

5.0 Natural Resources

Environmental resources cross political boundaries and affect land uses, development and quality of life. As the backdrop in front of which the activities of life are enacted, their presence, absence or degradation can have a significant impact on the quality of life of residents. The careful documentation and consideration of these valuable resources will allow the Town of New Hartford to determine what type and scale of development should be pursued and where it should be located.

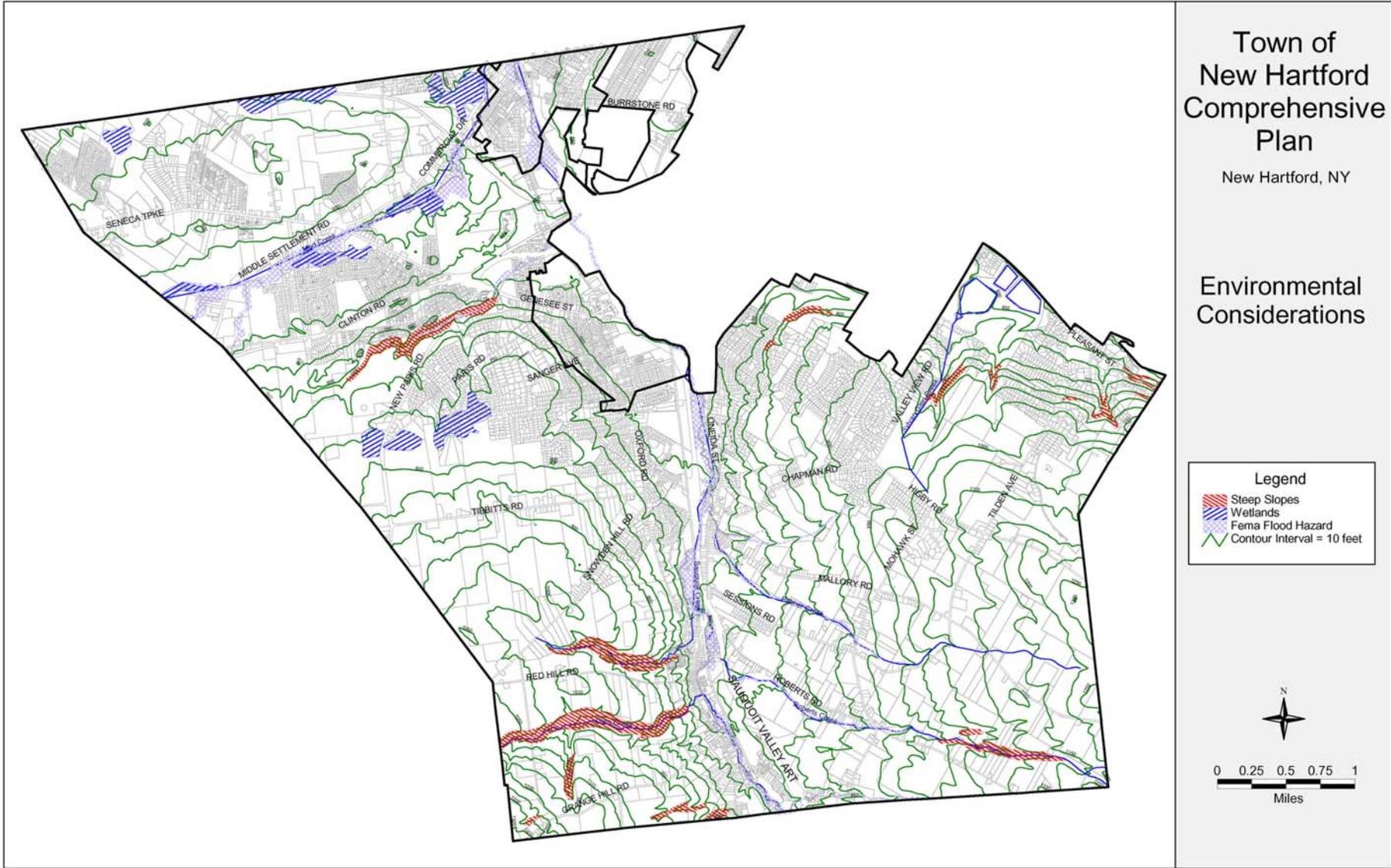
5.1 Physical Geography

Landforms within the Town of New Hartford have been influenced by glacial changes as well as the Mohawk River. The Mohawk River carved the east-west valley, which encompasses the northern portion of the Town. The southern portion marks the transition between the Mohawk Valley and the Appalachian Upland. The Town is characterized by steep hills to the south and more level ground to the north.

The Sauquoit Creek corridor bisects the Town from south to north and there are areas of steep relief along its banks. The Mud Creek basin bisects the northwestern section of the Town from west to east. This area is not as steep as the southern part of Town and has few significant topographical changes. Generally, there is greater steepness east of the Sauquoit Creek than to the west. There are relatively level plateaus on the tops of some hills in southern New Hartford that provide excellent views to the north.

