

# **SPECIAL AREA GUIDELINES WORKBOOK For the Tug Hill Region**



**24 July 2009**



## **Introduction**

It became evident, after a series of public forums held in early 1989, that residents of Tug Hill were concerned about “keeping Tug Hill the way it is.” There was widespread concern that without local control, the break-up of large forest land parcels, the pollution of waters, the importation of waste and the siting of other locally unwanted land uses would change the face of Tug Hill.

It was recognized that many of the activities that could change the nature of Tug Hill were being proposed and carried out by governmental agencies unaware of the special nature of Tug Hill or the desires and aspirations of its residents. Local land use controls were unable to provide the necessary protections in the face of “governmental immunity.”

The Tug Hill Reserve Act legislation was the result of a grassroots effort by Tug Hill residents to retain the character of Tug Hill through local action. The Act provides a means of recognizing Tug Hill’s specialness while respecting local land use controls. The Act provides a process of identifying, inventorying and designating those features of Tug Hill which make it unique and special, and requires other units of government, through dialogue with Tug Hill town boards, to be consistent with and respect the rural character of the Tug Hill.

### **The Tug Hill Reserve Act**

The Tug Hill Reserve Act (Chapter 486 of the unconsolidated laws of 1992) recognizes that the Tug Hill region has statewide and national significance because of water, wildlife, forest, farm and recreational resources. The act provides for protection of those resources through the preparation of a local reserve plan by a council of governments in the Tug Hill region. See Appendix A for the full text of the Act.

Once a local reserve plan has been completed, public agencies proposing development or reviewing development that could 1) directly affect a special area designated in a local reserve plan, and 2) change the nature of the town or village in which the development takes place, must consult with the affected towns or villages regarding the development’s consistency with the local reserve plan.

While councils of governments play a crucial role in the Tug Hill Reserve Act, all key decisions and powers stay with the participating towns and villages. Towns and villages decide to be part of the local reserve area or not; they designate special areas; they provide the real teeth of the reserve act through their local land use controls and environmental review.

The Tug Hill Reserve Act applies to any council of governments in the Tug Hill region as defined in law. The Tug Hill region today includes 41 towns and 21 villages, in a rough triangle formed by Watertown, Utica, Rome, and Oneida Lake.

The Act requires that a council of governments designate the boundaries of a local reserve area, as an agent for towns and villages working together. Of course, the choice of being part of a reserve area is strictly up to the individual towns and villages involved.

### **Local Reserve Plan**

A local reserve plan has five main elements:

1. a goal statement approved by all participating municipalities,
2. compatible and incompatible land uses,
3. criteria for the designation of special areas,
4. development review procedures,
5. a map showing each town or village designated special area.

The final plan is filed by the council of governments with the state's Secretary of State and any state and local government entities likely to carry out or review actions under the Act.

The existence of a local reserve plan or special area does not in itself mean a particular project will be denied or approved. They do not stop eminent domain proceedings or other governmental actions. Their existence does mean that a Tug Hill local government has determined a resource is important, and that state law requires consultation with the local government that has designated special areas, because of the importance of certain Tug Hill resources (as determined locally) to the State of New York. The idea is similar to the state's SEQR (State Environmental Quality Review Act) in that it requires a certain process, not a certain decision.

### **Special Areas**

Special areas are the driving force of a local reserve plan. Special areas are designated only by the towns or villages in which they occur. The council of governments preparing the local reserve plan would normally assist a participating town by developing criteria for special area designation, but leaving all decisions to the town or village. The council would also facilitate meetings between neighboring towns to help work out special area boundaries where they come to town or village lines.

The Act gives examples of special areas. Specifically mentioned are gulfs; important habitat areas; large, contiguous forest areas; core forest; major river or stream areas; important headwater areas; important groundwater areas; important historic areas; important scenic areas. Other features may be identified as special areas in a local reserve plan.

Special area designation is done by the adoption of a resolution of a town or village board, following a public hearing.

## Comprehensive Planning

Since the Tug Hill Reserve Act was passed in 1991, the NYS planning statutes have been amended to strengthen the local comprehensive planning provisions (Town Law Section 272-a, Village Law Section 7-722). The statutes now require that all capital projects undertaken by other units of government must “take such plan into consideration.”

