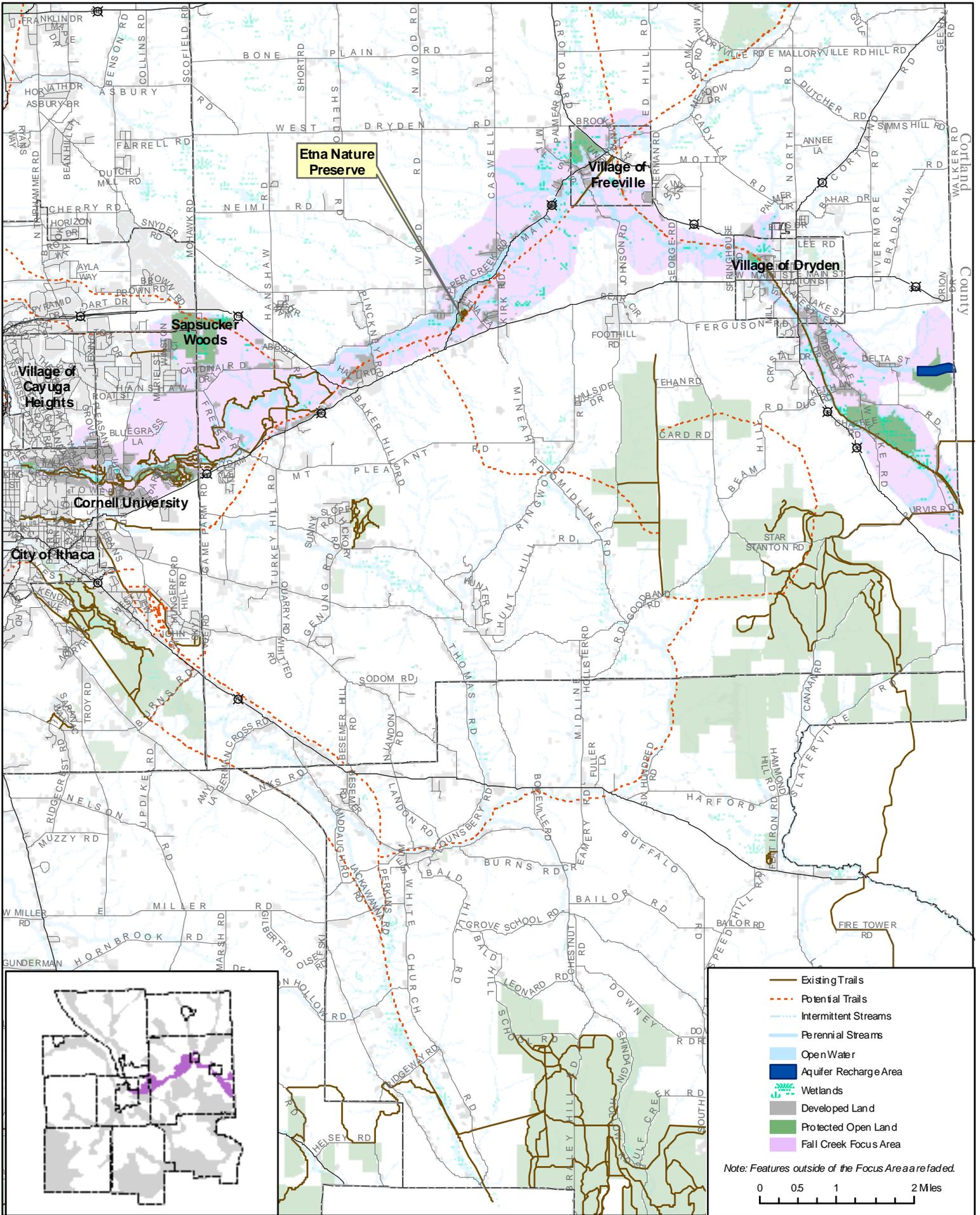


Fall Creek





Description of Focus Area

The Fall Creek Focus Area stretches from the City of Ithaca through the Villages of Freeville and Dryden, and to south end of Dryden Lake at the Tompkins County line. It encompasses a wide range of landscapes, from the Cornell Plantations to the forested lands around Fall Creek to the recreational facilities at Dryden Lake. The focal point of this area is the Fall Creek and Virgil Creek stream corridors, which connect and define the area.

Major Benefits

Water quality, outdoor recreation, education and research, and critical habitat and biodiversity are all important benefits of this Focus Area, and are largely centered around the creek corridor. A surficial aquifer along Virgil Creek (a tributary to Fall Creek) is the drinking water source for the Village of Dryden, and Fall Creek is the drinking water source for much of Cornell University and the surrounding areas. Numerous small community water systems are located throughout.

The Focus Area also supports a wide array of recreational opportunities. The westernmost portion of Fall Creek is a State-designated recreational river corridor, and the waterways and public trails along both Fall Creek and Dryden Lake provide important recreational opportunities for the public. Cornell University, including the well loved and much used Arboretum and Sapsucker Woods, dominates the western portion of the Focus Area and provides important education and research benefits, as well as recreational opportunities.

