

OPEN SPACE INVENTORY

OF THE

TOWN OF DRYDEN

TOMPKINS COUNTY, NEW YORK

MAY 15, 2003

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INTRODUCTION

The Town of Dryden Conservation Advisory Council (CAC), established by local ordinance under New York State General Municipal Law Section 239-y in the year 2000, is charged by the Town Board of the Town of Dryden with developing and maintaining an Open Space Inventory (OSI), as well as providing advice and input on issues related to natural resources planning in the Town of Dryden. The OSI provides data for developing sound open space planning and protecting natural and scenic resources of the Town of Dryden.

The Town of Dryden acknowledges the expertise and the work of the individual members of the CAC:

- Steven Bissen
- Joyce Gerbasi, Town of Dryden Representative to the Tompkins County Environmental Management Council
- Daniel Karig, Chair
- Edward McClenahan*
- Ilene Miller
- Nancy Munkenbeck
- Bruce Osadchey
- Craig Schutt, District Manager, Tompkins County Soil & Water Conservation District
- Charles Smith

The CAC prepared the OSI with the assistance of George Frantz, AICP. In addition, others who have assisted in its preparation are acknowledged below:

- Kate Hackett, Water Resources Planner, Tompkins County Planning Department
- John Whitcomb, former chair, Town of Ithaca Conservation Advisory Council

* The Town of Dryden appreciates the contributions made by Ed McClenahan before his death in August 2001.

Town of Dryden Town Board, 2002:

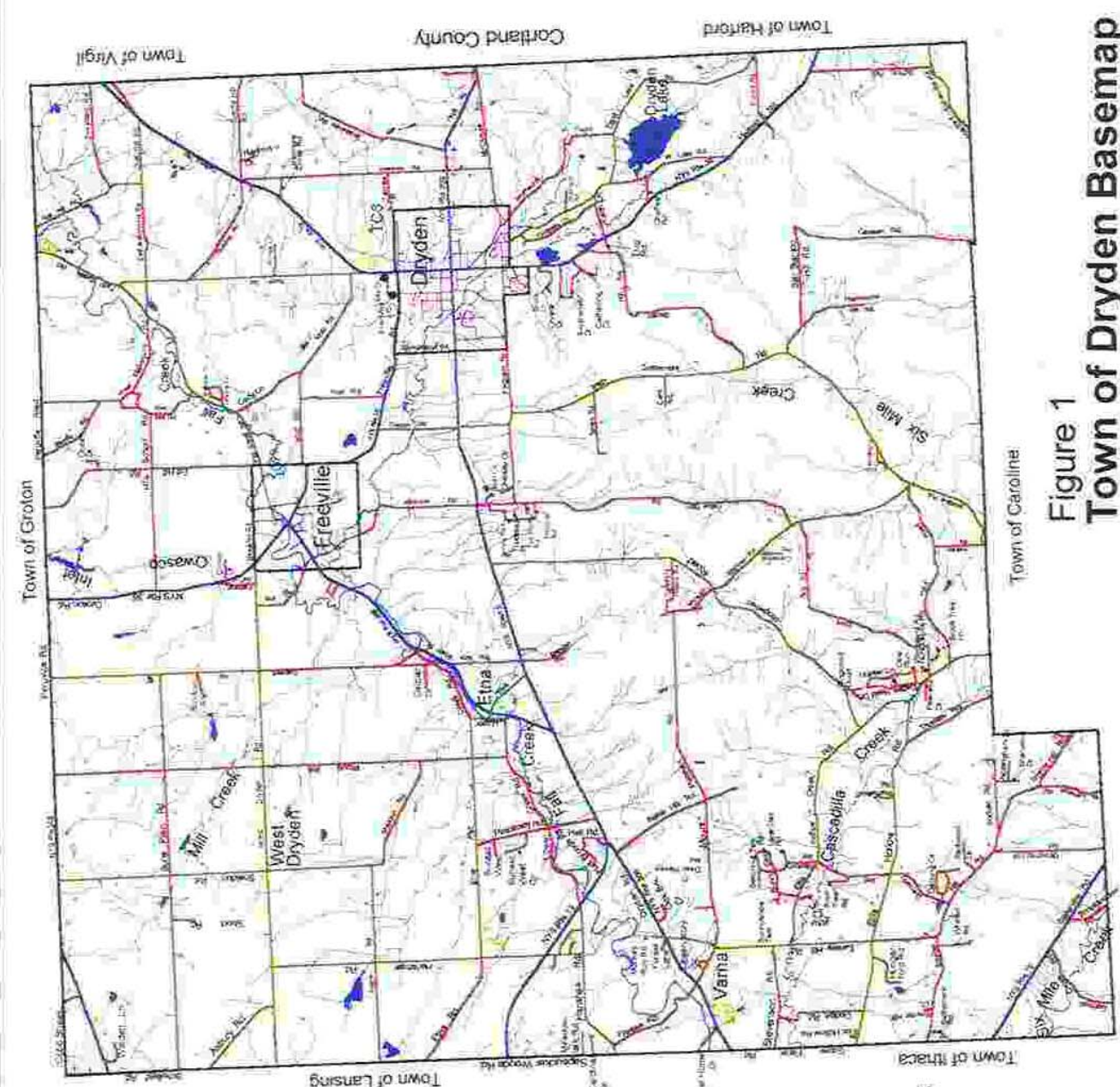
- Mark Varvayanis, Town Supervisor
- Deborah Grantham, Council Person, Deputy Town Supervisor
- Charles Hatfield, Council Person
- Steven Stelick, Jr. , Council Person
- Christopher Michaels, Council Person










STATEMENT OF PURPOSE

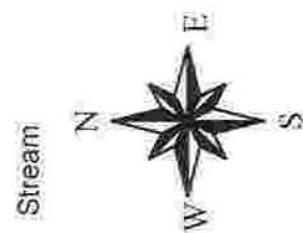
The purpose of this Open Space Inventory (OSI) is to identify, catalog, and map a variety of resources within the Town of Dryden. These include both natural and cultural resources as well as natural hazards. This inventory can be used to assist in land-use planning and policy decisions made by elected and appointed officials of the Town of Dryden, as well as its citizens. The document addresses resources on undeveloped land as well as areas with specific characteristics, such as recreational and historic resources, that could be of interest in discussions of the Town's land-use planning issues and policy concerns. As development in the Town of Dryden continues, the characteristics of specific resources will change. Therefore, this document should be updated in the future to maintain its utility as a reference tool.

TOWN OF DRYDEN — BASE MAP

This map shows the basic political boundaries, roadways and streams present in the county, allowing the viewer to find a sense of place and scale. This map is on the same scale as that used for each of the following maps, and can be used to reinforce the identification of sites of interest.



- Key**
-  Town of Dryden
 -  Village of Dryden
 -  Village of Freeville
 -  Tompkins County
 -  New York State
 -  Other Town
 -  Private Road
 -  Abandoned Road
 -  Municipal Boundary



Source: Tompkins County Planning Department & Tompkins County Planning Department, April 2020.

Note: Data contained in this product was originally produced by the Tompkins County GIS Department and may not be reproduced or redistributed without the express written consent of the engineer. Tompkins County does not warrant the accuracy or the completeness of the information provided by this data.

Figure 1
Town of Dryden Basemap

PHYSICAL RESOURCES AND HAZARDS

FLOODPLAIN AREAS

Flooding technically occurs when water in streams rises over the banks onto the floodplain, but is commonly described as the condition at which water levels encroach on property of value. The intensity of flooding is rated by the frequency at which a given water level is reached. Flooding is a natural process that occurs at some intensity once every year or two, but it is the major events that seriously affect society.

The 100-year flood, which statistically has a one-percent chance of occurring any year, is commonly used as a design event for bridges and other constructions in and around waterways. The area inundated by a 100-year flood is also used to delineate the zone in which the most serious flooding hazards exist. The 500-year flood is an analogous event which marks extreme, but historically possible, conditions. Statistically there is a 0.2 percent chance of a 500-year flood occurring in a given year.

Floodplains and the adjacent riparian zones subject to flooding are particularly important open spaces. In their natural state they ameliorate flood pulses and are sometimes areas of groundwater infiltration. They are unusually rich in botanical and faunal composition and offer linear corridors for movement. They also are appealing recreational areas and attractive sites for development, which leads to their becoming serious environmental hazards.

Flood hazard zone maps are authorized by the Federal Emergency Management Association (FEMA) so that flood insurance premiums can be determined under the National Flood Insurance Act. These maps, termed Flood Insurance Rate Maps (FIRMs), show the 100- and 500-year flood zones as well as other data, such as floodways. Floodways are defined as stream channels plus that part of the 100-year floodplain which must be kept free of encroachments that would cause the flood level to rise more than one foot. In general these encroachments would include occupied dwellings and major fill. The FIRM for the Town of Dryden includes one floodway in the Village of Dryden.

The 100- and 500-year flood zones are determined using a combination of hydrological and hydraulic data. First, the rate of water flow during these flood events must be obtained, and then the geometry of the stream channel must be quantified to determine how high this amount of water will rise. Neither of these quantities is often actually measured because of the time and labor involved, but can be estimated to various degrees of accuracy by indirect methods.

The water flow during these rare events is generally extrapolated from Flood Frequency curves based on smaller, more frequent floods, either in the stream in question or from regional relationships. The effect of those flows on the channel requires knowledge of the channel topography, which provides shape and slope, and of such effects as channel roughness and local obstructions (e.g. culverts, bridges, dams).

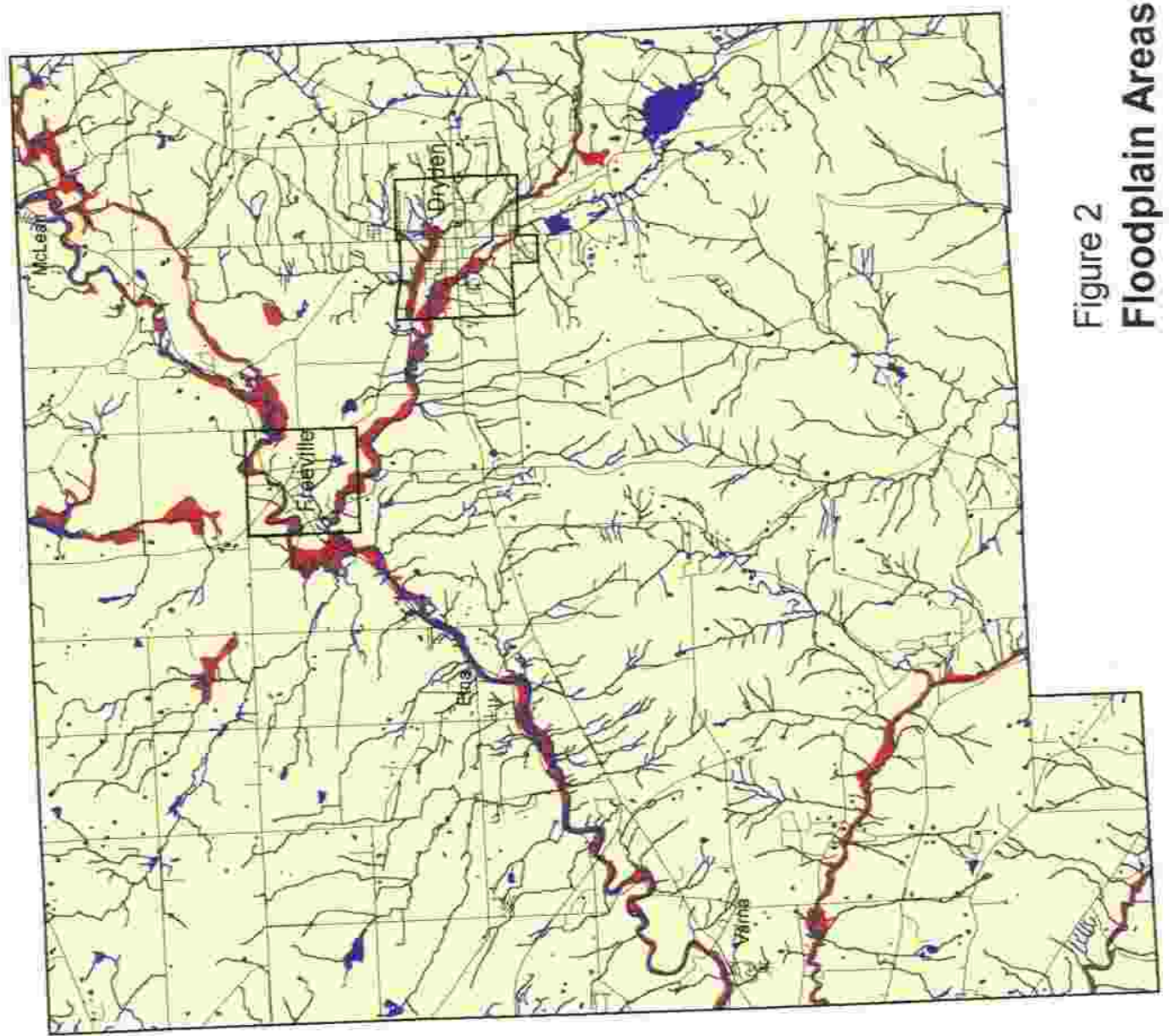
These points are made because such determinations require intensive investigations, which have not been made in the Town of Dryden, outside the village. The flood zones shown on the map are based on the available topography and very basic hydrologic data, and are thus only very generalized. At present, those involved in undertakings requiring

a more detailed knowledge of the flood zones are advised to estimate the associated flood zones using independent surveys and from local historical records.

