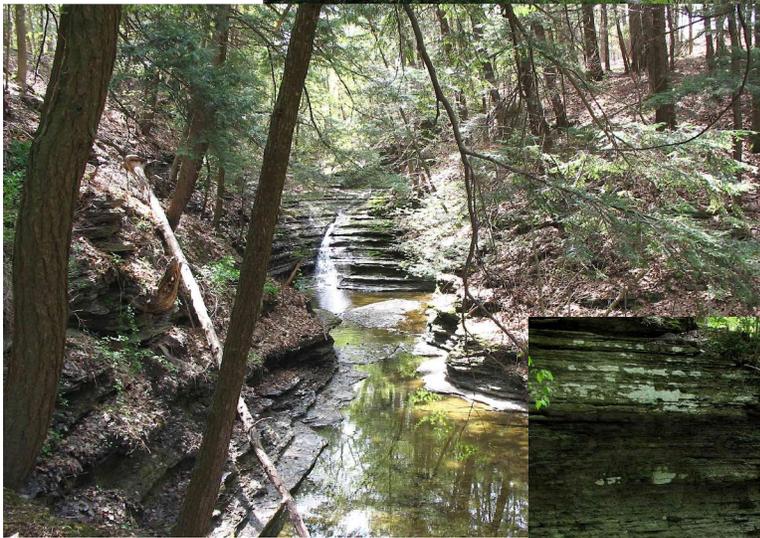
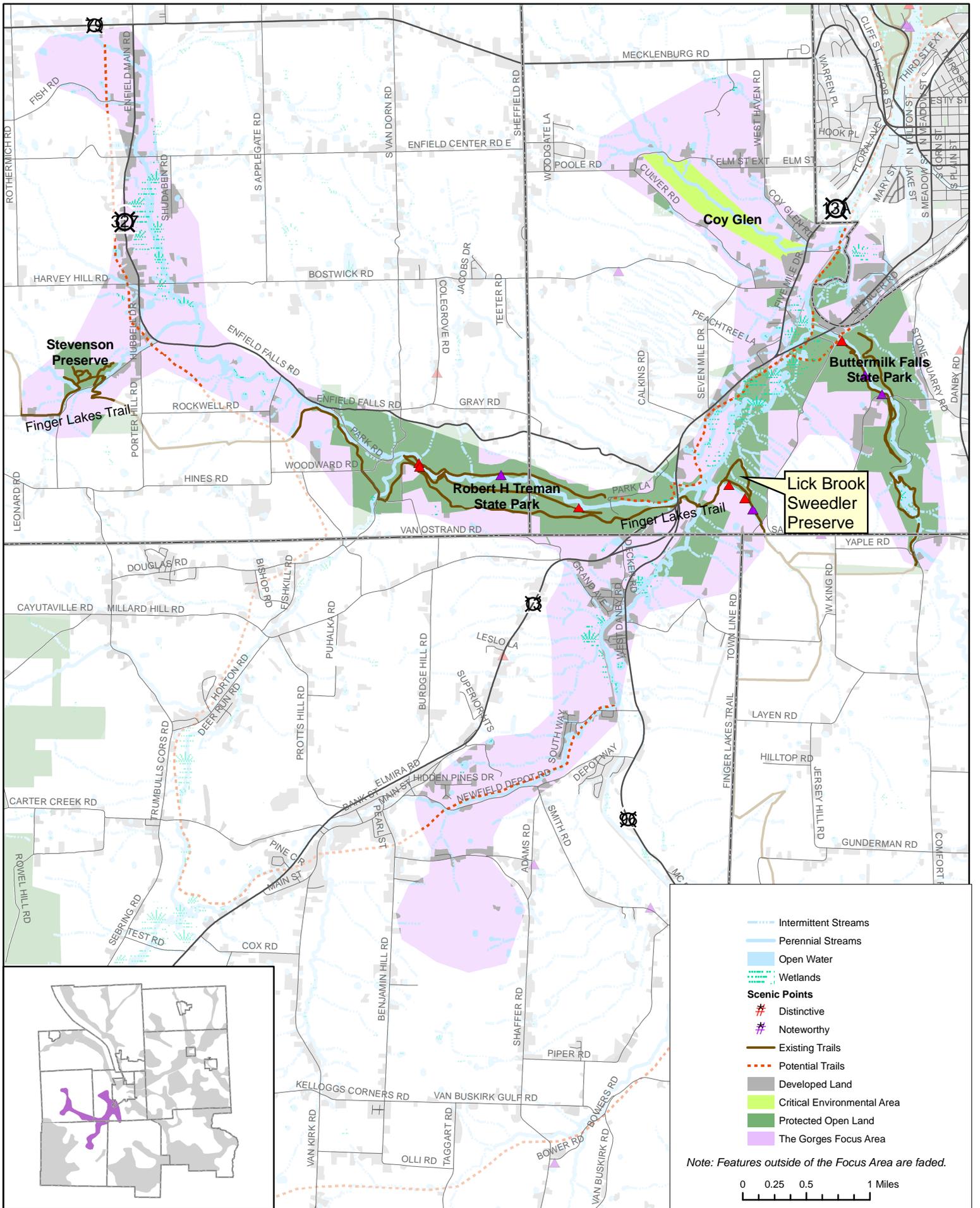


