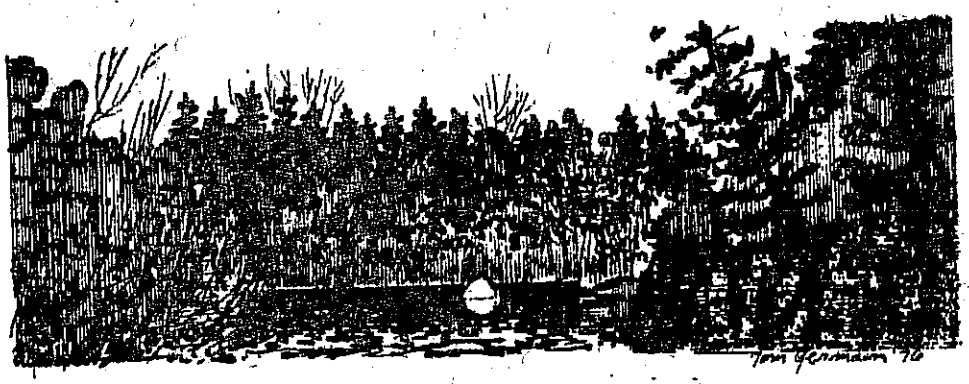
3. COMMUNITY RESOURCES

NATURAL RESOURCES INVENTORY



A major component in developing the Plan was the inventory of Tug Hill's natural resources. These resources represent a series of dynamic environmental systems, which through time may be altered by human activities. Because of the sensitive natural balance of many of these environmental systems it is important that the planning process carefully analyze each system and consider what levels of human activity should be permitted within each one.

The following pages define the several components of the natural resource inventory. An explanation of their importance to the community and how this importance was treated in the planning process is also described. The list below shows the data that was gathered for each of the towns in order to provide a rational basis for the Plan.

- *Soil Considerations.*
- *Slope Considerations.*
- *Water Resource Considerations*

  wetlands
  rivers, streams, ponds, lakes
  drainage basins
  flood plains
  *aquifers (sub-surface water potential)**

- *Forest Classification/Wildlife Habitats.*
- *Climate Considerations.*

* *The surficial geology is being mapped for the nine towns by the Syracuse University Geology Department. From this information aquifers and aquifer recharge areas can be identified.*

SOIL CONSIDERATIONS

Proper siting of development can be determined only after a thorough analysis of soil types within the community. Soils differ according to variations in particle gradation, behavioral characteristics, depth to bedrock, and drainage capability. Each of these factors is important in determining how much and what kind of development the land is capable of supporting. A thorough soils analysis can also help to avoid high development and construction costs.

Soil drainage capacity is a major consideration in determining development capability. This is particularly important when considering the feasibility of on-site sewage effluent disposal. On-site sewage systems installed on soils with improper drainage may result in the contamination of groundwater and runoff into a public water supply or bodies of water used for recreational purposes. In low-lying areas where drainage occurs too slowly, certain types of development can result in flooded homes and roads.

Soil bearing strength also influences site suitability for various uses. Proper soils provide good, stable support for various development purposes. Settling and shifting can occur in areas where the soil is not capable of supporting foundations.

Soil information can be important economically to a community. It can indicate areas of exceptionally high agricultural or commercial forest potential. Topography, soil drainage capacity, and bearing strength are also important qualifications in planning recreation development areas.

Summary of Soil Analysis Process:

Four physical characteristics were identified as having significance in regards to evaluating soil for community development:

- Permeability
- Depth to bedrock
- Depth to seasonal water table
- Soil texture

From these criteria and utilizing soil interpretations from the United States Agricultural Department, soil types were grouped into one of four categories. These categories were established on the basis of their relative development potential.(1)

- Slight limitations for development
- Moderate limitations for development
- Moderate to severe limitations for development
- Severe limitations for development

SLOPE CONSIDERATIONS

Comprehensive slope information is an essential element in the planning process. By relating land use to topography, it is possible to minimize damage to the environment and to avoid extensive site alterations.

As one measure of topography, slope indicates the percentage incline of the land, a vertical cliff face having a slope of one hundred percent, and a flood plain being very close to zero. Areas of slight slope usually present the fewest limitations to development, and can be developed with few engineering problems or damage to the environment. Steep slopes can mean high construction costs, unstable soil , and sewage disposal problems. Moderate slopes may be developed, but to do so often requires tampering with the landscape and relatively high costs.

The findings of a slope analysis should be reflected in the intensity limitations and the types of uses permitted in various parts of a community. By avoiding development on inappropriately sloped areas, a community can be assured of minimizing adverse effects of development on soil stability(i.e., preventing landslides or erosion), water quality site aesthetics, and on other natural resources.

