Chapter 2.6 Natural Resources

2.6.1 INTRODUCTION

Natural resources are affected by development activities through the loss of critical conservation areas such as wetlands and wildlife habitat. Development can also lead to such adverse effects as the on- and off-site pollution of natural resources, including groundwater or soils, or erosion of steep slope/loose soils areas. Typical sources of pollution in the area include runoff from roads and other impervious surfaces containing salts, oils, and gasoline, toxic household wastes, and in limited instances, industrial wastes. Natural resources and features—including topography, soils, water, and native plants and animals—need to be identified so that planning for future growth ensures their protection. Development must be planned in a way that the Town of Urbana and Village of Hammondsport maintain their water quality, keep soils free from contamination, preserves the important groundwater recharge and flood mitigation functions of wetlands, and continue to provide a habitat for native wildlife, particularly rare and endangered species.

2.6.2 GEOLOGY

Geology encompasses the bedrock geology of the region as well as the surficial geology, composed of soils and glacial deposits. Steuben County is in the Allegheny Plateau physiographic province. The Plateau is mature and eroded and its dissecting streams have created deep valleys. All the bedrock of Steuben County is of Devonian age and has been formed generally from deltaic deposits. The Valley Heads moraine of Fairchild covers the northeast corner of Steuben County around Keuka Lake, including the Town and Village. This is a thick drift that contains a considerable amount of rather resistant sedimentary and crystalline rock. Typically, it has a relatively high carbonate content and is leached to only shallow depths. The bedrock geology beneath the Town and Village is made up of sandstone, shales and siltstone. In general, bedrock in this area of New York State is not a limiting factor for development.

Most of the bedrock is blanketed with several feet of stratified and unstratified glacial sediments. Three types of deposits or material resulted from glacial retreat in Steuben County: till, lake-laid, and outwash material. The main glacial deposit in the county is till, which results from debris that is deposited beneath a moving glacier. The makeup of till is influenced by local bedrock over which the glacier has moved and picked up particles. Outwash deposits are scattered throughout the County and are the material that washed out from under and around a glacier during its meltdown. Lake-laid material are deposits in lake water that are exposed when the water level is lowered. In addition, the area in the immediate vicinity of the Keuka Inlet is an alluvial fan, which is a gravel deposit formed over centuries of water flowing into the Lake.

2.6.3 TOPOGRAPHY AND SOILS

TOPOGRAPHY

TOWN OF URBANA

The topography of Urbana is characterized by Keuka Lake, the valley that runs from the Lake through the southwestern portion of the Town, and the rolling hills, steep slopes and ridges that surround the valley and Lake (See Figure 2.6-1). It is the area within the valley, including the Village of Hammondsport, that comprises the flattest portion of the region and, therefore, its most developable land. The surface elevation within the Town varies greatly with its lowest point at Lake level of approximately 714 feet, to a high point that reaches 1,941 feet (Brown & Anthony, 1967).

VILLAGE OF HAMMONDSPORT

The Village of Hammondsport rests within the valley formed by Keuka Lake, situated on the southwestern tip of the Lake. Hammondsport's terrain is relatively flat around the Lake area and is at its lowest elevation by the Keuka Inlet in the southern portion of the Village (see Figure 2.6-2). The terrain gets slightly higher as it approaches the Glen Brook Flume to the north, with the portion of the Village north of the Flume increasing steeply and largely undevelopable.

SOILS

Soils are formed by the interaction of time, climate, parent materials, topography, and plant and animal life. The influence of each factor varies from place to place, but the combination of all five factors normally determines the kind of soil that develops in an area. The formation of soils is a continuing process, and it generally takes several thousand years for significant changes to occur under natural conditions. However, human intervention through clearing land or filling can cause noticeable changes in soil characteristics within a span of years.