The Gorges





Description of Focus Area

The 8,000-acre Gorges Focus Area serves as a major scenic gateway into and out of the southwestern portion of Tompkins County. It includes parts of the City of Ithaca and Towns of Ithaca, Newfield, and Enfield. The recreational amenities of the Focus Area are easily accessible by road and located within close proximity to population centers in Ithaca and the Towns of Enfield, Newfield, and Danby.

Spectacular gorges and glens, hanging cliffs, and breathtaking waterfalls characterize much of the Focus Area, approximately 40 percent of which is publicly protected by inclusion in Robert H. Treman State Park and Buttermilk Falls State Park. The Finger Lakes Land Trust's Lick Brook Sweedler Preserve and Stevenson Preserve are also located in this Focus Area, and several additional properties are protected through conservation easements.

Coy Glen, a locally designated Critical Environmental Area, is also located in this Focus Area. The southern and western-most portions of the Focus Area reach into the headwaters of Cayuga Inlet, one of the largest tributaries to Cayuga Lake.

Major Benefits

Major benefits provided by lands within this Focus Area center around the high quality water resources and the unique geologic conditions of this Area, and include fishing, outdoor recreation, water quality, and critical habitat and biodiversity. Scenic views are another important benefit of the lands in this Focus Area. A scenic resources inventory, currently being conducted by Tompkins County, documented a variety of scenic views from within this Focus Area, and numerous others that include portions of this Focus Area in their viewsheds.

Fishing

This Focus Area includes several popular and well-known fishing locations in Tompkins County, including the upper portions of Treman State Park and Buttermilk Falls State Park. Over four miles of public creekside fishing access and the regular stocking of Buttermilk and Enfield Creeks with brown trout and the stocking of the West Branch of Cayuga Inlet with rainbow trout offer additional and complimentary locations for fishing.

According to the *New York's Finger Lakes Fishing & Hunting* guide, the portion of Enfield Creek above Treman Falls is well-known for good brown trout fishing and fly fishing. A large wetlands complex in the upstream portion of Enfield Creek helps sustain a native population of landlocked salmon that also utilizes the warmer waters of Cayuga Inlet near its discharge to Cayuga Lake. While introduced sport fish provide anglers with enhanced fishing opportunities, they also compete against existing native fish populations, suggesting a need to balance the benefits against the potential impacts on biodiversity.

Outdoor Recreation

Outdoor enthusiasts enjoy a variety of recreational opportunities in this Focus Area that include well-known and picturesque public swimming areas, winding hikes through wooded corridors, close-up views of cascading waterfalls and creeks plunging through glens and gorges, and the amenities of two exceptional State Parks.

Visitors hiking through Treman State Park can view 12



Swimming at Treman State Park

waterfalls, including the 115-foot Lucifer Falls that is marked at one end by the sheer cliff walls of Treman Gorge (also called Enfield Glen). The stone bridges, benches, and pathways in Treman State Park, constructed by the Civilian Conservation Corps, create an exceptionally scenic hiking experience.