The following slope categories were mapped for the Cooperative Tug Hill Planning Board region:

0-8% - *Such slopes may be developed at a relatively intense level.*

8-15% - *Such slopes are also buildable but impose higher development costs and require special attention to potential environmental effects.*

15% and greater - *Development on these slopes may present serious environmental problems. Erosion rates are greatly accelerated. Accelerated erosion increases siltation. Septic systems will not function properly on these slopes. Development costs are likely to be massive because of the special engineering techniques that must be explored to ward off problems caused by slippage. Proper grades for streets are difficult to attain and often can only be accomplished by large road cuts.*

WATER RESOURCE CONSIDERATIONS

Planning in the Tug Hill region requires a complete inventory of water resources. This inventory involved the mapping of lakes, ponds, rivers, streams, groundwater, drainage patterns, and areas subject to flooding; identification and description of aquatic plant and animal communities were also covered.

Areas subject to flooding include lands adjoining rivers, streams, lakes, ponds or wetlands where flooding results from spring snowmelt, heavy rains or other weather conditions. By identifying these areas, it is possible to restrict development to open space uses which are tolerant of flooding and do not obstruct the flow of floodwaters. Financial loss can thus be avoided for both the community and private citizens who might otherwise build in, or might be affected by, building in these areas.

Groundwater is found in soil and rock beneath the surface, and is a major component of the community's water resources. This subsurface water is important in supplying water to surface water bodies and wells. Certain underground supplies, called aquifers, hold a large reservoir of water capable of supplying well water. Aquifer recharge areas are important in transporting precipitation to these reservoirs. The flow of groundwater is also important to the quality and quantity of surface water.

Wetlands are perhaps the most critical of these areas, due to their extreme sensitivity to development. These are areas subject to periodic or continual inundation by water and are commonly referred to as bogs, marshes, or swamps.

Most wetlands support a variety of wildlife. They serve as breeding grounds for many species of waterfowl, and resting stop-overs for an assortment of birds during migration. Many fur-bearing animals such as beaver, muskrat, raccoon, otter, and mink make their home in wetland areas. Certain types of wetlands such as marshes and vegetated lakeshores are also valuable for fish production.

Wetlands are efficient cleansers of water. Marshes and swamps filter out many of the sediments and pollutants carried by streams so that in some instances, water flowing out of wetlands is much purer than that flowing in.

These areas are also important in minimizing flood damage. They absorb great amounts of water during heavy rainfall and spring runoff; this can mean reduced peak flood flows and decreased flood damage.

The development limitations of wetlands must be taken into consideration in planning. The physical characteristics of wetlands in many cases make construction costly and impractical. Deep, mucky soils with insufficient drainage may be too unstable to support foundations, high water levels may result in flooded homes or eroded yard and frost-heaved roads. By considering these factors, the community can work to avoid irreparable damage to its environment.

Development limitations presented by other hydrologic features must also be considered. Flooded basements, erosion, or the settling of foundations may occur in areas with high water tables. Areas with poor drainage are unsuitable for proper sewage effluent disposal. Building or paving over an aquifer recharge area can result in the contamination or curtailment of a cummunity's drinking water supply. Moreover, improper siting of construction in relation to water resources may mean costly site alteration later.

Environmental damage may result from failure to consider these hydrologic features. Plant and animal species dependent on water resources will be lost if their habitats are destroyed. Shoreline development can contaminate a community's public water supply, and correction of such a situation is often a great expense to the community. Streams also provide extensive recreational opportunities which development may endanger. For all of these reasons, the Cooperative Board believes Tug Hill's streams should be subject to special protection, proposed standards for which have been drafted and are included in the Appendix E.

FOREST CONSIDERATIONS

In what has been called "the core" lies one of the largest uninterrupted tracts of forest in New York State. This forest can provide long term economic returns to the surrounding communities. In order to insure sustained timber yields in the area, it is essential to consider the implications of uncontrolled development.

Indiscriminate use of the forest will endanger the use of other important natural resources that exist within the forest environment. Trout require cold water (less than 70 degrees Fahrenheit) and a high dissolved oxygen concentration. For this reason, cutting in close proximity to streams, thus removing shade, and clear-cutting anywhere in a watershed must be done only after consideration is given to effects on fish life and bank erosion. Several deer yards have been identified on the periphery of the core forest. Proper forest management in these areas will help sustain a natural whitetail deer population.

The future water supply resource of the region is directly related to forest land use. Ten river systems have their headwaters in the core area. Disturbance to woodlands could bring changes in run-off quantity and quality which will not be beneficial. Logging practices also affect the land's rain interception and water retention properties. Care must be taken to manage the forests at a sustained yield. At the same time water supply must be protected in the management and harvesting practices. The Cooperative Board has prepared policies and standards to guide management of the forest. These appear in the Appendix D.