The most common characteristics used in describing soils are depth, permeability, drainage, and available water capacity. Descriptions of depth such as deep and very deep refer to the distance from the ground surface to other soil types or rock which would restrict or change water movement. Depth is important to water- and nutrient-supply capacity, downward movement of water, and root penetration. The depth and kind of material have an important effect on how a soil behaves when used for roads and structures. Permeability is the ease at which water passes through a soil. Drainage classes reflect the hydraulic conductivity and water holding capacity of soils. In a high permeability well-drained soil, the water moves quickly and can act as a recharge for groundwater. In low permeability poorly drained soils, the water moves slowly and can cause flooding and increased runoff. Available water capacity is the amount of water that a soil can hold within the zone accessible to the roots of trees and vegetation. See Table 2.6-1 for a description of soil limitations.

Table 2.6-1
Soil Limitations

Constraints	Characteristics	Concerns
Critical limitation	Slopes greater than 25 percent Soil less than six inches Soils very poorly drained	Erosion Septic Foundation failure
Severe limitation	Slopes 15 to 23 percent Soils less than 24 inches Soils poorly drained Low permeability Boulders and rocks	Erosion Septic
Moderate limitation	Slopes 8 to 15 percent Soils moderately well drained Soils greater than 24 inches	Erosion
Slight limitations	Slopes 0 to 8 percent Soils well drained	No unusual concerns
Others	Standing or intermittent water	See Wetlands section

Another important factor that affects the engineering properties of soils is slope. Steep slopes are generally those with slopes of 25 percent or more. Slope influences the retention and movement of water, transfer of heat, movement of soil material, rate and amount of runoff, potential for soil slippage and accelerated erosion, ease with which machinery can be used, soil-water state, and other functions. Together, slope and soil characteristics affect development capacity. For example, severe limitations are associated with steep, rocky, and shallow depth to bedrock soils. These lands are generally unsuitable for development because of the high potential for structural failures and erosion and drainage problems. Moderate limitations involve shallow depth to bedrock on rolling land where soils are stony and permeability is slow, indicating limitations on septic development. The best slope and soil conditions to support density are soils that are deep to very deep and moderately well drained to well drained and slopes of 0 to 8 percent.

While soils conditions can be a constraint to development, depending on factors such as wetness, frost action, stones, etc., there are also many engineering/construction techniques to overcome these constraints.

The three general soil associations in Urbana are Lordstown-Arnot, Dunkirk-Howard-Wayland, and Volusia-Mardin. The Lordstown-Arnot association lies on the steep slopes of the hillsides overlooking Keuka Lake and the valley area to the southwest of the Lake. This association generally lies on steep to very steep terrain, is dominantly well-drained, with moderately deep and shallow soils overlaying hard sandstone bedrock. As stated above, the combination of steep slopes and shallow soils can present a severe limitation to development and can lead to erosion problems and septic failures. There have, in fact, been erosion problems during storm events along the ridgelines. The Dunkirk-Howard-Wayland association lies in the valley area, including the Village of Hammondsport, on level to moderately steep terrain. It is excessively to poorly drained, and includes deep soils that are formed on lake plains, outwash kames (i.e., hills of stratified glacial drift), terraces, and floodplains. Lastly, the Volusia-Mardin association

rests on gently sloping to moderately steep terrain, ranges from somewhat poorly drained to well-drained, and includes deep soils that have a flagipan (i.e., a loamy and brittle subsurface). With the exception of poorly drained wetland areas, generally these conditions in the valley and gentle hill areas do not present development constraints (U.S. Department of Agriculture, 1978).

2.6.4 WATER RESOURCES

GROUNDWATER

Groundwater is a valuable source of drinking water. Groundwater is a moving stream that flows following the contours of the land. Most groundwater originates as rainwater which seeps downward through soils until it reaches the saturation zone from which wells and springs are fed. As described in Chapter 2.8, "Transportation and Infrastructure," all Village residents are supplied water from the Hammondsport public water district. Most of the Town residents outside the Village rely on private wells or springs to supply their water needs (residents along the Lake Street Extension, from the Village to the Pleasant Valley Winery, have access to public water).

