

A Greenprint for Seneca County

Prepared by Kristine West for the Finger Lakes Land Trust



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Executive Summary

The Seneca County Greenprint is a plan that identifies links between the county's natural resources, its economic development and its overall quality of life. Its purpose is to promote the conservation of environmental assets which underpin Seneca County's economic, cultural and environmental vitality. The key components of this greenprint are lands vital to water quality, agriculture, compatible tourism, and the health of eight natural resource focus areas. Descriptions of each component include an assessment of the resource and potential threats to its long term viability. Recommendations are made for each resource to promote conservation through collaborative and community based efforts.

Sprawling development patterns threaten the Finger Lakes Region, degrading agricultural viability, environmental quality and the rural lifestyle held dear to area residents. Given its distance from major urban centers, Seneca County has been spared intense development pressures thus far. Nonetheless, sprawl is evident throughout the county—particularly along major travel corridors and in scenic lakeshore areas.

Agriculture is the backbone of Seneca County's culture and economy—generating \$84 million in agricultural product sales and occupying 62% of the county's land area. Federal, state and county conservation agencies work with rural landowners to maintain agricultural viability and improve environmental quality by implementing agricultural districts and offering technical assistance and incentive programs.

With financial support from New York State, farmland protection efforts have recently been initiated. Thus far, the county has secured funding to purchase conservation easements on two farms in Fayette. In addition, the towns of Junius and Lodi have secured state grants to develop farmland protection plans.

While agriculture is a mainstay of the economy, tourism has potential for significant growth and already accounts for \$45 million dollars in visitor spending. The region's two largest lakes—Seneca Lake to the west and Cayuga Lake to the east—are the jewels of the county's tourism attractions. Efforts to promote and enhance nature and agriculture-based tourism in the county include wine trails on both lakes, designation of scenic byways and improved access to the county's public lands.

The lakes are an important clean water resource providing the foundation for life and human health. They also serve as the primary force behind the county's tourism industry. Water quality in both lakes is threatened by erosion and nutrient loading from land use within their watersheds. Efforts to reduce erosion and nutrient loading must address residential, transportation, and agricultural impacts.

Seneca County boasts 72 miles of shoreline and retains some of the best scenic views and undeveloped shoreline properties remaining in the region. Scenic lakeshore areas and lakefront properties are under intense development pressure which has the potential to degrade water quality in the lakes, threaten agricultural viability and mar scenic resources. A combination of public and private resources will be needed to ensure the integrity of remaining undeveloped lakeshore areas.

In addition to its scenic lakeshore districts, Seneca County encompasses a variety of landscapes that encompass regionally significant natural resources. The Montezuma Wetland Complex is well known as a premiere stopover for migratory birds while Finger Lakes National Forest and the former Seneca Army Depot boast thousands of acres of upland habitat. Smaller sites such as the Junius Ponds and Canoga Marsh add to the county's biological diversity.

An expansion of existing collaborative conservation efforts will be needed in order to ensure the future of Seneca County's significant open space resources. In addition, systematic education of landowners and municipal officials about the full array of conservation tools including conservation easements, technical assistance and incentive programs, and land use planning options will be essential to advance the goals identified by this greenprint.



Summary Recommendations

The county should lead a coalition of public and private sector partners in enhancing the economic competitiveness of farming in Seneca County while at the same time expanding farmland protection efforts through the purchase of conservation easements, and other means. It is recognized that these initiatives will require a long-term investment of sustained effort.

The water quality of Seneca and Cayuga Lakes should be protected by reducing nutrient loading and erosion from land uses within their watersheds. Best management practices on agricultural land and improvements to both municipal and on-site residential wastewater treatment facilities should be implemented throughout both watersheds.

A concerted effort should be undertaken to restore, enhance, and protect streamside habitat associated with:

- Black Brook in the Towns of Tyre and Seneca Falls;
- Mill Creek in the Town of Lodi;
- Canoga Creek and Marsh in the Town of Fayette.

These streams are recognized for their significant resource values and their value in providing habitat connectivity.

Land protection efforts—particularly through the use of conservation easements—should be expanded to secure key parcels associated with undeveloped lakeshore areas, the Montezuma Wetland Complex, Finger Lakes National Forest, and the Junius Ponds. To the maximum extent possible, these efforts should be undertaken in partnership with local municipalities.

Local communities should implement land use planning policies that maintain and enhance their character and long-term fiscal health by guiding new development to existing villages and hamlets, and minimizing development on productive farmland and lands that host significant natural and scenic resources. The county should continue to encourage these efforts and also support collaborative planning and facilitate information exchange among municipalities.

A 7,500-acre conservation area should be established within the former Seneca Army Depot—providing for appropriate public access as well as seasonal military training opportunities. A partnership between the county, Seneca White Deer, and the U.S. Army should be further developed to achieve this goal.



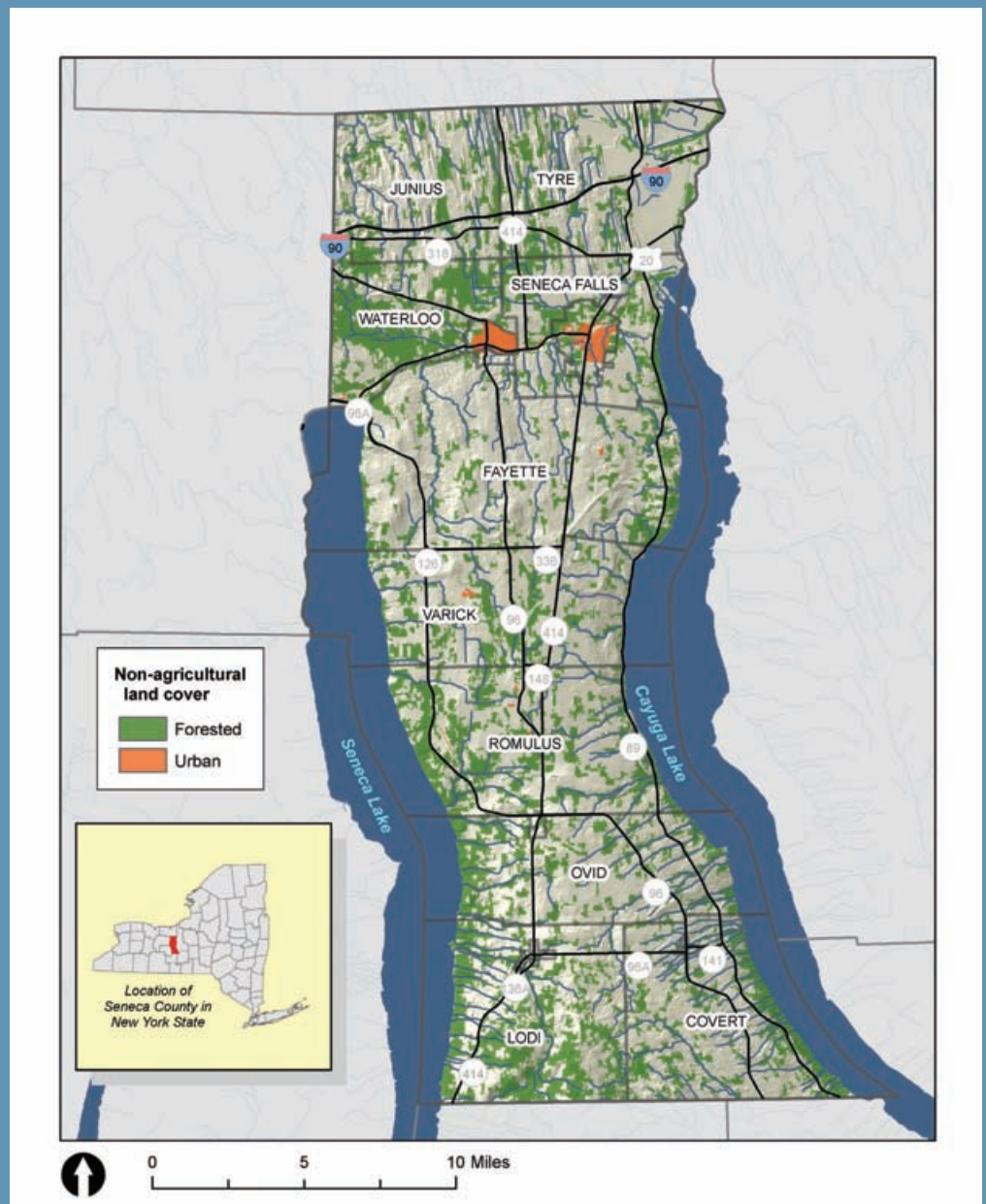
The Planning Process

The Finger Lakes Land Trust (FLLT) prepared A Greenprint for Seneca County as a tool to guide future conservation work in Seneca County, New York. The process included an assessment of Seneca County's natural resources using aerial photos available on the internet and field surveys from public roads combined with input from conservation professionals. The social context of conservation in Seneca County was informed by the project's advisory committee and by more than 30 informal interviews with private landowners and local leaders. This project was funded by a Seneca County family, who prefer to remain anonymous.