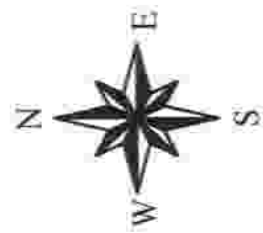
Flood zones in the Town change and also will become more accurate in the future. They change because both the hydrologic and hydraulic parameters change with such things as changing land use and with constructions along the stream channel. One important example in the Town is the construction of the Crispell Flood Control Dam on Virgil Creek, which will reduce the size of the flood zones downstream. On the other hand, development tends to increase the frequency and/or size of flood events.

The DEC, which is charged with the re-determination of flood zones every decade or so, will soon re-map these zones in the Town. For this effort, channel topography will be made very precisely using aerial radar plus ground surveying at selected sections. The flood hydrology will employ U.S. Geological Survey (USGS) data from gauging stations on Fall Creek and Sixmile Creek.

Larger-scale versions of the FIRM for the Town of Dryden can be viewed at the office of the Tompkins County Planning Department or ordered from FEMA at their Map Service Center, P.O. Box 1038, Jessup, MD 20794-1038; telephone: 800-358-9616; fax: 800-358-9620.



- Key**
- Stream
 - 100-Year Floodplain Area
 - 500-Year Floodplain Area
 - Lake or Pond
 - Municipal Boundary
 - Road or Highway



Source: Tompaine County ITB/GIS Division, for Floodplain
 National Flood Insurance Program Flood Insurance Rate Map
 for Town of Dryden, NY - May 1985

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 Tompaine County does not warrant the accuracy or the completeness
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**Figure 2
 Floodplain Areas**

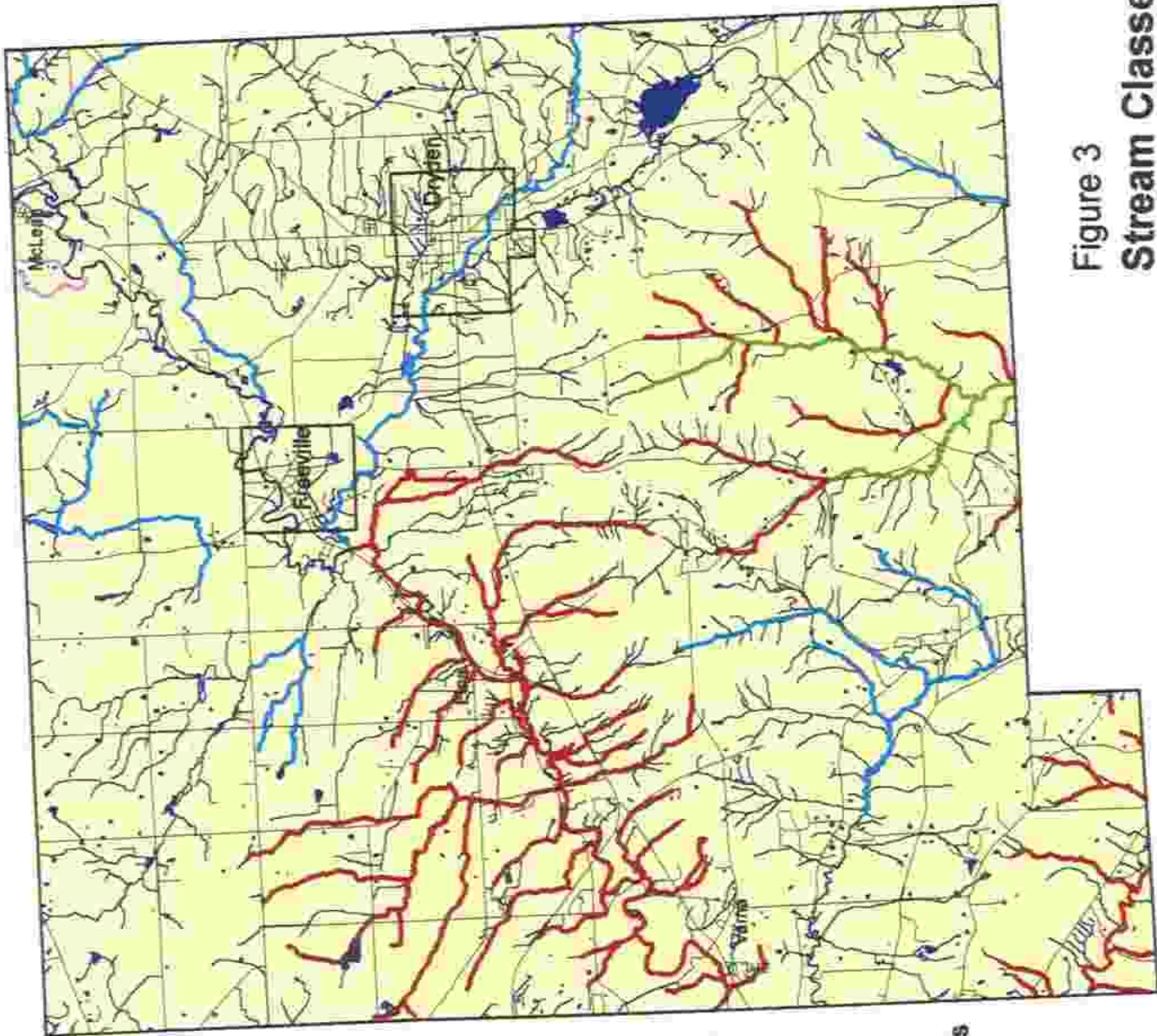
STREAM CLASSES

Water quality in streams and lakes of the Town is important for public health, recreation, and many environmental reasons. This quality is affected by activities occurring both within and along the body of water and in the watershed. Activity in and along the banks of the water bodies is regulated by various state and federal agencies, primarily the U.S. Army Corps of Engineers and the NYS Department of Environmental Conservation (DEC). The DEC has classified most water bodies in the state based on existing or expected “best use.” These uses, shown in the table below, range from AA to D and are modified by the classification of “T” or “TS” if the water body can support, respectively, trout and trout spawning. Water bodies classified as C(T) or higher are collectively referred to as protected streams and are subject to more stringent regulation.









<i>Stream Class</i>	<i>Best Use</i>
AA	Drinking (after chlorination)
A	Drinking (after chlorination and filtration)
B	Bathing
C (T)	Fishing (trout)
C	Fishing
D	Secondary contact recreation
	<i>Data from Tompkins County Planning Department</i>

Sources used for Stream Classes Map:

NYS Department of Environmental Conservation Priority Water List.



Key

-  A
-  A(T)
-  C(T)
-  C(TS)
-  Not Classified
-  Lake or Pond
-  Municipal Boundary
-  Road or Highway



Source: New York State Department of Environmental Conservation & Tompkins County ITSP/ISD Division
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**Figure 3
Stream Classes**

CLAY-RICH SOILS AND STEEP SLOPES

Clay-rich soils and steep slopes are conditions that can independently pose problems, but which can also lead to additional hazards when found together.

Clay-rich soils

Clay-rich soils in the Town of Dryden form primarily on glacial lake deposits, but occasionally also on clay-rich glacial till. In other areas such soils are also found overlying bedrock shale. These superficial materials tend to have low permeability, relatively high compressibility and poor bearing strength, as well as showing shrink-swell behavior when dried and wetted. With these characteristics, such soils are poor foundation materials and cause problems where good internal drainage is required, such as septic leach fields.

On the associated map, clay-rich soils are used as a proxy for clay-rich Quaternary sediments because these sediments are not digitally available or defined in detail in most areas. The area underlain by clay rich sediments is undoubtedly greater than that shown by the soils, but the map nevertheless shows a clear pattern. Glacial lake deposits are found in valley areas, mostly along Fall Creek and several of its tributaries and along Sixmile Creek. Along Sixmile Creek, the clay reaches several 10s of feet in thickness. The valleys of Lake Creek and Virgil Creek, within the Town are relatively free of this material (Miller, 1993).

Steep slopes

Steep slopes are here defined as those of more than 15 percent. This boundary is somewhat arbitrary, but it basically represents the moderate and steep slopes of the soil survey. These slopes occur mostly in the hills of the southeastern half of the Town and along the creeks, especially Sixmile Creek. Steep slopes are prone to erosion, and are generally poorly suited for agriculture. Because of their sensitivity to erosion, steep slopes are best left in or returned to woodland. Construction of roadways and other disturbances, such as logging, on steep slopes require special precautions to prevent erosion.

When steep slopes occur on clay-rich materials more than a few feet thick, there is an additional problem of landslides and slumps. These are most common along stream valleys, but can also be triggered by steep slopes created during construction. The greatest concentration of landslides in the Town is along Sixmile Creek, in the area underlain by thick lake clays. Some of these are currently active or have been recently active. Landslides and slumps are much easier to prevent than to stabilize, so the avoidance of undertakings that might trigger these events is to be preferred.

Sources used for Clay-Rich Soils and Steep Slopes Map

Originator: Tompkins County Planning Department, Tompkins County ITS GIS Division

Publication Date: June 1, 2001

Title: Digital Soils Associations map

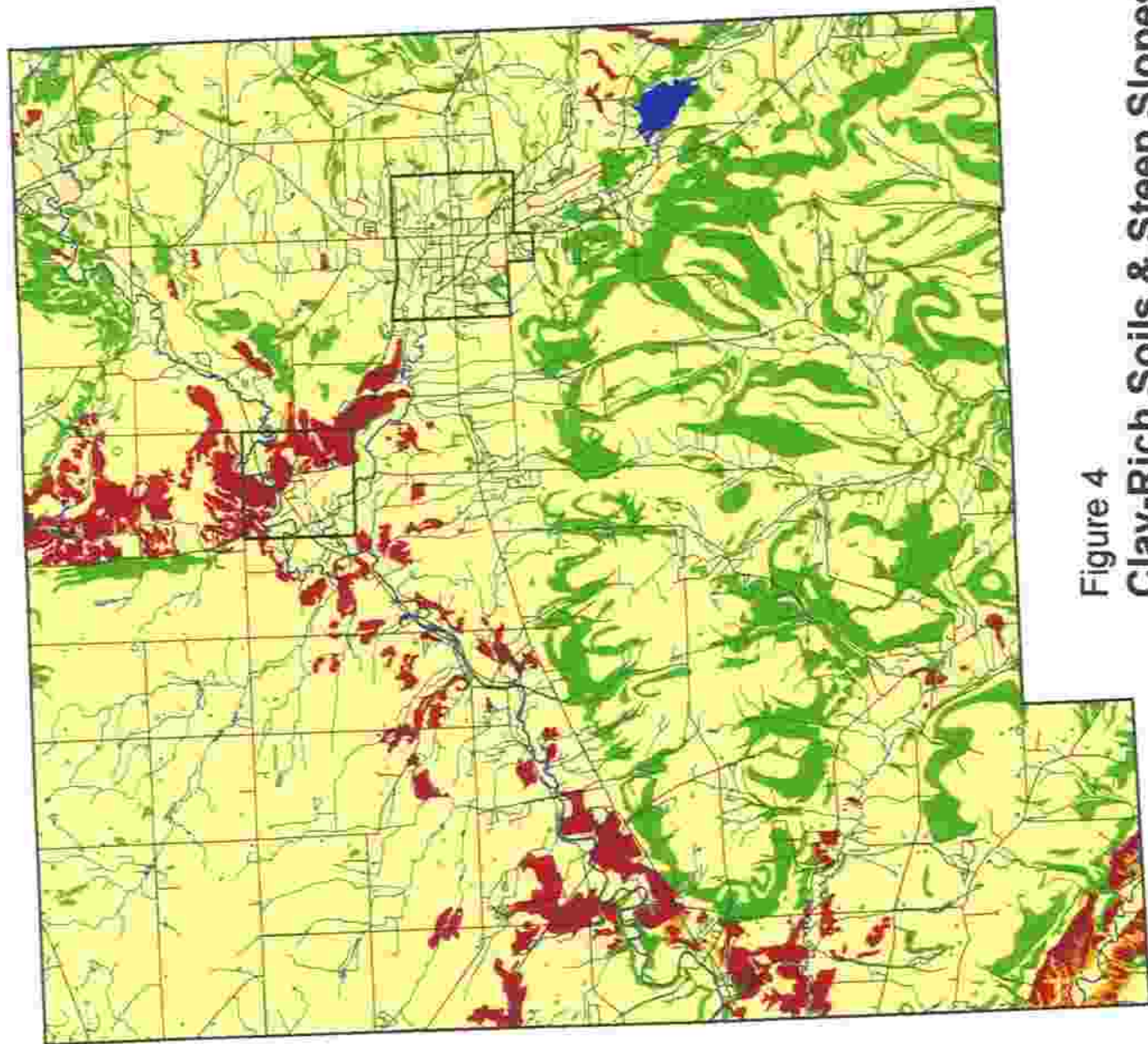
Contact: Greg Potter, Tompkins County ITS GIS Division, gis@tompkins-co.org

Other Citation Details:

The Soils Associations map was based on the USDA Soil Survey of 1961, published in 1965. Clay-rich soil associations were selected as those derived from glacial lake clays as follows: CA, HsB, HsC3, HuB, IcA, OaA, OcC3, RkA, RkB and RnC3. Steep slopes were derived from the soils classifications used to create the Digital Soils Associations map for Tompkins County. Those soils that occur on slopes of 15 percent or greater were identified and aggregated. Clayey soils that are located on steep slopes are HsD3 and HzE.