Groundwater aquifers are porous water-bearing geologic formations capable of yielding an appreciable supply of water. The geologic formations generally consist of unconsolidated deposits such as sand and gravel or bedrock, which in the Village and Town consists sandstone, shales and siltstone. Aquifers are similar to lake basins and river channels that contain surface water. There are no primary aquifers in the Town or Village. A primary aquifer is associated with the Cohocton River which yields 5 to 500 gallons of water per minute and partially surrounds the Town. A confined secondary aquifer is situated in the valley area, southwest of the Village of Hammondsport, that generates 10 to 100 gallons of water per minute. An aquifer is considered confined if it occurs underground. Also, there is an unconfined aquifer at the northern tip of Urbana and an aquifer of "unknown potential" in the southwest corner of Town (NYSDEC, 2001).

SURFACE WATER

There are a variety of surface water resources encompassed within and surrounding the environs of the Town of Urbana and Village of Hammondsport. There are four major surface water features. These include Keuka Lake, streams and their associated floodplains and wetlands.

All of the waterbodies have been assigned classifications for best uses and standards of quality and purity by the New York State Department of Environmental Conservation (NYSDEC) Water Pollution Control Board. Classifications are based on water quality at the time of sampling, as well as recommended best usage, which is determined by natural conditions and past, current, and desired uses of the water-bordering lands. Class A and AA are suitable for drinking water; Class B is suitable for primary contact recreation, such as swimming; Class C is suitable for fish propagation; and Class D is suitable for secondary contact recreation, such as boating. A Class D designation does not necessarily imply that the waters are polluted. These are waters that may not have been sampled or are extremely small or intermittent and, therefore, unsuitable for fish propagation.

KEUKA LAKE

The Town of Urbana and Village of Hammondsport are located on Keuka Lake. Keuka Lake is the only branched Finger Lake. From south to north, it extends from Hammondsport in Steuben County to Penn Yan in Yates County, a distance of approximately 24 miles. The lake is approximately three-quarters of a mile wide. Lake depths are predominantly greater than 100 feet in most places, with a maximum depth of 200 feet.

Keuka Lake is 50 feet higher than Canandaigua Lake, 271 feet higher than Seneca Lake, 331 feet higher than Cayuga Lake, 343 feet higher than Oneida Lake, 487 feet higher than Lake Ontario, and 718 feet higher than ocean level. Keuka Lake drains into Seneca Lake via the Keuka Lake Outlet. This difference in hystalic head (i.e., water levels) was harnessed to power mills during the early industrial years of the region. Most of the land within the Town and Village drains into Keuka Lake, which in turn drains to the north to Seneca Lake.

Keuka Lake is shaped like a "Y," and is the only Finger Lake in which the water flows in one of its branches in one direction then around a bluff and in the opposite direction. The branches, East and West, are divided by Bluff Point, which has an elevation of 812 feet high. At one point in its history, Bluff Point was an island, but receding lake elevations rendered it into its current peninsular form.

Keuka Lake possesses a Class "AA" water quality rating from NYSDEC, and is protected by NYSDEC up to the mean high water line of 715.15 feet elevation. NYSDEC protection prevents any party from legally disturbing the bed or banks of the stream without appropriate permits. Class "AA" is very high quality and can be utilized for drinking and food processing purposes. The lake is also classified as a trout spawning area (NYSDEC, 2001).

Lake Level Control

The water level for Keuka Lake is a function of precipitation, runoff, evaporation and transpiration, and waterflow through the Keuka Outlet in Penn Yan. Increased amounts of precipitation will elevate the Lake's water level, increasing the amount of erosion along the shoreline and consequential sedimentation which can damage shoreline property and degrade water quality.