Although there is no official depository of comprehensive plans which governmental agencies may refer to, nor any local consultation requirements, this does represent a significant step towards elevating the importance of local input into governmental decision making on all levels. It therefore behooves local governments to prepare and adopt comprehensive plans which identify special areas, and specify their preferred means of protection.

### A Note on this Version of the Special Area Guidebook

This is an updated version of an original guidebook which was prepared by the Cooperative Tug Hill Council in April 1992 as part of their reserve plan. The definitions of special areas in this guidebook do not correspond identically to the definitions of special areas in the Tug Hill Reserve Act. This has been done intentionally so as to 1) make criteria for the determination of special areas by local municipalities more objective, 2) to help encourage the designation of special areas which will be more consistent from municipality to municipality, and 3) to begin preparing the groundwork for the revision and updating of the Tug Hill Reserve Act through on-the-ground experience with revised definitions.

## Special Areas

### **Gulf**

*A gorge that generally holds scenic, geologic, ecologic, recreational, or historic significance. More specifically, a gulf is defined as a relatively narrow, deep passage with walls of a slope of 40% or greater, between two rock and/or earth faces containing one or more intermittent or perennial streams.*

A gorge in the Tug Hill region, locally called a gulf, is identified for its scenic, geologic, habitat or recreational value. These gulfs were identified based on knowledge of those familiar with the region, topographic diversity and geographic isolation. These gulfs represent fragile systems. They are categorized into two groups, the eastern escarpment gorges and the western fringe gulfs.

Eastern escarpment gorges are different from those on the western fringe mainly due to the rapid elevational change from the Tug Hill plateau to the Black River Valley. This has resulted in streams flowing off the escarpment cutting deep, short, branching gorges. Most have V-shaped valleys and very steep sides. Microclimate conditions within the gulfs support several rare plant species.

The western fringe gulfs were created by fast-flowing streams which drain the upper elevations of Tug Hill. The weak shale deposits characteristic of the western fringe result in unstable walls. In general, the gorge valleys are more U-shaped than in eastern escarpment gorges. Unique microclimate conditions within the gulfs support several rare plant species.

The data used for designating these areas was the Digital Elevation Model (DEM) from the US Geological Survey, from which a coverage was generated showing slopes greater than 40%. The slopes had to be within 100 ft of a stream and be between two rock and/or earth faces (two sided). Also, a buffer of 50 ft was applied to the slopes. The NYS Tug Hill Commission manually eliminated as many of the slopes greater than 40% that were not between two rock and/or earth faces as possible without field verification.

Suggested regulatory protection strategies and standards:

**zoning**

- minimum 200 foot setback of all uses from gulf rims
- conformance of uses to USDA NRCS and NYSDEC standards for erosion and sedimentation control
- storm water drainage plans for all uses subject to site plan review
- retention of vegetative buffers near gulfs through site plan review process

**subdivision**

- steer development away from gulfs and vegetative buffers through clustering development

**Important Habitat Area**

*Geographic sites or areas identified as significant for one or more plant species, animal species, or natural communities by the New York Natural Heritage Program, Audubon Society, New York State Department of Environmental Conservation's Comprehensive Wildlife Conservation Strategy, and/or other qualified conservation organizations that base their findings on a reliable set of scientific criteria and/or inventory information.*

The NYS Department of Environmental Conservation defines significant habitat areas to be habitat of special interest or value, due to its providing the key factors for survival of, and due to the presence of endangered, threatened or special concern species, unusual concentrations or variety of fish or wildlife (often seasonal in nature, such as spawning, nesting or wintering areas), unusual or unique ecological associations, and in which relatively intense fish and wildlife values, and human recreation associated with such wildlife, are concentrated in a limited geographic area. Specific examples of such areas include rare species habitat, colonial nesting areas, fisheries spawning and nursery areas, migratory roosting and resting areas, denning areas (reptiles, mammals), travel corridors and observation areas, and unusual vegetation areas. As these areas may change over time, due to additional inventory or inadvertent land use changes, available map updates

should be requested from the NYS Department of Environmental Conservation or the NY Natural Heritage Program before proceeding with land use decisions.