In Buttermilk Falls State Park, Buttermilk Creek flows through two glens and 10 waterfalls, the last of which gives the Park its name. Buttermilk Falls State Park is particularly well known for the plunge pools and potholes scattered throughout the creekbed, as well as for the 40-foot Pinnacle Rock, a pillar of shale created by the erosive forces of the creek.

Pools located at the base of Buttermilk Falls and the lower falls at Treman State Park offer unusually scenic locations for swimming that are particularly popular among Tompkins County residents. These Parks also offer campsites, picnicking facilities, ball fields, playgrounds, and pavilions.

Flowing to Cayuga Inlet, the waters of Lick Brook and Enfield Creek plummet through several popular wooded gorges and waterfalls in Tompkins County. The Finger Lakes Land Trust's 128-acre Sweedler Preserve, at Lick Brook, is an especially popular destination for close-up views of waterfalls and hosting interpretive nature trails. One of the most popular segments of the Finger Lakes Trail connects the Sweedler Preserve with Treman State Park and the Finger Lakes Land Trust's Stevenson Nature Preserve further west. A portion of the proposed Black Diamond Trail will also link this Focus Area with the Cayuga Lake Waterfront Trail, greatly enhancing the connectivity of and opportunity for hiking throughout this, and other, Focus Areas. Meadows and wetlands adjacent to the broad valley floodplain of Cayuga Inlet also offer bird watching opportunities, though much of this habitat and surrounding State parkland are threatened by increasing commercial development.

Water Quality and Flood Attenuation

Water resources in this Focus Area serve more than 20 community drinking water supplies, are critical to the multitude of recreational opportunities found within this Focus Area, and help maintain the quality of environment necessary to sustain the many rare and scarce plant and animal species found within this Focus Area. Three significant wetlands complexes found within this Focus Area play a critical role in maintaining these systems and in filtering out pollutants and intercepting floodwaters originating in the headwaters region of the Focus Area.

The large wetlands complex found in northeastern portion of the Focus Area is particularly important for filtering out sediment and gradually releasing stored

floodwaters to the low-lying valley floodplain of Cayuga Inlet. The valley bottom wetlands in this Focus Area, from the northeast corner of the Town of Newfield to the City of Ithaca, are designated as 100-year floodplain and provide excellent floodwater storage and filter out some of the sediment originating in Enfield Creek. Though erosion and sedimentation are of particular concern in this Focus Area, they are largely attributable to natural processes and originate mostly from Enfield and Buttermilk Creeks.

Critical Habitat and Biodiversity

The creek corridors and beautiful wooded gorges and waterfalls, with their dry rock outcroppings and moist shady walls, offer particularly diverse and rich habitat for a variety of species, including landlocked salmon, a variety of important birds, and several rare plant species and ecological communities¹. Stands of old growth forest are scattered throughout this Focus Area, including one stand in the Finger Lakes Lands Trust's 83-acre Stevenson Preserve estimated to be at least 150 years. Forested habitat throughout the Area supports several species of greatest conservation need, including the Canada Warbler and Jefferson salamander.

A large contiguous area of riparian habitat in the southern portion of the Focus Area, and others located along the creek corridors, support floodplain forest and several birds of greatest conservation need such as the Cerulean Warbler and Louisiana Waterthrush. This portion of the Focus Area, together with riparian habitat in the western tip of the Focus Area, is also suitable for the Jefferson salamander and Smooth Green Snake. Early successional habitat is scattered throughout this Focus Area and can be especially difficult to maintain as it matures into forest habitat.

Coy Glen, located in the northeastern finger of this Focus Area, is a particularly interesting and unique botanic and geologic area known for its numerous rare and scarce plants. The Town of Ithaca designated this site as a Critical Environmental Area because of its unusual and important qualities. The steep-sided rock walls and exposed bluffs of Coy Glen provide habitat for scarce liverworts, mosses, and ferns. Local geologic conditions and historic quarrying in the watershed have

¹ New York Natural Heritage Program, New York State Department of Environmental Conservation, May 2005. Biodiversity Databases, Element Occurrence Record Digital Data Set. Albany, New York.

created unique formations throughout the Glen that include dripping cliffs, creekbed “potholes” and fossil ripple marks. Though smaller in scale, Lick Brook is known for many of the same geologic and botanic characteristics as Coy Glen.

