the site has been prepared.

- Glen Hollow Park - Glen Hollow Park is an undeveloped 6 acre property owned by the Town on Lake Road. Once built, it would be the only park facility on the west side of Town. Proposed facilities are a playground for ages 2-5 and another for ages 5-12, a basketball court, and a volleyball court. Parking and a comfort station are also proposed. The park would most likely be used by the surrounding neighborhoods. Since there will be parking, people may come from other areas in the Town to use the playgrounds.

Organized Recreational Activities

As a part of the *Recreational Need Assessment* (Appendix E) an evaluation of existing organized recreational activities was completed. Organized recreational activities include baseball, basketball, football, soccer, softball, and volleyball. These activities, their participation levels and location are briefly described below.

Youth baseball programs are provided by Stillwater Little League including T-ball teams. The program includes children from both Mechanicville and Stillwater. There are currently 245 players. Softball is a sport that is gaining in popularity. In 2006 there were approximately 165 players. Practices are held at the American Legion Field, Riverside Veteran's Park and the Decrescente Fields in Mechanicville. Adult softball is also a reported popular activity

Youth football is presented by Northeast Youth Football League. A total of 6 teams and 100 players are involved. In addition, there is a cheerleading team with about 30 participants.

Local basketball programs include an AAU league and a youth program. Practices and games are played at the Stillwater Community Center. There are 220 players and 22 teams.

Soccer continues to gain tremendous popularity. Soccer is played as both an indoor and outdoor sport. In 2006 there were 268 players, 12 coaches, 6 assistant coaches, and 20+ volunteers. Players are ages 6 to 19.

Volleyball is a popular indoor sport for children and adults. There are approximately 72 players ages 18 and under who participate in volleyball within the Town.

Some organized recreational activities are currently not played and/or offered within Stillwater. However, these sports are gaining popularity in adjacent areas of New York. It can be anticipated that there will be future interest in these sports. This includes ice hockey/skating, lacrosse, and swimming. At this point in time there are no facilities within Stillwater to accommodate these sports.

Other Recreational Activities

Citizens engage in other recreational activities within the Town and there are additional opportunities for recreation that could be developed. For example, boating and fishing have historically been popular recreational activities. However, current facilities, or lack thereof, limit this activity. On the Hudson River, there is only one private marina with a boat ramp. Furthermore, there are no public boat launches in the Town. On Saratoga Lake, boat access to the lake was provided at Brown's Beach. This facility is currently closed. With the increasing popularity of kayaking and canoeing, public access to both the Hudson River and Saratoga Lake would be beneficial. Citizens also indicated the potential for rowing (crew) teams on the Hudson and the stretch of river along Stillwater would be an ideal location.

Cycling, snowmobiling, and equestrian riding are very popular in the area. There are 25 miles of existing bicycle, equestrian, and snowmobile trails within Stillwater. This includes: all 8.5 miles of U.S. Route 4 that passes through the Town and Village of Stillwater, which is a designated NYS Scenic Byway and state bicycle route; the 2 mile Historic Stillwater Multi-Use Trial, adjacent to the Riverside neighborhood; and, approximately 15 miles of snowmobile/equestrian trails managed by The County Trailblazers, Inc. (a local snowmobile club dedicated to trail development and management). In addition to these, there are 14 miles of mixed-use trials and a ten (10) mile tour road (with an adjoining multi-use pathway) within Saratoga National Historical Park.

Swimming is popular for general recreation. However, there are no public swimming pools or beaches in Town. Recreational swimming used to be available at Brown's Beach on Saratoga Lake. As it was previously noted, that facility is currently closed. Tennis also remains a popular recreational sport, although, there are no teams or public tennis courts in the Town.

The following lands are owned by the Town and have some potential for recreational use.

- Gurba South - This site is approximately 1.1 acres and is currently vacant with an existing retention pond. It is located on Gurba Drive South.

- Mullah Hill - The Town owns several parcels at the end of East Street. These sites are currently vacant with a level area at the end of East Street sloping steeply down to the railroad tracks.

- Riverfront Park - The Town recently purchased 18 acres of land in the northern part of Town near the Saratoga National Historical Park. The Town has explored the concept of establishing the Stillwater Riverfront Park at this site. Possible facilities include a boat launch and marina.

- Hudson River Access and Beach - The site is currently owned by the Canal Corporation. It has potential to be used as a beach for swimming and fishing and a small boat access to the river for fishing and recreation

Trails

Stillwater should seek to develop the many miles of multi-use trails and/or greenways that are highlighted in the *Stillwater Farmland Protection and Green Infrastructure Plan* to further improve upon its recreational capacity (Appendix F). Many of the existing trails within the community are already becoming fragment and/or removed as a result of development. Therefore, as Stillwater routinely improves its roadways, it is recommended, at a minimum, that it place "shared roadway" signage and expand the road shoulder to allow for safer bicycle/pedestrian travel. However, the town should seek additional funding to study, design, and construct the "greenway connectors" and/or roadside multi-use trials. The proposed trail network should include the following design considerations: unpaved equestrian sections, bicycle lanes and signage, parking and access opportunities, BMP and green design stormwater management controls, and more leisurely recreational opportunities.

3.9.2 Potential Impacts & Proposed Mitigation

Currently, existing facilities generally do not meet acceptable standards and are lacking in number to meet current needs. Inadequate outdoor facilities include: softball fields, baseball fields, soccer fields, football fields, lacrosse fields, tennis courts, swimming pool, boat launch, and a large playground. Existing facilities also lack adequate accessory facilities including bleachers, restrooms, locker/changing rooms and adequate parking. The Town also lacks sufficient indoor public facilities including: indoor soccer courts, basketball courts, volleyball courts, swimming pool, and hockey/skating rink. Future demand will seriously strain what is already an inadequate number of recreational facilities and/or opportunities. Table 3.9-2 provides each recreational activity's anticipated number of participants, which is based on the 10 year growth projection.

Table 3.9-2: Participant Level by Sport/Activity

Activity	Age	Anticipated Number of Participants*	Active Months	Existing Facilities
Baseball	5-14	319	March-July	1 diamond (American Legion)
Basketball	8-16	286	Winter	1 indoor court (Community Center)
Football	5-12	169	Sept-Nov	1 fields (American Legion and Community Center)
Hockey	5+	Unknown	Winter	None
Lacrosse		Unknown	Spring	None
Swimming (Teams)	10-18	Unknown	September - March	None
Soccer	6-19	348	April-June	1 field (American Legion)
Softball	10-16	215	April-June	1 field (Riverside Veterans Park)
Volleyballs (team)	18 and under	94	Winter	1 indoor court (Community Center)

*Anticipated participation generated by current participation level increased by 30% over the next 10 years due to growth

Multipurpose Facility

Many municipalities in upstate New York are building centrally located multi-use indoor/outdoor recreational facilities as a means to address these needs. The advantages of this type of facility are many. Parking areas can be scaled appropriately to handle the numbers of people attracted to the facility. Centrally located and shared changing facilities and restrooms can conserve space. Scheduling of fields and courts can take place in one location and facilities can be expanded as needed. A large, centrally located multi-use indoor/outdoor facility in the Town of Stillwater would provide space for all the current and future recreational needs. Generally, the amount of land needed for this type of facility would be between 20 and 50 acres. A central, easy to access location in the Town would be desirable.

Based on the Recreational Needs Assessment, the outdoor facilities needed to meet current needs include at least three (3) multi-use fields which would include football, soccer, and lacrosse, and three (3) baseball/softball fields, as well as tennis courts and a large playground. An outdoor swimming pool would be a welcome addition to the Town. Indoor facilities needed to meet current needs include two (2) multi-use courts for basketball, volleyball, and indoor soccer. As an option a swimming pool and ice rink for hockey and recreational skating could be added as needed.