The advisory committee included representatives from federal, state and county agencies and other not-for-profit conservation organizations active in the county. The advisory committee convened first in May 2008 to review the overarching themes of the project and the proposed conservation focus areas and then again in March 2009 to review and provide input to FLLT's draft assessment. Advisory committee members also contributed through numerous individual conversations with the author over the intervening 10-month period.

Input was sought from town representatives, community leaders and county residents through interviews and several public meetings. Local residents' views on conservation-related issues also influence the direction of future conservation work in Seneca County and those views are captured in this document alongside profiles of county residents who are working to protect the land they love. It is hoped that their stories will encourage and empower others to take similar measures.

This project exemplifies the collaborative approach taken by the Finger Lakes Land Trust. Established in 1989 as a non-profit conservation organization, FLLT has worked cooperatively with landowners and local communities for 20 years to conserve those lands that define the character of the region. To date, the Land Trust has protected more than 10,000 acres through direct acquisition, the use of conservation easements on private land and through partnership with local governments and other non-profit groups.



Seneca County is located in the heart of New York's Finger Lakes Region.

INTRODUCTION



Seneca County—a special place

Centrally located in the Finger Lakes Region, Seneca County occupies 330 square miles of gently rolling farmland and forest nestled between the two largest Finger Lakes—Seneca Lake to the west and Cayuga Lake to the east. Land use in the county's ten rural towns is a patchwork of agricultural land, natural areas and small rural villages and hamlets. The county is home to just over 32,000 people - most living in the northern half of the county near the villages of Seneca Falls and Waterloo.

The southern end of the county contains the northern extent of the forested highlands known locally as the Hector Backbone. Overall, the county's landscape forms a saddle with a centrally located ridge from which the land slopes toward both lakes.

Visitors flock to the area year-round to enjoy its abundant open space and natural resources. Seneca Lake and Cayuga Lake embrace the county with more than 72 miles of shoreline and underpin the local economy and quality of life. A diverse array of public lands including a national wildlife refuge, the state's only national forest, six state parks and several state-owned wildlife management areas protect and provide public access to the county's natural resources.

Together, these natural and man-made landscape features provide clean water, abundant food supply and wildlife habitat while also creating the scenic vistas and quality of life for which the county is known.

“In Seneca County, you can enjoy both sunrise and sunset over the largest lakes in the region.”

—Allan Buddle, Interlaken Historical Society

*Seneca County is defined by
farmland, forest and lakes.*



Sprawling development threatens the Finger Lakes Region



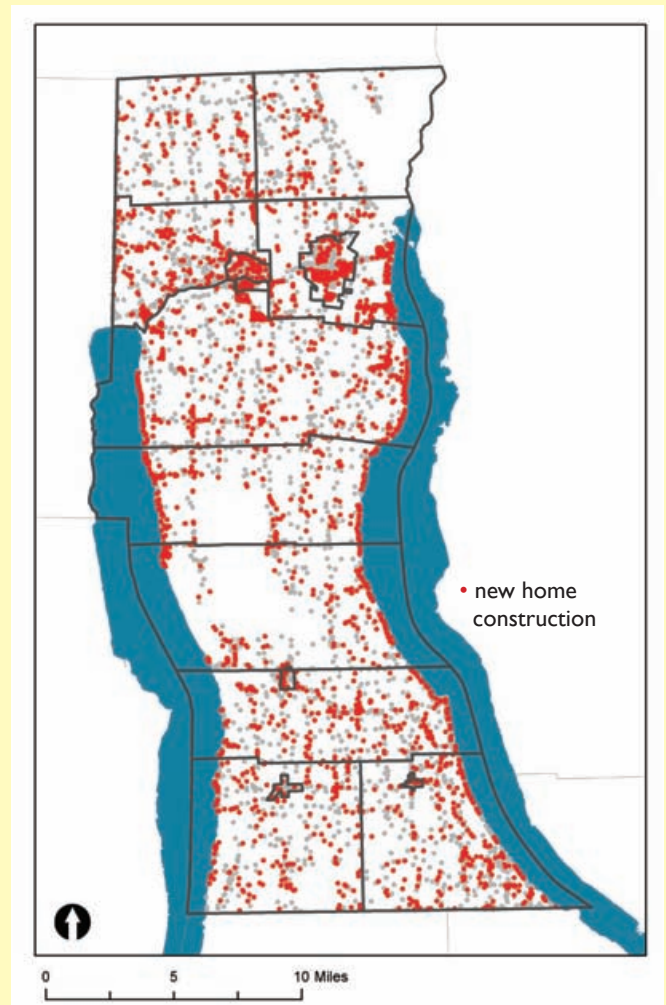
Though still rural in character, the Finger Lakes Region is gradually being changed by sprawling development patterns which threaten the area's natural character and agricultural vitality. Seneca County's relative isolation from urban areas has spared it from more intense development trends experienced elsewhere in the region. However, as the periphery of the region develops, Seneca County will experience increasing pressure from Rochester, Syracuse, Ithaca, and Corning—all located within a one-hour drive.

Recent publications by the Brookings Institute highlight demographic changes in New York's upstate region and the threats to open spaces here.ⁱⁱⁱ While population growth has been modest, rural sprawl has actually accelerated in recent years. The total amount of urbanized land in the region grew by 30 percent between 1982 and 1997, while its population grew by only 2.6 percent, reducing the density of the built environment by 21 percent. This pattern leads to what the authors call "sprawl without growth" which can increase the cost of services by local governments, reduce the quality of life for residents and degrade natural resources.

Indications of sprawl creeping into Seneca County are noted by long-term residents—houses and businesses springing up here and there on what used to be farmland; an increasing number of house lights shining out into dark winter nights. Sprawl is also documented in hard numbers by regional planning councils, census data and new home building statistics

According to the Genesee/Finger Lakes Regional Planning Council, Seneca County's developed landscape doubled from about two square miles to four square miles between 1985 and 1999. The U.S. Census reported that population declined one percent over a similar period between 1980 and 2000. In spite of recent upward trends, current population remains two percent below a peak reached in the 1970 census. In contrast, since 1970, 2,862 new houses have been built in the county.

Development pressure varies across the county. Pressure for large commercial development is highest in the northern portion of the county where infrastructure and population density support large businesses. In 2009 a new Lowe's Hardware store



Populations changes in Seneca County are in contrast with housing construction patterns. Between 1970 and 2008 population declined by 997 people and yet 2,862 homes were built during that same period.

opened in Waterloo and a Wal-Mart Supercenter began construction in the town of Seneca Falls near Route 414. Smaller commercial development pressure exists along the county's major travel corridors.

The lakes have lured residential development for more than 50 years. Development pressure remains strong along the lakes with both new construction and the renovation of seasonal cottages into year-round residences. More recently, properties with lake views are attracting new home construction.

Development in the inland rural areas of Seneca County sprouts up sporadically as individual landowners sell off road-front lots for either housing or commercial development.

Over time, the cumulative impacts of unplanned development can degrade agricultural viability, scenic vistas, natural habitat and the character of rural communities. Limited infrastructure in the rural communities of Seneca County has curtailed the degree of large scale development to date. However, as proposals to extend water and sewer lines move forward, the pressure to develop these areas will increase. In an atmosphere of minimal local land-use regulation and site-design standards, future development has the potential to degrade the natural resources and unique scenic beauty of the county along with its agricultural and tourism-based economy.