Additional References and Resources:

Miller, T. S. 1993, Glacial geology and the origin and distribution of aquifers at the Valley heads Moraine in the Virgil Creek and Dryden Lake-Harford valleys, Tompkins and Cortland Counties, N.Y. : U.S. Geological Survey Water-Resources Investigations Report 90-4168, 34 pages.



Key

- Clay-Rich Soils
- Steep Slopes (<15%)
- Clay-Rich Soils on Steep Slopes
- Other Soils
- Water Body
- Municipal Boundary
- Road, Highway
- Stream



Source: Digital Soils Map, Tompkins County, N.Y., Produced by Tompkins County ITSDGIS Division using data from USGS Soil Survey for Tompkins County, N.Y.

NOTE: Data contained in this product was originally produced by the Tompkins County GIS Program and may not be reproduced or redistributed without the express written consent of the originator. Tompkins County does not warrant the accuracy or the completeness of the information portrayed by this data.

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Figure 4
Clay-Rich Soils & Steep Slopes

IMPORTANT AGRICULTURAL SOILS

Agricultural lands are an important economic resource for the Town of Dryden, as agriculture is the largest industry in the town. It seems reasonable to conserve and protect the most productive of these soils whenever possible.

The USDA Soil Conservation Service (SCS) soil classification system divides soils into eight “soil capability classes” based upon how suitable these soils are for most types of farming. The grouping is based upon the limitations of the soils, the risk of damage when used, and the way they respond to farming practices.

Classes I and II designate “prime farmland soils,” which have the capacity for the highest production while requiring little to moderate conservation practices. Approximately 11,800 of the Town of Dryden’s 58,500 acres are classified as prime soils.

Class III soils have severe limitations for farming, generally requiring special conservation practices.

Classes IV through VIII have very severe limitations for farming and require very careful management.

Sources used for Important Agricultural Soils Map:

Originator: Tompkins County Planning Department, Tompkins County ITS GIS Division

Publication Date: June 1, 2001

Title: Digital Soils Associations map

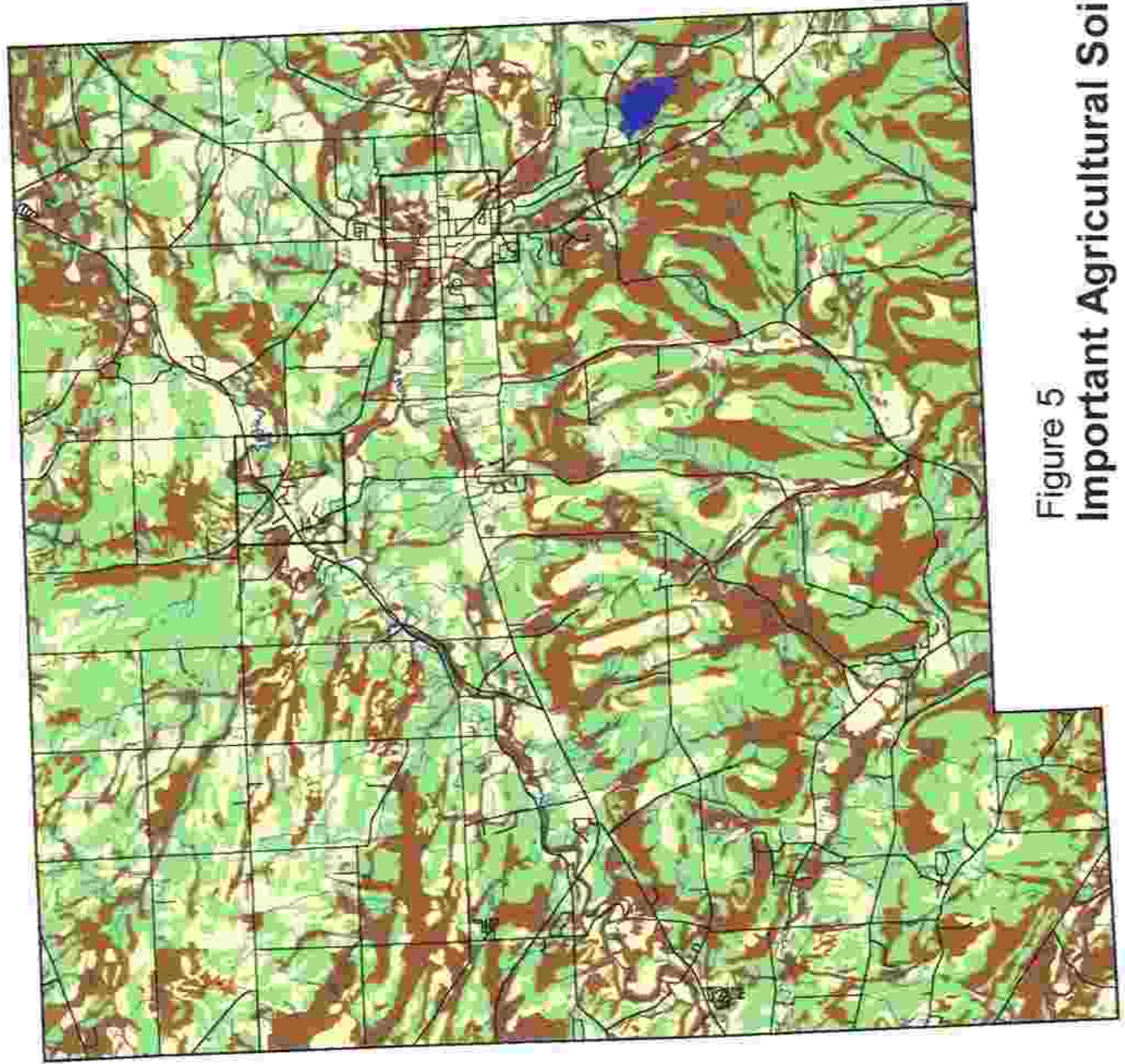
Contact: Greg Potter, Tompkins County ITS GIS Division, gis@tompkins-co.org

Other Citation Details:

The Soils Associations map was based on the USDA Soil Survey of 1961, published in 1965.

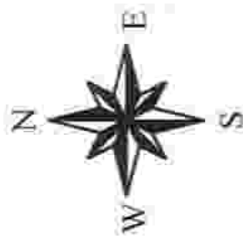
These data were produced by the Tompkins County GIS program.

Tompkins County does not warrant the accuracy or the completeness of the information shown by the data.



Key

-  Class I & II Soils
-  Class III Soils
-  Class IV-VIII Soils
-  Waterbody
-  Municipal Boundary
-  Road, Highway
-  Stream



Source: Eggle Soils Map, Tompkins County, N.Y. Published by Tompkins County in English planimetric data from USDA soil survey for Tompkins County, N.Y.

NOTE: Data contained in this product were originally produced by the Tompkins County GIS Program and may not be reproduced or redistributed without the express written consent of the originator. Tompkins County does not warrant the accuracy or the completeness of the information portrayed by the data.

Project No. 2004-04

Figure 5
Important Agricultural Soils

AGRICULTURAL DISTRICTS

Agricultural Districts

Agricultural District programs allow farmers to form special areas where commercial agriculture is encouraged and protected, promoting the retention of large blocks of farmland. Programs are authorized by state legislation and implemented at the local level. Participation in Agricultural Districts is voluntary. In exchange for participation, farmers receive a package of benefits that include the prevention of local governments from passing laws that restrict farming practices, and providing protection from private nuisance lawsuits. Agricultural enterprises located in Ag Districts are protected by the state's Right to Farm Laws.

The attached map shows the location of the county Agriculture District in the Town of Dryden. The Town of Dryden is located in Tompkins County Agricultural District #1. Agricultural districts are subject to periodic review and revision by the County Agriculture and Farmland Protection Board. Agricultural District #1 is scheduled for review in 2003.

Enrollment in the Agricultural Assessment program

Enrollment in the Agricultural Assessment program allows eligible farmland located both within and outside agricultural districts to receive real property assessment based upon the value of the land for agriculture production rather than on its fair market value. The agricultural assessment value establishes an "upper limit" for taxable assessments for eligible farmland.

To qualify for the Agricultural Assessment program, the property in question will (with few exceptions) be part of a farm which shows a gross income of at least \$10,000 in a tax year. A landowner's first step in applying for an agricultural assessment is to go to the Tompkins County Soil and Water Conservation District (SWCD) office and have a District technician complete a Soils Group Worksheet on all eligible land. The landowner then takes the completed worksheet and the Agricultural Assessment Application to the county assessment office.

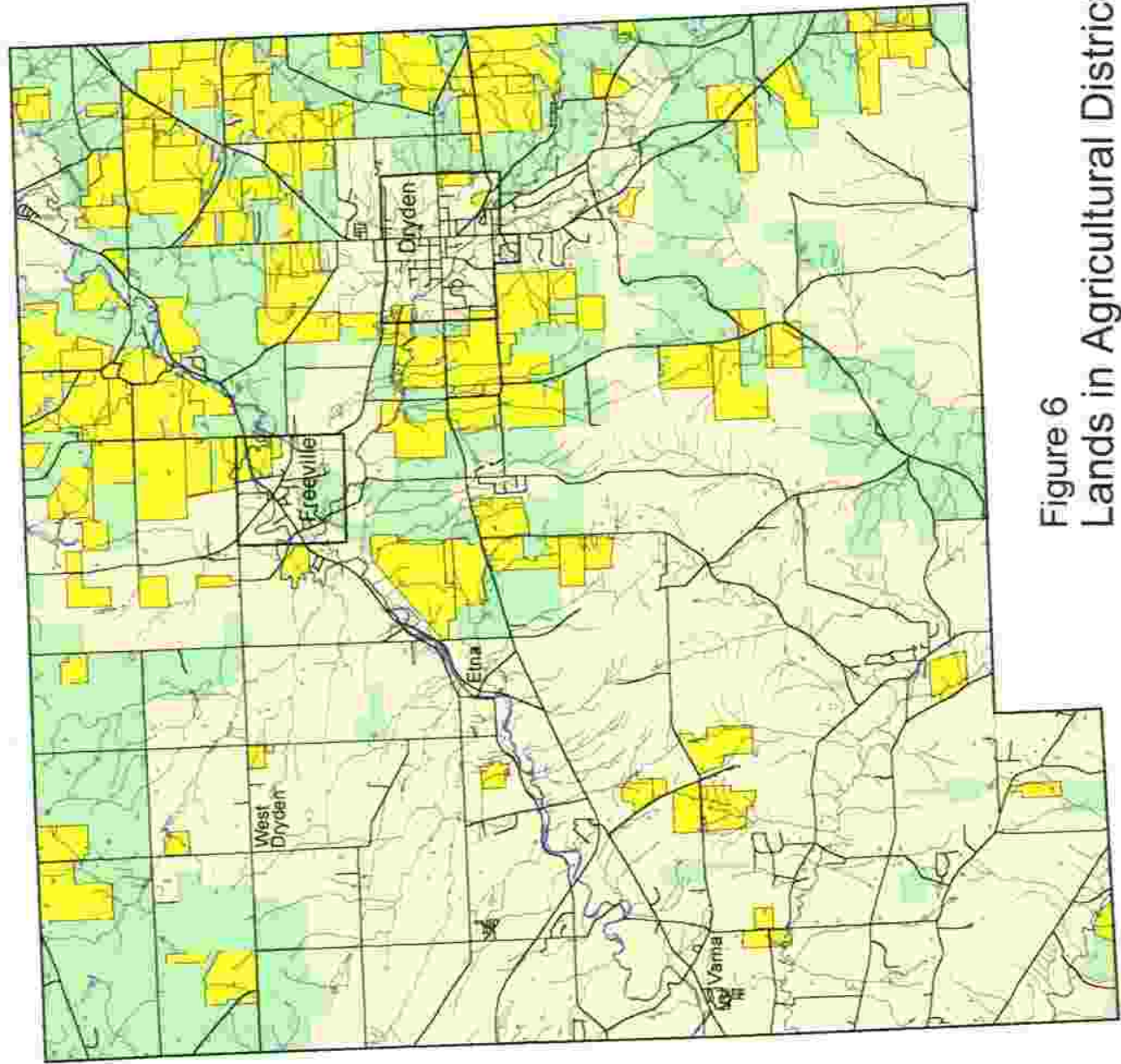
Sources used for Lands in Agricultural Districts Map:

These data were produced by the Tompkins County Planning Department, Tompkins County ITS GIS Division.