Scenic Resources

The advance and retreat of ancient glaciers in this region created the many gorges and “hanging valleys” that characterize the landscape in Tompkins County and help define the topography in this Focus Area. Certainly, the slogan “Ithaca is Gorges” refers to the spectacular landforms found in this Focus Area.

The State Parks in this Focus Area offer views of two particularly spectacular and well-known falls, Buttermilk Falls in Buttermilk Falls State Park and Lucifer Falls in Treman State Park. Also noteworthy are the forests on the north-western facing slopes that parallel Route 13, which provide one of the most prominent visual distinctions between the urban and rural areas of Tompkins County. This Focus Area serves as a gateway into and out of the City of Ithaca, and the steep slopes located throughout the southern portion of the County and in this Focus Area provide pervasive

and breathtaking views of the valleys and forested mountain sides for which Tompkins County is known. A scenic resources inventory, currently being conducted by Tompkins County, documents numerous scenic views from within this Focus Area, and many others that include portions of this Focus Area within their viewsheds. Although planning efforts for scenic resources will largely be done as part of the anticipated scenic resources plan that will follow completion of the scenic resources inventory, it is identified here because it is a key benefit provided by this Focus Area.



Scenic views from trail at Treman State Park

Protection and Management Issues

Fishing

- n Specific points along certain streams in the County have manmade structures that make it difficult for some fish species to access their spawning grounds, which negatively impacts those fish species’ reproductive success and robustness. One identified fish blockage is the Newfield Depot Road bridge located just east of the southern boundary of this Focus Area.
- n Pollutants in the waters, such as sediment, pesticides and herbicides, and inputs from atmospheric deposition, can negatively impact fish populations and raise health concerns for fish consumption.
- n When streambanks become eroded, vegetation can no longer filter out sediment and other pollutants, and water temperatures rise because there are no longer trees and tall grasses along the shore to provide shade. These effects negatively impact water quality and compromise the health of aquatic species. Although specific buffer needs vary from site to site based on topography, vegetation, soils, and land uses, in general a 100-foot vegetated buffer is the minimum needed to provide the filtration necessary for nutrient and pollutant removal and to prevent excessive temperature fluctuations. A wider buffer width may be required for bank stabilization or additional water filtration, depending on local site characteristics.
- n Fallen trees in creeks can also provide important habitat for fish, and should not be removed unless there is the potential for causing significant flooding or damage to infrastructure.
- n Wetlands absorb, store, and gradually release water over time. When it rains, wetlands absorb this water, and then gradually release it into nearby streams. In this way, wetlands play an important role in maintaining stream flow during dry periods.

Outdoor Recreation

- n The Finger Lakes Trail route is vulnerable to disruption because access is mostly provided through handshake agreements with property owners, rather than by formal trail easements.
- n Scenic views and tranquility are important components of the outdoor experience, and are threatened in some areas by human development and incompatible land uses. The noise from cars and trucks traveling along Route 13 and the lighting of buildings and parking lots associated with commercial development along Route 13 are negatively affecting the quality of the outdoor experience at Buttermilk Falls State Park.



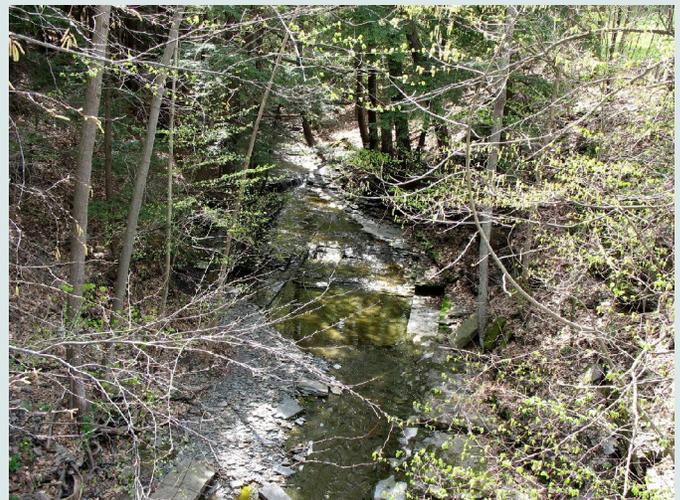
View from trail in Buttermilk Falls State Park. Development threatens the scenic quality and tranquility of the park.