In mapping forest land in the nine towns, two forest stand characteristics were considered:

1) Size of timber

- Sawtimber - greater than 12 inches in diameter
- Pole Timber - between 6 and 12 inches in diameter
- 20 Year Pre-commercial - twenty years or less to mature to pole timber size
- 50 Year Pre-commercial - more than twenty and less than fifty to mature to pole timber size

2) Type of stand

- Predominantly hardwoods
- Predominantly softwoods
- Mixed hardwoods and softwoods

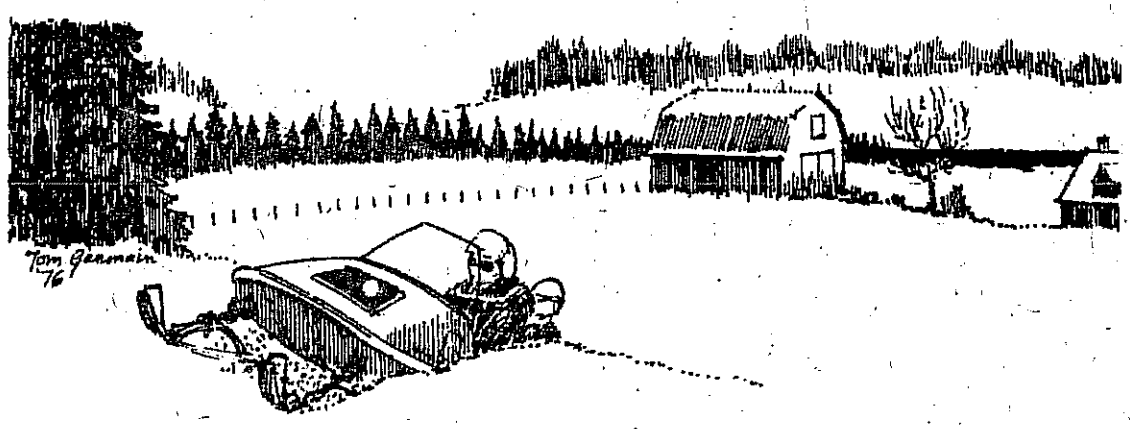
CLIMATE CONSIDERATIONS

Climate and local weather patterns play an important part in the lives of the people of the nine town area. The variations in certain aspects of climate create limitations to the types of uses possible for a piece of land. For instance, areas with a longer growing season are more likely to be used for agriculture, all other things being equal, than an area with a shorter growing season.

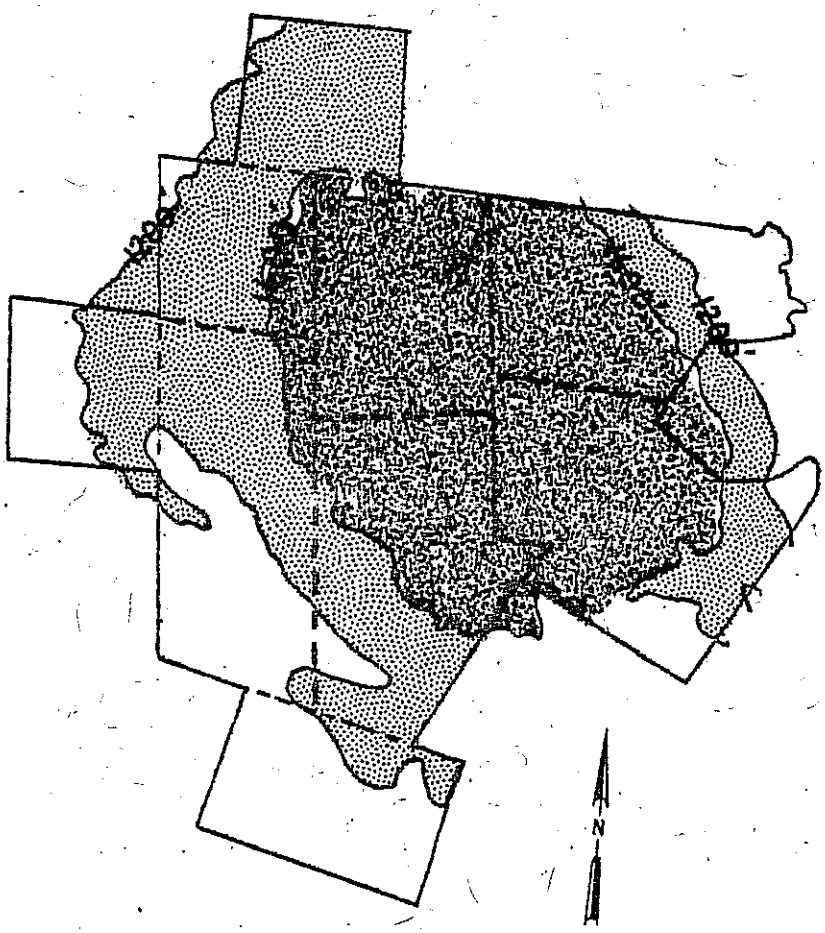
In order to determine the amount of limitation imposed by climate, it is necessary to define measurable criteria for evaluation that can be easily mapped and explained. The data used was taken from Resources of the Tug Hill Region. Briefly, climate variations on Tug Hill are primarily related to elevation. The higher an air mass rises the cooler it becomes, and the amount of moisture it can hold decreases. This means that as the winds blow from the west across Tug Hill, the air rises and loses moisture in the form of rain and snow. Differences in temperature and precipitation are thus explained locally by differences in elevation.