The gates at the Keuka Outlet can control the water level of the Lake, except during major storm events. The gates are owned and maintained by the Keuka Lake Outlet Compact, an intermunicipal body representing the various municipalities bordering the Lake. During flood events the Compact cooperates with downstream municipalities to moderate flows and prevent inundating other lakes, while protecting Keuka Lake simultaneously. The Compact has an adopted guide to control water levels in the Lake which includes minimum and maximum desirable levels for each day of the year. In 1998, the maximum level during spring and summer months was lowered from 714.5 to 714.2 feet above sea level to reduce flooding potential during this period.*

STREAMS

A variety of streams exist in and around the Town of Urbana and Village of Hammondsport including the Keuka Inlet, Glen Brook, and Mitchellsville Creek. The Keuka Inlet, also known as Cold Brook, flows northwesterly through the valley and into the Lake. The Inlet is a well known trout stream but has not been well maintained in recent years and needs bank stabilization work to stop erosion. Glen Brook flows from the higher elevations in the northern portion of the Town, down the steep slopes and turns east into the Village and into Keuka Lake. Another stream, Mitchellsville Creek, runs south along the western border of the Town and then turns east, eventually flowing into the Keuka Inlet.

The Keuka Inlet has a CTS classification, having Class C water quality and a trout spawning (TS) resource. Besides the Inlet, the only other stream in the area that has a NYSDEC-listed resource is a tributary that meets the Inlet from the south approximately one-half mile from the mouth of the Inlet. This stream has a CT classification, with a trout resource (i.e. this is a trout stream but is not a trout-spawning resource). Glen Brook and Mitchellsville Creek are both Class C streams. The Keuka Inlet is the only NYSDEC-protected stream in the area (NYSDEC, 2001).

FLOOD ZONES

Under the National Flood Insurance Program (NFIP), the Federal Emergency Management Agency (FEMA) is required to develop flood risk data to use in both insurance rating and floodplain management necessary to purchase federally-backed flood insurance. The data are developed through Flood Insurance Studies for individual municipalities. Special flood hazard areas are subject to inundation by the 100-year flood, which is a flood having a one percent or greater probability of being equaled or exceeded during any given year. The 100-year flood is the national standard on which the floodplain management and insurance requirements of the NFIP are used. There is a large floodplain in the Town of Urbana and Village of Hammondsport that originates in the Keuka Inlet (the “floodway”of the zone) in the southwest corner of the Town, runs through the valley area and Village, and terminates at Keuka Lake. The 100-year floodplain is at its greatest width in the Valley and narrows as it approaches the Village and Lake (See Figure 2.6-1).

As described in Chapter 2.1, “Land Use and Public Policy,” the Town of Urbana has mapped a Floodplain zoning district over the 100-year floodplain. The floodplain zoning severely restricts development.

POTENTIAL SOURCES OF POLLUTION

Surface water and groundwater are subject to contamination from specific point sources and non-point sources of pollution. A point source is defined as a discharge from a discrete identifiable location, such as a pipe. Point sources of water pollution are controlled by the government through permitting programs, such as the National Pollutant Discharge and Elimination System (NPDES) and its state counterpart, the SPDES.

Non-point source pollution originates from diffuse sources and enters water at non-specific locations through precipitation, runoff, and shallow subsurface flow. Sediment from

erosion, pesticides, fertilizers, oil, grease, and de-icing salts from roadways; septic systems; animal waste; dumped motor oil and household chemicals; storm water runoff; and discharges from boats and marinas are examples of non-point source pollution. Polluted water bodies can be easily identified by offensive odors, an abundance of aquatic vegetation, and fish kills.

Sediments released into waterbodies through erosion threatens both plant and animal life by reducing the amount of light and by smothering. They can also decrease the capacity of reservoirs. Sedimentation is a particular problem near construction sites. Nutrients, such as phosphates and nitrates from wastewater and fertilizers, promote the growth of algae, which crowds out other aquatic plants preferred by wildlife. Decaying sewage and aquatic plants use up oxygen, depriving fish and other animals of oxygen. The accelerated decay causes lakes to fill in much more rapidly than they would under natural conditions and results in an unpleasant odor. Another water contaminant, salt, enters waterbodies through the runoff of salts used to treat icy roadways in winter. High concentrations of salt make a waterbody unsuitable to be an emergency water supply. Pathogens, disease-producing contaminants such as bacteria, viruses, and parasites, enter waterbodies from septic systems and animal manure from farms. None of these sources are prevalent in Urbana or Hammondsport.