Numerous cost-of-services studies have documented how low-density residential development can create a financial drain on rural communities by creating a higher demand for water and sewer services, road construction and maintenance, public schools and emergency services which are not always supported by taxes generated by this kind of land use.ⁱⁱⁱ The results of these studies are influenced by many factors including the value and density of the housing stock and how efficiently services can be delivered.

In nearby Schuyler County, studies by the county's League of Women Voters in Dix, Hector and Montour showed that housing generated demand for services costing between \$1.30 and \$1.50 for every \$1 paid in taxes. In contrast, farms and forests generated between \$0.28 and \$0.31 in service demand for every dollar paid.^{iv} Open space and working farms also create benefits for tourism and recreation-based businesses by providing wildlife habitat and scenic vistas.

Seneca County is unique in the Finger Lakes Region as host to lands managed and used by several federal agencies including the Fish and Wildlife Service, the Forest Service and the Army. The extent of federal land in Seneca County has skewed the perception among some residents that conservation is limited to land acquisition by public agencies. This perception fuels concerns among some residents about the impact of conservation activity on local tax bases.

The Conservation Toolbox section of this report identifies mechanisms other than public land acquisition that can achieve natural resource conservation and maintain land in private ownership. In particular, permanent land conservation through conservation easements can help to guide development in a manner that stabilizes local tax rates. Further, property adjacent to parks, preserves and other protected land often commands premium prices—more than offsetting reductions in taxable value of land conserved through easements.



Lakeshore areas are experiencing development pressure for year round homes with either lake access or lake views.

GREENPRINT COMPONENTS



Agriculture: The Heart of Seneca County's Economy and Culture

Agriculture is the county's most dominant land use and creates the foundation of its economy.^v Farms occupy 62% of the county's land area. Resembling the agricultural landscapes of the Midwest, a few residents even affectionately refer to the area as "Little Iowa." The region's growing wine industry along the shores of the Finger Lakes is becoming known as the "Sonoma of the East."

The natural resources at the root of this county's strong and diverse agricultural economy are high quality soils and its location between Seneca Lake and Cayuga Lake which provides a microclimate favorable for growing grapes. Prime agricultural soils cover 37% of the county's land base while soils of statewide importance cover an additional 14%.^{vi} Embraced by the two largest Finger Lakes, Seneca County leads the region in linear shoreline with 72 miles.

In contrast to other areas of New York experiencing declines in agriculture, the number of farms in Seneca County increased between 1987 and 2007 by nearly 19% from 432 to 513 farms.^{vii} Over the same period, the amount of land in farms increased by just over 1%. Even with decreased average farm size, the market value of production per farm increased by 69% between 2002 and 2007. The county's growing Amish and Mennonite communities are largely responsible for the increasing number of farms and farmland as they return abandoned agricultural lands to production.^{viii}

The total market value of agricultural products sold in 2007 was \$84.1 million with livestock sales contributing 61% and sales from crops contributing 39%. Leading commodity groups were dairy (\$27.1 million), grains, oilseeds, dry peas and beans (\$22.8 million), cattle (\$13.8 million) and hogs and pigs (\$9.5 million).^{ix} Seneca County is one of the top ten producing counties statewide for several agricultural products including hogs and pigs (#1), cattle and calves (#4), grains and dry beans (#5) and products related to sheep and goats (#9).



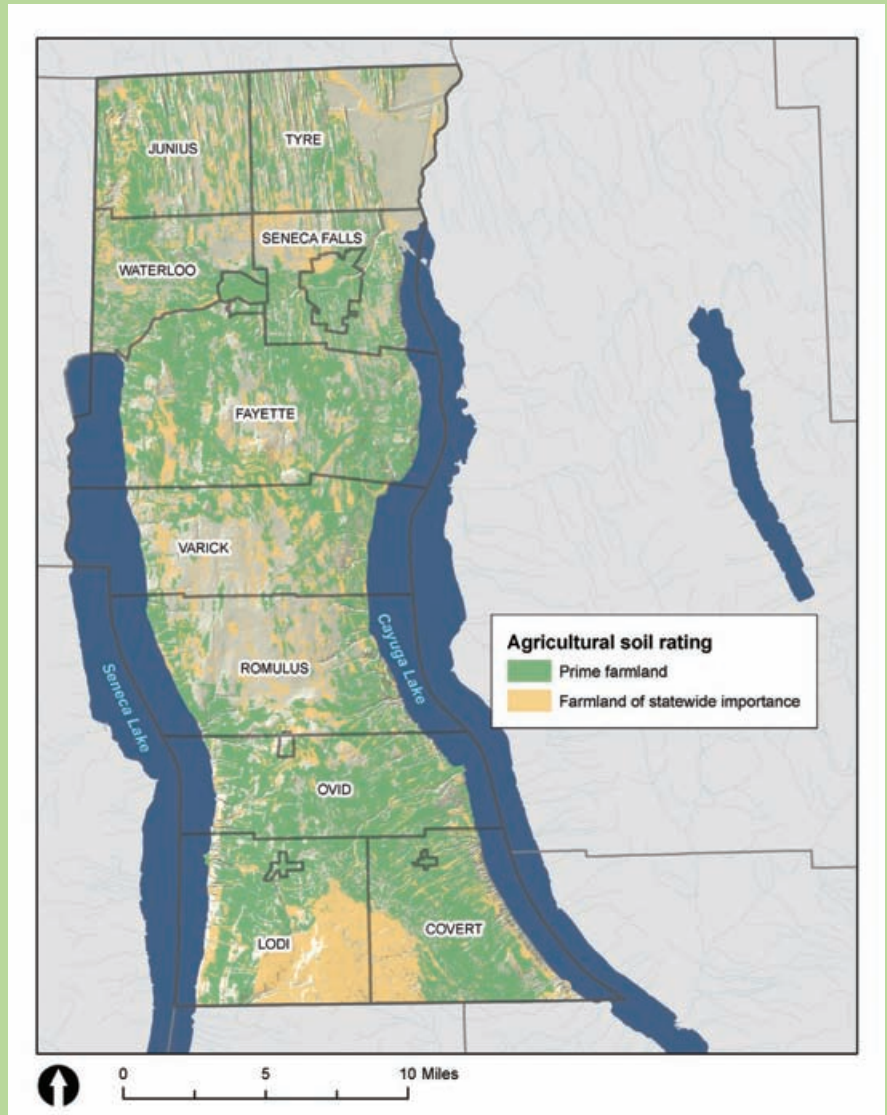
*Top: Amish and Mennonite farmers are a growing segment of the Seneca County farming community.
Above: Farms define the rural Seneca County landscape.*

In addition to these products, Seneca County's agricultural economy is diversified by niche farms including estate wineries, organic farms and roadside produce stands. The economic impact of farming within Seneca County extends beyond the farm gate as farms create demand for agricultural supply stores and service centers and also support the tourism industry.

The Finger Lakes Region is the largest wine producing area in New York. The lakes moderate the climate on nearby slopes creating ideal growing conditions for grapes. The lakeshore areas in Seneca County support 27 wineries—the highest density of wineries in New York State outside of Long Island.^x Many wineries in the county are marketed through wine trails along the shores of Cayuga Lake and Seneca Lake. The sale of wine directly from the vineyards between March 2007 and February 2008 totaled nearly six million dollars—generating approximately \$475,000 in tax revenue for the county.^{xi} The vineyards also support a growing bed and breakfast and restaurant industry.

Increasing agricultural trends are not observed uniformly throughout the county. Farmers, including Amish, are leaving some of the county's higher elevation areas.^{xii} Farms near business and travel corridors with access to water and sewer services in the northern third of the county are falling to development. Even in areas of the county experiencing agricultural growth there is no guarantee that these land use trends will continue. Farmers struggle with intergenerational transfer of their businesses as younger generations continue to leave farming for more lucrative lifestyles elsewhere.

Sprawl directly threatens agriculture by causing farming to become less profitable and, in some cases, to lose viability. When farms are converted to non-farm use, the remaining properties can become increasingly difficult to access with farm



equipment. Conflicts with non-farmers unfamiliar with the noise, smell and use of chemicals associated with common agricultural practices can increase as people attracted to rural scenery move to the area from more urban environments. Finally, as farmland is converted to non-farm use, the supporting farm services and supply industry can lose profitability. In extreme situations, a negative feedback loop can develop where fewer farms lead to failing support businesses which in turn lowers the viability of remaining farms.