A concept plan incorporating the elements noted above was prepared utilizing a simple and compact arrangement. The design included an 800’ by 800’ area divided into 4 softball/baseball fields, 4 championship soccer fields and two football or soccer fields with room for spectators. This arrangement requires approximately 15 acres for the fields

plus 3-5 acres for parking, circulation and accessory structures. Based on this concept a cost estimate was prepared and is presented in Table 3.9-3.

Table 3.9-3: Multipurpose Facility Order of Magnitude Cost Estimate

Land Acquisition 20 acres at $10,000/acre	$200,000
Building the basic fields	$240,000
Parking and Circulation	$210,000
Changing Rooms/Restrooms	$200,000
Total	$990,000

The construction of a multi-use indoor/outdoor recreational facility would not satisfy all of the Town's anticipated recreational needs. The development of smaller community parks will help to alleviate some of the projected recreational needs.

Cost estimates for additional recreational facilities (proposed and potential) were derived from conceptual site plans, local property values, and comparable project types. The cost to provide these additional recreational facilities is approximately 4.6 million, and is briefly summarized in Table 3.9-4 below.

Table 3.9-4: Proposed & Planned Recreational Facilities

Town Lands/Parks/Projects	Description	Construction Costs	
		Low	High
Glen Hollow (Lilac) Town Park*	Community Park: pavilion/building, parking, recreational amenities, signage, landscaping, general Infrastructure	$1,119,756.30	
Historic Stillwater Multi-Use Trail*	Recreational Amenity: 1.1 mile, multi-use trail, overlook/rest areas, seating areas, signage, landscaping, general infrastructure	$529,000.00	
Riverfront*	Community Park: parking, boat launch, signage, landscaping, general Infrastructure.	$1,000,000.00	
Boiler House Town Park*	Community Park: pavilion/building, parking, signage, recreation amenities, landscaping, general Infrastructure.	$681,069.00	
Riverside - Veterans	Community Park: parking, recreation amenities, landscaping, general Infrastructure.	$60,000.00	$80,000.00
White Sulpher Springs	Neighborhood Park: parking, pavilion restoration, signage, landscaping, general infrastructure	$70,000.00	$90,000.00
Gurba South	Neighborhood Park: landscaping, park amenities, signage, riparian restoration	$20,000.00	$50,000.00
Mullah Hill	Neighborhood Park: multi-use field, trail bridge, signage general infrastructure, site revegetation	$380,000.00	$420,000.00
Multi-Use Trail Network	Recreational Amenity: town-wide, multi-use trail, signage, landscaping, general infrastructure	$100,000.00	$150,000.00

Riverfront Access	Community Park: parking, boat launch, signage, landscaping, general Infrastructure.	$250,000.00	$500,000.00
Total		$4,209,825.30	$4,569,825.30

*More accurate, site-specific estimates for the noted projects were developed using conceptual site designs and/or were gathered from existing estimates by the Town included in request for aid (grants).

The Town's overall recreational needs are estimated at $5.6 million.

Mitigation Fees for Recreation

The Town of Stillwater recognizes that continued growth and prosperity depends on the timely provision of public facilities needed to serve new growth and development. Construction of the noted facilities will also have an impact on the Town's operating budget and will likely require the addition of staff to maintain and operate the facilities. Construction of all the noted facilities within the ten year timeframe is not likely a feasible undertaking.

The Town's growth projection anticipates upwards of 600 new homes by 2017. Because demand for new recreational services is, in part, a function of this projected growth, mitigation fees should be proportionally directed towards future development (i.e. minor/major subdivisions, commercial site plans, etc.). A more practical and equitable approach would be to base recreational mitigation fees on the number of new homes, as opposed to a price per acre metric. In order for the Town to continue to offer sufficient recreational services, the need to expand the type of projects that are subject to the recreational mitigation fees is suggested. The total cost of the proposed recreational facility improvements is estimated at approximately $5.6 million. As noted some of the planned facilities are to address existing needs and some of the facilities will be driven by future growth.

To establish an equitable mitigation fee, it was necessary to assess the existing demand for services (public share) and the future demand attributable to new development (developers' share). The future cost for recreational services was divided proportionally between, existing development and projected residential development. Based on the number of existing residential units, the ten (10) year growth projection represents an approximately 9.8 % increase within the Town. The developers' share, therefore, is 9.8 % of the total recreational cost, or approximately $548,000.

Existing Residential Units	3,054
Projected Residential Development	600
% Increase	9.8 %
9.8 % of Recreational Cost (total)	$548,000
($5.6 million)	

Therefore, the residential share of recreational cost estimates is approximately $913 per single-family detached home. These mitigation fees can be collected at the issuance of

each building permit, or, as an alternative, collected in thirds: one third at the stamping of final plans; one third at the first building permit; and one third at the first issuance of Certificate of Occupancy.

Additionally commercial development often drives residential growth and recreational demand due to increases in localized labor and customer visitation; it is recommended that such development shoulder a proportion of the recreational costs as well. Ten (10) year projected commercial growth in Stillwater is approximately 150,000 square feet of construction. Based on a survey of neighboring municipalities, reasonable recreational fees for commercial development is $0.80 per square foot construction, which would generate $120,000 in recreational fees.

Because mitigation fees will only cover a small portion of the needed recreational funding, the Town will need to pursue additional sources of monies. This may include grant opportunities, municipal bonding options, and/or tax revenues.

3.10 Farmland and Open Space

This section examines the existing farmland and open space resources within the Town. The potential impact of growth to these resources is considered and proposed mitigation measures are described.

3.10.1 Farmland & Open Space Existing Conditions

The Town's Farmland and Open Space resources serve to define the character, landscape and history of the Town. Recognizing the importance of these resources the Town developed the *Stillwater Farmland Protection & Green Infrastructure Plan* (Appendix F). The plan was created by an Advisory Committee that was comprised of local residents, members of the farming community, and representatives from the Stillwater Planning Board, the Saratoga County Planning Department, Saratoga PLAN, and the Saratoga National Historic Park. The committee was initially tasked with developing a "conservation vision" for the Town of Stillwater.

The members of the Advisory Committee met regularly while developing the plan, and they drew upon a myriad of local, county, and state resources. The committee consulted local historians, individuals from Saratoga County Real Property Services, Saratoga County Cornell Cooperative Extension, New York State Department of Agriculture and Markets, New York State Office of Parks Recreation and Historic Preservation, professional assessors, local and regional non-profits, and the National Park Service.

Using the groundwork established by *Green Infrastructure Plan for Saratoga County*, (recently adopted by the County) the committee developed a three step planning process. The first step in the planning process was designed to identify agricultural and open space resources (Resource Inventory). The next step was designed to assess the role that each resource plays within the agricultural and open space network, their importance, vulnerabilities and/or strengths, and needs; and, based on this analysis, develop various

preservation goals that reflect their multi-functional benefits (Evaluation & Goal Setting). The final part of the planning process was designed to create a package of economic and land use tools and recommendations, programmatically designed to protect Stillwater's farmland and conserve and enhance its open space resources (Protection & Management Strategies).

Providing opportunities for Stillwater residents to take part in the planning process was a high priority for the *Stillwater Farmland Protection and Green Infrastructure Plan* Advisory Committee. Committee meeting minutes and information were posted on the Town's website regularly, and residents were encouraged to contact the committee with their ideas, question, comments, or concerns.

The Advisory Committee also held a public workshop September 18, 2007, which focused on inventorying agriculture and green infrastructure resources. Workshop attendees took part in a participatory mapping exercise – through which numerous resources were identified. Cumulatively, through numerous phone and e-mail correspondences, the September 2007 public workshop, and an actively engaged Advisory Committee, the *Stillwater Farmland Protection & Green Infrastructure Plan* was prepared. The following information was synthesizes from that effort.