Several companies in the Town and Village have had water pollution permits (including Bully Hill Vineyards, Mercury Aircraft Central and Mercury Aircraft Central DIV), which are regulated by the United States Environmental Protection Agency (EPA). The EPA has maintained records on companies with pollution permits through its Permit Compliance System (PCS). The only company that the PCS lists as surpassing its pollution threshold is Mercury Aircraft Central, which has been non-compliant for 6 out of 13 quarter-year periods.

In addition, the former Town of Urbana landfill, located on Crows Nest Road in the Town Keuka Lake around the Village's southern border, is listed by the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) as a potential site that may have to be cleaned up under Superfund legislation. However, a landfill cover and water treatment system has recently been completed to control and capture contamination at the site. No further remedial action is planned but the water treatment will be ongoing. The B&H railroad site, which is situated in the Town near the southern boundary of Hammondsport and at the mouth of the Keuka Inlet, may also have environmental concerns. Phase I and Phase II environmental investigations have been completed on the site and the Town is considering further tests to better determine potential contamination levels.

WATER PROTECTION ORGANIZATIONS

The United States Environmental Protection Agency (USEPA) enforces federal clean water and safe drinking water laws, provides support for municipal wastewater treatment plants, and takes part in pollution prevention efforts aimed at protecting watersheds and sources of drinking water. The Agency carries out both regulatory and voluntary programs to fulfill its mission to protect the nation's waters. At the state level, NYSDEC protects water quality in lakes, rivers, aquifers and coastal areas by regulating wastewater discharges, monitoring waterbodies and controlling surface runoff. In addition the NYSDEC manages the availability of freshwater resources, and helps communities prevent flood damage and beach erosion. NYSDEC promotes water stewardship and education.

The Finger Lakes-Lake Ontario Watershed Protection Alliance (FL-LOWPA) is a regional, intergovernmental organization dedicated to the protection and enhancement of water resources in New York's Lake Ontario Basin. FL-LOWPA is funded by New York State and its membership includes 24 counties wholly or partially in the Lake Ontario watershed. The organization promotes information sharing, fosters collaborative watershed management programs, and emphasizes an ecosystem-based approach to water quality improvement and protection.

The Keuka Lake Association (KLA) is a not-for-profit organization dedicated to the protection, preservation, and improvement of Keuka Lake and its watershed. The group, comprised predominantly of homeowners, is involved in a wide range of issues concerning the lake including land use, navigation and safety, recreation and fisheries, and watershed evaluation and education. The Keuka Watershed Improvement Cooperative (KWIC) is an intergovernmental program formed by the KLA that provides a uniform septic system construction and management law that has been adopted by all the municipalities that surround the Lake. Friends of Keuka Lake is another citizens group active in issues related to the protection of water resources in the area.

WETLANDS

Wetlands are transition areas between uplands and aquatic environments. Freshwater wetlands are a valuable natural resource for the Village. The important functions of wetlands include flood mitigation, groundwater recharge (the movement of surface water down through the soil to the underlying groundwater system or aquifer), wildlife habitat, biospheric stability (the biosphere is the thin layer of air, water, and soil that encircles the globe and supports all life), erosion control, pollution filtration, open space, and areas for recreation and education.

Wetlands are protected by State and Federal laws, which require any person wishing to conduct an activity in a wetland or regulated adjacent area to obtain a permit from the issuing authority.

Wetlands are categorized as lacustrine (lakes), palustrine (marshes, swamps, and bogs), or riverine (rivers and streams). Where the water table is near or at the surface of the land or where the land is covered with shallow water, there is a predominance of wetland vegetation, and the substrate is predominantly saturated wetland hydric soils. Characteristic soils, vegetation, and hydrology distinguish wetlands from upland areas.

Soils that are poorly and very poorly drained are considered to be hydric (wetland) soils. These are divided into three types: alluvial, organic, and upland wetlands. Alluvial soils are deposited by stream sedimentation and flooded on a regular basis. The soils are wet by virtue of their low-lying positions along streams. Organic soils are created by decayed plant material, usually found in wetlands that were former lakes and ponds, which have become filled as a result of eutrophication, the excessive growth of vegetation as a result of nutrient overloading, and succession, the change in plant communities over time. Upland wetlands are soils subject to flooding and ponding because of their low-lying position in the landscape. In general, the soils are nearly level (0 to 2 percent slopes), very deep, poorly drained, and have a high water capacity.