Data used to designate these areas came from the Audubon Society for important bird habitat boundaries, and from the NY Natural Heritage Program for the significant natural communities and areas of rare animal/plant species.

Suggested regulatory protection strategies and standards:

**zoning**

- retain important habitats through site plan review process
- maintain development densities which will help retain unfragmented habitats

**subdivision**

- steer development away from important habitat areas through clustering development
- encourage appropriately designed, unintrusive low-volume roads

**Large Contiguous Forest Area**

*An area of at least 500 contiguous acres that contains an assemblage of tree species where the predominant land cover is deciduous, evergreen, and/or mixed forest.*

Large blocks of contiguous forest lands are significant for providing timber, habitat, watershed protection, hunting, fishing, and other recreational values. The break-up of these large parcels through subdivision would have serious negative impacts on the forest industry of the region. The 500 acre minimum is based on parcel size patterns on Tug Hill.

The National Land Cover Database (NLCD) 2001 land use coverage was used to designate large contiguous forest areas, which was obtained from the Multi-Resolution Land Characteristics (MRLC) Consortium (group of federal agencies). Classes of land cover were assigned values and aggregated to reach a minimum total value to determine where contiguous land cover of more than 500 acres met a certain threshold of land cover types.

Suggested regulatory protection strategies and standards:

**zoning**

- limit uses in forest zones to logging, mining, silviculture, hunting/fishing camps, seasonal camps, passive recreation
- 25 acre minimum lot size, or development not exceeding 25 lots per square mile
- retain forest blocks through the site plan review process

**subdivision**

- steer development away from large forest blocks through clustering development
- encourage appropriately designed, unintrusive low-volume roads

## **Core Forest**

*The central portion of Tug Hill characterized by forest and wetland cover, including open water, and containing only unpaved roads, that are minimum maintenance or seasonally maintained.*

The core forest area is the generally roadless center of Tug Hill. A majority of this area is owned by private individuals in parcels of 250 acres or more. Although this area has few public roads, it does have a network of logging roads and is dotted with seasonal camps. This area is very important to the forestry based economy of the region.

Two data sources were used to determine core forest: tree species density data from the US Forest Service and the National Land Cover Database (NLCD) 2001 land use coverage, from the Multi-Resolution Land Characteristics (MRLC) Consortium. Analysis combined analyzing the density of American Beech, Red Maple, Yellow Birch, Sugar Maple, Black Cherry, Balsam Fir, and Red Spruce trees (those species most common in higher elevation areas such as the core of Tug Hill), land cover comprised of forestland, open water, and wetlands, and areas at least 150 feet (46 meters) from a paved road. Technical information about the GIS commands run during analysis is located in Appendix F.

Suggested regulatory protection strategies and standards:

### **zoning**

- limit uses in forest zones to logging, mining, silviculture, hunting/fishing camps, seasonal camps, passive recreation
- 40 acre minimum lot size, or development not exceeding 16 lots per square mile
- retain forest blocks through site plan review process

### **subdivision**

- steer development away from large forest blocks through clustering development
- encourage appropriately designed, unintrusive low-volume roads

## **Major River and Stream Corridor**

*The flowing water and the adjacent uplands within 150 feet of a 3<sup>rd</sup> order or larger stream.*

Major river corridors are significant because they provide important public benefits including recreation, wildlife habitat, and clean water. A third order stream is formed when two second order streams join (also see Important Headwater Area definition). Similarly, a fourth order stream is formed when two third order streams join.



Many of the major rivers and streams are identified in Article 42 of the NYS Executive Law as Inland Waterways. It may be advisable to consider making sure all rivers and streams in this category are identified in Article 42.

Data used to designate these areas on the map, was the stream data obtained from the National GAP Analysis Program. The STRAHLER order system for streams was used. Any stream that was a 3<sup>rd</sup> order stream or greater was used for this map designation. A buffer of 150 ft was applied to these streams to give what were the major river or stream corridors.