Existing Agricultural Resources:

Figures 3.10-1 identifies the location of existing agriculture uses in the Town. Figure 3.10-2 identifies the locations of prime and statewide important soil group. Below is a description of these resources.

Prime & Statewide Important Soils

Prime Soils is a designation that is assigned by the United States Department of Agriculture-Natural Resource Conservation Service. Prime soils are well-drained soils that have a gentle slope and require a minimum of conservation practices. The criteria for identifying prime soils are entirely related to soil characteristics and other physical criteria. In general, Statewide Important Soils are defined as soils that are similar to prime soils but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Stillwater has over 7,400 acres of prime soils and 8,000 acres of statewide important soils, which together equals over half of Stillwater's total land area. The preservation of these soils types is an essential part of any successful farmland protection program. As one would assume, the location of these soil types largely coincides with much the Town's existing farmlands.

Agricultural Districts

New York State's Agricultural Districts Law was enacted in 1971. The intent of this law is to encourage the continued use of farmland for agricultural production. An agricultural district can be created by a group of interested landowners "who collectively own at least 500 acres." Enrolled agricultural district land owners benefit from several protective

measures, which can include: protection from “unreasonably restrictive” local laws; a Notice of Intent requirement (NOI) for public projects that may impact farms (that includes an agricultural impact statement); some limited protection from private nuisance actions; and a property sale disclosure notice informing potential buyers that they are within an agricultural district.

Stillwater is part of Saratoga County Consolidated Agricultural District No.1, which encompasses over 35,050 acres of land, including areas of the Town of Saratoga and Moreau. As of 2005, there were 36 parcels – totaling 3,263 acres – enrolled in Stillwater’s 15,740 (+/-) acre portion of the agricultural district. By comparison, in 1996, there were 85 participating parcels, which totaled 7,251 acres. Table 3.10-2 provides a breakdown by agricultural activity of these properties.

Table 3.10-2: 1996 & 2005 Stillwater Agricultural District Data

Agricultural Activity	1996 No. Parcels	2005 No. Parcels	1996 Acres	2005 Acres
Vacant Agricultural Land (Productive)	18	7	1,187	536
Livestock and Products	40	17	4,010	1,672
Field Crops	25	10	2,000	956
Nursery & Greenhouse	2	1	52	25
Specialty	NA	1	NA	75
Total	85	36	7,251	3,263

Source: Saratoga County Planning Department

Active Agriculture

An inventory of the County's agricultural lands was completed as a component of the *Green Infrastructure Plan for Saratoga County*; property data and information was obtained from a variety of sources (i.e. tax assessment data, GIS data, local residents, etc). The County's planning team and their consultants identified 109 agricultural parcels within the Town of Stillwater – totaling 6,344 (+/-) acres.

The Town revisited this inventory to reaffirm its finding and bring greater detail to the effort. The Town's inventory included: review of Saratoga County Real Property Tax Services data, consultation with local farmers, the Saratoga County Planning Department, Saratoga County Cornell Cooperative Extension, and New York State Department of Agriculture and Markets; public participatory mapping; a comprehensive windshield survey; and GIS data cross-referencing (i.e. NYS orthographic imagery, USGS-NLCD land cover data, etc).

The results of the inventory identified field crops and other agriculturally productive lands as the prominent agricultural land use within Stillwater (3,105 +/- acres). Livestock, such as equestrian and dairy, and residential properties with agriculture activity accounted for nearly 50 % of the farming, while "Specialty Farms" (mostly sod production) accounted for 4 % of agricultural land. The inventory also indicated that approximately 890 acres of land that was thought to be agriculturally active either lay follow or had been developed for housing.

Figure 3.10-1 Agricultural Land Use

Figure 3.10-2 Prime Farmlands

Existing Natural & Open Space Resources

Figure 3.10-3 Natural Resources highlights Stillwater's natural resources priority areas. Following is a description of these resources.

Wetlands & Hydric Soils

Stillwater has over 2,500 acres of NYS Department of Environmental Conservation (DEC) and Nation Wetland Inventory (NWI) wetlands. Wetlands are vital to any ecological network. Wetlands reduce flood damage by acting as a natural "sponge," storing water and slowly releasing it. They help to control shoreline erosion by dissipating wave energy and they filter pollutants and sediment from surface water runoff. Wetlands serve as an important interface between surface and groundwater, helping to recharge aquifers. Together, these resources can act as "carbon sinks," mitigate flooding, and promote biodiversity and estuarine health.

Floodplains & Riparian Buffers

Floodplains are low-lying areas that are adjacent to wetlands, streams, rivers and lakes that are often inundated with water during peak periods of snowmelt and/or heavy rains. They allow floodwaters to be temporarily stored during peak flows, often mitigating downriver impacts. Additionally, floodplains can offer open space and critical habitat areas. According to digitized FEMA Flood Insurance Rate Maps and Flood Hazard Boundary Maps, there are approximately 2,240 acres of land within 100-year flood elevations in Stillwater. Most floodplains adjoin the Hudson River, Saratoga Lake, or the Anthony Kill.

Riparian buffers, like floodplains, are found alongside waterbodies. A healthy riparian area consists of native trees, shrubs, and grasses. Riparian buffers "intercept" contaminants and sediment from stormwater runoff (i.e. nonpoint source pollution). In addition, they enhance habitat connections, steady natural water temperatures, and stabilize stream banks – enhancing ecological functions and landscape conditions.[6] Using New York State Department of Environmental Conservation (DEC) GIS data, a 100 foot buffer was assigned to Stillwater's wetlands, streams, and waterbodies. Based on this analysis, there are approximately 4,201 acres of existing and/or potential riparian buffers, which includes 1,485 acres of DEC wetland buffers.

Surface Water

There are over 81 miles of NYSDEC classified streams within Stillwater. Under New York State Public Health Law, all waters within the state are given a classification by the NYS DEC which is based on the best usage of the waters. The classifications range from AA to D. A and AA class waters are suitable for drinking, while class D waters are

[6] Randolph (2004)

suitable for secondary contact recreation (i.e. boating). Some streams are given a sub-classification of (t) or (ts), indicating whether the waters can support trout or trout spawning, respectively. Over 88 % of the

Figure 3.10-3 Natural Resources

streams within Stillwater are designated either class C or C(t) – a designation for water that is suitable for fish propagation. 10 % of the streams (8.2 miles) are designated A or A(T).

All of Stillwater's A and A(t) designated waters are within the 2,858 acre Plum Brook watershed, which includes the Mechanicville Reservoir, and is also a sub-watershed of the Anthony Kill. The Plum Brook watershed is one of three significant watersheds that Stillwater is part of. Approximately 4,640 acres of Stillwater is within the Saratoga Lake watershed, while all of Stillwater is within the Hudson River watershed.

Forest Lands

Based on USGS National Atlas Forest Fragmentation Census data, National Land Cover Database information, and New York State orthographic imagery, there are over 17,000 acres of unfragmented forests within Stillwater. The majority of these lands are within the Plum Brook and Saratoga Lake watersheds, and Saratoga National Historic Park. According to Saratoga County Real Property Tax Service (2007) data, there are over 3,316 acres of land that are taxed under Section 480-a of the Real Property Tax Law. Section 480-a of the Real Property allows landowners, with parcels at least fifty acres in size, to apply for up to and 80 % tax exemption by committing their forest land to a DEC approved forest management plan.