Contact: Greg Potter, Tompkins County ITS GIS Division, gis@tompkins-co.org

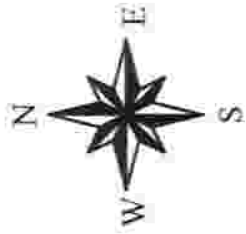
Other Citation Details:

Tompkins Co. does not warrant the accuracy or the completeness of the information shown by the data.



Key

- County Agric. District
- Enrolled Parcel
- Municipal Boundary



Source: Tompkins County GIS/CIS Division & Tompkins County Planning Department, June 2000.

*Note: Data contained in this product was originally produced by the Tompkins County GIS Program and may not be reproduced or redistributed without the express written consent of the original creator. Tompkins County does not warrant the accuracy or the timeliness of the information portrayed by the data.

**Figure 6
Lands in Agricultural Districts**

WETLANDS AND HYDRIC SOILS

As defined by the National Wetlands Inventory, wetlands are “lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.” Hydric soils are areas with soils that formed under conditions of saturation, flooding, or ponding during the growing season long enough to develop anaerobic conditions in the upper part. Hydric soils are found near wetlands or water bodies or where historically a wetland was present. The definitions show the gradation from wet to dry with a wetland and its associated vegetation on the “wetter” side than the hydric soil by itself. Because of the importance of all wet or potentially wet areas in decision-making, wetlands and hydric soils are included on one map.

In the Town of Dryden, most of the wetlands and associated hydric soils are located in the northern half of the township north of State Highway 13 and east of State Highway 38 near the Dryden Lake area. These are areas that are flatter, low-lying or near water bodies such as Fall Creek, Six Mile Creek and Dryden Lake. In the southern hill areas, wetlands and hydric soils tend to be found very close to streams.

Wetlands

The wetland areas on the map were delineated using photo-interpretation of digital aerial photos. These areas were interpreted using the Land Use and Land Cover Classes devised by the staff in the Tompkins County Planning Department and the Tompkins County Information Technology Services, GIS Division, based in part on the Land Use and Natural Resource Inventory (LUNR) classification system from 1968. Digital Ortho-photo Quarter Quadrangles (DOQQs) from 1994/1995 were used as source maps for the interpretation. The land cover of “wetland,” as defined for this map, includes the following land cover types: open water, such as natural lakes, reservoirs, ponds, and streams; also marshes, bogs, shrub wetlands, and wooded wetlands.

Hydric soils

Hydric soils are groupings of soil types with the characteristics mentioned above. This and other groupings are known as soil associations. Associations have been mapped for all defined soils for Tompkins County. The Tompkins County Soil Association and USDA Soil Conservation Service determined the different soil types. Our map includes only the hydric soil association and not others that may be thought of as “poorly draining,” such as clay soils.

Sources used for Wetlands and Hydric Soils map creation:

Wetlands:

Originator: Tompkins County ITS GIS Division, Tompkins County Planning Department

Publication Date: June 1, 2000

Title: Land Use/Land Cover

Contact: Sharon Heller or Jacquie Bow, Tompkins County Planning Department

Other Citation Details:

The Land Use/Land Cover Map was created using DOQQs from 1994/1995 provided by the USGS and NYS DEC. The LUNR (Land Use and Natural Resource Inventory) classification system was developed from a statewide land use and land cover mapping project and includes 130 land use and land cover classes. Tompkins County Planning Dept. adapted these classes to create its own classes. Of these classes, only two (Wb and Ww) were used in determining wetlands for this map.

Hydric Soils:

Originator: Tompkins County Planning Department, Tompkins County ITS GIS Division, USDA Soil Conservation Service

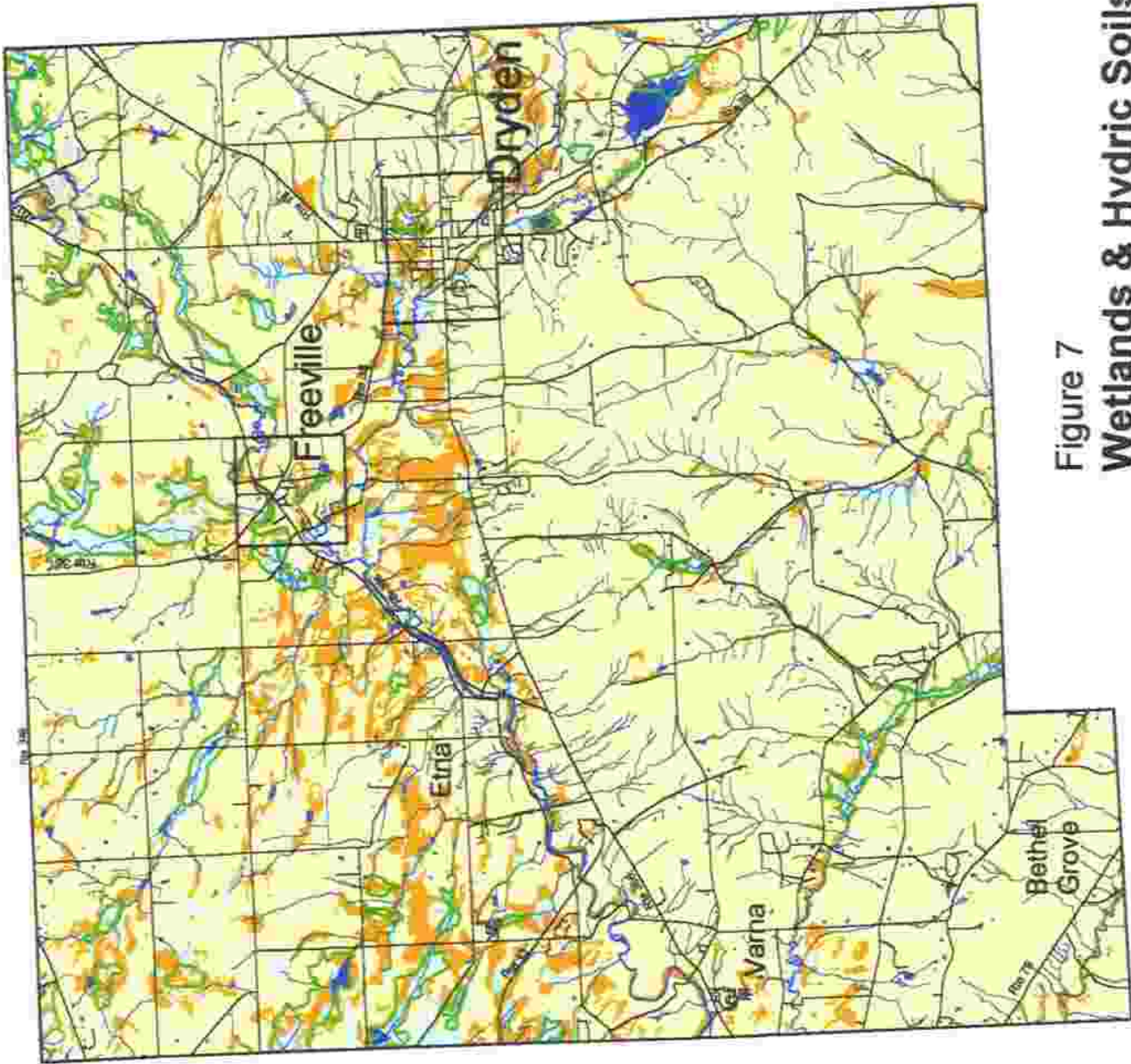
Publication Date: 1999








Title: Soil Associations

Contact: Greg Potter, Tompkins County ITS GIS Division, gis@tompkins-co.org

Other Citation Details:

The soil associations are groupings of 2 or 3 soil types with common characteristics. The hydric soils are one of these groupings. This grouping consists of the following soil types: Ab, Ca, EcA, ErA, FdB, Fm, Ha, Hc, Hk, IcA, IcB, Ly, Mm, Mn, Mp, Ws. The soil types were derived from the Tompkins County Soil Interpretation Report published in 1970. Explanations of each soil type code can be found in that publication.



- Key**
-  Wetlands
 -  Hydric Soils
 -  Water Body
 -  New York State Freshwater Wetland Boundary
 -  Municipal Boundary
 -  Road, Highway
 -  Stream



Source: Templeville County Land Use and Cover Map, prepared by Templeville County Planning and Economic Development Department, Templeville County GIS Applications Map, produced by Templeville County GIS Division and the USDA, Soil Conservation Service, September 2001. NYS Freshwater Wetland boundary data supplied by NYS Dept. of Environmental Conservation.

Note: Data contained in this product was originally produced by the Templeville County GIS Program and may not be reproduced or redistributed without the express consent of the originator. Templeville County does not warrant the accuracy or the completeness of the information portrayed by this data.

Figure 7
Wetlands & Hydric Soils

GROUNDWATER RESOURCES

Groundwater is a very important but too often under-appreciated resource in the Town of Dryden. All but a few residents in the western part of the Town depend on groundwater as their primary water source, and the Village of Dryden uses groundwater for its municipal water supply. Reliance on groundwater for most public and private water supplies in the Town will clearly continue for the foreseeable future, which demands that this resource be monitored and protected. Groundwater is not only an important source of drinking water, but also is the major contributor to streamflow during most of the year.

Groundwater is not uniformly distributed in the Town, but is concentrated in aquifers. These are defined as geologic units that contain and produce relatively large amounts of extractable water from the pore spaces between solid rock particles, and vary widely in size and nature. The amount of water that an aquifer can supply is a function of its thickness, porosity, and permeability.

All significant aquifers in the Town are composed of unconsolidated sand and gravel, but a large percentage of residents who must rely on wells on their own properties obtain their water from fractures in the bedrock, which locally consists primarily of sandstone and siltstone. These bedrock “aquifers” generally require deeper wells to penetrate enough fractures to provide even minimal water flows, and the water quality is generally lower than that of sand and gravel aquifers because of higher mineral content.

The more significant aquifers in the Town are found in the major valleys, and result from fluvial and glacial processes. These aquifers are all composed of sand, gravel, and coarser material deposited by running water, originating either from melting glaciers or from more typical streams. These aquifers can be divided into two major types: unconfined and confined.

Unconfined aquifers are those in which the water surface is the water table and is exposed to atmospheric pressure through the pore spaces in unsaturated surface deposits. These are generally very shallow, as for example the alluvial (stream) deposits adjacent to major streams. Unconfined aquifers are recharged from rainfall and streamflow and, because they are open to the surface, are susceptible to contamination from human activities such as fuel-tank leakage, sewage, oil and gas spills, and agricultural chemicals.

Confined aquifers are overlain by impermeable deposits, typically clay-rich, and have potential surfaces that are very often different from the water table (potential surfaces are the heights to which water rises in a well drilled into the aquifer). Sometimes this height is above the ground surface, in which case the well is termed “artesian”. Although confined aquifers are protected from contamination from above, they are susceptible to pollution that originates in the recharge areas, which typically lie at the outer fringes of these aquifers. In some of the larger valleys there are multiple confined aquifers, all of which can be overlain by an unconfined aquifer and which may result in a geologically complex underground aquifer system.

Aquifers can be further categorized by the depositional environment in which they were formed:

Valley Heads Moraine: Moraines are deposits formed at the edge of a glacier by a complex combination of ice and water depositional processes. The deposits are thus

complex mixtures of sediment types from impermeable clay-rich till to coarse water laid sand, gravel and cobbles. In many cases aquifers so formed are small and not well interconnected. These can be either unconfined or confined, but in general the Valley Heads Moraine does not form large aquifers.