“If you want to protect farmland, make sure farmers can continue to earn a living.”

—Jim Fravil, Just Serendipity Farm, Lodi

Recommendations

- Increase secure funding for the New York Department of Agriculture and Markets Farmland Protection Implementation Grants to conserve large blocks of viable farmland where the best agricultural soils exist. Additional priority should be afforded to areas where farmland protection would complement public investment in conservation of other significant natural resources including public water supplies, public lands and important habitat areas.
- Implement land use policies and standards at the town level to protect open space and farmland, to minimize impacts of residential development and to maximize the efficiency of providing public services to residents.
- Minimize environmental impacts of agricultural practices by encouraging participation in technical assistance and incentive programs offered by the Natural Resource Conservation Service and the Soil and Water Conservation District. Since Amish and Mennonite farmers are a growing segment of the agricultural community but may not be aware of voluntary conservation options, a communications strategy should be tailored to this group.

Profile in Conservation: Doug Freier

Doug Freier knows farming and he’s made a good living off the land raising hay, row crops and a few cattle. Doug’s family has been farming the productive soils of Fayette for three generations. His father taught him that, “You don’t sell off the farm for houses.” But over the years, he’s seen that happening around him—here and there, a few houses at a time. He has friends who farm in New Jersey who warned, “Its coming, so you should do something while you can”.

New houses sprouting in farm fields concern Doug because of their impact on the future of agriculture. Once the houses go up, you don’t get the farms back. New houses can make agriculture on the remaining farms difficult. Tractors don’t mix well with rush hour traffic. New residents often aren’t familiar with, and don’t like, the smell and sounds that accompany farm operations. Sometimes new neighbors don’t respect property lines causing damage to fields and valuable crops.

Doug found a way to forever protect his land from development by selling his development rights to the state through the New York State Agricultural Purchase of Development Rights Program. He applied for a Farmland Protection Incentive Grant to protect the part of his farm closest to town and under the strongest development pressure. His 2007 application was successful but he hasn’t seen the money yet. It takes time, more work and some out of pocket costs to pay for surveys, a title search and an appraisal. But Doug has a long view of the land. If easy money was Doug’s only concern, he could have made that by selling those fields for houses. Doug has worked hard to hold back the houses by investing in this program. His investment in farmland protection will pay off for the community and the next generation of farmers.

Doug Freier was Seneca County’s first successful applicant to New York State Department of Agriculture and Markets Farmland Protection Implementation Grant program.



Tourism

Tourism in the Finger Lakes Region is a \$2.7 billion dollar industry. Visitor spending in this region is the highest in New York State outside of New York City, Long Island and the Hudson Valley.^{xiii} In Seneca County, tourism accounts for \$45 million in visitor spending, generates nearly \$5.7 million in state and local taxes and employs nearly 900 people. The county's unique position on both Seneca Lake and Cayuga Lake in addition to abundant scenic, historic and natural resources attract visitors to the area from Ithaca, Rochester, Syracuse and beyond. The Seneca Lake Wine Trail, the Cayuga Lake Wine Trail and the Cayuga Lake Scenic Byway all promote the area's attractions to visitors.

Seneca County's natural resources are inviting to nature enthusiasts and sportsmen alike. The visitor's center at Montezuma National Wildlife Refuge records more than 140,000 visitors annually. On the two occasions that the Former Seneca Army Depot was opened for wildlife and history tours, the tours sold out and hundreds had to be turned away. Year round, anglers and hunters are drawn to the county's bountiful wildlife sustained on the lakes and on public and private lands.



“Seneca County happens to be blessed with some of the best hunting and fishing in the area. Game, fish—it’s all out there because of the land and the lakes.”

—Mike Ernst, Seneca Falls resident and Ducks Unlimited member.

Recreational Trails

Amenities providing public access to the county's resources enhance the quality of life of residents and encourage visitors to extend their stay and increase their spending in the area. Hiking and biking trails are attractive to many residents and visitors.

There are several existing hiking and biking trails in the county including the Esker Brook Trail at Montezuma Wildlife Refuge, the Frank A. Ludovico Sculpture Trail in Seneca Falls and the Geneva Lakefront Promenade. Plans to link these three trails along the 19-mile Seneca-Cayuga trail corridor moved forward with a groundbreaking in 2009. Nearby, more than six miles of hiking trails are planned for the Seneca Meadows Environmental Education Center in the town of Seneca Falls.

Further south, at Sampson State Park, a hiking and biking path runs along the shoreline and links to the Hamlet of Willard. Willard is currently planning for improvements along its waterfront to enhance local resident's use of the shoreline trail.

The Interloken and NoTan Takto trails in the Finger Lakes National Forest in Lodi offer public access and recreational opportunities. The Town of Lodi Farmland Protection Plan recommends linking one of these trails to the village to capitalize on the trail's tourism potential.

Public access to the lakes in Seneca County is provided along nearly seven miles of shoreline resources—most of it on Seneca Lake at Seneca Lake State Park, Sampson State Park, Bonavista State Golf Course, Willard State Wildlife Management Area, Lodi Point State Marine Park and the Caywood area of the Finger Lakes National Forest.

Public access on Cayuga Lake in Seneca County is limited to Cayuga Lake State Park and Dean's Cove State Boat Launch. The distance between these access points limits use of the lakes by kayak and canoe tourists. Additional small-scale public access to Cayuga Lake would benefit the region's tourism industry and natural resource conservation efforts.

Recommendations

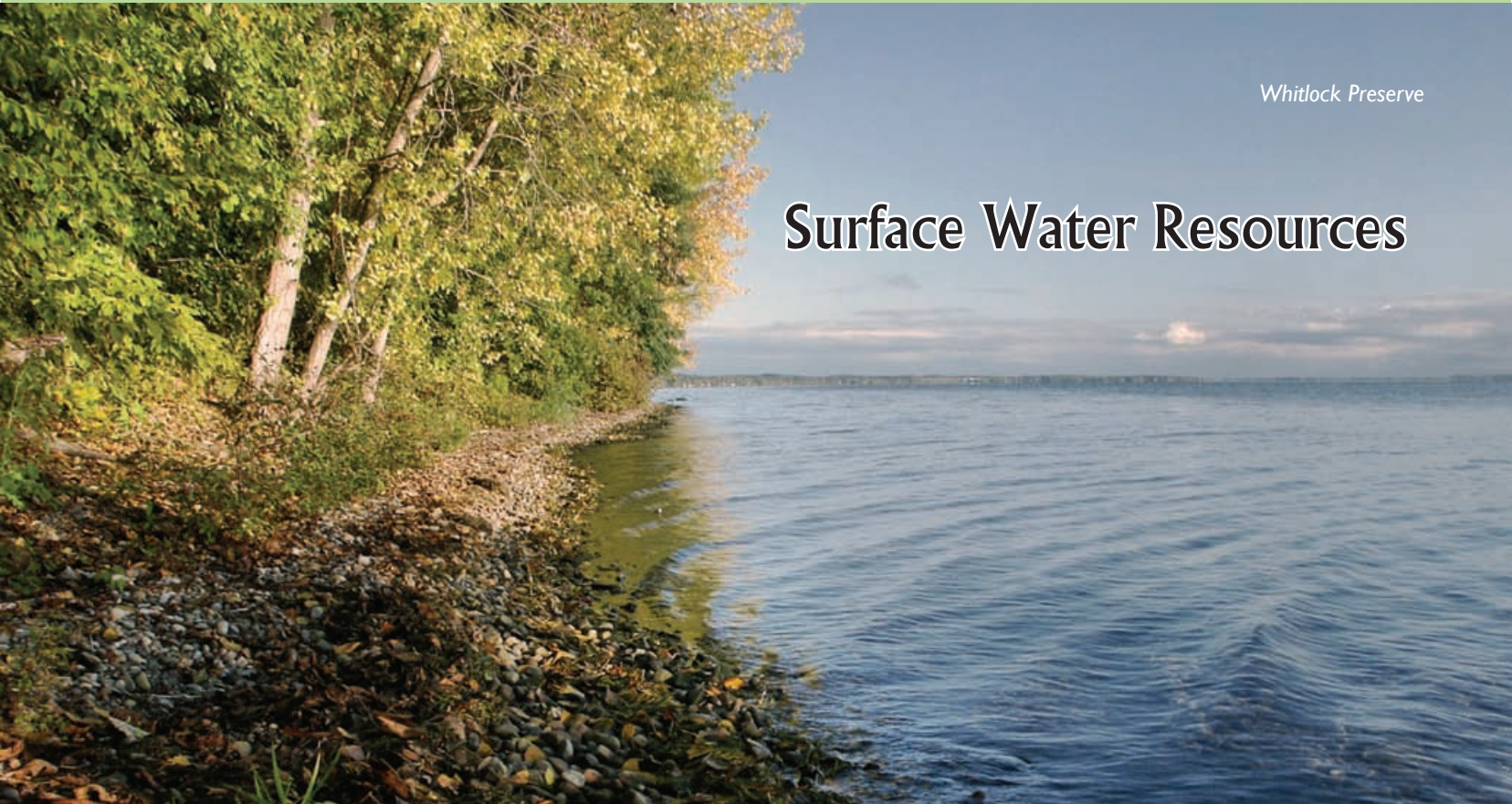
- Local communities looking to improve public access and create tourist amenities should consider increasing trail head visibility, and providing interpretive signs or brochures for existing trails. Extending any trail system on public land should be done in a manner sensitive to neighboring landowner concerns. Extension of trails on private land should be done only under voluntary agreements with private landowners.
- Improve public access to the lakes through the development of a Water Trail System. A network of undeveloped shoreline sites and commercial establishments could provide multiple conservation and recreation benefits but would specifically be designed to allow a kayaker or canoeist to tour the lakes by providing reasonably spaced launch sites, food and lodging, picnic areas and interpretive kiosks. Existing public lands can be incorporated into this network but additional small sites should be acquired to improve access to Cayuga Lake.