3.10.2 Potential Impacts

Projects such as the Luther Forest Technology Campus are driving future growth throughout the Capital Region. By 2040, it is anticipated that there will be an additional 58,000 persons living Saratoga County. Stillwater, with its proximity to the Luther Forest Technology Campus, is at the center of this growth.

As identified in the Town's Buildout Analysis/Growth Projections it is estimated that approximately 600 new single family homes and up to 150,000 square feet of new commercial, office, retail, and industrial space could be constructed within Stillwater by 2017. This growth has the potential to further encroach on and fragment the Town's farmland and open space resources. Residential development within the Town's agricultural core impinges on the ability to actively cultivate lands and conduct farming practices.

Gauging the effect of this development on the landscape can be illustrated by the area of land lost to development. In order to arrive at such a figure, the amount of land consumed by future development was calculated using the buildout analysis' projected ten (10) year growth rate of 15.5 %. Based on this growth rate and the Town's minimum lot size requirements, it is estimated that future residential development could consume approximately 1,140 acres of land. This process was repeated for commercial use, which equaled 12 acres, giving a total of 1,152 acres of projected development.

Table 3.10-1: Projected Residential Land Consumption

Zoning	Full Buildout (Units)	10 Year Projections (Units)*	Minimum Lot Size (Acres)	10 Year Projections (Acres)**
LDR (no water or sewer)	1,488.50	230.72	2.00	461.44
LDR (water & sewer)	12.80	1.98	1.00	1.98
LDR (water or sewer)	303.00	46.97	1.50	70.45
RM (no water or sewer)	4.70	0.73	1.00	0.73
RM (water & sewer)	60.30	9.35	0.23	2.15
RM (water or sewer)	52.10	8.08	0.28	2.22
Rural Residential	1,933.70	299.72	2.00	599.45
Residential Resort	12.70	1.97	0.50	0.98
Total	3,867.80	599.51		1,139.40

*Projections are based on a 15.5% (per district) growth rate, which was derived by dividing a 10 year projection of 600 new home by 3,867 homes at full buildout

**This figure represents the "10 Year Projections (Units) multiplied by the "Minimum Lot Size"

***This figure Represents the "Full Buildout (Units)" multiplied by the "Minimum Lot Size"

Table 3.10-2: Projected Commercial Land Consumption

Zoning	Full Buildout Floor Area (sq. ft.)*	10 Year Projections Floor Area (sq. ft)**	Minimum Lot Size (Acres)	10 Year Projections (Acres)***
B-1	358,933.64	19,014.51	0.23	1.46
B-2	540,482.74	28,632.07	0.14	2.19
ID	1,932,109.75	102,353.51	1.00	7.83
Total	2,831,526.13	150,000.10		11.48

*Based on a maximum Floor Area Ratio of 0.3 (See Technical Memorandum No.1; DGEIS/Growth Projections)

**Projections are based on a 5.3% (per district) growth rate, which was derived by dividing a 10 year projection of 150,000 sq. ft. of new commercial, office, retail, and office space by 2.83 million sq. ft. at full buildout

***Based on the "10 Year Floor Area Projections" divided by the maximum floor area (.03), then multiplied by $2.29568411 \times 10^{-5}$ for the conversion to acres

Based on the anticipated distribution of the growth a majority of the growth would occur in Stillwater's Low Density Residential (LDR) and Rural Residential (R-R) Zoning Districts – areas that are primarily comprised of Stillwater's most fertile farmland and unfragmented forests.

Agricultural, Natural, and Open Space Resources

From 1982 to 1997, over 425,000 acres of land in Upstate New York was converted from rural uses (mostly agricultural and forest land) to urban development. During that same period the number of acres in cultivated cropland declined by 20 %, or roughly 675,000 acres.[7] Mirroring these State-wide trends, nearly 19,000 acres of farmland was converted in Saratoga County from 1982 to 1997, which represents 20 % of its active farmland.[8]

Based on the growth projections, it is estimated that approximately 1,152 acres of land could be developed by 2017. As it has been noted, the majority of growth and development within Stillwater will likely occur in its most fertile or forested areas. These resources are vital to Stillwater's "small hometown" identity, which the *Stillwater Comprehensive Plan* seeks to preserve. Aside from the potential impact to Stillwater's local character, the loss of these resources would have economic implications as well. Many "cost of services" studies have demonstrated that agricultural resources generate more in real property tax revenue than they require in municipal benefits. According to the American Farmland Trust, for every dollar generated in property tax revenues in northeastern New York, farmland only requires $0.21 in public services. Whereas residential development requires $1.36 in services for each property tax dollar collected.[9] Therefore, the loss of farmland within Stillwater, due to development, would likely result in a fiscal net loss for the Town.

Potential impact to Stillwater's natural and agricultural resources, as result of future growth, could impair Stillwater's ecological health (i.e. biodiversity, aquatic health, etc). For example, these resources reduce stormwater runoff volumes, which in turn reduce peak flows by utilizing the natural retention and absorption capabilities of vegetation and soils. By maintaining existing pervious ground cover, farmland and open space resources can increase stormwater infiltration rates, thereby reducing the volume of runoff entering combined or separate sewer systems, and ultimately a community's lakes, rivers, and streams. Research has shown that watershed health begins to decline when impervious surface coverage exceeds 10 % and becomes severely impaired if this number climbs beyond 30 % of the total watershed area. With increased growth comes an increase in impervious surfaces and developed lands. These surfaces promote non-point source pollution storm and surface water runoff. Substances such as lawn fertilizers, pesticides, and sediments are major causes of impaired waterways (i.e. eutrophication, turbidity, pollution).

Natural and agricultural resources have both personal and profound intrinsic values. Forests, fields, streams, and historic sites offer a place for natural and personal exploration. In an increasingly connected and faster-paced world, agricultural and natural

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[7] Rolf Pendall, "Sprawl Without Growth: The Upstate Paradox"

[8] Green Infrastructure Plan for Saratoga County

[9] Tom Daniels, "Holding Our Ground: Protecting America's Farms and Farmland"

resources serve as timeless reminders of who we are and where we come from. Additionally, these resources offer invaluable educational opportunities. Good land stewardship is a societal value that is passed from one generation to the next. Therefore, any impact to these resources could result in the collective loss of Stillwater's natural and agricultural heritage.

3.10.3 Proposed Mitigation

Agricultural, Natural, and Open Space Resources

The primary purpose of the goals of the *Stillwater Farmland Protection and Green Infrastructure Plan* was to identify the potential impacts that projected growth and/or development may have on the Stillwater's agricultural, natural, and open space resources, and recommend measures which may be necessary to minimize those impacts.

The plan provides a variety of recommendations to conserve Stillwater's agricultural, natural, cultural, and recreational resources and establishes some specific targets

Protection of opens space and farmland requires public involvement, leadership and a sustained effort. The following recommendations were included in the plan:

1. Create a standing committee (Conservation Advisory Council or similar) to implement the recommendations of the "Stillwater Farmland Protection and Green Infrastructure Plan"

2. Continue Public Education process:

    - Conduct an Agriculture and Farmland Protection Informational Workshop

    - Conduct a Conservation Subdivision Informational Workshop

3. Establish Trails Subcommittee of the Conservation Advisory Council

4. Amend local land use regulations (zoning and subdivision) – incorporate techniques recommended in this plan, such as:

    - Conservation subdivision design

    - Riparian buffers

    - Environmental overlay district

    - Updated stormwater management

    - Local wetland protection regulations

- Scenic overlay for viewshed of Saratoga National Historical Park
- Consider incorporation of other techniques described in this plan, such as:
  - Sliding scale density regulation
  - Agricultural zoning
  - Tree clearing regulations for new development

5. Develop a local Purchase of Development Rights (PDR) Program
   - Establish criteria for evaluating proposals from willing landowners
   - Explore funding options to supplement the open space mitigation fees established through the GEIS
   - Identify sources of grant funding
6. Consider establishment of a Lease of Development Rights (LDR) Program
7. Develop sliding scale for tax abatement based on length of the term easement
8. Establish criteria for evaluating proposals from willing landowners
9. Work with local tax assessor to consider assessment procedures for farmland and open space
10. Establish Historic Preservation Commission (or similar) and develop a local historic preservation ordinance

Active protection of agricultural resources through purchase of development rights (PDR) and lease of development rights (LDR) programs is an essential element of the *The Stillwater Farmland Protection and Green Infrastructure Plan* (Plan). It identifies key area of high quality agricultural and natural resources in an effort to establish priorities for protection. Utilizing Geographic Information Systems (GIS) site-suitability analysis procedures agricultural and natural resource data was entered onto individual maps and the resources were overlaid and analyzed to reveal clusters of significant resources. Locations where multiple resources were present were considered to be of higher agricultural and natural resource quality. A completed discussion regarding this process is included in Appendix F.