Slope is an indicator of the steepness of the land. Approximately 61% (9,995 acres) of the land area in the Town is relatively level with slopes of 0%-5%. Slopes of 6%-10% are found in 23% (3,837 acres) of the Town's land area. These are found throughout the Town but primarily along the central corridor of the Town adjacent to the Sauquoit Creek. Slopes of 11%-20% are found in 12% (2,029 acres) of the Town's land area. These are generally located along the southwestern edge of Sauquoit Creek. Other pockets are located east of Sauquoit Creek and a significant section is found in the northeastern portion of Town.

Slopes greater than 20% are deemed very steep and considered to be unsuitable for development due to economic and environmental constraints. Developments on steep sites require careful site planning and attention to erosion and landslide potentials. Three percent (516 acres) of the Town's land area falls into this category. These areas are located on both side of Sauquoit Creek and around some of its tributaries (Harris Brook, The Glen and an unnamed brook just south of Mud Creek). There are also pockets of steep slopes in the northeastern section of the Town.



5.2 Soils

Soils are naturally occurring bodies on the surface of the earth that are dependent on the local geology, landforms, relief, climate and natural vegetation.

Characteristics such as depth to bedrock and ground water, permeability, fertility and drainage determine whether or not soils are appropriate for agriculture, physical development or natural open space uses.

Large portions of the soils in New Hartford are formed in glacial till sediments derived from limestone (Honeoye, Lima, Lansing, Pittsfield, Nellis etc.). The remaining glacial till soils were formed in sediments derived from acid shale or sandstone (Manlius, Lordstown, Arnot, Cazenovia etc.). Pockets of sandy or gravelly soil formed in glacial outwash sediments are also scattered throughout the Town. Large deposits of alluvial soils exist adjacent to Mud Creek, Sauquoit Creek, Palmers Creek, Brown Creek and their tributaries.



52 percent of New Hartford soils meet the highest national standards

The U. S. Department of Agriculture, Natural Resources Conservation Service (NRCS), classifies soils relative to their agricultural productivity. The two most highly productive soils are national prime farmland and farmland of statewide significance. National prime farmland is defined as land that is well suited for the production of food, feed, forage, fiber, and oilseed crops, with the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when properly treated and managed. Farmland of statewide importance includes land in addition to national prime farmland that is of

statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Within the Town of New Hartford, approximately 52% is classified as prime farmland and 13% of the land area is classified as farmland of statewide significance. These soils are found throughout the Town.

5.3 Hydrology

5.3.1 Streams

Two significant water bodies are located in the Town: Sauquoit Creek and Mud Creek. Sauquoit Creek, which is 21 miles in length, originates in the Town of Paris and flows in a northerly direction through the Town of New Hartford and seven other municipalities before emptying into the Mohawk River. Mud Creek flows west to east and is a tributary of Sauquoit Creek. Several other small streams are also tributaries to Sauquoit Creek.

Drainage patterns generally flow towards the center of New Hartford into the Sauquoit Creek basin. In the northwest, Mud Creek is the low point and drainage tends to flow into this creek and then to Sauquoit Creek.

The Department of Environmental Conservation (DEC) classify Sauquoit Creek and Mud Creek as C(T). The best use for Class C(T) surface water is fishing, particularly trout fishing. The water quality should be suitable for trout propagation and survival and primary and secondary contact recreation such as swimming. However, other factors may limit its use for contact recreation purposes.

5.3.2 Watersheds



The Sauquoit Creek in Chadwicks

The Sauquoit Creek Watershed consists of 63 square miles of land area, most of which is located within Oneida County but a small portion lies within Herkimer County. The watershed encompasses portions of 14 municipalities. The upper (southern portion) of the watershed is primarily agricultural and residential in nature and the lower watershed is highly urbanized, containing dense residential and commercial development. The Sauquoit Creek Watershed includes the Towns of Paris (43% of the basin's land area), New Hartford (31%), Kirkland (11%), Whitestown (5%) and Litchfield (3%), and the Village of New York Mills (2%). The

remaining 5% of the watershed is comprised of portions of the Towns of Bridgewater, Marshall and Frankfort, the City of Utica, and the Villages of New Hartford, Clayville, Whitesboro and Yorkville.

The Sauquoit Creek basin has a history of localized and generalized flooding. In 2001, the Sauquoit Creek Basin Steering Committee was formed to identify engineering and planning initiatives, best management practices, and potential revenue streams as well as to provide stewardship for future generations. One of the goals and objectives of the Sauquoit Creek Basin Steering Committee was to become a legal entity. This was accomplished in 2004, when the Sauquoit Creek Intermunicipal Commission was established through the signing of intermunicipal agreements between the Towns of New Hartford and Whitestown and the Villages of New Hartford, New York Mills, Whitesboro and Yorkville. As a legal entity, the Commission will be able to implement initiatives to better manage the watershed.