Suggested regulatory protection strategies and standards:

**zoning**

- 200 foot minimum setback of all uses from high water marks
- conform to USDA NRCS and NYSDEC standards for erosion and sedimentation control
- storm water drainage plan through the site plan review process
- retain vegetative buffers near rivers and streams through the site plan review process

**subdivision**

- steer development away from river and stream corridors and vegetative buffers through clustering development

**Important Headwater Area**

*Hydrologically connected 1<sup>st</sup> and 2<sup>nd</sup> order streams with a combined length of at least five miles, that are uninterrupted by roads and where the land cover within a 150 feet buffer area around them is compromised of 70% or greater forest, wetland, or open water. Also includes the adjacent uplands within 150 feet of such streams, and wetlands (in their entirety), whose boundaries fall within 150 feet of such streams.*

Important headwater areas are the beginnings of major streams and rivers. A first order stream has no tributaries. A stream is a second order stream below the junction of two first order streams. These streams are usually composed of groundwater and surface water sources, the latter largely wetlands. These areas are important to both the quantity and quality of the water flowing through these rivers and streams as well as providing important wildlife habitat, especially for waterfowl and furbearers.

Data used for this map was the stream data from the National Gap Analysis Program, National Land Cover Database (NLCD) 2001 land use coverage from the Multi-Resolution Land Characteristics (MRLC) Consortium, ALIS road coverage, and wetlands from the NYS Department of Environmental Conservation. To obtain these areas, the STRAHLER order system was used for the streams and all streams that were either 1<sup>st</sup> order or 2<sup>nd</sup> order were selected. Those streams were then analyzed with the road data and land cover data to determine where 5 mile lengths or longer existed without road

crossing and with at least 70% land cover in forest, wetland, or open water. Once that was complete, a 150 foot buffer was applied, and all wetlands that fell partially within those buffers were added as well.

Suggested regulatory protection strategies and standards:

**zoning**

- 200 minimum foot setback of uses from headwater areas
- conform to USDA NRCS and NYSDEC standards for erosion and sedimentation control
- use storm water drainage plan guidance through the site plan review process
- retain 200 foot vegetative buffers near headwater areas through site plan review process

**subdivision**

- steer development away from headwater wetland areas and vegetative buffers through clustering development
- use storm water drainage plan to determine vegetative buffers near rivers and streams

**Important Groundwater Area**

*Area delineated as containing an underlying aquifer, as depicted by United States Geological Survey, United States Environmental Protection Agency and/or New York State's Aquifer data.*

Important groundwater areas are areas overlying an aquifer or significant groundwater area. These groundwater resources are important for water supplies to municipalities as well as feeding rivers and streams which supply recreational opportunities and wildlife habitat.

Data used for this map was the US Geological Survey aquifer coverage that was digitized by the NYS Tug Hill Commission.

Suggested regulatory protection strategies and standards:

**zoning**

- prohibit incompatible uses including bulk storage of potentially hazardous substances (i.e. gas stations and salt storage) and uses which significantly contribute to water runoff (i.e. car washes, junkyards, large parking lots)
- ensure that lot sizes are adequate to prevent groundwater pollution from septic systems
- minimize impervious surfaces through site plan review
- use groundwater protection overlays where appropriate
- use storm water drainage plan guidance through the site plan review process

**subdivision**

- steer development away from important groundwater areas through clustering development
- encourage appropriately designed, unintrusive low-volume roads
- use storm water drainage plan guidance through the subdivision review process

**Important Historic Area**

*A structure and/or community feature listed or eligible to be listed on the New York State and/or National Register of Historic Places, or designated as an archeological site by the New York State Office of Parks, Recreation and Historic Preservation.*

Historic areas are structures and places which are important to the character of a community.

Data used for this map was the national and state registered historical sites that were obtained from NYS Office of Parks, Recreation, & Historical Preservation.

Suggested regulatory protection strategies and standards:

**zoning**

- review site plans of any activity undertaken on lots that feature historic structures or sites
- review the demolition of historic structures

**subdivision**

- steer development away from important historic areas through clustering development

**Important Scenic Areas**

Scenic areas, although specifically mentioned in the Tug Hill Reserve Act, is being left undefined at this time. There is little objective research and there are no objective, useful studies of scenic areas in the Tug Hill Region which could be used as a basis for developing a working definition. It is the recommendation of this guidebook that communities not designate scenic areas until appropriate research and studies become available to guide such designations.