Left: Recreational trails provide amenities for residents and visitors alike.

Below: Vineyards contribute to both the agricultural and tourism economies of Seneca County



Surface Water Resources



According to a 2006 United Nations report on clean water and sanitation, 1 in 6 people in the world lack access to clean drinking water. The Finger Lakes Region is truly blessed with this precious resource. The lakes supply 1.2 million residents and 22 million annual visitors with 200 million gallons of water per day.^{xiv} The importance of clean water as a fundamental requirement of life and human health cannot be overstated.

The Finger Lakes—Seneca and Cayuga

Together, Seneca and Cayuga Lakes contain 6.6 trillion gallons of fresh water. The lakes have long been recognized as an important public water supply, the key natural resource underpinning the region's quality of life and the focus of conservation efforts for decades. As a result, communities are increasingly linking their conservation and planning efforts to protect water quality in the lakes.

Both Seneca Lake and Cayuga Lake have watershed management plans which provide a foundation from which inter-municipal organizations and conservation groups act. On Seneca Lake, the Seneca Lake Area Partners in Five Counties (SLAP-5) is the partnership organization serving as the municipal entity implementing the plan through research, monitoring and water quality protection measures throughout the watershed. On Cayuga Lake, the Cayuga Lake Inter-municipal Watershed Organization serves as the coordinating municipal organization implementing the Cayuga Lake Watershed Restoration and Protection Plan. The Cayuga Lake Watershed Network serves as a community based partnership promoting the plan's goals and advocating for watershed health.

The largest threats to water quality in the lakes are erosion and nutrient loading resulting from some agricultural practices, poorly maintained storm water management systems, outdated municipal and on-site residential waste water treatment systems, and poorly planned development.

Indicators of water quality include concentrations of dissolved oxygen and water clarity. As soil erodes into the lakes it directly affects water clarity and also carries with it nutrients and other chemicals from the surrounding landscape. Significant nutrient loading leads to eutrophication—a process whereby excess nutrients stimulate plant growth. Enhanced plant growth, often called an algal bloom, further reduces water clarity but also leads to decreased concentrations of dissolved oxygen in the water when the plants die, sink to the lake bottom and are decomposed by oxygen-using bacteria. Areas where there is a low concentration of dissolved oxygen, which do not support aquatic life, can develop in shallow portions of the lakes.

Research by John Halfman at Hobart and William Smith Colleges indicates that summer algal blooms in Seneca Lake are increasing. This reflects a declining trend in the lake's water quality. Residents on Cayuga Lake are increasingly concerned about the worsening algal blooms each summer.

“My greatest concern is that nothing will be done to improve water quality in these lakes until it's too late.”

- John Halfman, Hobart and William Smith Professor of Geo-limnology and Hydro-geochemistry

Most of Seneca County's privately owned shoreline was developed for residential and summer cottage use decades ago. At the time of construction, stringent standards for septic systems did not exist. Cost, space limitations and inadequate soil types often hamper improvements to residential lakeshore septic systems. To this day, shoreline cottages with inadequate septic systems contribute to water quality degradation within the lakes. Conversion of seasonal cottages into year-round residences places additional strain on often outdated septic systems.

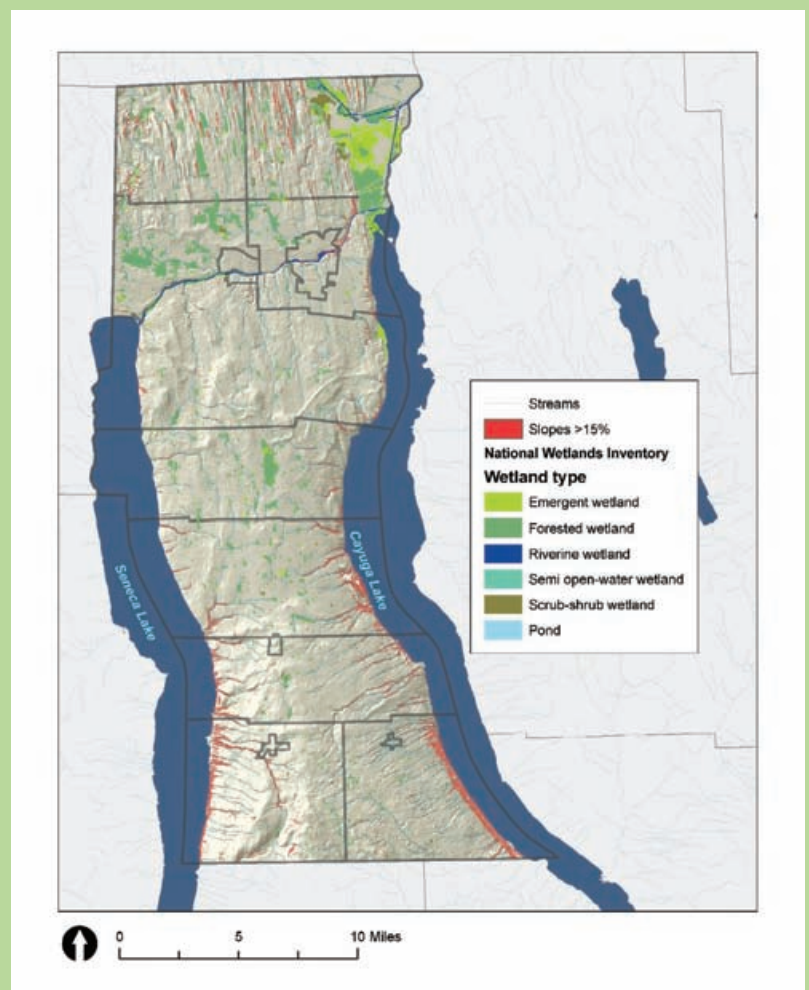
The recent trend toward constructing larger lakeshore homes and permanent residency in lakeshore areas can negatively impact water quality in several ways. Construction activities on steep slopes, increased areas of hardened surfaces and application of lawn maintenance chemicals can all result in increased sedimentation and contamination of the lakes.

Many impacts of new construction can be minimized through regulations and technical assistance from public agencies. However, there is currently no coordinated watershed level effort to minimize inputs from residential septic systems through inspection and enforcement. Installing sewer lines is expensive and would require construction of waste water treatment facilities and installation of waste pumping stations to bring residential waste away from the lakes. In addition, the installation of sewer lines might also lead to more intensive development on nearby lands that could lead to additional adverse impacts on lake water quality.