Alluvial (stream deposits): Although almost all the local aquifers were formed by streams of some type, this category is restricted to those aquifers formed by streams not directly related to glaciation. Many or most are unconfined and are often too thin to be useful. They are also quite susceptible to surface contamination. Some, however, are products of pre- or interglacial streams, are generally confined, and can be highly productive.

Deltaic: Deltas form where streams enter lakes and lose their ability to transport coarse sediment. Taughannock and Myers Points are deltas into Cayuga Lake, and are the sites of unconfined aquifers. There are no significant active deltas in the Town of Dryden, but such sedimentary deposits may have formed when glacial ice dammed valleys and formed glacial lakes. Most such deposits are now elevated above the present valley floors and are largely unsaturated.

Outwash Plains: These are large sheets of coarse sand and gravel deposited by meltwater at the front of a glacier. Outwash aquifers are particularly well developed in front of the Valley Heads Moraine, which marks a relatively stable ice front location during the last major glacial episode. The most recent outwash aquifers are unconfined, but can be quite thick. In cases where the ice front advanced over older outwash plains there can be multiple outwash deposits separated by impermeable till, in which case the older outwash forms confined aquifers.

Kame Deposits: Kames are deposits of coarse sand and gravel formed by running water along the surfaces or edges of valley glaciers. After the glacial ice has melted, these deposits can form aquifers of highly variable size, shape, and continuity. Some, especially kame terraces along valley sides, can form thick saturated deposits, either confined or unconfined.

The Village of Dryden taps several aquifers in the Dryden-Harford through-valley to supply water for the village and some nearby residents. At present four municipal wells supply over 200,000 gallons of water per day. The Dryden-Harford through-valley is the most extensively examined area in the Town (Miller, 1993) but even here capacities and behavior of these aquifers are not known. Miller identified five confined aquifer zones, of which the third and fifth are the most productive.

The Fall Creek valley contains another, relatively large aquifer system from which very significant quantities of water could be supplied. The aquifers near McLean are reported to be unconfined but near Freeville are overlain by lake deposits and become artesian (Craine, 1974).

A smaller confined aquifer exists beneath the lower Sixmile Creek valley from at least just below Brooktondale to the Ithaca City reservoir, where this buried stream channel appears to have been breached by postglacial erosion, allowing current discharge

beneath the reservoir and into the gorge downstream (Daniel Karig, personal observations). This aquifer is artesian for most of its length. Aquifers of probable smaller capacity and of unknown character in the Town underlie the upper Sixmile Creek valley and the headwaters of Cascadilla Creek.

The amount of available groundwater is limited by aquifer recharge, which is a function of rainfall and infiltration. Infiltration is reduced by the creation of impermeable surfaces such as pavement and buildings. If such surfaces are created in critical recharge areas, aquifer recharge can be severely affected. Steps should be taken to reduce or compensate for the reduction. Such steps include constructed infiltration basins. Groundwater supply can also be affected by aquifer overdrafts (when extraction exceeds recharge). Although this is not yet a significant problem, conservation should be addressed well before it becomes necessary.

The quality of groundwater can be compromised by contamination from surface or subsurface sources. These contaminants range from road salt to leaking fuel tanks and consist of heavy metals, solvents, and pathogens. Aquifers have some ability to degrade or bind contaminants, and confined aquifers are partly protected from surface contamination. However, because of the slow movement of groundwater (of the order of feet per day), once contaminants enter an aquifer they remain for a very long time. Remediation of a contaminated aquifer is a slow, difficult, and expensive operation. It is far preferable to avoid contamination than to have to remediate it.

Sources used for Groundwater Resources map:

Originator: Todd S. Miller

Publication Date: 2001

Title: Unconsolidated Aquifers in Tompkins County, New York

Issue Identification: Water Resources Investigations Report 00-4211

Publication Place: Troy, NY

Publisher: U.S. Geological Survey

Contact: Todd S. Miller, U.S. Geological Survey, 30 Brown Rd. , Ithaca NY 14850; tel. (607) 266-0217

Other Citation Details:

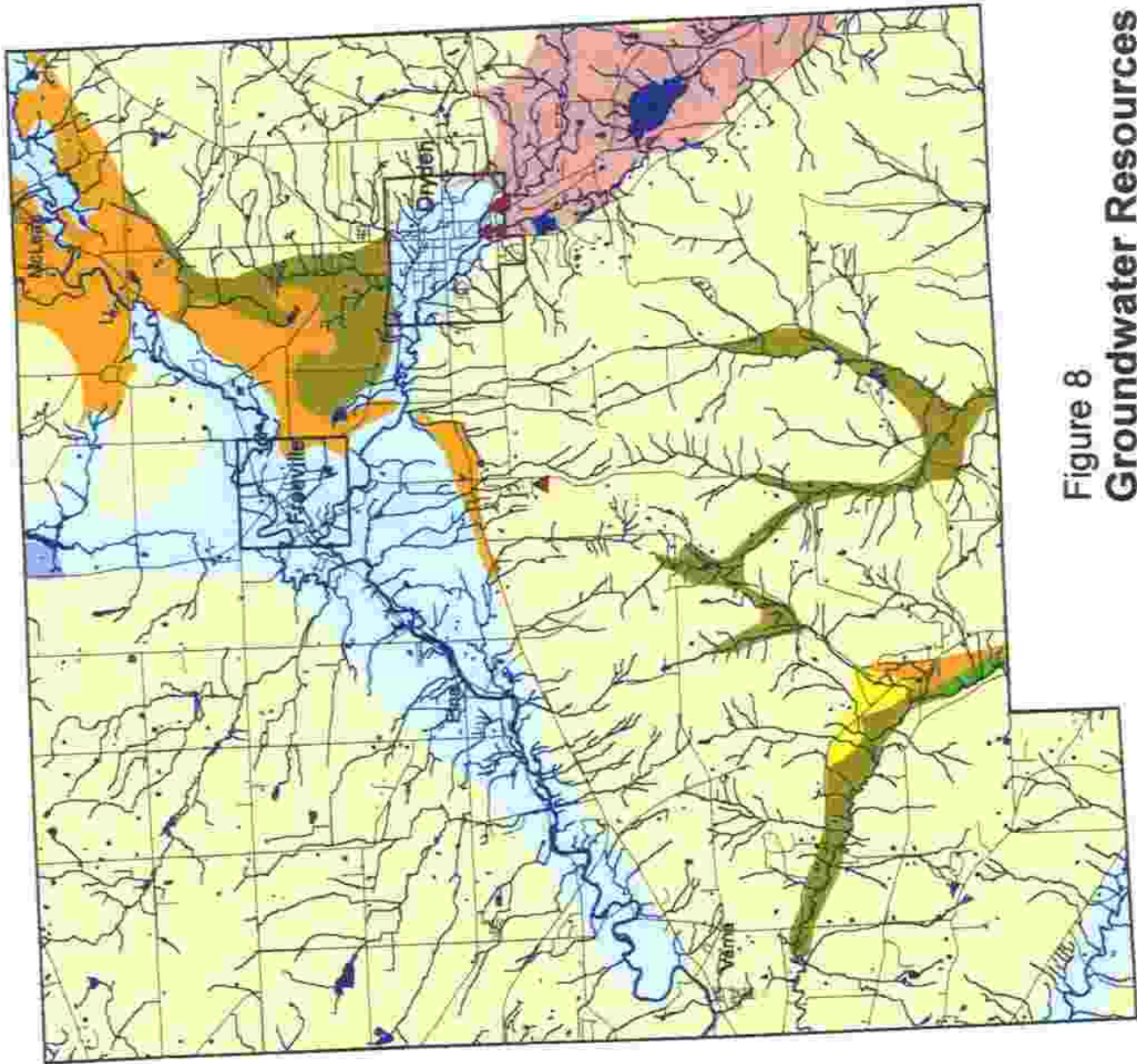
The Groundwater Resources Map was created by George Frantz, using aquifer data from the Miller map and stream locations and roads from the Tompkins County Planning Department GIS database.

Additional References and Resources:

Craine, Leslie J. 1974, Ground-Water Resources of the Western Oswego River Basin, New York. ORB-5. Prepared by the U.S. Geological Survey in cooperation with the N.Y. State Department of Environmental Conservation.

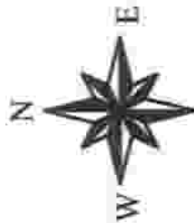
Miller, T. S. 1993, Glacial geology and the origin and distribution of aquifers at the Valley heads Moraine in the Virgil Creek and Dryden Lake-Harford valleys, Tompkins and Cortland Counties, N.Y. : U.S. Geological Survey Water-Resources Investigations Report 90-4168, 34 pages.

Tompkins County Planning Department, 121 E. Court Street, Ithaca, NY 14850; tel.
(607) 274-5560



- Key**
- Alluvial
 - Delta
 - Outwash
 - Kame Deposits
 - Moraine
 - Undifferentiated Sand & Gravel
 - Presence of Aquifers
 - Unknown

- Community Water
- Supply Well
- Municipal Boundary
- Road or Highway
- Stream
- Lake or Pond



0.5 0 0.5 1 1.5 2 Miles

Source: Miller, Todd S., Unconsolidated Aquifers in Tompkins County, New York, U.S. Geological Survey, Water Resources Investigations Report 00-4211, 2000.
 Tompkins County IT/Broad Division for road, stream and municipal boundary data.

NOTE: Data contained in this product originally produced by the Tompkins County GIS Program may not be reproduced or redistributed without the express written consent of the originator. Tompkins County does not warrant the accuracy or the completeness of the information portrayed by the data.

print-map.html

Figure 8
Groundwater Resources

BIOLOGICAL RESOURCES

LAND USE AND LAND COVER

Land use refers to built landscape, land that has been altered for a specific purpose, such as for residential, commercial, or industrial use. Land cover refers to land that has not been altered and has natural vegetation, such as forest, grass, or brush, or some other natural surface such as rock or sand. Current land use and land cover information enables communities to identify existing land use patterns, and, consequently, make better-informed decisions concerning proposed land uses, development suitability analyses, and comprehensive planning. These data provide a static picture of current development patterns, may be used as a benchmark for future land use and land cover analyses, and may be used for historical analyses when data from other timeframes become available in geographic information system (GIS) format.

Land use and land cover data have been mapped into a single GIS coverage, Land Use and Land Cover (LULC), which form a basis for comprehensive study of the land surface in Dryden as well as the rest of Tompkins County (the Tompkins County 1999 Land Use and Land Cover Project). The Tompkins County Planning Department designed a specialized classification system of 63 classes based on the Land Use Natural Resource (LUNR) inventory created by Cornell in 1969. This detailed classification system has been grouped into 10 major LULC classes for the county planning study. These are: 1. Agriculture, 2. Forest/Brush/Grass, 3. Water and Wetlands, 4. Residential, 5. Commercial, 6. Industrial, 7. Outdoor Recreation, 8. Public/Private/Institutional, 9. Transportation, 10. Other: Disturbed/Barren/Abandoned. For the purpose of the Town of Dryden map further condensation has resulted in 7 categorical classes. Note that in some cases where a portion of the map may have more than one land use, a secondary land use has been omitted from the map.

The 7 categorical classes used for this map are:

- | | |
|----------------------|--|
| 1. Developed | includes 4,5,6,9,10 and some of 7 and 8 of County LULC |
| 2. Forest | includes a subset of 2 of County LULC |
| 3. Brush and Meadow | includes a subset of 2 of County LULC |
| 4. Agriculture | includes most of 1 of County LULC |
| 5. Wetlands | includes a subset of 3 of County LULC |
| 6. Utility Corridors | includes a subset of 2 of County LULC |
| 7. Water Bodies | includes a subset of 3 of County LULC |

Below is a list of the original 63 LUNR land use classes, grouped according to the classification used for the current map. Those few land use classes not found in the town of Dryden are noted as absent at the end of the appropriate summary map classification.

1. Developed

Cbd

Central Business District: Commercial/residential centers of city and villages where mixed land uses of Commercial, Public/Institutional, and high density

Residential exist. There may be buildings that comprise more than one type of land use, such as a storefront on the first floor, offices on the second floor, and residences on the third floor. Land uses are mixed and are high in density

Co

Offices: Buildings that contain administrative offices, as well as facilities that include business or technology services that are not predominantly retail orientated. Facilities may be part of a business/technology/industrial park. In some cases medical offices (Ph) may be included if they do not constitute the dominant land use.

Cr

Retail: Commercial areas along roadways not associated with distinct commercial centers or large shopping malls. Will include linear highway corridor development, as well as individual retail businesses and services that may exist within residential or industrial areas.

Cs

Commercial Storage: Indoor and outdoor commercial storage facilities for public rentals and warehouse/storage facilities not associated with adjacent commercial or industrial land uses.