Utilizing the results of the GIS analysis, the *Stillwater Farmland Protection and Green Infrastructure Plan* Advisory Committee established a goal to preserve 2,000 acres of high quality agricultural and natural resources lands by the year 2017 through a local

Purchase of Development Rights (PDR) Program. Funding of the PDR Program is to be raised in part through imposition of mitigation fees for new development.

The Purchase of Development Rights (PDR) is an increasingly popular tool that is used for farmland and open space conservation. When willing landowners sell their development rights to a local or state government, or non-for-profit, they give up the right to develop their land. However, they retain all other property rights that are associated with owning land (i.e. use of the land for agriculture or other specified purpose, right to prevent trespass, right to sell, etc). The value of a property's development rights is determined by calculating the difference between the fair market value and the agricultural value.

In order to calculate the cost of such a preserving 2000 acres, various appraisers who were familiar with the area's real estate market and the PDR process were consulted. Table 3.10-5 PDR Program Cos*ts* provides an estimated range of cost by acre for protection and a total cost assuming 2000 acres are protected. However, for the purposes of this report, we base possible program cost on the average PDR program costs.

Table 3.10-3: PDR Program Costs

Range	Development Rights Cost (Per Acre)	Total Cost
Low	$3,000	$6,000,000
Average	$6,500	$13,000,000
High	$10,000	$20,000,000

To establish an equitable mitigation fee, it was necessary to quantify the impact and distribute this cause of the impact to existing and proposed development. Not all of the expense to preserve farmland should be borne by new development. This was done by analyzing the amount of (or land area consumed by) existing development within Stillwater, and then comparing that to the ten (10) year growth projections. The ten (10) year projection assumes 600 new homes would be built and up to 150,000 square feet of non-residential development by 2017, 1,152.

Using GIS and Stillwater's existing minimum lot size requirements, the land area occupied by existing development was calculated. Properties occupied by a residence were assigned a 'consumed land area' (CLA) value equal to the minimum lot size of the zoning district in which they were located. Based on this method, it was estimated that there was 2,910 acres of existing development in Stillwater. Again, this information was then verified using the National Land Cover Database 2001 land cover layer, whereby the amount of developed land was calculated using GIS analysis. These values compare favorably.

Based on this analysis, the land area consumed by development (past and present) is 4,062 acres. The (10) year projected development estimates, therefore, account for 28 % of the total ten (10) year development, and the balance (72 %) can be attributed to past

development.

Existing Development	2,910 (72 %)
Projected Development	1,152 (28 %)
Total Development	4,062 (past and future)

Using the average per acre cost ($6,500/acre), the total cost of the PDR program is approximately $13,000,000, the public's share (existing development) would total $9,360,000 (or 72 %). The future development share (projected development) is $3,640,000 (or 28 %). Utilizing these figures, a $3,159.72 per acre of projected development ($3,640,000/1,152 acres) mitigation fee would be assessed. Table 3.10-6 provides a summary of these costs. However, final mitigations fees should be based on further analysis of Stillwater's development rights values, which more then likely fall somewhere between $3,000 and $6,500 per acre.

The assessment methodology and administration of the program is subject to further discussion. It is anticipated that these mitigation fees will be collected at the issuance of each building permit. An alternative approach is to divide the collection of funds into thirds: one third at stamping of final plans; one third at the first building permit; and one third at the first issuance of Certificate of Occupancy. By adopting these fees, Stillwater would be able to generate part of the necessary cost for strategic land acquisition (i.e. Purchase of Development Rights or *Fee and Simple* land acquisitions). Stillwater should consider certain actions exempt from mitigation fees, including affordable housing projects and family member uses.

Table 3.10-4: Total Mitigation Fees

PDR Costs (Per Acre)	Preservation Total (Acres)	$3,000	$6,500	$10,000
Developer's Share (Per Acre) of disturbance	2,000	~$1,460	~$3,160	~$4,860
Public's Share (Total)		$4,320,000	$9,360,000	$14,400,000

3.11 Cultural Resources

This section examines the cultural resources within Stillwater. Given Stillwater's rich history, future development could impose significant impacts on these resources. In order to evaluate Stillwater's cultural resources historic maps, State and Federal databases, and local historians were examined and/or consulted. Within this section the potential impact of the projected growth within Stillwater to these resources is considered and proposed mitigation measures, if any, are described. Figure 3.11-1, Cultural Resources, located at the end of this section highlights Stillwater's many cultural and historic resources. Bellow is a discussion of these resources.

3.11.1 Existing Conditions

State & National Register

According to the Office of Parks, Recreation and Historic Preservation's (OPRHP) State Preservation Historical Information Network Exchange (SPHINX), there are two locations listed on the State/National Register of Historic Places (NRHP) – the Saratoga National Historic Park (SNHP) and the Champlain Canal. Both these historic sites/features played a pivotal role in early American History. The SNHP preserves the sites associated with a significant American military victory during the Revolution, the Battle of Saratoga. Whereas, the Champlain Canal, which was opened in 1823, linking the Hudson River to Lake Champlain at Whitehall (The Birthplace of the United States Navy), was a once-bustling commercial corridor.

Archaeological Sites

In addition to the above NRHP sites, OPRHP SPHINX database identifies 37 Archeological Sites within Stillwater. Of the 37 Archeological Sites nine (9) are Historic Sites, (two of which had prehistoric artifacts), six (6) are Prehistoric, and seven (7) are Precontact. Of these sites, only one has been determined to not eligible for NRHP status. The 15 remaining sites in the SPHINX database had no assigned Archeological Site classification.

Buildings

There are nine (9) buildings and/or structures identified by OPRHP SPHINX database, all of which have been determined not eligible for listing on the NRHP.

Unique Sites

The OPRHP SPHINX database also list nine (9) additional Unique Site Numbers (USN). Local landmarks such as the Bolton Manor/Mancuis House, Big Trolley Bridge, Brooking Residence, and the White Sulphur Spring and Hotel Site are identified.

Table 3.11-1 at the end of this chapter provides a complete list of cultural resources identified by the OPRHP SPHINX database.

Archeological Sensitive Area Map

The New York State Historic Preservation Office (SHPO) Archeological Sensitivity Maps for New York State are, "defined areas within the state where the discovery of archeological sites is predicted" In addition, these areas include the locations of all known sites that are in the SHPO Archeological Site files and the New York State Museum Archeological Site files. In accordance with Section 304 (16 USC 4702-3) of the National Historic Preservation Act of 1966 and Section 427.8 of the State Historic Preservation Act of 1980, the exact locations of sites are not displayed since they are

protected from disclosure. Archeological sites are overlaid and protected by randomly placed buffer zones. SHPO bases their recommendations to state and federal agencies – regarding the need for archeological surveys – on a particular projects proximity to these buffer Zones.