Wetland plants, or hydrophytes, have morphological and physiological adaptions that enable them to survive inundation and/or saturated soil conditions. In New York State, a wetland is specifically identified by the presence of hydrophitic vegetation. The method

used by the Federal government is based on the presence of hydrophytes, hydrology, and hydric soils.

There are two, NYSDEC regulated wetlands in the Town, both in the valley. The smaller of the two lies at the mouth of the Keuka Inlet. This is a Class II wetland as determined by NYSDEC, which means that it provides important wetland benefits, the loss of which is acceptable only in very limited circumstances.

The larger wetland in the Town rests to the south west of the Village and is partially included in the floodplain. This is a Class I wetland, which has the highest level of protection under NYSDEC, as it provides the most critical of the State's wetland benefits, reduction of which is only accepted in the most unusual circumstances.

2.6.5 CLIMATE AND AIR RESOURCES QUALITY

CLIMATE

The climate in Steuben County is described as temperate and continental, as it is governed primarily by air masses and weather systems developing within the North American continent. The summers are pleasantly warm with high temperatures in July averaging 82 degrees Fahrenheit, while winters are relatively long and cold with average lows in January of only 15 degrees. The average length of the freeze-free growing season is 145 days in the area.

Annual precipitation in Steuben County ranges from 31 to 36 inches. However, topography of the region plays a significant role in the weather conditions, as conditions in the higher and lower elevations differ within short distances. For instance, 35 to 36 inches of annual precipitation are common in the higher elevations of 1,500 feet and more, where lower elevations in the valleys have average annual precipitation marks of around 31 inches. Snow cover in eastern Steuben County is generally measurable for approximately three months during the year, with 50 to 55 inches accumulating annually.

In terms of sunshine, there is sun only 30 percent of the days during the winter months, while the summer days offer 60 percent chance of sun.

AIR QUALITY

The Village of Hammondsport and the Town of Urbana are generally within attainment levels for all criteria pollutants as identified in the 1998 New York State Air Quality Report, Ambient Air Monitoring System (NYSDEC Division of Air Resources, 2001).

2.6.6 AQUATIC ECOLOGY AND TERRESTRIAL ECOLOGY

AQUATIC ECOLOGY

As discussed above, there is an identified NYSDEC-regulated Class I wetland and Class II wetland located in the Town of Urbana. A portion of the Class II wetland crosses into the Village of Hammondsport.

A wetland is classified by NYSDEC as Class I if it possesses any of the following characteristics (NYCRR 664.5):

- it is classic kettlehole bog;
- it is resident habitat of an endangered or threatened plant species;

- it supports an animal species in abundance or diversity unusual for the state or for the major region of the state in which it is found.
- it is tributary to a body of water which could subject a substantially-developed area to significant damage from flooding or from additional flooding should the wetland be modified, filled or drained; and
- it is adjacent or contiguous to a reservoir or other body of water that is used primarily for public water supply, or it is hydraulically connected to an aquifer which is used for public water supply.

A wetland is classified as Class II if it possesses any of the following characteristics (NYCRR 664.6):