Da

Abandoned: Areas that include buildings and facilities that are interpreted as abandoned or vacant.

Db

Barren Land: Land that is composed of either rock, gravel or sand, which cannot be cultivated or associated with any other defined land use class.

DI

Disturbed Land: Land that has been cleared of vegetation and the interpretation of any identifiable or defined land use class is not possible.

Ia

Agriculture Industry: Buildings and facilities associated with agri-business

Ie

Extractive: Salt mining operations, gravel pits, rock quarries.

II

Light Industry: Facilities and grounds that include activities associated with the manufacturing, processing, fabricating, assembly, finishing, packaging, warehousing, and outdoor storage of products.

- It**
Communication Towers: Communication tower sites at ground level including areas occupied by guide wires.
- Iu**
Utilities: Power plants and substations.
- Oe**
Recreation corridors: Areas characterized as linear recreation ways for uses such as trails and paths associated with outdoor recreation activities and pedestrian connections.
- Og**
Golf Course: Includes driving ranges, club house and greens
- Op**
Parks: Public parks as well as Cornell Plantations including picnic areas, walking/hiking/running trails, playgrounds, manicured lawns, and landscaped areas within park boundaries.
- Or**
Youth & religious camps: Cabins and other buildings associated with summer camps and or religious retreats.
- Ot**
Stadiums/track/ball fields: Sporting fields that may or may not be associated with schools and parks. Baseball diamonds, tennis courts, running track, soccer and football fields with goal posts, swimming facilities. Motor tracks included.
- Pc**
Cemetery: Cemeteries at least one-half acre in area.
- Pd**
Solid waste disposal: Waste disposal sites such as recycling centers, landfills, exposed dumps and private junk yards.
- Pe**
Educational: All schools, university and college academic buildings, research facilities, and associated parking facilities and quads. College campuses include other land uses that, if at least one-half acre in area, is designated as distinct LULC classes. Pe is used only for the academic and research related buildings and the surrounding parking lots and grounds. This class also includes other learning centers such as the Sciencenter, Cayuga Nature Center and the Finger Lakes School of Massage.
- Pf**
Community center, social hall, fraternal lodge: American Legions, Veterans associations, and community centers where social events, Bingo, pancake breakfasts and chicken bbq fund raisers occur.

- Ph**
Health facilities: Hospital, health clinics, medical offices, and nursing homes.
- Po**
Governmental office facilities: Includes all local, state, and federal governmental office facilities that are interpreted to be the dominant land use. This class includes courthouses, town halls, and other public service and administrative facilities.
- Pp**
Public works: Areas that include facilities for highway departments, fire departments, public safety, maintenance buildings, and related storage areas. Public works facilities present on the educational campuses that are at least one-half acre in area are classified as Pp.
- Pr**
Church/synagogue/monastery: Houses of worship. Delineated only if the parcel on which the facility(s) is located is at least one-half acre in area.
- Ps**
Sewage treatment facilities: Facilities whose primary function is the treatment of waste water.
- Pt**
Water Tank: Tank used as reserve of water, either for drinking water or for filling of fire department trucks.
- Pw**
Water management facilities: Facilities whose primary function is management of drinking water.
- Rh**
High density residential: Residential land areas with approximately 5 or more dwellings on average per acre. Comprised mainly of urban areas of residential land use patterns including densities ranging from single family structures to multi-unit apartment buildings.
- RI**
Low density residential: Residential land areas with a maximum average of 1 dwelling per acre.
NOTE: All residential areas associated with any of the Agricultural classes were delineated as Developed Residential Low density (RI) if the combined areas of residential structure, residential outbuildings, and manicured/landscaped yards are at least one-half acre. Otherwise, residential uses were incorporated into their associated Agricultural class.
- Rm**
Medium density residential: Residential land areas with more than 1, but less than 5 dwellings on average per acre.

Rp

Manufactured home park: Residential land areas with a density of 4 or more manufactured homes on average per acre and a designation of the property as a manufactured home park or subdivision.

LUNR Classifications **not** used in summary for this map:

Cc

Shopping Centers/Malls: Commercial areas that are predominately shopping centers and malls including significant surrounding parking facilities.

Oc

Campgrounds: Public and private camping areas, including areas designated for camping in state and town parks as well as private RV parks.

Oh

Hunt clubs: Land areas used specifically for the sport of hunting. May include shooting range and fields for practice of this sport.

Om

Marinas/Yacht Clubs

Os

Recreational shoreline: Shoreline where land use is recreational lake access. Docks and boat moorings may exist. Consists of rocky shoreline land cover. Boundaries vary with lake levels.

Pj

Correctional facilities: County jail, secure work camps, and other correctional centers.

Ta

Airport or active airstrip: Includes all public and private airport facilities, hangars, parking facilities, and runways.

Tc

Bus depot, fleet storage, garage for public vehicles: Places that store large number of cars, vans, trucks or buses for purposes of public use and transportation. Examples include Cornell's fleet storage, T-CAT, ISCD school bus depot.

2. Forest**Fc**

Coniferous Forest: Forested areas where needle trees, such as pine, spruce, fir and hemlock make up at least 80% of the tree cover.

Fd

Deciduous: Forested areas where broadleaf trees make up at least 80% of the tree cover.

Fm

Mixed forest: Forested areas with mixed coniferous and deciduous trees. The ratio of the predominant coniferous or deciduous tree stands must not exceed 80%.

Fp

Forest Plantation: Rows of mature trees, primarily conifers, planted by man.

3. Brush and Meadow**Fb**

Brush: Areas that have considerable growth of shrubs and small trees, but can not be classified as forest. The brush land cover must occupy at least 80% of the delineated area. Forest and grassland may be incorporated into the remaining 20%.

Fg

Grassland: Open grassy areas with no associated adjacent land uses. May include small amounts of shrubs, trees and brush. The grassland cover must occupy at least 80% of the delineated area. The remaining 20% may be trees, shrubs and brush. Grassland areas may be naturally occurring, or may be regularly mowed.

4. Agriculture**Ac**

Cropland: Tillable land used for growing cultivated field crops, forage crops, grain, beans, etc. Hedgerows separating defined Ac areas were delineated as separate classes (typically Fd, Fm, Fb or Fc) if they are greater than 20 meters wide.

Ad

Cattle: Farmland used for the feeding and milking of dairy cattle as well as for beef cattle. Barn with silos and feedlots are included.

Ae

Horse farm: Horse barns, feed lot, and animal recreation areas. (Pasture will be in Ap)

Ah

High intensity cropland/horticulture: Nurseries, including green-houses, vegetable production areas, and other gardens more than a half-acre in size. Does not include Christmas tree farms (see At).

Ai

Inactive Agriculture: Farmland and fields that appear to be no longer used for farming practices. Fields may appear to be growing over with tall grasses and small shrubs.

Ap

Pasture: Areas used for grazing. Is enclosed by fence and may have small trees and shrubs. Located adjacent to livestock farm

At

Tree farm: Areas used for cultivating trees, primarily Xmas trees.

Ay

Other farms: Poultry, sheep, swine, game, mixed animal farms, animal shelters, and farms that produce livestock feeds (granaries).

LUNR Classifications **not** used in summary for this map:

Af

Fishery/Aquaculture: Fishery ponds and associated buildings.

Ao

Orchards: Farmland dedicated to growing tree products including associated buildings.

Av

Vineyards: Grape growing farms and pastures which may include winery buildings.

5. Wetlands

Wb

Marsh, bog, shrub wetlands: Areas of wetlands that contain grasses, scrub, brush, and are void of tall trees.

Ww

Wooded Wetland: Wooded areas that show considerable amounts of water beneath the trees.

6. Utility Corridors

Utility corridors were delineated on the map wherever there was no active human use of the land underneath or above the utilities. Active human use is defined as agriculture, commercial or industrial development or residential use, which was generally in the form of lawn areas. Also wherever utility corridors crossed wetland areas, the wetland was delineated on the map. Hence the map depicts a subset of the categories Fb and Fg described above.

7. Water Bodies

Wn

Natural Lake/Pond: Bodies of water that are not formed by damming creeks. Ponds may be man-made.

LUNR Classifications **not** used in summary for this map:

Wc

Reservoir: Bodies of water that are formed from damming creeks.

Classifications used for creating structure:

Th

Highway: The limited access sections of Route 13 that include at least 4 total traffic lanes. Associated interchanges and ramps will also be delineated within this class.

Tr

Railroads: Active railroad right of ways, including switchyards.

Sources used for Land Use and Land Cover Map:

Originator: Tompkins County Planning Department, Tompkins County ITS GIS Division

Publication Date: June 1, 2000

Title: Land Use / Land Cover

Contact Person: Jacquie Bow, GIS Analyst

Contact Electronic Mail Address: gis@tompkins-co.org

Other Citation Details:

This data set is derived from the interpretation and delineation of land use and land cover from Color Infrared Digital Orthophoto Quarter Quadrangle (DOQQ) images. Orthophotos are vertical aerial imagery that has had all distortions caused by ground elevation changes and camera distortions removed through computer processing and placed in a digital format that can be used with computer applications. A digital orthoimage combines the rich information content of an aerial photo with the accuracy and spatial registration of a map. Each DOQQ corresponds to a one-quarter section of a USGS 7.5 minute topographic map quadrangle. This data set was produced by interpreting DOQQ images from 1995, as well as color aerial photographs from 1999 and black and white photos from 1991 and 1992. The image analyst performed field work in 2000 to bring this data set current to 2000. A quality assessment was performed giving this data set approximately 93% accuracy by individual classes. When grouped into 10 classes the accuracy is 97%. The minimum mapping unit for this project is a half acre, and the best scale to display the individual classes is 1:12,000. At a scale of 1:24,000 or smaller, it is best to use only the 10 grouped categories. The individual classes will not be discernable at smaller scales.

Town of Dryden portions of the county data were field checked and revised September 2001 by George R. Frantz & Associates.

Statistics for the percentages of various land uses and land covers can be extracted for the various political units or watersheds as well as for the entire county.

Use Constraints:

The following statement must be included with any products that use or are derived from this data set: "Data contained in this product was originally produced by the Tompkins County ITS GIS Division and may not be reproduced or redistributed without the express written consent of the originator. The originator does not warrant the accuracy or completeness of the information portrayed by the data."

Additional Resources and References:

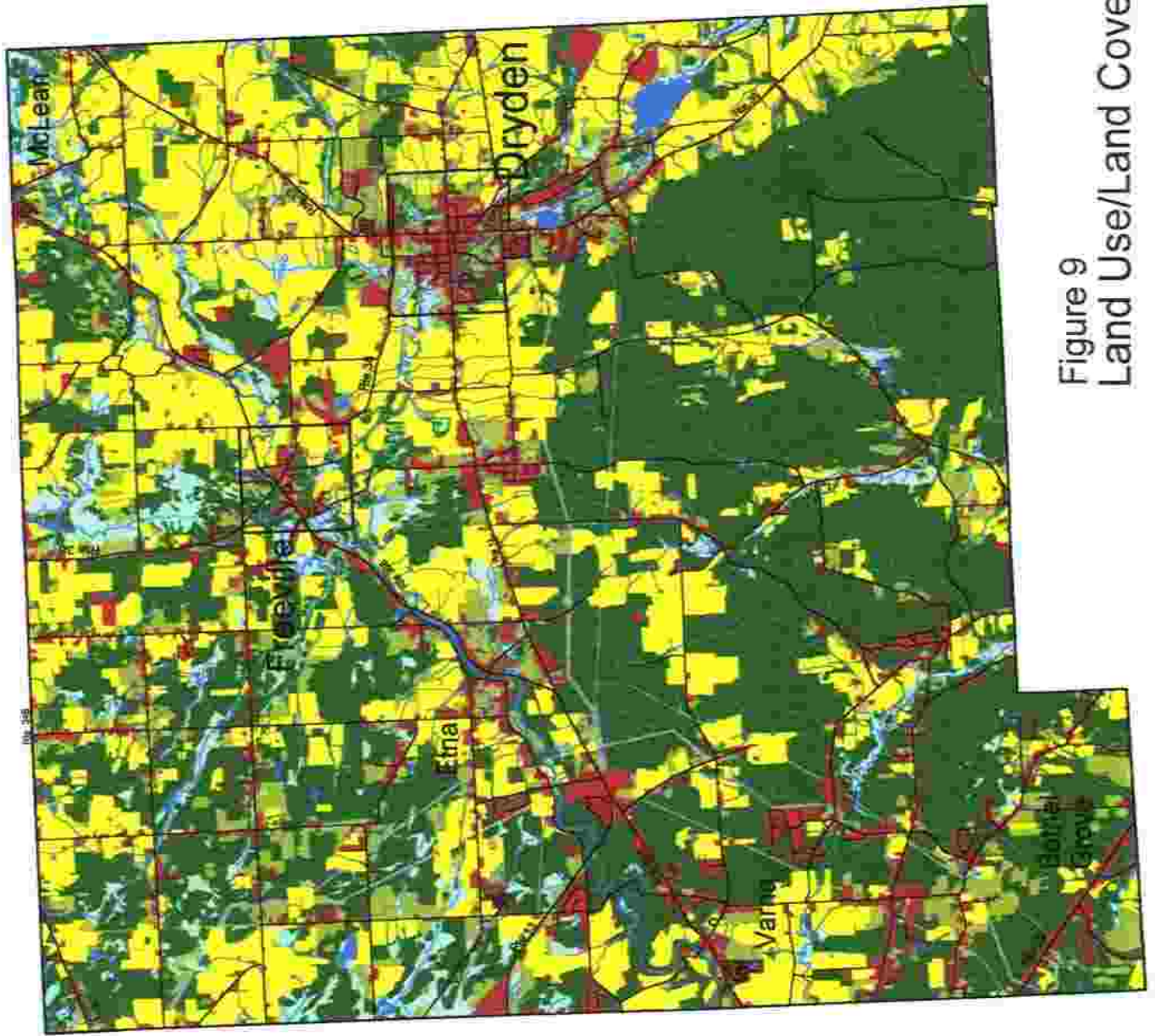
Institute for Resource Information Systems (IRIS), Rice Hall, Cornell University 607-255-0800.