According to SHPO Archeological Sensitivity Maps, over 14,300 (+/-) acres are within archeological sensitive areas, which is approximately 56 % of the Town's overall land area. Most Archeological Sensitive Areas coincide with Stillwater's historical development patterns. This includes development around Saratoga Lake and along the Hudson River and Champlain Canal Corridor.

Local Inventory

As a component of the *Stillwater Farmland Protection & Green Infrastructure Plan* (See Appendix F), the Stillwater Historian and the Curator of the Stillwater Blockhouse Museum were asked to identify important local landmarks within the Town. They provided an inventory of historically significant sites and/or features. In addition, they helped to locate and map many of the local landmarks. In all, 49 local landmarks were identified. The inventory consisted of historically significant sites cemeteries, churches, bridges, homesteads, and buildings. Figure 3.11-1, Cultural Resources (located at the end of this chapter), identifies the location of 31 of the local landmarks. Table 3.11-2 at the end of this chapter provides a complete list of local landmarks identified by the Stillwater Historian and the Curator of the Stillwater Blockhouse Museum.

Historic Map Review

Historical maps ranging from 1793 to 1949 were reviewed for the purposes of this report. Each map discussed below is presented at the end this chapter. The earliest map depicts the northeast portion of Stillwater along the Hudson River, an area that was then known as Bemis Heights, which is today the area in and around Saratoga National Historic Park. The map portrays and area that is primarily comprised of farmsteads and wooded lands.

The David H. Burr Map of Saratoga County (1829) shows the Town divided into 23 parcels, with two (2) villages, Mechanicsville and "Stillwater Falls," and three (3) churches. The map also shows several unidentified roadways and the newly developed Champlain Canal. Julius Bien & Company's 1895, Map of Warren, Saratoga and Washington County provides more detail of the Town's roads and properties. The map also plots the Saratoga Railroad, which is shown running from the southeast to northwest corners of Town. From 1829 to 1895, properties within the town remained relatively unchanged. However, there is clear evidence increased development along the Hudson River and Champlain Canal, between the Village of Stillwater and Mechanicsville.

The 1898 United States Geological Survey (USGS) Topographic Quadrangle Map (Quad Map), Cohoes Sheet shows, in detail, the existing road network and topography. According the map, development within the Town was limited, with sporadic housing paralleling the roadways that crisscrossed the community, with more concentrated

settlement alongside the Hudson River and Champlain Canal, between the Village of Stillwater and Mechanicsville. The 1929 USGS Quad Map appears much the same, with only one significant difference, the Mechanicsville Reservoir. The 1949 USGS Quad Map shows continued development along the Hudson River and Champlain Canal, between the Village of Stillwater and Mechanicsville. The map also shows an established Saratoga National Historical Park.

3.11.2 Potential Impacts

Without conducting a site specific investigation it is difficult to predict any and all impacts to the cultural resources within Stillwater as a result of development. Regardless, because Stillwater is so rich in history, it is evident that the development of certain parcels and/or archeological sensitive areas of the Town without further research could result in the destruction of cultural resources.

3.11.3 Proposed Mitigation

The *Stillwater Comprehensive Plan* provides several recommendations for cultural and historic resource preservation as well. Taken together, these recommendations would certainly help mitigate the impact future growth could have on various cultural resources. The Comprehensive Plan recommends that Stillwater consider seeking Certified Local Government (CLG) designation from the NYS Office of Parks, Recreation, and Historic Preservation (OPRHP). CLG status would make Stillwater eligible for competitive grants to support activities such as: historic resources surveys; planning; public education projects; repair and restoration of properties listed in the Historic Register; and administering and training the local historic preservation commission; etc.

The *Stillwater Comprehensive Plan* also recommends that Stillwater consider establishing a historic preservation ordinance to protect structures, sites and other landmarks. A local landmark law could establish a process and criteria for the designation of local historic landmarks. Alternatively the Town could adopt a historic area overlay district. Special design guidelines or review criteria could be developed to guide the Planning Board when reviewing projects in the overlay district. According to the New York State Open Space Planning Guide:

> *New York State enabling legislation allows local communities to protect historic properties through purchasing, restoring, operating, leasing, acquiring fee title or interests, providing for transfer of development rights, regulating and establishing historic preservation boards and districts.*

The OPRHP Field Service Bureau (FSB), coupled with the Stillwater Historian, can assist in identifying cultural resources. By identify these resources, the Town and OPRHP could retain and protect historic features in new projects, as well as in rehabilitation and redevelopment projects.

The *Stillwater Farmland Protection & Green Infrastructure Plan* offers several recommendations designed to preserve the Town's cultural resources. Similar to the *Stillwater Comprehensive Plan*, the *Stillwater Farmland Protection & Green Infrastructure Plan* calls for the adoption of a historic preservation ordinance; however, the plan also calls for the creation of a historic preservation commission. The power of historic preservation commissions can vary, but in most circumstances, local laws require projects that might affect a community's cultural resources to be referred to the historic preservation commission.

The *Stillwater Farmland Protection & Green Infrastructure Plan* also recommends that the Town coordinate cultural resources preservation efforts with the Saratoga National Historical Park and the National Park Service, and in doing so, develop a scenic overlay district for Stillwater's portion of the Saratoga National Historical Park's viewshed. In 2003, over 100,000 people visited the park, spending on average $62 per group, per day in the local area. In total, visitor spending was $3.30 million, "which supported a total of $3.52 million in sales, $1.20 million in personal income, 90 jobs, and $1.91 million in value added."[10]

Because Saratoga National Historical Park is such an important cultural resource, any scenic overlay should include site design standards that minimize the visual impact of development on the Park's scenic resources. These standards could include: tree planting and/or screening design and requirements; locating proposed projects appropriately so as to limit the visibility; and architectural design requirements, such as lower visibility building and/or roofing materials.

In addition to these recommendations, existing state and federal laws are in place, which, when implemented, are designed to avoid, minimize and mitigate impacts to historic and archeological resources. Therefore, the Town should require all potential development within the Study Area to be conducted in accordance with these existing laws to minimize or eliminate significant adverse impacts. Additional guidance on the minimal level of due diligence that should be performed by sponsors of individual land development projects is provided as follows:

Project sponsors will screen and perform preliminary investigations to determine potential impacts resulting from the proposed project. At the start of particular project types, project sponsors will review the NYS Office of Parks, Recreation, and Historic Preservation (OPRHP), State Historic Preservation Office's (SHPO) State Preservation Historical Information Network Exchange (SPHINX) and OPRHP's National Register Document Imaging Program (NRDIP). These resources should be use to answer State Environmental Quality Review Act (SEQRA) Environmental Assessment Form (EAF) related questions.

If a review of these on-line resources indicates that a particular site is "archeologically sensitive" or there are cultural resources present, then project sponsors are required to

[10] National Park Service, Economic Impact of Visitors Spending by Parks (2003)

send a Project Review Cover Form to OPRHP to request additional information. OPRHP will respond with the appropriate regulatory procedures and will provide project-specific recommendations.

If a project involves any Federal or State permits or funding, an information request to OPRHP is required. OPRHP will review all requested documentation and their approval is required. However, a lead agency (i.e. Planning Board/Town Board) can always request an archeological study to be performed for any project, regardless of the information provided by SPHINX and NRDIP.

In order to mitigate potential impacts to cultural resources, OPRHP and/or a lead agency may require that a project sponsor conduct a site specific Phase 1A Literature Review and Sensitivity Assessment. Any such Phase 1A should be conducted in accordance with the New York State Archaeological Council (NYAC) *Standards for Cultural Resource Investigations and the Curation of Archeological Collection in New York State* (1994) and in compliance with the State Environmental Quality Review Act (SEQRA).