## **Appendix A**

### **1992 SESSION LAWS Chapter 486 TUG HILL RESERVE – CREATION**

AN ACT in relation to the creation of a Tug Hill reserve, to provide for the protection and beneficial use of productive forest, farm and recreation lands as working lands.  
Approved and effective July 17, 1992

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Declaration of findings and purpose. The legislature finds that the Tug Hill region, as defined by law, provides water, wildlife, forest, farm and recreational resources of nationwide, statewide and regional significance. Protection of these resources through coordinated, local action will provide the most enduring and cost-effective method of retaining the rural and remote character of this land, and of retaining the independent way of life of its people and their economy.

The legislature further finds that resources particularly important to the character of Tug Hill include its major river corridors; its gorges (locally known as “gulfs”); its core forest and headwaters area; aquifers; habitats of endangered, rare and threatened plant and animal species; habitat important to protected animal species, such as deer winter yards; and state- and locally-designated historic sites. These resources are among those that should have highest priority for protection through local reserve plans and local land use controls.

The legislature further finds that Tug Hill’s national and statewide significance is related to its inclusion in the U.S. Forest Service’s Northern Forest Lands area, and its proximity to the Adirondack Park and the Adirondack Champlain International Biosphere Reserve. Its regional and statewide significance is related to its natural values as well as the economic contribution of its pure waters, its timber, and its hunting, fishing and other recreational opportunities.

The legislature further finds that, lying between Lake Ontario, the Black River and Oneida Lake, the region’s approximately 2,000 square miles encompass towns and villages scattered in a vast acreage of forest and farm land. The core of the region encompasses more than 800 square miles of remote forest land and the headwaters of several major rivers, with much of the area inaccessible by public road. These resources are crucial to the region’s natural environment, its economy, and its very way of life. These resources supply water for residents of the Tug Hill region, as well as communities outside the region. Its pure waters and vast forest lands are essential to thousands of jobs in forest, agricultural and other industries in and near the region. These resources also

support opportunities for hunting, fishing, and recreation that are integral to the region's economy and way of life.

The legislature further finds that the region's national and statewide significance is also related to its history of municipal cooperation, as evidence by creation of formally incorporated intermunicipal agreements for resource protection that date back to 1974. This tradition is especially strong in the core of the region where towns have administered a multi-town resource management plan, similar rural development codes, and a cooperative zoning board of appeals since the mid-1970's, and now are joined in a council of government of 19 towns and villages, which are preparing a local reserve plan. This track record demonstrates the capability of Tug Hill region towns and villages to work together for resource protection and appropriate economic development. The legislature further finds that retaining the rural character of the Tug Hill region will require the cooperation of individuals and public and private organizations, and close consultation between state agencies, boards, commissions, authorities and local governments.

It is the purpose of this act to establish a system of protection for the Tug Hill region through programs administered by local councils of governments, and to ensure that in proposing development or in the review of proposed development the actions of governmental agencies, boards, commissions and authorities are consistent with protection of the region.

## Section 2. Definitions:

1. "Core forest area" shall mean areas which are a part of the large, contiguous, central portion of Tug Hill characterized by forest cover, few public roads, headwater areas of major rivers or streams, concentrations of wetlands, and identified for their significance in an inventory of special areas prepared by or for a council of government in the preparation of a local reserve plan and map.
2. "Council of governments" shall mean a group of representatives of Tug Hill municipalities working together under article 5-G of the general municipal law to administer a local reserve plan.
3. "Deer winter yards" shall mean those areas in the Tug Hill region identified by the New York state department of environmental conservation as mild winter and harsh winter deer wintering areas.
4. "Gulf" shall mean a gorge in the Tug Hill region identified for its scenic, geologic, habitat or recreational value in an inventory prepared by or for a council of government in the preparation of a local reserve plan and map.
5. "Important habitat areas" shall mean Tug Hill region plant and animal sites identified by the New York Natural Heritage Program; and similar sites identified in an inventory

prepared by or for a council of government in the preparation of a local reserve plan and map.

6. “Important headwaters and groundwater area” shall mean an area encompassing the headwaters and headwater wetlands of a major river or stream, or an area overlying an aquifer or significant groundwater resource, as identified in an inventory of special areas prepared by or for a council of governments in the preparation of a local reserve plan and map.