Conventional wisdom is that the largest nutrient and erosion inputs to the lakes come from the highlands south of the lakes leading to significant conservation efforts in these areas. However, some are beginning to think about the cumulative impacts of the network of roadside ditches and agricultural drain systems installed throughout the Finger Lakes Region. These alterations to the natural landscape increase agricultural productivity and road safety by increasing the transfer of water from the land. But, they may also be associated with unintended consequences of increased erosion and nutrient loading to the lakes.

Water quality conservation efforts in Seneca County are gaining traction with the implementation of best management practices on farms and road bank stabilization projects in many towns. In 2008, the Seneca County Soil and Water Conservation District secured more than \$50,000 in grant funds to assist the county and the towns of Covert, Fayette, Ovid and Romulus to install road bank stabilization projects minimizing storm water runoff to the lakes from road side ditches.

The Soil and Water Conservation District's Agricultural Environmental Management (AEM) program aims to reduce the environmental impacts of farming and to maintain the viability of agriculture. In Seneca County, about 60 farms are enrolled in this voluntary program which offers customized farm assessments, planning and implementation of best management practices.



Streams and wetlands

The lakes provide the foundation of the county’s water resources but the streams leading to them are important components of the system. Draining Seneca Lake, flowing through the villages of Waterloo and Seneca Falls and into Cayuga Lake, the Seneca-Cayuga Canal is the largest permanent moving water resource in the county. The canal supports a significant warm water fishery and provides important recreational boating access between the lakes. Future development along the canal corridor should be managed to protect public access to this resource in concert with the protection of prime farmland and remaining natural areas located adjacent to the canal.

Short reaches of several creeks in Seneca County support trout populations. The fish utilize creek segments between the lakes until reaching the first obstacle which impedes further movement upstream. Wild rainbow trout have been documented in seven tributaries to Seneca Lake including Reeder Creek, Kendaia Creek, Indian Creek, Sixteen Falls Creek, Tommy Creek and two unnamed tributaries in the town of Ovid. On Cayuga Lake, Canoga Creek supports a stocked brook trout population.

In the generally flat terrain of Seneca County, one doesn’t immediately think of gorges or waterfalls. But, there are more than 50 waterfalls documented in the county—none of them on public land.^{xv} Ravines, with their steep slopes and erodible soils, are not suitable for farming or construction. Ravines and gorges provide unique growing conditions for many plants and create important travel corridors for wildlife. Unfortunately, trash accumulates in many gorges throughout the Finger Lakes. In addition, poorly planned development can encroach upon gorges and watercourses leading to increased erosion as well as fragmented wildlife habitat.

There is a broad array of wetland types in Seneca County. From the vast Montezuma Wetlands Complex to wetland pockets in Waterloo, Junius, Fayette, Varick and Romulus—all of these wetlands provide important ecological functions. Wetlands dampen water flow from surface drainage systems, mitigate nutrient inputs from surrounding land uses and provide important wildlife habitat.

The wetlands of particular significance in Seneca County that have received protection through public land acquisition and ecosystem management are described individually later in this report. Other remaining wetlands should be sustained by local communities for the important services they provide—protecting water quality and providing wildlife habitat. Both development and agricultural activities should be undertaken in a way that provides adequate buffer of these areas.



Seneca-Cayuga Canal

Recommendations

- Reduce nutrient loading and sedimentation to the lakes by:
 - * Increasing secure funding to enable more landowner participation in federal, state, or county-run agricultural conservation and best management programs.
 - * Upgrading municipal and on-site lake shore residential wastewater treatment infrastructure.

- Launch a concerted effort to conserve sensitive lands bordering streams through partnerships and a combination of voluntary conservation measures including best management practices, conservation easements and limited land acquisition to enhance water quality, habitat connectivity and farmland protection efforts. To maximize impact of conservation efforts and to establish demonstration areas, creeks that link public and private lands should be a particular priority—they are:
 - * Black Brook, in the towns of Tyre and Seneca Falls, which links restoration and management efforts in the Montezuma Wildlife Refuge with those at the Seneca Meadows Environmental Education Center.
 - * Mill Creek, in the town of Lodi, which provides habitat connectivity between the Finger Lakes National Forest and Seneca Lake and flows through areas identified as high priority for farmland protection.
 - * Canoga Creek, a spring fed creek, flows into Cayuga Lake in the town of Fayette. Multiple partners are involved in habitat restoration and management in the Canoga Marsh Wildlife Management Area and surrounding uplands.

Profile in Conservation: The Tidball Family

Keith and Moira Tidball were looking for a dream and found it at Canoga Creek Farm. In the wake of 9/11, they decided to relocate from Washington D.C. to be closer to Mo's family in the Finger Lakes Region. Experienced in community outreach, nutrition and agriculture, they wanted a place where they could put some ideas to work about blending agriculture and natural resource protection. An avid sportsman, Keith was also looking for land with habitat to support his passion for hunting and fishing.

Before the Tidball family arrived on the scene, the farm near Canoga Creek had been in the same family since the 1880's. In 2002 the farm went up for sale because farming wasn't in the cards for the current owner anymore. Turning down offers from others not interested in agriculture, he closed the deal with the Tidballs only after they convinced him that they had the intent and skills to give farming a go.

In the seven years since they moved in, Keith, Mo and their two daughters have developed a deep connection to their farm and its natural resources. Living by a motto that "work conquers all," they entered portions of their property into the Wetland Reserve Program offered through Natural Resources Conservation Service. Further, they are restoring the wetland through a collaboration that includes the US Fish and Wildlife Service Partners for Wildlife Program, the New York State Department of Environmental Conservation, Ducks Unlimited, Trout Unlimited and the Cayuga Watershed Network. On the working portions of the farm, they are implementing Agricultural Environmental Management (AEM) practices to reduce the environmental impacts of their small beef operation.

The Tidballs' commitment to conservation has garnered recognition from the Cayuga Watershed Network's Lake Friendly Farm Program, the Seneca County Soil and Water Conservation District and New York State's AEM program. Through hard work, a passion for the outdoors, and a growing network of friends and partnerships, they have restored important habitat and revitalized the farm—breathing new life into it for the next chapter in its story.

The Tidball family has taken advantage of technical assistance programs and built partnerships to protect and restore natural habitats on their farm overlooking Cayuga Lake.