5.3.3 Wetlands

Water in the form of precipitation reaches the ground and collects in natural basins where it is stored. These sites create special habitats called wetlands. Many plant and animal species are dependent on wetland environments to survive. Wetlands also can also reduce flooding, play a role in stormwater management and provide recreational and open space uses. Seven New York State recognized wetlands and several federally regulated wetlands are located in the Town of New Hartford.

The DEC classify wetland in descending order from greatest to least value as Class I, II, III or IV. The value is based on characteristics such as cover type, ecological associations, habitat functions, hydrologic functions and special features. All the State recognized wetlands are Class II wetlands and they are located in northwest sections of the Town near the Whitestown border. Wetlands account for approximately 1.5% of the land area within the Town of New Hartford.

5.3.4 Groundwater

While most of the developed areas are serviced by municipal water and sewage disposal some properties still rely on septic tanks for sewage disposal and private wells for their water supply. The rural, southern section of the Town in particular relies on groundwater for water supply. On-going protection of aquifer and recharge areas is required to ensure that ground water supplies are protected from contamination.

The Town of New Hartford does not have a designated primary aquifer but productive areas of groundwater supply are found along Mud and Sauquoit Creeks. Groundwater wells in the Town obtain water from consolidated and unconsolidated deposits. Local well drillers have not obtained consistent well results. Generally, well yields are sufficient for single-family use when obtained from shale bedrock at depths of 100 feet to 125 feet. There are also some artesian wells (wells under pressure which flow at the ground surface). Wells in shale bedrock that exceed 125 feet will encounter saltwater from the Syracuse salt beds and will not be suitable for potable supply. Hydrogen sulfide may also be an issue when wells are drilled in New Hartford's shale bedrock. Unconsolidated deposits of sand and gravel in the Town are also a potential source of potable water. These are located around Sauquoit Creek and other areas in the Town.

5.3.5 Flooding

The Federal Emergency Management Agency (FEMA) inventories areas where flooding is likely to occur. The 100-year flood zone designates areas that have a 1% chance of flooding in any given year. FEMA requires flood insurance be obtained for buildings constructed within this zone. Within the Town of New Hartford the flood zone generally follows Sauquoit and Mud Creeks and their tributaries. Approximately 2.5% of the land area in the Town of New Hartford falls within the flood zone.

Localized flooding is also an issue at several culvert locations throughout the Town due to increased stormwater runoff and is further addressed in the Infrastructure section.

5.4 Hazardous Materials

Everyday business activities result in the generation, transportation, treatment, storage and disposal of hazardous waste. Companies involved in any of these activities are required to provide information on their activities to state environmental agencies. The U.S. Environmental Protection Agency (EPA) provides public access to this information through several information databases that track environmental activity that may affect air, water, and land throughout the United States.

According to the EPA Envirofacts Data Warehouse, as of December 2005, there were no Superfund sites (a program administered by the EPA to locate, investigate, and clean up uncontrolled hazardous waste sites) or brownfields (a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant) in the Town of New Hartford. There were 46 sites within the Town that handle hazardous material. While the activities of these sites are regulated by the EPA and not a significant cause for concern, it is important that emergency responders are aware of their locations and the products they handle so that responders can be appropriately prepared if they need to respond to emergencies at those locations.

5.5 Air Quality

To ensure that all Americans have the same basic health and environmental protections, the EPA sets limits on how much of the following criteria air pollutants can be in the air anywhere in the United States: Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), Sulfur Dioxide (SO₂), Ozone (O₃), Particulate Matter (PM₁₀ and PM_{2.5}), Lead (Pb). A geographic area that meets or exceeds the primary standard is called an attainment area. If the primary standard is not met, the area is called a nonattainment area. According to data obtain from the EPA AirData Web site in December 2005, the Town of New Hartford is an attainment area for all criteria air pollutants.

5.6 Natural Resources Findings

- Areas of the Town of New Hartford have slopes over 15% and will require careful site planning and attention to erosion and landslide potentials if development occurs
- The Sauquoit Creek Intermunicipal Commission has been established to better manage the Sauquoit Creek watershed
- There are several state and federally regulated wetlands in the Town of New Hartford
- Areas of the Town of New Hartford receive drinking water from private wells
- The FEMA designated flood zone in the Town of New Hartford generally follows Sauquoit and Mud Creeks and their tributaries

- There are no Superfund or brownfield sites in the Town of New Hartford
- The Town of New Hartford currently meets the EPA's standard for criteria air pollutants

5.7 Natural Resources Policies

Policy 1 - Appropriate regulations to protect ground water and water quality should be adopted and enforced

Policy 2 - New development projects should be encouraged to incorporate energy conserving and alternative energy systems and building systems that minimize energy consumption

Policy 3 - Steep slopes, wetlands and other sensitive areas should not be developed

Policy 4 - The Town's important soils and significant agricultural lands should be protected

Policy 5 - The Sauquoit Creek Corridor should be protected and revitalized