7. “Important historic and scenic areas” shall mean a vista, scenic stretch of road, or historic site identified for its significance to the character of a community, as identified in an inventory of special areas prepared by or for a council of governments in the preparation of a local reserve plan or map.

8. “Large, contiguous forest area” shall mean an area of at least 500 acres of private forest land in the Tug Hill region identified for its significance in providing timber, habitat, hunting, fishing, or other recreational value in and inventory of special areas prepared by or for a council of governments in the preparation of a local reserve plan and map.

9. “Local reserve” shall mean an area of Tug Hill forest, farm and recreational land, and wildlife habitat, associated water resources, documented as having at least statewide significance in a plan administered by a council of government and approved by all participating municipalities.

10. “Local reserve plan” shall mean a multi-town plan prepared by a council of governments, setting goals, compatible and incompatible land uses, criteria for designation of special areas, and development review procedures. The local reserve plan shall serve as a guide to member municipalities in the adoption of local plans, land use controls and programs to help meet the goals of a local reserve plan. A local reserve plan shall take effect upon approval of all participating municipalities.

11. “Major river or stream corridors” shall mean a Tug Hill region river identified for its significant water supply, recreational, habitat or scenic value in an inventory of special areas prepared by or for a council of governments in the preparation of a local reserve plan and map.

12. “Special areas” shall mean those particular areas in a local reserve which are identified by municipalities as vital to protecting natural resources and character of the landscape. Tug Hill resources to be considered for special area designation in a local reserve plan include, but are not limited to, gulfs; important habitat areas; large, contiguous and core forest areas; major river and stream corridors; important headwater and groundwater areas; and historic and scenic areas.

Section 3. Council of governments.

1. A council of governments shall identify a local reserve within, or comprised of, its member municipalities.
2. The council shall assist member municipalities in the identification of special areas and in the review of development proposed in special areas, and review of development that could have reserve wide impacts.

Section 4. Local protection special area program. Special areas identified by municipalities may be protected through local land use codes adopted by individual municipalities, based on guidelines suggested by the council of governments. Special areas may be designated critical environmental areas by the municipality under provisions of the environmental conservation law. Participating municipalities shall take at least one of these two actions to designate a special area.

Section 5. Consistent government actions. Actions of governmental agencies, boards, commissions, and authorities in proposing development or in the review of proposed development shall be consistent with maintaining the rural character of Tug Hill and the intent of this act. When a governmental agency, board, commission or authority proposes development or reviews proposed development which directly affects locally-designated Tug Hill special area resources, and which could change the basic nature of Tug Hill in a municipality that has adopted a local reserve plan, such agencies, boards, commissions and authorities, shall consult with the affected municipality or municipalities on consistency with the local reserve plan.

Section 6. This act shall take effect immediately.

## **Appendix B**

### **GLOSSARY OF TERMS FOR THE TUG HILL RESERVE ACT**

**Tug Hill Reserve Act:** A law authorizing councils of governments in the Tug Hill region to designate local reserves, prepare local reserve plans and administer programs to ensure that in proposing development or in the review of proposed developments, the actions of governmental agencies, boards, commissions and authorities are consistent with the protection of the region, with maintaining the rural character of Tug Hill, with the intent of the Act, and with local reserve plans.

**Special Area:** A particular area in a local reserve which is identified by a town as vital to protecting natural resources and the character of the landscape.

**Special Area Guidelines Workbook:** A guide prepared for the use of the towns of the Tug Hill in preparing individual town special area maps. The guidelines of this workbook are designed to assist towns in meeting the special area criteria established in the Tug Hill Reserve Act.

Special Area Maps, Individual towns: Maps designating special areas in individual towns of the Tug Hill, adopted by a resolution of the local town board.

Special Area Map, Composite: A composite map of the individual town special area maps, adopted by a resolution of a Tug Hill council of governments, and made a part of a reserve plan.

Tug Hill Reserve Plan: A local reserve plan adopted by a resolution of a Tug Hill council of governments, and composed of a goals statement and a composite special area map.