Notes on development of the database:

The Tompkins County Planning Department used interdepartmental mapping expertise of the Tompkins County Information Technology Services GIS Division to produce a land use and land cover data set of Tompkins County, NY.

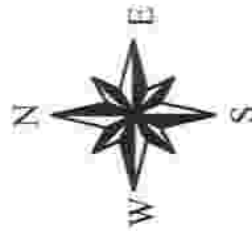
Traditionally, land use and land cover maps have been developed by interpreting aerial photographs, delineating land use and land cover polygons onto a geo-referenced base map, and then digitizing the line work. This project used an innovative methodology to develop a land use and land cover map entirely within a digital environment. Digital Orthophoto Quarter Quadrangles (DOQQ), a type of color infrared digital aerial photograph, and a number of other secondary digital data sources (wetlands, hydrology, and planimetric base data) were used to interpret and delineate land use and land cover directly on-screen.

In 1968, the Land Use and Natural Resource Inventory (LUNR) a statewide land use and land cover mapping project, used aerial photographs to identify 130 land use and land cover classes. The Tompkins County land use and land cover classification system has been designed to be comparable with the LUNR classification system. Comparable classification systems will enable users to analyze changes in land use and land cover over the previous thirty-year time period.



Key

- Developed Lands
- Forest
- Brush & Meadow
- Agriculture
- Wetlands
- Utility Corridors
- Water Body
- Municipal Boundary
- Road, Highway
- Stream



0.5 0 0.5 1 1.5 2 Miles



Source - Florida's County Land Use and Cover Map prepared by Tompkins County TRS & Cooper & Thompson County Planning Dept. June 2001. Field checked and updated by Orange & Volusia & Seminole August 2001.

NOTE: Some information in this product was originally produced by the Tompkins County TRS & Cooper & Thompson County Planning Dept. and is being included in this product with the express written consent of the TRS & Thompson County Planning Dept. and Volusia & Seminole County. The information is provided as is and is not intended to be used for any purpose other than the original purpose for which it was prepared.

Figure 9
Land Use/Land Cover

UNIQUE NATURAL AREAS

The map of Unique Natural Areas accompanying this report includes information about two kinds of features. Tompkins County Unique Natural Areas within the Town of Dryden are one group of features. DEC Mapped Wetlands are the second group of features. DEC Mapped Wetlands have potential for regulatory action. Each of these groups of features and the sources of the information they represent are described below.

Unique Natural Areas

Unique Natural Areas (UNAs) are sites with outstanding environmental qualities, identified by the Tompkins County Environmental Management Council (a county advisory board on environmental issues) as deserving special attention for preservation and protection. UNAs include such natural features as gorges, woods, swamps, fens, cliffs, and streams. At least one of six criteria are used to classify an area as a UNA: (1) rare or scarce species that have been recognized at a national, state, or local level; (2) rare or scarce animal species or critical migration, reproduction, or feeding habitat for rare or scarce animals; (3) rare plant or community types for Tompkins County; (4) one of the best examples of an ecosystem or plant or animal community within the county; (5) rare or outstanding geological features or processes; and (6) outstanding natural or scenic beauty as viewed within or from a distance.

A comprehensive UNA inventory was developed over the course of many years, with input from many people. Craig Tufts completed the first inventory in 1976 as a Masters thesis at Cornell University. This inventory was reviewed, expanded, and updated by members of the Environmental Management Council, the Tompkins County Planning Department, and two hired botanists, Robert Wesley and Nancy Ostman.

One hundred and ninety-two sites scattered throughout the county are designated as UNAs, ranging in size from half an acre to 4,216 acres. UNAs lie on both publicly and privately owned lands and most are not open to visits from the public. Prior to the release of the UNA Inventory in 1990, individual sites were researched and visited (when permission was granted by the landowner) in order to determine their environmental significance. The current UNA boundaries are based on the 1999 UNA update and have been revised with the assistance of 1991 black-and-white aerial photography, 1994/1995 Digital Ortho Quarter Quadrangle color infrared aerial photography, 1991 planimetric GIS base data (roads, building footprints, streams) and field visits.

UNA boundaries are current to the 1999 Unique Natural Areas Inventory. In the past, Unique Natural Area boundaries usually have been officially updated only during a major revision of the Unique Natural Areas Inventory. In the spring of 1998, digital UNA boundaries were developed from the 1990 UNA Inventory site maps (hand-drawn on 1:24,000 scale USGS topographic base maps). A variety of digital data sets were used to assist the GIS Intern in delineating UNA boundaries (through on-screen digitizing), including 1991/1992 planimetric base data (roads, building footprints and streams), 20-foot topographic contours and 1997 tax parcel boundaries. Unique identification codes were assigned to each UNA polygon, based on the town-by-town coding system used in the 1990 UNA Inventory. Draft maps of each UNA boundary were then reviewed in conjunction with 1991 black and white aerial photographs and 1994/1995 Digital Ortho Quarter Quadrangle color infrared aerial photographs by field biologists. A new county-

wide coding system was developed and a new identification code assigned to each Unique Natural Area. Final boundary revisions for each Unique Natural Area were completed by the Tompkins County Planning Department GIS analyst in September 1999. Unique Natural Areas boundaries are approximate.

DEC Mapped Wetlands

The DEC Mapped Wetlands are based on official New York State Freshwater Wetlands Maps as described in Article 24-0301 of the Environmental Conservation Law. DEC Mapped Wetlands, as shown on the map accompanying this report, are not, however, a legal substitute for the official freshwater wetlands maps. Coverages are available on a county basis for all areas of New York state outside the Adirondack Park. DEC Mapped Wetlands for the Town of Dryden are based on maps updated on December 16, 1994, for Tompkins County. Official, regulatory wetland maps are prepared by NYSDEC and filed as required by the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law).

Sources used for Unique Natural Areas map:

Originator: Tompkins County Environmental Management Council, Tompkins County Planning Department, Cornell Plantations

Publication Date: 1999

Title: Unique Natural Areas of Tompkins County Database, 1999

Other Citation Details:

This is a relational database developed in Microsoft Access. Information from the “Unique Natural Areas of Tompkins County, 1990 Inventory” was entered into this database, and subsequently updated for the “1999 Unique Natural Areas Inventory.” Fields include site and vegetation description, reason for selection, special land use information, water resources, physical characteristics, soils, conservation of the site, cover type, ecological communities description, flora and fauna.

Originator: Craig Tufts, Masters Student at Cornell University

Publication Date: Unpublished material

Title: A Preliminary Inventory of Some Unique Natural Areas in Tompkins County, 1976

Other Citation Details:

This study was conducted by Craig Tufts between 1973 and 1976 as a Masters thesis. He inventoried 84 Unique Natural Areas in Tompkins County. This study provides detailed information about each UNA site (site description, location, ownership, man-made changes, natural features, activities, reason for selecting site, and comments) along with a series of maps showing the location of Unique Natural Areas in each town in Tompkins County. Three possible strategies for the conservation of natural areas are discussed.

Originator: Tompkins County Environmental Management Council, Tompkins County Planning Department, Cornell Plantations

Publication Date: 1990

Title: Unique Natural Areas of Tompkins County, 1990 Inventory, 1st Edition

Other Citation Details:

This study, based on the 1976 study “A Preliminary Inventory of Some Unique Natural Areas in Tompkins County, New York,” inventories 181 Unique Natural Areas in Tompkins County. This inventory provides detailed information about each Unique Natural Area (ecological communities, geological features, water features, soil features, special land use information, reasons for selection, adjacent land uses, and vulnerability of the site to visitors) and shows the boundary of each Unique Natural Area (hand-drawn on 1:24,000 scale USGS topographic base maps). The introduction provides information about the uses of the inventory, the methods for identifying candidate sites, procedures for surveying, criteria for classification as a unique natural area, a guide to the data forms describing the sites, and a list of the sites.

Originator: Tompkins County Environmental Management Council, Tompkins County Planning Department, Cornell Plantations

Publication Date: 1999

Title: Unique Natural Areas of Tompkins County, 1999 Inventory, 2nd Edition

Contact Organization: Tompkins County Planning Department

Contact Electronic Mail Address: gis@tom-pkins-co.org

Other Citation Details:

This is an extensive revision of the “Unique Natural Areas of Tompkins County, 1990 Inventory.” One hundred ninety-two Unique Natural Areas are inventoried. Detailed information about each Unique Natural Area (site description, reason for selection, rating, protection status, water resources, physical characteristics, soils, conservation comments, cover type, vegetation/animal description, rare flora, and rare fauna) and an accurate site map of the UNA boundary is provided for each site.

Access Constraints:

Not for public release without a signed consent form, which must be obtained from the Tompkins County Planning Department.

Use Constraints:

The following statement must be included with any products that use or are derived from this data set: “Data contained in this product was originally produced by the Tompkins County Planning Department and Tompkins County Environmental Management Council and may not be reproduced or redistributed without the express written consent of the originator. The originator does not warrant the accuracy or completeness of the information portrayed by the data.”

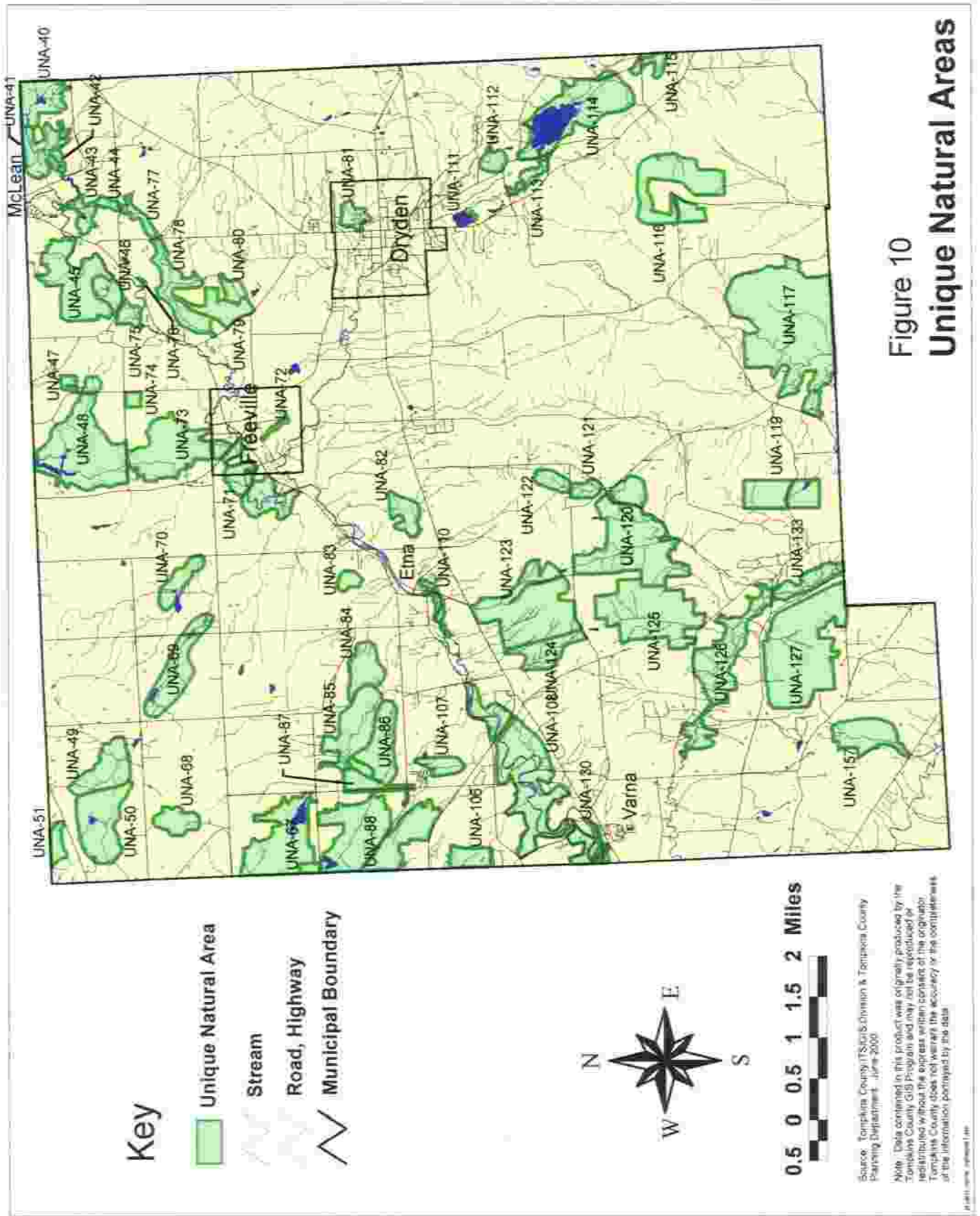


Figure 10
Unique Natural Areas

POLITICAL RESOURCES

MANAGED OPEN SPACE ASSETS

The managed open space assets of the Town of Dryden constitute one of the largest areas of protected lands in Tompkins County. These include both public and private lands which have been set aside for recreation, education, and preservation, as well as watershed and flood control. The protected properties may contain special geographic or biological cover. Some lands included in this category are maintained for specialized recreation for the community.