- n The presence of pollutants such as sediment, herbicides, pesticides, fertilizers, pathogens, and litter can negatively impact human health and recreational opportunities. Elevated sediment and pathogen levels cause occasional closings at the well-known and highly-popular swimming areas in Treman State Park and Buttermilk Falls State Park.
- n When trails are not properly maintained, they are less inviting for people to use. Well-maintained trails that are clearly marked not only provide for a better recreational experience, but also encourage people to stay on the trail, thereby limiting the impact of recreational use on sensitive areas and adjacent private property. Lick Brook is frequently visited and is a particularly sensitive location within this Focus Area, and may benefit from further education about the unique and vulnerable qualities of this site. Consideration should be given to potential impacts on fragile plants and animals in the area when designing new trail routes.

- n Generating awareness of available recreational opportunities can facilitate greater public enjoyment and appreciation of public resources and natural amenities. Education of the public about the nature and purpose of particular trails is also necessary to protect the amenities and designated use of the trail (be it a footpath, horse trail, or mechanized use trail) and to ensure that trail users have the experience they anticipate.

Water Quality and Flood Attenuation

- n Pollutants in the waters (such as sediment, pesticides and herbicides, fecal contamination and other inputs) can negatively impact human health and increase the costs of treating drinking water. Vegetated buffers along permanent and intermittently flowing watercourses, wetlands, and associated floodplains help filter pollutants from water, and are critical for sustaining water quality.



Forested buffers, like this one along Lick Brook, protect water quality. In general a 100-foot vegetated buffer is the minimum needed.

- n Excavation of gravel from streams, and other in-stream management activities, can cause erosion, change the natural course of the stream, and reduce the ability of the natural landscape to control flooding. Gravel extraction, particularly in the upstream reaches of Enfield Creek, should be minimized as much as possible.
- n As water runs off the landscape and into streams below, it accumulates pollutants (such as sediment, bacteria, pesticides, and herbicides) that can negatively impact water quality. Steep slopes and shallow soils in some portions of this Focus Area

reduce the ability of the landscape to absorb rainwater, and therefore increase the potential for runoff. Land management practices designed to minimize the amount of pollutants entering runoff are particularly critical in these areas.

- n Water flowing through roadside ditches eventually enters a stream and/or a lake. Proper management of roads and roadside ditches is important in limiting the amount of pollution and sediment that enters streams and lakes and the spread of invasive species.
- n Wetlands and riparian areas are sometimes filled or degraded, which negatively impacts the ability of those systems to slow the flow of stormwater and provide storage for floodwaters (reducing the amount of floodwater entering streams, ponds, and Cayuga Lake). Development in these areas can increase the volume and rates of stormwater runoff and increase the potential for flooding, property damage and erosion during storm events. Development, and its resultant impacts on water quality, is of particular concern along the major transportation routes and valley bottom areas of this Focus Area. Due to the steep slopes and natural propensity for erosion within this Focus Area, special consideration should be given to protecting both large and small wetlands within this Focus Area.
- n Although many of the key water resources in the Cayuga Inlet watershed are found within the Focus Area, these resources are affected by activities that occur throughout the watershed. As a result, water resource management efforts must address issues that extend beyond the boundaries of the Focus Area.