## **Appendix C**

### **TUG HILL RESERVE PLAN CONSULTATION PROCESS**

(example adopted by Cooperative Tug Hill Council)

The Tug Hill Reserve Act (Chapter 486 of the laws of 1992) finds that the Tug Hill region provides water, wildlife, forest, farm and recreational resources of nationwide, statewide and regional significance. Protection of these resources through coordinated, local action will provide the most enduring and cost-effective method of retaining the rural and remote character of this land, and of retaining the independent way of life of its people and their economy.

It is the purpose of the Tug Hill Reserve Act to establish a system of protection for the Tug Hill region through a program administered by local councils of governments, and to ensure that in proposing development, or in the review of proposed development, the actions of governmental agencies, boards, commissions and authorities are consistent with protection of the region, with maintaining the rural character of Tug Hill, with the intent of the Act, and with local reserve plans.

The Cooperative Tug Hill council, a local council of governments within the Tug Hill area, has established a local reserve known as the "Tug Hill Reserve," and has prepared and adopted a reserve plan known as the "Tug Hill Reserve Plan." This reserve plan designates special areas to be protected by the Tug Hill Reserve Act.

Governmental agencies, boards, commissions, authorities, and local governments of the Tug Hill Reserve shall follow the following steps:

1. Any governmental agency, board, commission or authority, prior to final action on a proposed development or review of a proposed development, shall locate the area to be developed on the "Cooperative Tug Hill Council - Local Reserve Plan - Special Area Map" to determine whether it is within a designated special area.
2. If proposed development directly affects designated special areas and would change the basic nature of Tug Hill, the governmental agency, board, commission or authority



must contact the town/village clerk(s) of the affected municipality(s) to determine whether consultation is necessary.

3. Within 45 days of being contacted by the governmental agency, board, commission or authority, the town/village board shall hold a regularly scheduled meeting or call a special meeting of the board. Notice of the meeting shall be given to the involved governmental agency, board, commission or authority and to the Cooperative Tug Hill Council.

4. The town/village board shall determine if the proposed development directly affects designated special areas and would change the basic nature of Tug Hill, thus requiring consultation.

5. The town/village board shall notify the involved governmental agency, board, commission or authority immediately to discuss further steps in the consultation process in order to maintain the consistency of the proposed development with the Tug Hill Reserve Plan. If consultation is determined to be unnecessary, the town/village board shall immediately notify the involved governmental agency, board, commission or authority.

## **Appendix D**

### **QUESTIONS ABOUT THE TUG HILL RESERVE ACT**

What does the Tug Hill Reserve Act do?

Requires GOVERNMENTAL ORGANIZATIONS to notify and consult with local town boards when they carry out or issue permits for development projects in SPECIAL AREAS.

What does the Tug Hill Reserve Act NOT do?

The Reserve Act does not affect the actions of private landowners. Private development can only be regulated by local zoning laws, and the Reserve Act and special area designation are NOT zoning.

What is a special area?

Any area designated by the town board which meets criteria established in the Tug Hill Reserve Act. Possible special areas include:

- gulfs
- important habitat areas
- large contiguous and core forest areas
- major river and stream corridors

- important headwater and groundwater areas
- historic and scenic areas

What is a governmental organization?

Governmental organizations required to comply with the Tug Hill Reserve Act include state, county and local agencies, boards, commissions, and authorities. Units of the federal government are not covered by this Act.

What towns are participating in the Tug Hill Reserve Act?

Towns which are members of council of governments in the Tug Hill Region may participate in the Act.

Can special areas be changed in the future?

The town board may add, delete or change special areas designated on the map by a simple resolution of the board upon public hearing. The town board may also withdraw from involvement with the Tug Hill Reserve Act at any time upon repealing the map.

## **Appendix E**

### **FROM THE TOWN/VILLAGE OF LOWVILLE COMPREHENSIVE PLAN**

#### **A. Clustering**

The general concept behind clustering is that density is separated from lot size. In this way, the same number of homes are allowed but there is more flexibility in where the homes are located. Currently, the Town regulates density by having a minimum lot size for each zoning district. The minimum lot size in a particular zoning district, for example, might be 1 acre. Under this regulation, each home must be placed in the middle of a one acre “box”. Another way to express this density is that a person can build 1 dwelling unit (du) per acre - so on 10 acres a person can build 10 homes. However, by expressing the density in this way, the person is no longer confined to dividing the land into one-acre lots. Smaller lots, as the capacity of the land can support, could be clustered on a portion of the site while the remainder remains open. In this way, the entire site is not divided into building lots and the homes can be sited in the most suitable locations.