Both public and private managed open space assets are present in the Town of Dryden, some for specific educational and recreational purposes, and some for preservation of specialized natural areas. Access to the public varies with each property. Cornell University owns much of this land, concentrated in the western part of the town adjoining the towns of Ithaca and Lansing. Some of these areas are open to the public.

Cornell uses the Cornell Natural Areas for ecological purposes in addition to their main use as educational resources. The Cornell Natural Areas located in the Town of Dryden include Ellis Hollow Wetlands, Etna Hollow Wetlands, Etna Fringed Gentian Area, Monkey Run, and Mount Pleasant. Part of Sapsucker Woods, used for ornithological study and community observation, is also in the Town of Dryden. Finger Lakes Land Trust owns the Etna Nature Preserve and the Ellis Hollow Nature Preserve, which are open to the public. The Land Trust also owns conservation easements on four privately owned properties, in both the South and North parts of the town, which are not shown on the public map. The Nature Conservancy owns the Malloryville Bog (Von Engeln Preserve), which is open to the public and is equipped with boardwalks and signage.

Community parks in the villages of Freeville and Dryden, as well as in the hamlets of Etna, Bethel Grove, Ellis Hollow, and Varna are preserved for recreational and community activities. Privately owned recreational areas also exist in the town, such as the Dryden Golf Course (abutting Dryden Lake) and the Dryden Rod and Gun Club. Dryden Lake Park (occupying the northwestern tip of Dryden Lake) and the Jim Shug Trail are managed by the Town of Dryden. The Jim Shug Trail goes from the village through portions of Cortland County, and connects with the Finger Lakes Trail. There is also a separate trail toward Freeville, which is partly developed.

Two major state forests are present in the southeastern portion of the town: the Yellow Barn State Forest and Hammond Hill State Forest. These areas are managed under the NYSDEC's Regional Forest Management Plan Region 7, providing recreational usage and species protection and greenways.

These managed assets also include both public and private watersheds. The Crispell Flood Control Dam Project on Virgil Creek provides non-motorized recreational uses as well as protecting the Village of Dryden from flooding. Dryden Lake is a state wildlife management area, which provides major opportunities for bird watchers and anglers, as well as hikers and boaters. The town contains Fall Creek, Virgil Creek, and many tributaries to these creeks. In too many cases the banks of these creeks are not under any protection, leading to siltation and erosion of adjoining properties.

Sources used for Managed Open Space Assets map:

Originator: Tompkins County ITS GIS Division, Tompkins County Assessment Division

Publication date: July 1, 2001; updated yearly

Title: Tompkins County Tax Maps (ARC Export: 2000)

Contact Organization: Tompkins County ITS GIS Division, 128 E Buffalo St. , Ithaca
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Contact Electronic Mail Address: gis@tompkins-co.org

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Contact Organization: Albert R. Mann Library, Cornell University, Ithaca, NY 14853

Contact Electronic Mail Address: menn_ref@cornell.edu

- Key**
-  Public Park/Recreation
 -  Private Park/Recreation
 -  Private Preserve/Natural Area
 -  State Forest Lands
 -  Cornell University (non-Plantations)
 -  Civic Association/Foundation
 -  Flood Control or Water Supply
 -  Other Lands
 -  Water Body

 Stream

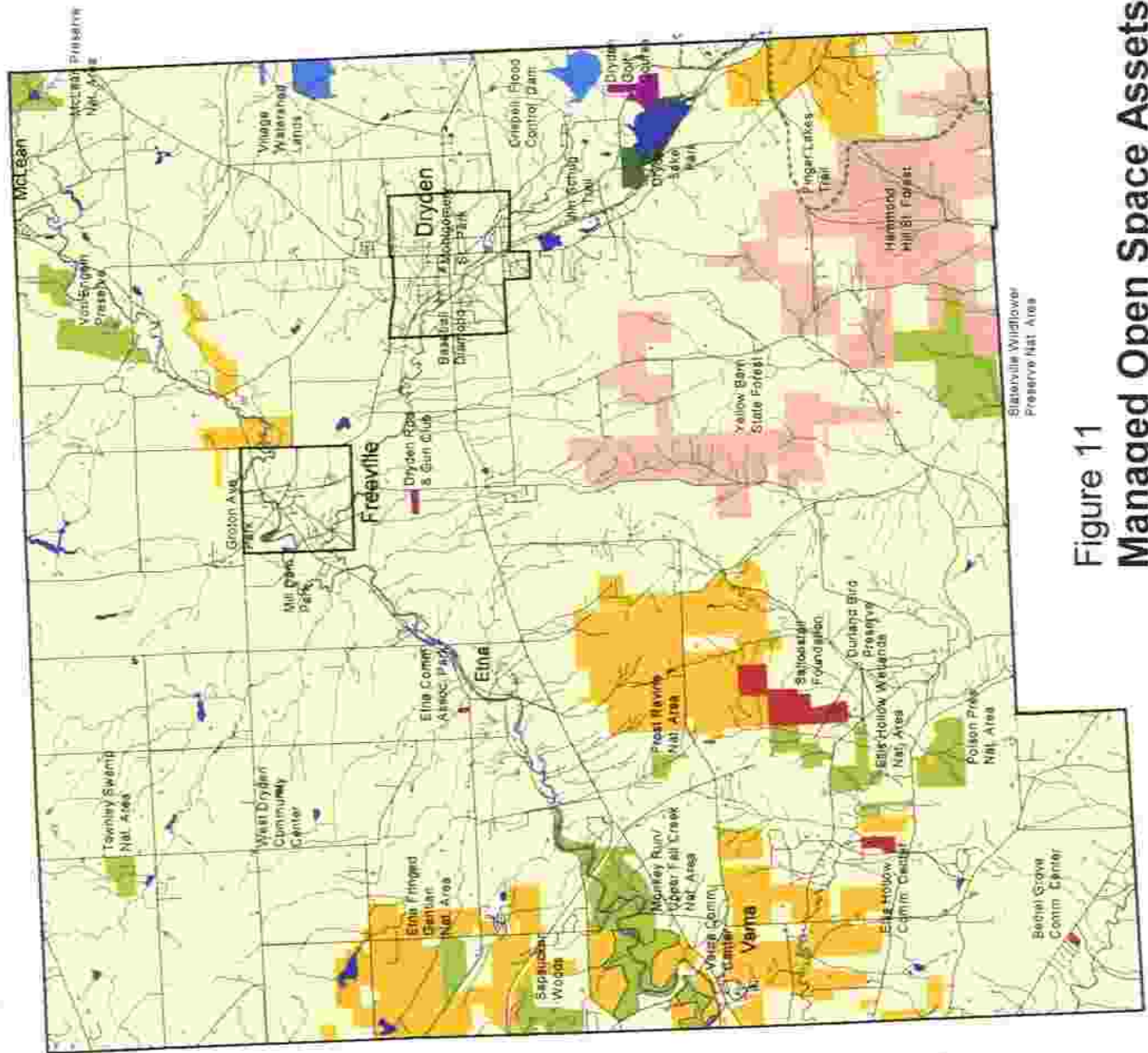
 Road, Highway



Source: Tompkins County Historic Division & Tompkins County Planning Department, June 2000

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Revised 11/13/07



**Figure 11
Managed Open Space Assets**

Stateville Wildflower Preserve Nat. Area

SELECTED HISTORIC SITES

In addition to its wide range of natural resources, the Town of Dryden also possesses a wealth of historic and cultural resources. Although these might ordinarily not be recognized in an Open Space Inventory, we feel that historical and cultural resources in the Town also deserve to be inventoried, and to be considered for recognition and preservation.

Historic sites begin with those from the time of Native American habitation, and continue through the European pioneer times into the period of early Town development. Few traces of Native American and pioneer activities remain in the Town, but sites of several important habitations and the locations of several roads and trails from those periods have been identified. These are not included in this inventory but are available from the Dryden Historical Society.

Inventoried historical resources from about 1815 to 1900 include buildings, both public and private, as well as some bridges and cemeteries. The most clearly defined historic resources are those listed on the National Register of Historic Places in New York state. These properties have undergone review and are afforded some degree of protection from destruction or alteration. Eight individual buildings within the Town (of which seven are in the Village) and the Dryden Village Historic District are included on the Register.

Another, significantly different selection of historical buildings as well as historical bridges was compiled by the Department of City and Regional Planning, Cornell University, in a 1999 report to the Town Board. Also included in its report but not in this inventory is a compilation of all barns in the Town.

Yet another perspective was presented by the Cayuga Chapter of the Daughters of the American Revolution, which compiled historic sites in Tompkins County that were marked by the state of New York. These roadside signs note the sites of significant buildings, usually destroyed, as well as significant happenings. The DAR pamphlet with this information is on file at the Dryden Historical Society. Identification of these ranges from obvious to highly subjective, with different inventories often including very different elements. There are undoubtedly still other historic sites that warrant future recognition.

Sources used for Selected Historic Sites map:

Originator: George Frantz, consultant to the Town of Dryden

Publication Date: This publication

Title: Historic Sites

Contact: Conservation Advisory Committee, Town of Dryden

Other Citation Details:

The Historic map was created using data from:

1. National Register of Historic Places in New York State, compiled by Peter D. Shaver.
2. "Future Land Use in the Town of Dryden: Alternatives and Recommendations," a report prepared by the Department of City and Regional Planning, Cornell University, December 1999.

3. Dieckmann, Jane Marsh, ed. (originator), "The Towns of Tompkins County" Ithaca, NY: DeWitt Historical Society. 1998.
4. Tompkins County, Department of Planning & ITS/GIS Division, "Tompkins County Tax Maps (ARC Export:2000)," Tompkins County: Tompkins County GIS Program.

Other, non-plotted historic sites are listed in "Historic Sites Located in Tompkins County," pamphlet prepared by the Cayuga Chapter of the Daughters of the American Revolution.

CULTURAL RESOURCES

In addition to its wide range of natural resources, the Town of Dryden also possesses a wealth of historic and cultural resources. Although these might not be ordinarily recognized in an Open Space Inventory, we feel that historical and cultural resources in the Town also deserve to be inventoried, and to be considered for recognition and preservation.

Cultural resources are defined in this inventory as including cemeteries, religious centers, educational institutions, community centers and foundations, museums, libraries, and other municipal buildings. A number of these resources, such as the Southworth Library and other buildings, and some cemeteries, are also of historical significance.

Sources used for Cultural Resources map:

Originator: George Frantz, consultant to the Town of Dryden

Publication Date: This publication

Title: Cultural Resources

Contact: Conservation Advisory Committee, Town of Dryden

Other Citation Details:

The Cultural Resources map was created using data from:

1. Tompkins County ITS/GIS Division, the Tompkins County Planning Department,
2. Harry L. D. Weldon . "Historic Cemeteries, Town of Dryden": a map filed at the town of Dryden offices. 1984.
3. Dieckmann, Jane Marsh, ed. (originator), "The Towns of Tompkins County"
Ithaca, NY: DeWitt Historical Society. 1998.