Additionally, the creek corridor, farmland, forests, and wetlands found in this area provide critical habitat for a variety of plants and animals. Other important benefits include fishing opportunities along Fall Creek and at Dryden Lake, scenic views in the western portion of the Focus Area and south of Dryden Lake, and flood mitigation by the wetlands and floodplains throughout.

Drinking Water Quality

Protecting water quality in this Focus Area is critical for public health. The municipal water supply for the Village of Dryden originates from groundwater located

beneath the Virgil Creek valley. A recharge area for this groundwater supply is located in the same valley, just north of Dryden Lake. In addition, Fall Creek is the drinking water source for Cornell University and surrounding areas, and there are numerous community drinking water wells located throughout this Focus Area.

Water quality issues vary across the Focus Area. Of particular concern are: runoff from residential and agricultural uses near Dryden Lake; high pathogen counts detected periodically throughout Fall and Virgil Creeks; excessive erosion originating from Virgil Creek and in and along the tributaries of Fall Creek near Mount Pleasant and Turkey Hill Roads; and the contribution of sediment from roadside ditching practices in the Etna area (where roadside ditches serve as the primary drainage system). Development in the floodplain is another significant concern in this Focus Area.



Roadside ditches in the Etna area are a major contributor to sediment in Fall Creek.

Outdoor Recreation

The Fall Creek and Virgil Creek corridors, and Dryden Lake, provide focal points for recreation opportunities in this area. The western-most section of Fall Creek is a State-designated recreational river corridor, and both Fall Creek and Dryden Lake provide important boating and fishing opportunities for the public.

Numerous trails wind through the Cornell University Natural Area located near campus, and the Dryden Lake trail connects the Village of Dryden with Dryden Lake and the Finger Lakes Trail. Old railroad beds

along the creek corridor provide possible routes for future trails that could connect these existing trails, and the abandoned Monkey Run Road could connect Sapsucker Woods to this trail corridor as well. Dryden Lake, as well as many of the trails in the eastern half of the Focus Area, provides excellent bird watching opportunities. Finally, “Flat Rock” near the Cornell University Arboretum is a popular location for swimming in the summer months.



Numerous trails, such as those that wind through Sapsucker Woods, provide recreational and bird watching opportunities.

Education and Research

The western portion of the Focus Area includes several large Cornell University Natural Areas, which provide habitat for unique plant species and education and research opportunities. Sapsucker Woods, associated with the Cornell Laboratory of Ornithology, an internationally recognized bird sanctuary and research center, is located here. In many cases, these lands are managed for specific purposes to support educational or research objectives and, consequently, are particularly vulnerable to factors that might compromise their ecological integrity.

Critical Habitat and Biodiversity

Although the Focus Area includes portions of the City and two villages, the creek corridor and the relatively undeveloped land between population centers provides critical habitat for a broad range of species. Three key areas are notable for accommodating a diversity of

species within close proximity to existing protected open space. Sapsucker Woods Bird Sanctuary is well known for its diverse bird populations, including key wetland bird species. The Etna area is characterized by diverse habitat types centered around wetlands, agricultural grassland, and the stream corridor. The Etna Nature Preserve is located in this area, as well as the Etna Swamp Unique Natural Area, and the nearby Caswell Grassland Important Bird Area.

Just south of Dryden Lake is prime agricultural grassland habitat. This is one of only a handful of sites in the County where Northern Harrier, a bird of greatest conservation need, is found. Dryden Lake and the Virgil Creek Dam (currently maintained for grassland birds) to the north, and State-owned agricultural research land managed by Cornell University to the south, could form the basis for a larger conservation area. This land is also located in an Agricultural Resource Focus Area.



The grasslands surround Dryden Lake provide critical grassland habitat and have been identified as a Natural Heritage Site by New York State.

Protection and Management Issues

Drinking Water Quality

- ▭ 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. 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 nutrient and pollutant removal. A wider buffer width may be required for bank stabilization or additional water filtration, depending on local site characteristics.
- ▭ Excavation of gravel from streams, and other in-stream management activities, can cause erosion and change the natural course of the stream.
- ▭ When areas are developed, precipitation and runoff flowing across developed areas accumulate pollutants, such as sediment and oil and gas products.
- ▭ 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.
- ▭ 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.
- ▭ Although many of the key water resources in the Fall Creek 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 Areas.

Outdoor Recreation

- ▭ Scenic views and tranquility are important components of the outdoor experience, and are threatened in some areas by human development and incompatible land uses.



Scenic views, such as this one from the Monkey Run Trail in Dryden, are an important part of the “outdoor experience”.

- ▭ 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. When designing new trail routes consideration should be given to potential impacts on fragile plants and animals in the area.
- ▭ The Finger Lakes Trail section in the southeastern portion of the Focus Area is currently located on a public road. While this is a fairly quiet road, relocating the trail onto the adjacent land would enhance the hiking experience.
- ▭ 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.