The consequences of various elevations are best described in terms of growing season, important to agriculture and forest growth, and average annual snowfall, which is greater on Tug Hill than anywhere else in New York State. The following table shows the general relationship between these two factors and elevation. The corresponding degree of limitations assigned to each category appears on the left side of the table.

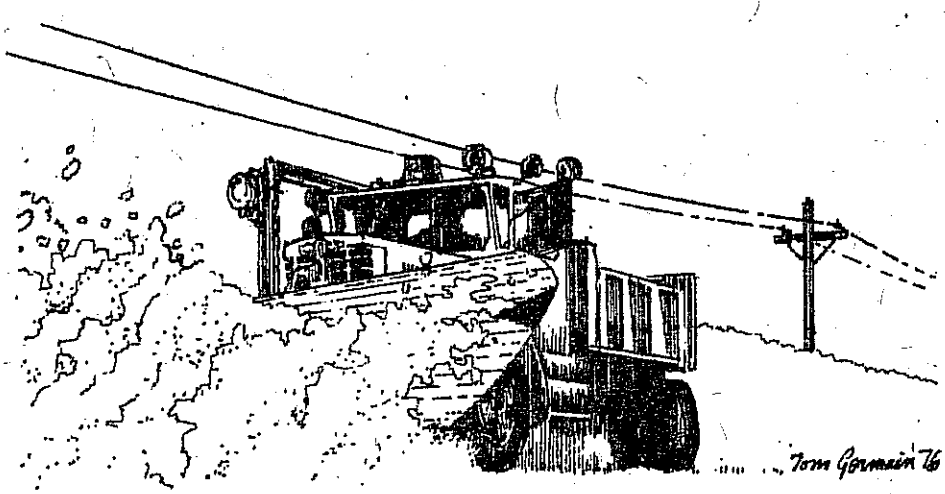
Degree of Limitation	(in days) Approx. length of Growing Season	(in inches) Average Annual Snowfall	(in feet) Above Sea Level Elevation
Slight	180+	160-180	1200 or lower
Medium	160-180	180-200	1200-1600
Severe	160 or fewer	200+	1600 or higher



CLIMATE MAP



SOCIAL AND ECONOMIC ELEMENTS



Social and economic factors are also major Plan components. The relationship among these factors, their effects on present and potential land usage and their relationship to natural resources must be considered in making land use decisions.

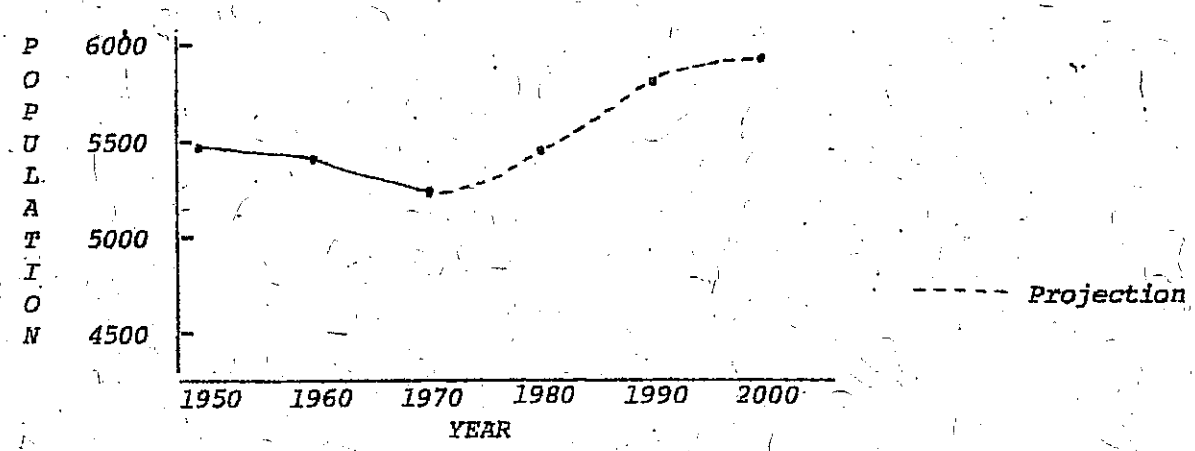
Social and economic elements include the feelings of the people about their community, the character of the community, and land use commitments in the form of capital investment in land, buildings and improvements. The location of present investments in roads and other service and commercial facilities is an important factor in locating sites for future growth.

On the following pages, the importance of these factors to the area and their role in the planning process is described. The factors considered are listed below.

- *Population*
- *Existing Land Use*
- *Agricultural Districts*
- *Transition Lands*
- *Human Settlement*
- *Transportation*
- *State Lands*
- *Recreation*

POPULATION

According to the U.S. Census, resident population in the nine towns declined between 1950 and 1970, from 5,479 to 5,230 people. The peak population of the area occurred one hundred years ago, when there were about twice as many people. The following projection shows an increase to 5,490 by the year 2000.



SOURCE: NYS Office of Planning Services.