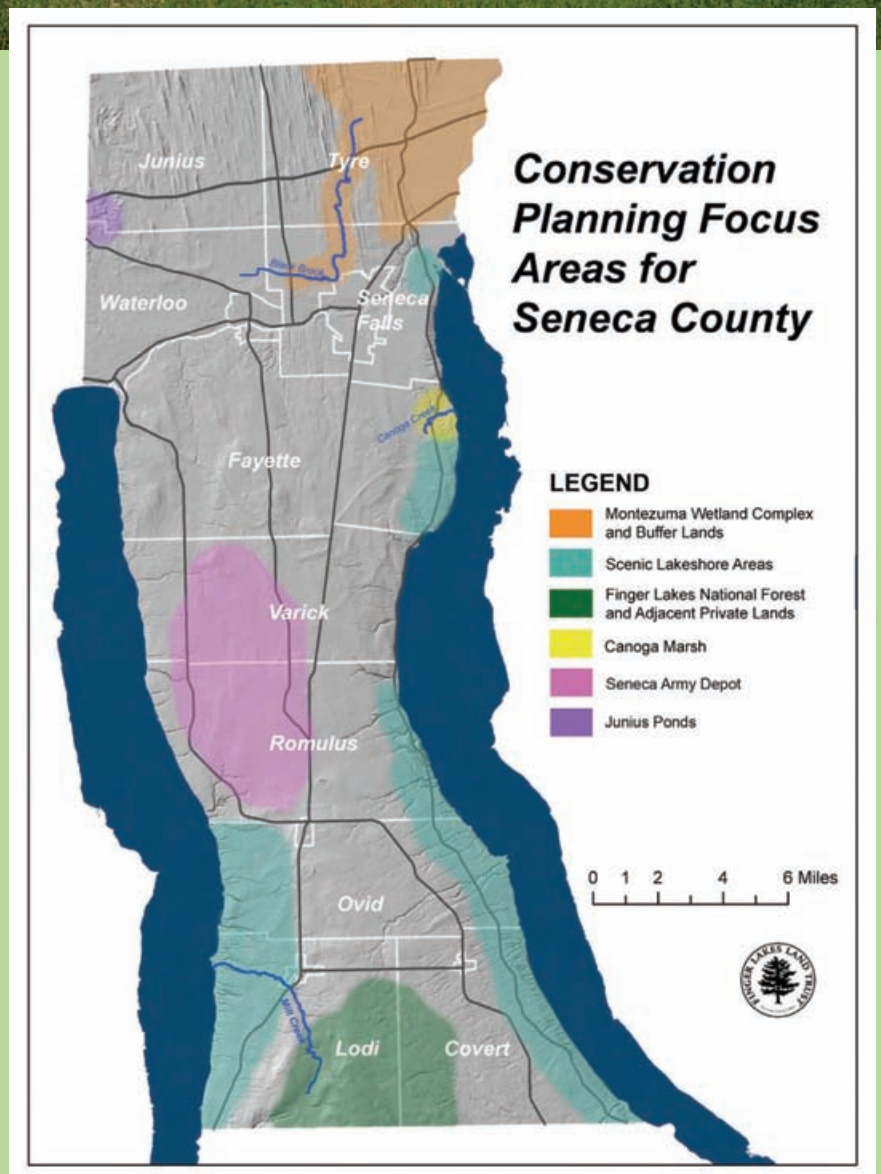
Natural Resource Focus Areas

Significant natural resource focus areas recognized by public and private conservation partners include the shoreline areas of the Finger Lakes, Montezuma Wetlands Complex, the Finger Lakes National Forest, Junius Ponds Unique Area, the former Seneca Army Depot, Canoga Marsh and areas of grassland bird habitat. Brief descriptions of each of these resources are provided along with suggestions for voluntary and collaborative conservation measures to help secure their future. Recommendations presented herein reflect input from conservation professionals charged with managing these resources as well as input from community leaders and landowners.

Scenic Lakeshore Areas

The dominance of agricultural land use in the Finger Lakes Region creates a world class scenic resource enjoyed by residents of the county. Views of the lakes against a backdrop of the rural landscape often extend into neighboring counties. The Cayuga Scenic Byway and the proposed designation of Route 414 in Lodi as a Scenic Byway reflect the importance of scenic resources to the area's economy and quality of life.

Land sandwiched between the lakes and scenic roadways on either side of the county is of particular conservation significance. Forested



and cultivated slopes within these zones are susceptible to erosion. Development here has the potential to impact lake water quality in addition to degrading valuable farmland and marring scenic resources. Lake access, scenery and easy access from state roads combine to drive intense development pressure in this area, leading to rapidly appreciating land values.

Elsewhere in the county, scenic views of farmland and hamlets along the Route 5&20 corridor have given way to an almost uninterrupted corridor of development and congestion. Without a systematic effort to identify and conserve the county's scenic resources, they will likely be degraded during the coming years.

“It’s not just the lakes that are scenic, it’s the farms in the foreground that allow us to see the lakes that make this region special.”

—Shawn Bossard, Seneca County Cornell Cooperative Extension

Recommendations

- Based on recommendations from the Cayuga Lake Scenic Byway group and the Scenic Route 414 Committee, seek opportunities to provide additional public access to the region's scenic resources through interpretive viewing areas along the county's designated scenic roads.
- Secure scenic vistas near Cayuga Lake and Seneca Lake through the use of conservation easements, particularly along the Cayuga Scenic Byway and the proposed Scenic Route 414 in Lodi.
- Implement land use planning, site design and building standards that will maintain this resource into the future by locating new structures and lighting in patterns that maintain scenic vistas.



John and Holly Bailey donated a conservation easement on their farm to the Finger Lakes Land Trust to protect agricultural uses, natural habitat and scenic views from Route 89.

Profile in Conservation: John and Holly Bailey

John and Holly Bailey never ran a farm before 1974. That changed when they purchased 90 acres of crop land and an old farm house on Deerlick Springs Road along the Cayuga Lake Scenic Byway in Ovid. They converted their fields to produce strawberries, sweet corn, melons and raspberries. For 12 years, John and Holly sold their produce at local farm stands and farmers markets, providing locally grown food to residents and visitors to the area. Now, with their two children grown, John and Holly have retired from farming. They continue to live on the farm. They keep their land in agricultural production by renting their fields to neighboring farmers.

As John and Holly raised their family, they fell in love with this piece of land which sustained their bodies and spirits with good food, hard work, glimpses of wildlife and scenic views of Cayuga Lake. A desire to protect the land's natural features and to keep it available for farming in the future led John and Holly to donate a conservation easement to the Finger Lakes Land Trust.

The easement provides for continued agricultural and forestry uses on the property while limiting development to one additional home. The land remains in the Bailey's ownership and they plan to stay on the farm for years to come. Future ownership of the Bailey farm is unknown, but one thing is not: when their tenure is done, the Bailey's are happy to know that this land will be always protected from subdivision and development. It will remain available for another family to farm and for wildlife to use. For the rest of us, their farm will continue to provide scenic views of the working landscape and lake which define the heart of the Finger Lakes Region.

“We love this place and we feel it’s our responsibility to pass it along to future generations so others can appreciate it too.”

—John Bailey

Shoreline Properties

Shoreline properties are unquestionably the highest value natural resource in the county and a significant source of tax revenue. Countywide, the average per acre assessed value of a residential waterfront property is nearly six times that of an inland residential property. Non-waterfront residential properties occupy more than 12 times the area as do waterfront properties but contribute only twice as much in total assessed value.



During the post-World War II boom, much of the Seneca County shoreline was developed for residential use. Today, several factors are contributing to changing the character of shoreline residential areas. In response to increasing tax burdens associated with waterfront properties, some seasonal cottage owners are forced to sell. Throughout the region, seasonal cottages are being renovated into larger year-round homes many with larger docks. This trend leads to an increased 'built footprint' and decreased scenic quality of some shoreline areas. To varying degrees, towns are responding to these changes through planning and regulation.

The scenic beauty and recreational opportunities afforded by the lakes creates strong development pressure. Over the years, dense private shoreline development has degraded natural habitat and limited public access to the lakes throughout the region. In recognition of the importance of shorelines to recreation, water access, scenic beauty and wildlife habitat, the protection of undeveloped shoreline in the Finger Lakes Region is recognized as a priority in the New York State Open Space Plan.

In spite of historic and current shoreline development pressures, Seneca County hosts some of the last significant undeveloped shoreline parcels in the Finger Lakes Region. Stretches of undeveloped shoreline persist in Seneca County, particularly in the southern end of the county where steep slopes and bluffs have prevented development.

In an analysis of waterfront properties within Seneca County, the Finger Lakes Land Trust found a combined total of about 11 miles of privately owned, undeveloped shoreline. More than a dozen properties with at least 1000 linear feet of lakefront were identified. Some of these properties have been spared development due to environmental constraints or access limitations. Some have been spared because of the values held by the families and not-for profit organizations who have owned them for many years.

Recommendations

- Encourage the owners of remaining undeveloped shoreline parcels to permanently protect their land through voluntary conservation measures.
- Provide information to landowners of undeveloped properties about conservation options and associated financial benefits.
- Encourage implementation of land use planning, site design and building standards that will minimize impacts of development on natural vegetation buffers and lake water quality.

*Top: Seneca County harbors some of the last remaining undeveloped shoreline in the Finger Lakes region.
Above: High density docks in Seneca County.*

Montezuma Wetlands Complex

Located in Wayne, Seneca and Cayuga Counties, the Montezuma Wetlands Complex is widely recognized for its significance as a stop-over area for migratory birds on the Atlantic Flyway during their journeys between their nesting areas and wintering grounds. An estimated one million birds pass through the area every year providing an impressive display of abundance and diversity. More than 240 bird species use the complex throughout the year including waterfowl, shorebirds, neotropical migrant songbirds and raptors.

The Montezuma Wetlands Complex is the focus of a multi-partner conservation effort to protect and restore 36,050 acres of wetlands and associated uplands. Strategies to conserve the wetlands include: restoration and management of land acquired from willing sellers by the Department of Environmental Conservation and the United States Fish and Wildlife Service; the execution of cooperative management agreements between partners and private landowners; and, the use of conservation easements by government and not-for-profit partners. In Seneca County, the lead conservation agency in this partnership is the United States Fish and Wildlife Service which owns and manages the Montezuma National Wildlife Refuge including about 9,000 acres in the town of Tyre.