Critical Habitat and Biodiversity

- n Although specific habitat size requirements vary by habitat type and from species to species, contiguous open space of at least 135 acres is generally needed to support diversity and abundance in plant and animal communities, and to enhance species survival by providing habitat for larger populations of animals and allowing for species movement and migration. Many species; however, are more sensitive to habitat size and generally require a much larger contiguous area of at least 6,000 acres for suitable habitat.
- n Wildlife corridors promote genetic diversity among species and help counter the negative effects of habitat fragmentation by connecting otherwise isolated patches of suitable habitat.
- n The introduction of non-native species, pesticides, herbicides, and fertilizer can inhibit growth of native species critical to aquatic and terrestrial biodiversity. Fens are particularly vulnerable to impacts from invasive species and use of herbicides, pesticides, and fertilizers within the fens and on adjacent lands. Road management and maintenance practices for Elmira Road and West Danby Road, near the Cayuga Inlet Parnassia Fen (Unique Natural Area #148), should take into account potential negative impacts to sensitive fen species. In addition, the presence and spread of Asiatic bittersweet in Treman State Park is an emerging concern.
- n Beavers physically alter habitats by cutting down trees, building dams, digging canals and building lodges. This activity affects the distribution of many other plant and animal species. In some situations beavers are desirable, whereas in other circumstances their presence may be detrimental to habitat management goals. As a result, areas inhabited by beaver may require active beaver management. The nature of the management depends on the particular conditions and resource priorities of the site. Beaver damage has been observed in the trees along Lake Treman.
- n Many riparian forest birds are particularly sensitive to habitat fragmentation. Fragmentation of riparian forest habitat decreases the ability of certain species to utilize migration corridors and increases competition from species that dominate edge habitats. In addition, fragmentation increases light penetration into riparian forests, which can alter understory composition and forest microclimates. There are two critical components of functioning and unfragmented riparian habitat: 1) forested buffers along creeks of at least 330 feet; and 2) large contiguous tracts of adjacent forestlands.
- n Species that live in and around stream corridors and floodplains require clean water to thrive. Poorly managed riparian areas, and riparian areas that are cleared for development, negatively impact water quality and reduce the viability of these habitat areas.
- n Some timber harvesting practices can adversely impact riparian habitat (for example, by reducing canopy coverage, damaging understory vegetation and forest litter, and increasing erosion on steep hillsides and along creeks). While most riparian birds tolerate timber harvesting, it is important to encourage harvesting practices that are compatible with preserving water quality and habitat requirements of species of greatest conservation need in

the area. For example, vernal pools in forests are particularly sensitive to intensive timber harvesting, while some forest species, such as the Canada Warbler, benefit from modest timber harvesting.

- n Illegal collection of seeds, plants, and animals can have a negative impact on plant and animal populations that are critical to biodiversity in this region.
- n Overgrazing of forested areas by whitetail deer can inhibit native plant growth, forest diversity, and forest regeneration. Deer particularly like eating saplings, which can interfere with the viability of understory habitat that is particularly critical for many riparian birds.
- n There is not enough protected or actively managed early successional habitat in the County. Most early successional habitat species are not sensitive to the size of the habitat patch, so even small habitat conservation efforts can be beneficial. Early successional species require periodic disturbance of habitat to maintain the mix of early successional vegetation. Some species also require a mix of grassland and forest/shrubland in close proximity.
- n Vernal pools, found in forests and other landscapes, provide critical habitat for species of greatest conservation need, such as the Jefferson Salamander. A vernal pool is a depression in the ground that periodically fills with rainwater, snowmelt or a rising water table. This unique habitat is particularly sensitive to alterations or destruction resulting from development. Vernal pool species are also vulnerable to road mortality during migrations to and from breeding sites.
- n Some species are sensitive to disturbance by humans straying off trails. Off road vehicles and bicycles can also be particularly detrimental in sensitive areas. The fragility of the ecosystem and number of rare and scarce plants in Coy Glen and Lick Brook make them especially vulnerable to disturbance by visitors. When designing new trail routes consideration should be given to potential impacts on fragile plants and animals in the area.
- n When streambanks, lakeshores, and upland areas erode and become bare, water quality and the health of aquatic species are compromised (by increases in sediment and other pollutants that don't get filtered out by vegetation, and higher water temperatures resulting from lack of shade from trees and other tall vegetation). Although specific buffer needs vary from site to site based on topog-



One of the numerous falls along the Lick Brook trail. Lick Brook is particularly sensitive to disturbance by visitors.

raphy, vegetation, soils, and land uses, in general a 100-foot vegetated buffer is the minimum needed to provide the filtration necessary for nutrient and pollutant removal and to prevent excessive temperature fluctuations. A wider buffer width may be required for bank stabilization, improved habitat conditions, or additional water filtration, depending on local site characteristics.

- n When the amount of surface water runoff increases as a result of development, streams may become wider and shallower causing increases in water temperature and reductions in the suitability of streams for fish propagation and survival. Stream relocation and management can limit natural flooding and channel meandering, which provide vital aquatic habitats.