In addition to the Phase 1A Literature Review and Sensitivity Assessment, and depending on the results of Phase 1A research and the archeological sensitivity of a particular site, a Phase 1B field investigations should be conducted prior to site development to determine the presence or absence of cultural resource. If significant cultural resources are revealed during a site survey, additional archeological investigation would be necessary. OPRHP does not need to review Phase 1A and/or Phase 1B reports and other documentation when there are no State or Federal permit/funding involved; however, OPRHP can offer technical assistance for reviewing documentation upon lead agency request.

Figure 3.11-1 Cultural Resources

4.0 SIGNIFICANT ADVERSE UNAVOIDABLE IMPACTS

Future growth and development within Town of Stillwater will have some adverse impacts on the community that cannot be avoided. Some may be short term impacts, such as traffic due to road repairs. Most will arise from an increase in population, the development of new homes and business, and the alteration of the existing landscape. These changes could have permanent or long-term environmental impacts. Most of these are an unavoidable consequence of the region and Town's growth.

The following adverse impacts that cannot be avoided due to future growth and development are identified below:

Soils & Geology

Development within the Town of Stillwater has the potential to result in adverse impacts with respect to soils and geology. Constraints to development within the Town include steep slopes (>15%), wet soils and wetlands, poorly or excessively drained soils, and shallow depth to bedrock. Clearing, grading and construction activities can also result in on- and off-site erosion and sedimentation.

Many development constraints can be overcome through engineering practices of varying cost and effectiveness, depending on site-specific conditions. However, poor design, inappropriate development, and poor maintenance can result in the failure these practices, leading to soil erosion and water turbidity.

Water Resources

It is important to limit the amount of impervious surface areas in new developments and to ensure appropriate treatment of stormwater quality before it is released offsite. Furthermore, Compliance with standard best management practices as outlined in the NYS Stormwater Design Manual (2001), as well as erosion and sediment control practices identified in the project-specific SWPPPs that are prepared for development proposals, will ensure that waters are protected from potential adverse impacts of stormwater and construction-related runoff. However, construction activities associated with potential buildout over the 10-year evaluation period could expose soils to erosion, which would in turn can lead to sedimentation in downstream water bodies, including streams, wetlands, ponds, and lakes. Sedimentation could adversely affect the aquatic environment and could also change the physical characteristics of the water body. In addition to potential impacts related to erosion and sedimentation, stormwater runoff can pick up contaminants from impervious surfaces and adversely affect water quality from a chemical perspective

Locally Significant Habitat & Species

Development within the Town of Stillwater over the buildout period could have a significant impact on the quality and amount of habitat within the Town, with potential impacts to wildlife as well. The growth projections estimate up to 1050acres of land will be impacted by development from 2007-2017. Some loss of forested areas, agricultural land, meadows, brush areas, and other types of vegetative cover will occur. This loss of habitat could potentially result in permanent impacts to wildlife, as well as the potential reduction in vegetative species diversity. Construction activities will temporarily disturb some species of wildlife, which will be displaced during construction and may return to some extent after construction is complete.

Land Use & Zoning

Future growth could impact Stillwater's historical development patters. The majority of land area within Stillwater is zoned as either Low Density Residential (LDR) or Rural Residential (RR). Current zoning regulations allow for a one (1) to two (2) acre minimum lot size within these districts (depending on the presence of sewer and/or water). Development at such a density within these districts could strain and may have a negative impact on the Town's natural resource, agricultural community, and its rural character. Furthermore, inappropriate development within business zoning districts along the Route 4 corridor could equally strain existing municipal infrastructure and the community's character. Any adverse and unavoidable impacts as a result of Stillwater's land use and zoning will largely depend on the implementation of design and access management guidelines set-forth by the *Stillwater U.S. Route 4 Corridor Plan* and the *Stillwater Comprehensive Plan* land use recommendations.

Community Services

Future growth will result in an increase demand for community services. It is anticipated that as growth rates dictate, state, county, local and individual monies will be used to provide sufficient coverage and/or services within the Town based as needed.

Parks, Recreation, Farmland, and Open Space

Currently, existing recreational facilities generally do not meet the acceptable standards and are lacking in number to meet the current needs within Stillwater. Projected growth within Stillwater will likely place an even higher demand on Stillwater's already limited recreational facilities. However, if Stillwater were to develop a centrally located multi-use indoor/outdoor recreational facility and multi-use trails highlighted in the *Stillwater Farmland Protection & Green Infrastructure Plan*, many of these needs could be addressed.

With regards to Stillwater's agricultural and natural resources, much of the future growth could occur in its most fertile or forested areas, which could certainly impact its "small

hometown" identity. Future growth could impair Stillwater's ecological health as well. As is the case with Stillwater's recreational facilities, many of these issues can be mitigated by implementing the recommendations put forth in the *Stillwater Comprehensive Plan* and the *Stillwater Farmland Protection & Green Infrastructure Plan*.

Cultural Resources

Without conducting a site specific investigation it is difficult to predict any and all impacts to the cultural resources within Stillwater as a result of development. Regardless, because Stillwater is so rich in history, it is evident that the development of certain parcels and/or archeological sensitive areas of the Town without further research would result in the destruction of cultural resources.

5.0 ALTERNATIVES

The New York State Environmental Quality Review Act (SEQRA) calls for the evaluation of reasonable alternatives to a proposed action. The action being evaluated in this document is the growth of the Town over a ten year planning period (2007 to 2017). This EIS analyzes the projected growth of the town assuming the following land development will occur:

600 New Single family Homes

50,000 SF of Commercial/Office/Retail Space

100,000 SF of Industrial Space

5.1 Alternative Growth Rates

Based on full buildout under the current zoning regulations a total of 3868 units of single family housing could be constructed. Based on the anticipated expansion of water and sewer services this number increases to 4,071. Similarly up to 1.2 million square feet of commercial/retail space and 2.6 million square feet of industrial square feet could be constructed in the Town. The rate at which development occurs depends on a variety of factors including (but not limited to) the local economy, availability of developable land, and induced growth. The baseline assumption was established after evaluating these factors and historical trends. Two alternative scenarios could occur: the Town could grow at a slower rate consistent with historic trends (Linear Growth Rate) or could grow at a much more rapid rate (Trend Hyper Growth Rate).

Historic- Linear Growth Rate

Historically, the Town has issued an average of 42 single family permits per year over the last 16 years. According to inspection of the Town's building permits no new commercial or industrial facilities have been constructed in the last ten years. Under this alternative a total of 420 single family homes would be constructed. The resultant environmental impact of this alternative would be reduced proportional to the growth rate. The Town's technical team dismissed this alternative after evaluating regional growth projections, examining the current trends and considering the LFTC development.

Trend Hyper Growth Rate

The Capital District Regional Planning Commission (CDRPC) in its "Effects of Alternative Development Scenarios in the Capital District" evaluated a series of potential growth rates. The Alternative Development Report presents four (4) development scenarios for discussion. They are:

Scenario 1 - Status Quo Trend- The baseline scenario is based on the CDRPCs 2040 population projections. This scenario assumes growth will occur consistent with local historic trends and patterns.

Scenario 2 - Concentrated Growth – This scenario utilizes the 2040 population projections however growth is distributed/allocated to a locale in proportion to its current population.

Scenario 3 - Trend Hyper-Growth - This scenario assumes that growth in the Capital District will occur at a rate equal to the overall U.S. rate of growth. Growth is distributed consistent with the baseline scenario methodology.

Scenario 4 - Concentrated Hyper-Growth – Utilizing the Scenario 3 growth rates growth is allocated to locale based on current population centers (similar to Scenario 2.)