As seen below, the Towns of West Turin and Martinsburg are the most populated, followed by Florence with about half as many people. None of the nine towns has more than 1800 people, and Montague has less than one hundred. This small scattered population reflects the remote nature of the region.

Population Summary By Town (1970)

TOWN	TOTAL POPULATION	PERCENT OF NINE TOWN POPULATION
Boylston	276	5.3
Florence	610	11.7
Martinsburg	1516	29.0
Montague	58	1.1
Osceola	167	3.2
Pinckney	319	6.1
Redfield	386	7.4
West Turin	1713	32.7
Worth	185	3.5
Total	5230	100.0

SOURCE; U.S. Census, 1970.

The number of camps in the area showed a nearly two-fold increase from 1964-74, and presently is almost equal to the number of permanent homes. To understand the importance of the area's non-residential population, it must be remembered that the "core towns" of Worth, Montague, Redfield, and Osceola are more than 64% non-resident owned and the others are at least 24% non-resident owned, as shown below. Many non-residents first came on a part-time basis, but later moved to the area permanently. Often the expectations for services of these people, who are usually from more urban areas, exceed the expectations and demands of long-time residents.

Non-resident Ownership As A Percent Of Pirvately Owned Acres (1974).

TOWN	PERCENT NON-RESIDENT
Boylston	44
Florence	34
Martinsburg	24
Montague	82
Osceola	88
Pinckney	48
Redfield	64
West Turin	51
Worth	64

SOURCE: The Use, Value and Taxation of Tug Hill Lands, (Map 9).

Just over half of the resident population is under 24 years of age. Both young people and those who are retired require more public services and support from the remainder of the population in the work force. Some of the needed services include schools, recreation programs, and medical care.

Population Summary By Age For The Nine Towns (1970).

AGE	TOTAL NUMBER	PERCENT
0-4	492	9.4
5-15	1292	24.7
16-24	837	16.0
25-34	486	9.3
35-44	575	11.0
45-54	486	9.3
55-64	476	9.1
65+	586	11.2
	5230	100.0

SOURCE: U.S. Census, 1970.

Some of the people of the nine towns work within the Cooperative Board area. There are jobs associated with the forest like logging, hauling timber, and wood processing. Much of the processing is done outside of the nine towns, however. Many people make their livelihood in agriculture, either operating a farm, working for farmers, or handling farm products such as hauling milk, or making cheese. Some people work at home occupations, and some work locally in small businesses, such as bars,

and restaurants, grocery stores and gas stations.

More than half of the working population travels outside the nine towns to work. Centers such as Lowville, Carthage, Camden and Adams, and cities such as Syracuse, Rome and Watertown provide a majority of the jobs.

Jobs Of Employed Population 16 Years And Over Of the Nine Towns (By Occupation)

	NUMBER	PERCENT
Professional, technical, managers and administrators	282	18
Sales, clerical and kindred workers	158	10
Craftsmen, foremen and operatives, except transport	460	29
Transport equipment operatives	96	6
Laborers, except farm	62	4
Farmers, farm managers, farm laborers and farm foremen	345	22
Service workers including private household workers	172	11
TOTAL	1,575	100

SOURCE: U.S. Census, 1970.

Family incomes in the nine towns are varied. The average for 1970 was $9,850 which is substantially below the state average of $12,498. Due to the rural nature of the area, most families are able to reduce expenses by growing and preserving many of their own vegetables and some meats. However, expenses for heating and transportation are relatively high due to the severe climate and distance from service centers. The breakdown of family income is as follows:

Family Income In The Nine Towns

INCOME $	NUMBER OF FAMILIES	PERCENT
0- 2,999	156	14
3,000- 4,999	98	9
5,000- 6,999	185	16
7,000- 9,999	314	28
10,000-14,999	276	24
15,000-24,999	69	6
25,000 and over	40	4
Total Families	1,138	100

SOURCE: U.S. Census, 1970.

In summary, the people of the nine towns are an important element in the area's character. There is a sense of pride, resourcefulness and independence associated with living in a severe climate often with few nearby neighbors. Whether the people live in a small hamlet or in the countryside, there is a strong feeling of community identification and belonging, which is one of the precious qualities of life on Tug Hill.

EXISTING LAND USE AND VEGETATION PATTERNS

Past and present patterns of land use have a definite role in planning for tomorrow. The character of a community is a product of its land use composition and its natural resources. Early in the planning process, the town planning boards decided that a major goal would be to insure that the integrity of the area's character and the character of its communities will be maintained.

The dominant pattern of vegetation on Tug Hill is one of increasing density of forest cover from the periphery to the core of the region. The high plateau at its center is covered by largely unbroken forests. Successional forests and brushlands dominate upland sites surrounding the forested core, while active agriculture and successional fields are most prominent on the flood plains east of Lake Ontario, in the Black River Valley, and in the Mohawk Valley. Throughout all areas, wet woodlands of varying species composition occupy low-lying and depressional areas.