Scenic Resource

- n Scenic views contribute to the general attractiveness, outdoor experiences, and high quality of life experienced by residents and tourists of Tompkins County. These views can be degraded when vegetation or manmade structures interfere with the quality of the view or the point from which the view can be seen. The lighting and noise associated with development along Route 13 South interfere with the outdoor experience of people visiting Buttermilk Falls State Park, particularly those who stay overnight at the Park.

Priority Actions for The Gorges

The Natural Features Focus Area Project has identified 35 priority action items to be initiated over the next five years. The action items have been established to bolster and coordinate the region's many existing conservation efforts. They are not intended to replace or replicate those efforts. The action items reflect the broad range of unique uses in the identified Focus Areas. Below is a list of actions that are particularly relevant to The Gorges Focus Area. For a complete list of actions and designation of principal agencies that will lead implementation efforts please see the *Implementation of Priority Actions* section of the complete county-wide plan.

Fishing

- è Acquire and build additional parking areas for fishing access, as opportunities arise. Construct parking at least 100 feet from stream and use pervious paving materials where possible to limit the impact of new parking areas on water quality. Public access should be limited to less sensitive areas, particularly near fens.
- è Establish accessible fishing locations at publicly owned parks and creeks where fishing opportunities are already located, as opportunities arise.

Water Quality

- è Encourage semi-pervious paving, bioretention, and infiltration practices.
- è Provide education about and access to hydrologically sensitive area data through the Natural Resources Inventory (NRI) on-line interactive mapping tool.
- è Educate highway departments about the impacts of roadside ditching on water quality and water quantity as well as on the spread of invasive species, and provide highway departments with information about appropriate best management practices to address this issue.
- è Investigate and distribute information about techniques for controlling excessive water-borne bacteria originating from geese and other wildlife.

Outdoor Recreation

- è Create and distribute a guidebook for the county's recreational amenities that highlights trails, swimming areas, and bird watching opportunities.
- è Reduce nighttime light and noise impacts on Buttermilk Falls by working with business owners on Route 13. This should be part of a longer-term strategy to establish local controls adjacent to all State Parks.

Critical Habitat and Biodiversity

- è Work with municipalities to protect wetlands and vernal pools smaller than 12.4 acres in size and not regulated by the NYS Department of Environmental Conservation.
- è Map small wetlands and vernal pools using data on hydrologically sensitive areas and provide information to landowners and municipalities about these locations.

Invasive Species and Native Plants

- è Inventory and identify high priority areas for the control of invasive species.
- è Establish a coordinated approach for distributing invasive species information to landowners throughout identified high priority areas.
- è Develop and distribute a list of popular landscaping plants and appropriate native species substitutions.
- è Conduct a comprehensive "natural lawns and gardens" campaign to limit the use of pesticides, herbicides, and fertilizer, and increase the use of native plants in landscaping.
- è Develop a policy for using native plants for all county maintenance activities and on all county properties, and work with local municipalities to institute a similar policy.

Rural Landowner Outreach and Education

- è Enhance existing rural landowner education efforts with an emphasis on sustainable forestry practices, impacts of ATV use, invasive species, wetlands management, grassland habitat, and targeted outreach to new rural landowners.
- è Identify and coordinate the dissemination of information about grants available to private landowners for habitat management and enhancement.

Technical Assistance for Municipalities

- è Provide technical assistance to municipalities working on projects that implement the recommendations of the plan.
- è Provide training and information to municipalities on the full-range of conservation tools available, the Plan and the Natural Resources Inventory, flood plain management strategies, and vernal pool and small wetland habitat conservation.

Coordination

- è Convene a group of partners (Tompkins County Conservation Partners) involved in local conservation efforts twice a year. Meetings will facilitate regular information sharing as well as coordinated educational efforts such as periodic field trips for municipal officials to key sites in the Focus Areas.

Land Protection in Priority Areas

- è Protect open space system through partnerships with area agencies and municipalities by purchasing land and acquiring conservation easements.
- è Educate landowners about tax incentives available for conservation efforts through various formats including town/village newsletters with special emphasis on landowners within the open space system.
- è Develop or identify a model conservation zoning ordinance for use in key portions of the Focus Areas.
- è Engage key land protection stakeholders to assess the financial resources available for land conservation and work to establish additional funding as needed.