The CDRPC analyses indicate growth rates of the Capital District under Scenarios 3 & 4 (or Hyper Growth Alternatives) could double or triple (approaching 8 to 9%) over a ten year period- mirroring the overall growth rate of the U.S. This growth is predicated on the success of projects like the LFTC and a robust local economy. Utilizing the CDRPC projections; 70 to 95 homes per year could be constructed in Stillwater during 2000-2020 under the Hyper- Growth Scenarios. Extrapolating these figures, it is estimated 875 new homes could be constructed from 2007 -2017.

If growth at this rate were to occur the resultant impacts of this alternative would be accelerated and modest increases in the impacts to the Town's open space/agricultural resources would be realized. This growth is double the historic rates and was dismissed by the Town's technical team as overly aggressive or optimistic.

5.2 No Action Alternative

The No Action Alternative is a standard alternative required to be analyzed under SEQRA. The GEIS analyzes the affects of growth on the Town's resources and infrastructure. Growth or development without growth will likely occur under any scenario. The No Action Alternative is not defined as the No Growth Alternative. No Action in this case may be considered inaction on the part of the Town to manage growth. The Town's Comprehensive Plan adopted in 2006 establishes a series of goals and policy directives that focus on managing growth and planning for future development so that the Town's community character and agricultural resources are preserved for future generations. No Action is not a desired alternative.

6.0 GROWTH INDUCING IMPACTS

The projected residential and commercial development within Stillwater will certainly result in growth inducing impacts. As the supply and demand for housing increases, so too will the need for additional services. Residential and commercial growth often encourages the development of ancillary services (i.e. restaurants, hotels, entertainment, etc). The number of these ancillary services is a function of demand. Increased demand due to growth will likely, therefore, result in the development of numerous unanticipated services.

As the Stillwater buildout analysis highlights, considerable residential development could significantly increase throughout the areas of Stillwater that are now primarily rural, which could in turn encourage the development of more nearby goods and services. Such development would have a profound impact the Town's agricultural and natural resources. However, the implementation of such plans as the *Stillwater Comprehensive Plan*, *Stillwater US Route 4 Corridor Plan*, and the *Stillwater Farmland Protection and Green Infrastructure Plan* could mitigate the potential impact of such scenario by altering Stillwater's current land use paradigm from one that is suburban orientated to one that is in keeping with its traditional land use patterns (i.e. mixed use, concentrated hamlets coupled with unfragmented areas of farmland and open space) – thereby alleviating many of the growth inducing impacts.

Regional Considerations

As Section 3.4, Land Use and Zoning identified, the impact of growth can extend far beyond a community's political boundary. For example, development can lead to excessive stormwater runoff from impervious surfaces, increasing the likelihood of erosion and non-point source pollution – impairing both local and regional waterways. This can also be said for most any development within a stream's riparian corridor. In addition, local development can impact regional traffic and/or business patterns, taxes, community services, and even quality of life. The proposed Luther Forest Technology Campus (LFTC), for example, is likely to have major regional implications on growth. Communities throughout the Capital District region will experience both positive and negative impacts if the projects come to fruition.

7.0 IRREVERSIBLE COMMITMENT OF RESOURCES

Based on Stillwater's buildout analysis, it is estimated that approximately 600 new single family homes and up to 150,000 square feet of new commercial, office, retail, and industrial space could be constructed by 2017. Based on these projections and Stillwater's current zoning regulations, 92 % of that growth is likely to occur in the Town's most fertile or forested areas. The conversion of agricultural and open space resources for development would have a profound impact on Stillwater's rural community character and its natural environment. Even if the recommendations presented by the *Stillwater Comprehensive Plan*, *Stillwater US Route 4 Corridor Plan*, and the *Stillwater Farmland Protection and Green Infrastructure Plan* were adopted, there would still be some loss of these resources, albeit considerably less.

With new growth comes the increased need for community services such as police and fire protection as well as schools. Furthermore, new homes and commercial development requires time, labor, and materials for both their construction and long term maintenance. New development also requires additional sewer, water, electricity, communications, transportation infrastructure, utilities, and the like.

Throughout Section 3.0, Environmental Setting, there is considerable discussion about the availability and needs of these resources. As it is the case with any exercise that involves future predictions, there exists a margin of error. Therefore, it is difficult to determine the future availably of each resource. Natural resources such as water and petroleum are vulnerable market shifts, political upheaval, and environmental degradation and/or changes. Changes in the economy and/or the labor force can certainly have a tremendous impact on the availability of essential resources that are needed to construct homes and business, build roads, and provided municipal services.

8.0 USE AND CONSERVATION OF ENERGY

The *Stillwater Comprehensive Plan*, *Stillwater US Route 4 Corridor Plan,* and the *Stillwater Farmland Protection and Green Infrastructure Plan* all call for a change in Stillwater's current land use paradigm. Stillwater's existing zoning regulations are currently more favorable to suburban oriented development. The abovementioned planning efforts recommend a land use template that is in keeping with the Town's traditional land use patterns (i.e. mixed use, concentrated hamlets coupled with unfragment areas of farmland and open space). Because energy consumption and auto-dependency are inextricably linked, such changes would reduce petroleum demands and farmland and open space land conversion.

Based on Stillwater's buildout analysis, it is estimated that approximately 600 new single family homes and up to 150,000 square feet of new commercial, office, retail, and industrial space could be constructed by 2017. During the construction of these homes and business, energy will be used to power equipment and construction vehicles. Additionally, the tools and material used for construction will require the use of energy for their production.

In addition to energy use for construction, new homes and business will increase energy demand over the long term as well. Once construction is completed and new homes and business are in use and/or occupied, local and regional energy suppliers will have to provide additional energy for air conditioning, lighting, the use of household appliances, business operations, etc. However, energy consumption can be mitigated to some extant by promoting the use of energy efficient appliances and green design elements.

9.0 FUTURE SEQR ACTIONS

Future development proposals should be consistent with the criteria specified in the future findings statement prepared for this GEIS. These criteria include the mitigation measures discussed for each environmental issue. Failure to provide mitigation for potential adverse impacts will require further SEQR action to justify the lack of mitigation.

In the event subsequent proposed actions were adequately addressed in the GEIS but not adequately addressed in the findings statement, an amended findings statement must be prepared. If subsequent proposed actions were not addressed or not adequately addressed in the GEIS and the subsequent actions will not result in any significant environmental impacts, then SEQR only requires that a negative declaration be prepared.

SEQR requires a supplemental to the final generic EIS if the subsequent proposed action was not addressed or was not adequately addressed in the generic EIS and the subsequent action may have one or more significant adverse environmental impacts. As future development is proposed within the Town, the Lead Agency for each proposed action will be responsible for carrying out the requirements of SEQR. This will require the Lead Agency to interpret the Statement of Findings prepared by the Town, as it specifically relates to the development being proposed. To provide the Lead Agency with sufficient documentation to compare the parameters and impacts of a site specific project with the Findings Statement, each project that is subject to SEQR (Unlisted or Type 1) must prepare a Full Environmental Assessment Form.

Work Cited

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Appendix A:
Town of Stillwater GEIS Buildout/Growth Projections

March 16, 2007

Appendix B:
Town of Stillwater GEIS Traffic Impact Study
July 17, 2007

Appendix C:
Town of Stillwater GEIS Water Supply Evaluation
September, 2007

Appendix D:
Town of Stillwater GEIS Wastewater Evaluation
October, 2007

Appendix E:
Town of Stillwater GEIS Recreational Needs Assessment
December 7, 2007

Appendix F:
Town of Stillwater Farmland Protection & Green Infrastructure Plan
December, 2007