The diversity of the natural resources in the region is responsible for the varying land use patterns throughout the region's history. Timber harvesting and land clearing for agriculture flourished throughout the area over 100 years ago, resulting in the virtual absence of undisturbed forest stands. Although lands in agricultural use are a significant part of the region, the proportion varies considerably from town to town, ranging from a low of 1% in Redfield and Osceola to a high of 41.3% in Martinsburg. The sparsely populated central core area, which has the poorest soils and most severe climate, contains very few farms. Lands used for agriculture are concentrated in towns around the rim of the region. At present, the location of farming seems in good balance with the best use of the land. Within the last 40 years, conifer plantations have been widely established. The forest area represents second-growth hardwood forests resulting from extensive timbering almost a century ago.

From the 1968 Land Use and Natural Resource Inventory for New York State comes a picture of recent land use patterns. That 99% of lands in the nine towns are in water, forest, and farm use clearly establishes the area's open space character. The map following page 21 reflects the following categories of land use as they occur throughout the region; definitions of these land use types are put forth in Appendix A.

- Agriculture - 14%
- Forests - 73%
  - Mature Forests
  - Plantations
  - Brushlands
- Wetlands - 12%
  - Wetbrush
  - Wetwoods
  - Water Bodies
- Developed Lands - 1% (such as residential, public, commercial, industrial and transportation use)

The economic importance of the forest and agricultural land cannot be overestimated. Jobs in agriculture, in forest-resource related industry and in recreation employ most of the people who work inside the Cooperative Board area. Large tracts of forest land in the core are necessary for the area to remain commercially viable from a timber management and harvesting standpoint.

TRANSITION LANDS

Transition lands, shown together with agricultural districts on the following map, are a large category of lands that are experiencing change in use. Generally, these lands are becoming brush and tree covered after many years of being planted in crops or in pasture. They are in a process of natural succession from meadow to forest. Between 1955 and 1974, about 31,000 acres in the Cooperative Board area have been undergoing this type of change. (2)

The special significance of this category is that it represents the location where many future land use decisions and further changes in use are likely to occur. As soon as agricultural use of a piece of land ceases, the land assumes a different character, and is available for different use, including particularly the development of camp or home lots.

Transition from agriculture occurs when soil or climatic comditions prove to be too poor to justify continuance of agricultural use, or when taxes become too much of a burden, or when the opportunity presents itself to sell the land. In any case, the change is due to economic pressure.

Transitional lands lie mostly in the uplands next to the forest. For this reason, the trend toward second home development and recreational use of the land is significant. A study of land sales/transfers in 1974 in the Lewis County towns in the Cooperative Board area indicates that one quarter of the land that changed hands was this type of property and that it went for 20 times the price it sold for 10 years earlier. (3) *Between 1964 and 1974, "developed" acreage increased by nearly three times.* (4) *Developed acreage is defined as land with a permanent or seasonal residence, or as recreational property, or as land in commercial or industrial use.*

AGRICULTURAL DISTRICTS

New York State's Agricultural Districts Law was passed to help maintain viable agriculture in the face of growing urban pressure and land speculation. Farmers form a district by making a voluntary commitment of their land to agriculture for a period of eight or more years. In return, they can get relief from property tax increases if their assessment exceeds a certain ceiling figure because of rising residential land values. They are also excused from having to pay costs of water and sewerage lines made necessary by urban development.

Agricultural districts in the Cooperative Board area occur only in the Towns of Martinsburg and West Turin, as shown on the following map. These districts are composed of lands already committed to agriculture and contain areas with the best soils in the region for farming. Soils having slight limitations for development are also the best soils for agricultural use, which contributes to the severe competition between agriculture and residential development in many locations. Continuation of agriculture and discouragement of non-agricultural uses, such as residential development, has been an overriding factor in making planning decisions. This position stems from the belief that maintaining agricultural land for future use is important for the good of the area.

HUMAN SETTLEMENT

Excluding the Villages of Constableville and Lyons Falls, there are nearly 2,300 dwellings (including camps) in the Cooperative Board area. Distribution of these by type is shown below. It is significant that the number of camps is almost equal to the number of conventional and mobile homes. In the central Towns of Montague, Osceola, Redfield and Worth, the number of camps is proportionally much higher. Also significant is the proportion of mobile homes to total non-camp housing which, for the region, approaches 25%. Unlike camps, mobile homes tend to be scattered throughout the area with significant numbers occuring in each town.

	Camps	Conventional Homes	Mobile Homes	Number
Boylston	65	108	22	195
Florence	44	138	41	223
Martinsburg	28	262	46	336
Montague	111	25	14	150
Osceola	231	61	17	309
Pinckney	28	85	30	143
Redfield	260	132	35	427
West Turin*	88	203	45	336
Worth	116	46	13	175
Total	971	1060	263	2294

* *excluding Constableville and Lyons Falls.*

SOURCE: Windshield survey, 1974.

The 1974 survey of existing housing identified a number of units in each town that were judged to be in a deteriorating or dilapidated condition. The earlier 1970 Federal Census found large number of units without basic plumbing facilities. Such attempts to measure the quality of the area's housing stock are rendered less meaningful than elsewhere because of the part-time, recreational occupancy of so many units. For these, conventional evaluation standards are inappropriate.