There are many options for the remaining open lands derived from clustering. In all cases the open land should be restricted from any further development in some way. One method is through a conservation easement, held by the Town, a land trust, or both. There are several options in terms of ownership of the open land under easement. For example, if the original parcel was owned by a farmer, the farmer could retain ownership of the remaining lands. In this case the farmer would continue to farm the land and

would retain all the rights of ownership (including the right to transfer title) except the property's development rights, which would already have been used. Or the large remaining open parcel could be sold for a large "estate" farm (as one of the housing units allowed based on the original lot count). In both cases, the open space would be managed by a private land owner.

Clustering can be included in the Town's land use regulations as an option or as a requirement. As an option, it is often ignored by developers who are unfamiliar with the concept and therefore are reluctant to try it. This is true even though they can often save money due to shorter road and infrastructure lengths. As a mandate, the Town could simply regulate density in terms of dwelling units per acre, as described above, and require some minimum percentage of open space for any subdivision. The minimum percentage of open space should be significant - at least 50% to make a real impact in terms of protecting resources and rural character. It is important to reiterate that the overall allowed density with clustering would not exceed what is possible with a conventional subdivision.

#### B. Conservation Development

The conservation development is a resource-based process for subdivision design. The Town should consider the design of conservation developments instead of conventional subdivisions. The conservation design approach is quite simple and involves collaboration between the Planning Board and the applicant at the earliest state of design - the concept or sketch plan phase. To determine the yield, or possible lot count for a site, subtract the lands which contain severe constraints to development (defined in the subdivision regulations - wetlands, floodplains, very steep slopes, etc.). The maximum number of housing units would be based on the number of acres remaining and the maximum allowable density in the zoning district (for example, 1 du/acre).

Once the number of housing units is established, the design process can begin. Start by identifying the resources present on the site (agriculture land, historic or scenic views, significant tree stands, etc.). Illustrated residential design guidelines, described below, could assist in this process. Once the analysis of resources is done, it is possible to identify lands where development is most appropriate. Locate the homes in these development areas, design road alignments to connect these homes, and then draw the lot lines. Because the area and bulk regulations used for conventional subdivisions are not applicable, the process is creative and not driven strictly by regulations. Randall G. Arendt, in his book *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks* (1996) provides excellent guidance in the use of this approach to subdivision design.

The important aspect of the conservation development is that it is an opportunity for a Planning Board to become involved very early on in the site development process. Under standard subdivision and site plan review procedures, a Planning Board or Zoning Board is in a reactionary mode and must wait for a concept plan to be presented. Under a conservation development procedure, the Planning Board is involved in the process of

identifying developable and undevelopable land before sketches and concept plans are laid out. The process works well for standard subdivisions as well as cluster developments.

## **Appendix F**

### **TECHNICAL NOTES ON GIS ANALYSIS**

For the “Core Forest” definition, a value (Value C) was generated and any point that had a value greater than 2.75 for “Value C” was selected. To get “Value C” we added together two other values, “Value A” (pixel data) and “Value B (pixel data)”. “Value A” was obtained by getting the total density of American Beech, Red Maple, Yellow Birch, Sugar Maple, Black Cherry, Balsam Fir, & Red Spruce from the tree species density data. “Value B” was obtained by using the NLCD 2001 land use coverage to set all land use that is forestland (41 - 43), open water (11), or wetlands (91 & 95) with a value of 1 and all other land uses were set with a value of 0. The numbers you see in parenthesis correspond to values in the land use coverage, for example, 11 represents open water in the land use coverage, so any pixel with the value 11 would be open water. To get “Value C”, “Value A” was added to “Value B” and converted to a point dataset (each point representing a pixel value for the two values added together). After selecting all points that had a value greater than 2.75 for “Value C”, the Tug Hill Commission only used the selected points that were at least 350 meters from a paved road. These points were used to generate the boundary, which was manually generated.