- it is an emergent marsh in which purple loosestrife and/or reed (phragmites) constitutes less than two-thirds of the covertype;
- it contains two or more wetland structural groups;
- it is contiguous to a tidal wetland;
- it is associated with permanent open water outside the wetland;
- it is adjacent or contiguous to streams classified C(t) or higher under Article 15 of the Environmental Conservation Law;
- it is traditional migration habitat of an endangered or threatened animal species;
- it is resident habitat of an animal species vulnerable in the state;
- it contains a plant species vulnerable in the state;
- it supports an animal species in abundance or diversity unusual for the county in which it is found;
- it has demonstrable archaeological or paleontological significance as a wetland;
- it contains, is part of, owes its existence to, or is ecologically associated with, an unusual
- geological feature which is an excellent representation of its type;
- it is tributary to a body of water which could subject a lightly developed area, an area used for growing crops for harvest, or an area planned for development by a local planning authority, to significant damage from flooding or from additional flooding should the wetland be modified, filled, or drained;
- it is hydraulically connected to an aquifer which has been identified by a government agency as a potentially useful water supply;
- it acts in a tertiary treatment capacity for a sewage disposal system;
- it is within an urbanized area;
- it is one of the three largest wetlands within a city, town, or New York City borough; or
- it is within a publicly owned recreation area.

VEGETATION

RARE AND SIGNIFICANT VEGETATION

The Natural Heritage Program of the NYSDEC has listed rare or significant vegetation throughout most areas of New York State. Two listed species of plants have been identified in Urbana and Hammondsport by the Natural Heritage Program. According to New York State, rare plant species have 20 to 35 extant sites or 3,000 to 5,000 individuals stateside. Threatened species have six or fewer extant sites or between 1,000 and 3,000 individuals in the state. Endangered species have five or fewer extant sites or fewer than 100 individuals stateside. Protected plants may not be collected without permission. Unprotected plants may be taken at any time; however, a permit may be required.

The following are state-listed plant species that have been observed in the Town of Urbana and Village of Hammondsport and some notes on their degree of rarity (NYSDEC, July 2001); all are vascular plants:

- Bird's-Eye Primrose (Primula mistassinica) - Vascular Plant: Threatened. Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.
- Highbush Blueberry Bog Thicket - Community: Unprotected. Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

The NYSDEC does not permit identification of the location of the listed and ecologically sensitive plant species because of their vulnerability to collection and disturbance.

STREET TREES

No comprehensive inventory of trees on the Village of Hammondsport rights-of-way has been completed to date. Street tree inventories typically identify the number of trees by species, size, condition, and location.

WILDLIFE

The management of terrestrial and aquatic habitats for vegetation and wildlife is necessary to provide mitigation from the direct adverse impacts of development. As wildlife populations increase and habitat areas decrease, wildlife management becomes increasingly difficult and of the utmost importance.

The NYSDEC practices wildlife management throughout the state. NYSDEC regulates the various hunting seasons, stocks waterbodies with fish, and monitors fish populations. The state stocks trout in Keuka Lake. During the spring of 2001, an estimated 9,400 yearling and older trout were released into Keuka Lake from the Town of Urbana (NYSDEC, 2001). In addition, the New York State Fish Hatchery on Fish Hatchery Road rears lake, brown, and rainbow trout.

Keuka Lake, woodlots, and the stream corridors and adjacent lands provide habitat for a large number of wildlife species. Birds, insects, reptiles, amphibians, fish, and mammals are included in the wildlife community. The NYSDEC has identified Keuka Lake as a "waterfowl concentration area," a significant habitat area. Birds are present at any time of the year, but are most diverse and abundant during the spring, summer, and fall, when

migration and breeding take place. The wetlands contingent to Keuka Lake in the Village is a particularly important habitat. The forests and wetlands have two distinct bird communities: permanent residents and seasonal visitors. Pheasants, eagles, wild turkey, and trumpeter swans are among the bird species found in Urbana. Mammals found in and around the Village and Town range in size from tiny rodents to larger animals including black bears, cougar, and white-tailed deer. Most species are nocturnal and are thus rarely observed.

New York State defines endangered animals as native species in imminent danger of extirpation or extinction in New York or any species listed as endangered by the U.S. Department of the Interior. Unprotected species, according to the State may be taken at any time without a limit, although a license to take may be required. The presence of rare or endangered wildlife has not been identified in the Town of Urbana or Village of Hammondsport by the NYSDEC. However, the NYSDEC data relate only to known occurrences of rare animals or significant wildlife habitats based on data assembled in its files. A comprehensive survey for plant and animal occurrences in the Town and Village has not been conducted by the NYSDEC.

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*Keuka Lake Association