A variety of problems exist with respect to assessment and taxation of residential uses in Tug Hill. These include a general tendency to underassess housing compared to other property classes. The same seems to be true of camps, at least in those towns for which data is available. This tendency, as noted earlier, is coupled with high service costs for many residences due to their scattered locations. (5)

Housing patterns, including the location and types of dwellings and associated facilities, both public and private, help determine the area's character. Where there are widely dispersed camps, the area has a remote quality. Where there are groups of year-round residences, especially if there are businesses or public facilities too, the area takes on a hamlet quality.

The nine-town area contains many hamlets and crossroads offering a variety of small-scale governmental, professional, commercial and other services. These include such facilities as churches, town halls, schools, stores and gas stations which attract people and serve as focal points of community activity.

The specific character of these places is determined by the population of their service area, distance to neighboring centers whether within or outside the Cooperative Board area, and the kinds of services offered in neighboring centers. For most specialized services, Tug Hill residents must look outside the area to Lowville, Pulaski, Adams, Boonville and Camden, or beyond to Syracuse, Utica, Rome, Watertown and Carthage.

Analysis of the mix of services found within Tug Hill's hamlets and crossroads shows a tendency for services to occur in definite groupings which can be ranked in order of increasing complexity. (6) *It follows that expansion of the range of available services can be acheived most readily by locating new service uses in and around existing centers.*

Second home growth tends to occur in more remote areas where a significant land market has developed in recent years. As noted earlier, camps now account for over 40% of all housing units in the area, much more in the core. Data on growth in numbers of camps is not generally available, but an increase of 75% was recorded in the Town of Redfield from 1972 to 1974. (7)

In summary, two kinds of settlement pressures are addressed in the Plan: second homes, or camps, in remote areas, and residential and related uses in the vicinity of existing centers. The Plan seeks to encourage development of permanent homes and new service activities in and around the area's existing hamlets and crossroads. Second home growth should be accomodated only where access is available and when the impact on natural resources will be slight.

The auto provides the principal means of travel in the Cooperative Board area. Years ago, railroads were quite important on the Hill; now only the Villages of Lyons Falls is served by a railroad line. There are airports associated with the major cities around the region at Watertown, Syracuse and Utica-Rome, and a few smaller ones a bit nearer. Within the CTHPB area, there is an airstrip at the end of Kumrow Road in Osceola, but it has been out of use for a long time.

The nine-town area has 560 miles of roads, which are shown on the map following page 32. Roads link the area's scattered population with employment centers and places that provide goods and services. The towns in the Cooperative Board area have classified their roads by use: (1) major roads, including state arterials, major and minor collectors (usually county), used by people traveling through the area, and to service centers in and outside the area; (2) rural roads (usually town roads) providing access to residences; and (3) seasonal limited use roads providing access to seasonal residences, forest resources, and recreational opportunities.

One of the goals of the Cooperative Board is to meet development needs with existing roads in order to keep the cost of road maintenance within affordable limits. Almost all of the road work being done is in the nature of rehabilitation and reconstruction of existing roads, which is costly in itself. In 1974, the towns of the Cooperative Board area spent $217,896 on construction and maintenance. (8) Snow removal costs are not included in that figure but would probably double the cost. Even the widely used practice of oiling sections of dirt and gravel roads where they pass in front of houses is becoming costly.

There is a definite relationship between road quality and adjacent land use. Better roads invite development, and where residential development has occured, pressure to improve the road is usually placed on town government. It is important, too, that the purpose of a particular road not be lost in planning the uses adjacent to it. For example, the purpose of a state road is to move volumes of traffic over long distances. These roads are usually in good condition and well maintained, so they often seem to be a good place to encourage housing and other forms of development. Care must be taken that the spacing of driveways to new uses are not so close together that the speed limit must be lowered, thus defeating the primary purpose of the road.

In the Cooperative Board area, problems have been experienced where housing or recreational development has caused an increase in traffic. Many roads cannot withstand the strain of fuel oil delivery trucks, moving vans, and trucks drawing mobile homes. Thus, land uses which generate such traffic should only be encouraged where the roads are adequate. Off-the-road parking must be provided for recreational activities which bring numbers of cars. Road shoulders are neither wide enough nor firm enough to accomodate such use. West Turin and other towns in the CTHPB area have voiced concern over the damage caused by heavier than normal traffic on light-duty roads in spring when the ground is still wet from melt water.

To implement the Plan, an effort is being made to get legislation passed at the state level that will prevent towns from having to open seasonal-use roads to year-round use when it is not economically feasible. At a town level, implementation of the Plan would be assisted by each town's adopting minimum road specifications and a capital improvement program schedule for town roads. Development, particularly of year-round residences, in remote areas with limited or no public road access, should be discouraged. Conversely, it is important to the solvency of Tug Hill towns that development be encouraged only in areas where there is already good access to public and commercial services.