Education and Research

- ▢ School groups, as well as conservation volunteers and members of the public, frequently use publicly owned natural areas as outdoor classrooms. Additional access to lands that represent a broad range of natural environments would enhance learning opportunities and facilitate greater use of nature as an educational resource.
- ▢ Public use of education and research lands is usually restricted in some way, in some cases because unauthorized visitors to these properties may inadvertently trample sensitive species used for research purposes or interfere with specialized management practices in use. Where restricted, these lands should not be visited without permission from the owner or manager of the property.
- ▢ Some education and research lands are generally open to the public for personal enjoyment and relaxation. For these areas, staying on the trail is important, especially where off-trail use may cause damage to the site or trampling of sensitive species. Certain sites are very sensitive, and may not be appropriate for large groups or children.
- ▢ The spread of invasive species, herbicides, pesticides and fertilizers from adjacent lands can compromise the integrity of the ecological, plant and animal communities being studied.
- ▢ Overgrazing by whitetail deer negatively impacts the quality and regeneration of ecological, plant and animal communities being studied. Deer damage has been extensive to Cornell University Natural Areas, and poses a major threat to the viability of their unique plant populations.

Critical Habitat and Biodiversity

- ▢ 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.
- ▢ Wildlife corridors promote genetic diversity among species and help counter the negative effects of habitat fragmentation by connecting otherwise isolated patches of suitable habitat. Sapsucker

Woods is becoming increasingly isolated by development. Maintaining connections to nearby Fall Creek is critical for the ecological viability of this key habitat area. Keeping the surrounding areas “permeable” to bird species movement is necessary, as is limiting further fragmentation of the landscape. There are also possible connections to habitat in the nearby Airport Ponds and Wetlands Focus Area.



Sapsucker Woods provides habitat for a wide variety of birds. Maintaining connectivity to nearby Fall Creek is critical for the ecological viability of this key habitat area.

- ▢ The introduction of non-native species, pesticides, herbicides, and fertilizer can inhibit growth of native plants critical to biodiversity.
- ▢ There is not enough protected or actively managed grassland habitat in the County. Patches of at least 150 acres in size (or smaller patches located in close proximity) are necessary to support viable populations of grassland communities. The Sapsucker Woods, Etna, and Dryden Lake areas all have large patches of suitable grassland habitat. The Dryden Lake area habitat is particularly noteworthy, given the presence of Northern Harrier and its proximity to the State agricultural land.
- ▢ Several grasslands species are threatened in the County, and require specific land management practices to provide high-quality habitat.
- ▢ Wetlands and ponds are sometimes filled or degraded, which has a negative impact on the ability

of those systems to support wetland and pond species. The large wetlands found in the Sapsucker Woods and Etna areas provide critical habitat. Current filling and grading activities in the Etna area are of particular concern. Given that many wetland bird communities depend on wetlands within a two-mile buffer of their home habitats, the smaller wetlands scattered along the creek corridor in both the eastern and central portion of the Focus Area are also a critical component of wetland habitat benefits.

- ▢ Species that live in and around wetlands and ponds require clean water to thrive. Poorly managed wetlands, ponds, and upland areas have a negative impact on water quality and reduce the viability of these habitat areas.
- ▢ Controlling the location of streams, and limiting the natural flooding and channel meandering characteristics of streams, can inhibit the growth of native stream and riparian area vegetation, which is needed for wetland species to thrive. Natural stream meandering and flooding appear to be particularly important in the Etna Area, given the



Stream meandering in the Etna Area creates important and diverse riparian habitat.

type of habitat found here.

- ▢ 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. Several patches of early successional habitat are found in the Etna area. These early successional habitat areas

require periodic disturbance to maintain the right mix of vegetation.

- ▢ Development in the Etna Area poses a significant challenge for habitat integrity and connectedness. The nearby stream corridor provides an important connecting link between the Etna Nature Preserve and the wetlands and grassland areas to the east of Kirk Road. Maintaining connections to the nearby Caswell Grassland Important Bird Area is also desirable.
- ▢ Vernal pools found in the western portion of the Focus Area provide critical habitat for species of greatest conservation need, such as the Jefferson Salamander. A vernal pool is a depression in the ground that fills with the rising water table of fall and winter, or with the meltwater and runoff of winter and spring snow and rain. This unique habitat, and associated wetlands and upland forests, are particularly sensitive to alterations or destruction resulting from development or timber harvesting. Vernal pool species are vulnerable to road mortality during migration to and from breeding sites.
- ▢ Some pond species, such as snapping turtles, are vulnerable to high road mortality on roads during the nesting season.

Priority Actions for Fall Creek

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 Fall Creek 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.

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, 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.
- è Initiate inspection and maintenance requirements for individual on-site wastewater treatment systems, as also recommended in the Tompkins County Comprehensive Plan.

Outdoor Recreation

- è Provide emergency responders with better trail maps to improve incident response time. Create and distribute a guidebook for the county's recreational amenities that highlights trails, swimming areas, and bird watching opportunities.

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.
- è Provide a wide selection of native plants as part of annual plant sale, and eliminate all invasive species from the sale.

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 priority protection areas 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.