STATE LANDS

The State of New York's extensive land holdings in the Cooperative Board area are an important factor in the planning process. The special significance of these lands to the nine towns results from their public character, which increases their potential for public use and which entitles certain parcels to exemption from local property taxes.

State-owned land in the nine towns is classified variously as "multipe-use," "game management," "forever wild" (under the state constitution), or as "reforestation." The first three classes are generally found in small, scattered holdings. The last, "reforestation," occurs mostly in large tracts. In all, these lands account for 20% of the nine town area and represent a considerable public investment. Their distribution is described by town below and shown on the preceeding map.

	Town Acres	State Acres	% of Town
Boylston	24,986	7,714	30.9
Florence	26,048	11,511	44.2
Martinsburg	48,134	5,723	11.9
Montague	41,811	16,448	39.3
Osceola	55,706	4,363	7.8
Pinckney	26,810	9,912	37.0
Redfield	59,558	12,828	21.5
West Turin	66,983	2,111	3.2
Worth	27,808	4,873	7.3
Total	377,844	75,483	20.0

SOURCE: The Use, Value and Taxation of Tug Hill Lands, Table 18, p. 79.

Planning responsibility for these lands rests with the State Department of Environmental Conservation. The Department is presently preparing a state land management plan which will incorporate policy for state lands in Tug Hill. It is the Cooperative Board's position that such policy should be formulated in conjunction with related policies for surrounding privately-held lands. This position is based on the belief that public uses of varying kinds and intensities on state lands will affect adjacent private property and vice-versa.

Snowmobiling, cross country skiing, hunting and fishing will generate parking needs and traffic impacts on existing residences. Effect on road maintenance should be considered, including the seasonal nature of many roads which render the state lands they serve inaccessible in winter. Management of deer yeard projects, which cross and recross parcel boundaries, requires cooperative planning between state and town interests.

More important still, there are a number of private tracts bounded entirely or largely by state land. State management policies threaten to conflict with future use of these tracts unless the issue receives careful attention during the planning process.

The State Legislature has disallowed all or part of the exemption from local property taxes to which state property is entitled. Thus, multiple-use and game management lands are generally tax exempt, forever wild lands are fully taxable, and reforestation lands are exempt from county taxes but pay town and school district taxes.

Since multiple-use and game management lands are not evenly distributed, the reduction in town tax base is also uneven. Four of the nine towns, especially Montague, have experienced significant losses in taxable value. The four are listed below together with the exempt acreage in each. The Cooperative Board urges that a uniform system of tax payments on state-owned land be implemented which would fairly compensate each town in which state lands are located.

	Exempt State Acreage
Boylston	1,764
Florence	1,201
Montague	5,837
Redfield	1,637

SOURCE: The Use, Value and Taxation of Tug Hill Lands, Table 18, p. 79.

RECREATION

The residents of the Cooperative Board area showed concern for recreational uses in the nine towns in their reponses to the Citizen Survey, in large part because of the area's increasing popularity as a source of recreation opportunity to nearby population centers. Concerns voiced by those who completed the survey included hunting and fishing, snowmobiling, trail bikes and tourist business. The majority of the reponses favored some growth in the use of recreational resources on Tug Hill. They identified snowmobile, hiking and skiing trails and hunting and fishing as recreational activities in which growth might occur. Most of the people responding wished to see either no change or a decrease in the number of second homes on Tug Hill. The questions and responses are included in Appendix B. The Cooperative Board recognizes the important connection between recreation and other land uses and that the physical characteristics of the land, for example soils and slope, help to determine suitability for various types of recreation.

Perhaps the area's greatest recreational asset is the core forest. Here, water, land and vegetation unite to form a place special to our people. Passive types of recreation, such as hunting, fishing, hiking and tenting will generally not interfere with this unique system. However, second home development, and unrestricted motor bike and snowmobile use would tend to degrade the core area and diminish its value to local residents. These more active and development centered kinds of recreation should be controlled and restricted primarily to fringe areas, especially state lands. Whetstone Gulf State Park in Martinsburg is one area where recreation is controlled to allow different kinds of recreation without conflicting with other uses.

The following areas are becoming centers of recreational activity and the main types of recreation found in each area are listed:

Redfield - Osceola

- Second home development
- Snowmobiling
- Hunting and fishing
- Other low-intensity activities:
  - boating: Redfield reservoir
  - canoeing
  - camping
  - hiking

Barnes Corners - Rector

- Second home development
- Snowmobiling
- Hunting and fishing
- Hiking trails in gulf areas
- Park and picnic areas

West Turin - Highmarket

- Snowmobiling
- Hunting and fishing

Martinsburg

- Park and trail system:
  - Whetstone Gulf
  - Whittaker Falls
  - Roaring Brook

This Plan begins to address the concern of the area's citizens that recreation be controlled and conflicts between types of recreation and other land uses be minimized. It specifically addresses the problems associated with second home development because of its potentially great impact on the existing environment. Other important recreational uses, for example trail-type activities, are not dealt with in the plan. The Cooperative Board recognizes recreation as a topic of special interest and of considerable importance to the future of the area, which will require further special study.