Montezuma National Wildlife Refuge

The Montezuma National Wildlife Refuge is located at the northern end of Cayuga Lake. Most of the water flowing through the Refuge flows from Cayuga Lake. However, Tschacke Pool, on the western edge of the refuge, is fed by three small streams: Black Brook, Esker Brook and White Brook. The headwaters of these streams are outside of the designated refuge area and there are no plans to include them within the refuge. Nonetheless, the long term ecological health of this portion of the refuge depends on the character of the lands within the watersheds of these three brooks.

The level of collaboration between public agencies, private landowners and not for profit conservation groups in the Montezuma Wetlands Complex project is testament to the broad support of this conservation effort. The Friends of the Montezuma Wetlands Complex is an organized volunteer group providing opportunities for local citizens to engage in this nationally recognized conservation partnership by supporting restoration efforts within the wetland complex and through community outreach, education and advocacy.



Residents of the town of Tyre are generally positive about hosting the national refuge because it contributes to the rural nature of their town, provides public access to a significant natural resource and provides both hunting and environmental education opportunities.^{xvi} However, some officials and residents in the Town of Tyre have expressed concern about the long term impact of the extent of public land in the town, saying that about 30% of the town's land base is off the tax rolls.^{xvii} Tyre receives payments in lieu of taxes (PILOT) through the Refuge Revenue Sharing Act but congressional appropriation for the funding has been declining for many years.

The refuge is an important component of the local tourism economy. Annual visitation to the refuge is estimated to be about 140,000 people—many of whom stop to shop and eat at local businesses and restaurants. Efforts to increase nature based tourism include the Savannah Wild tour—an annual 4½ hour bus tour to Howland Island, the Montezuma Audubon Center and Montezuma Wildlife Refuge and several programs supported by the Friends of the Montezuma Wetlands Complex Group.



Cayuga Lake Wildlife Management Area

The Cayuga Lake Wildlife Management Area (WMA) occupies 225 acres of cattail marsh and wooded swamps between the northwestern shore of Cayuga Lake, the Cayuga-Seneca Canal and Montezuma Wildlife Refuge. While the size of this wildlife management area is dwarfed by the Refuge, its location between the Cayuga Lake Scenic Byway and Cayuga Lake make it and nearby farmland a significant gateway for southbound travelers on the Byway in Seneca County.

Seneca Meadows Wetlands and Recreational Complex

Just east of the Montezuma Wetlands Complex is the newly opened Seneca Meadows Wetlands and Recreational Complex. This 600-acre environmental education, habitat restoration and outdoor recreational complex was created by the Seneca Meadows Landfill as a mitigation measure for filling 71 acres of wetlands during an expansion of the landfill area. The facility includes meeting rooms, an environmental laboratory and educational displays. The Montezuma Audubon Center shares its staff with the Seneca Meadows Educational Center to assist with weekend educational programming. Plans to construct six and a half miles of recreational trails and to restore savannah habitats on the site are moving forward in collaboration with staff from the Montezuma National Wildlife Refuge. This project contributes to conservation of the Montezuma Wetlands Complex because it includes portions of Black Brook which flows into the west side of the refuge at Tschacke Pool.



The Seneca Meadows Education Center offers opportunities for nature education, recreation and tourism.

Recommendations

- Continue building on collaborative efforts for land conservation, habitat restoration, environmental education and nature based tourism among the Montezuma Wetlands Complex partners and including representatives of local towns.
- Secure the future of remaining privately owned wetland areas and adjacent upland buffers through acquisition from willing sellers, management agreements and conservation easements.
- Launch a public awareness campaign of the importance of Black, White and Esker Brooks to the water quality in Tschacke Pool using the Seneca Meadows Wetlands Complex and Education Center as a local resource center. Encourage private landowners, especially on Black Brook, to protect water and habitat resources by creating streamside buffers, restoring wetlands, reducing erosion and entering land into conservation easements.



Birds flock to the Montezuma Wetland Complex during migration every year.

Finger Lakes National Forest

The only National Forest in New York State, the Finger Lakes National Forest encompasses just over 16,000 acres in Seneca and Schuyler Counties with approximately one third of the Forest in Seneca County. The National Forest is characterized by a mosaic of forest, shrub, and grassland habitats allowing multiple uses including grazing, timber harvesting and recreation. In Seneca County, the Forest occupies about 4,100 acres in the town of Lodi and just over 1,100 acres in the town of Covert.

The forest is recognized in the New York State Open Space Plan as the northwest terminus of the “Emerald Necklace” an arc of more than 50,000 acres of forested hills and valleys extending from the Finger Lakes National Forest through several tracts of public land south and east past Ithaca to Tioga County. This network of public and private land supports extensive forests that provide a home to a rich diversity of plants and animals.

The Finger Lakes National Forest has also been named a New York Important Bird Area in recognition of its importance to an assemblage of grassland nesting birds, neotropical migrant songbirds and raptors. According to ornithologist Charlie Smith, over half of the breeding bird species found in New York State can be found on the Finger Lakes National Forest.

Public use of the Finger Lakes National Forest includes grazing by the Hector Grazing Association, hiking, camping, bird watching, trail riding, fishing, and hunting. Recreational use of the forest in Lodi is concentrated along the No-Tan-Takto and Interloken trails, local ponds, and at Caywood Point on Seneca Lake. Public access to the Caywood Point area is currently limited but a day use area is under development here.

Private lands adjacent to the National Forest have traditionally been managed for compatible uses such as agriculture, firewood cutting and hunting. With residential development increasing in the region, properties next to public land are

being sought out for home sites. In some cases, such development can contribute to problems within the forest including habitat fragmentation, reduced recreational opportunities and increased management costs to the Forest Service. Towns around the forest can also be impacted by residential development next to the forest if it fragments farmland and creates an increased demand for services. Therefore, it is in the mutual interest of the surrounding towns and the forest to collaborate on farmland and open space protection measures in a way that is sensitive to local tax base concerns.

State and federal agencies began acquiring land that now makes up most of the Finger Lakes National Forest in the 1930's. Initially managed by the Soil Conservation Service as the Hector Land Use Area, the Forest Service became responsible for managing these lands in 1954. The Finger Lakes National Forest was created in 1983 when the residents of New York opposed federal plans to divest itself of the land.

Because land was acquired from willing sellers only, existing public land is intermingled with privately owned lands. Funds appropriated for forest consolidation in the 1990's were used to purchase several properties that were not directly adjacent to existing federal lands. These transactions raised concerns among some residents about the federal government's ultimate land acquisition goals as well as their associated impacts to the local tax base and overall economy.

The Lodi Town Board currently opposes additional land acquisition by the Forest Service. Communication between representatives of Lodi and the National Forest Service are needed to address local concerns and to develop a partnership that will make possible the permanent protection of those privately owned lands that are vital to the health of the National Forest, the character of the town and the integrity of its agricultural community.

Recommendations

- Through regular communication, develop partnerships between the Finger Lakes National Forest, host towns and other stake holders to achieve mutually agreed upon goals including open space and farmland protection, invasive species management, tourism promotion and economic development.
- Secure funds through the Forest Service to purchase conservation easements from willing sellers on key parcels adjoining the Finger Lakes National Forest.



Above: Residential development is often attracted to rural areas next to permanently conserved land resulting in habitat fragmentation, loss of farmland, and increased demand for services.

Below: Portions of the Finger Lakes National Forest in Lodi are used for grazing and managed for grassland bird habitat



Junius Ponds



Home to several species rare in New York and host to a diverse array of high quality rare plant communities, the Junius Ponds have long been recognized by New York State, the Town of Junius and conservation partners as important natural areas. The area of interest is a chain of kettle-hole ponds and their associated wetlands nestled among glacially deposited gravel hills in the western side of the Town of Junius.

The unique character of the Junius Ponds area is dependent on the underlying geomorphology of the site. Groundwater seeping through the underlying layers of bedrock and gravel deposits develops high concentrations of minerals, creating ideal growing conditions for wetland communities known as fens. The Junius Ponds supports a variety of fens unique in New York.

The wetlands, in turn, provide habitat for a variety of plants and animals—some rare in the state. Long-term conservation of the site depends on protecting both the quality and quantity of groundwater feeding it and minimizing the impact of invasive non-native species.

The site has been protected over the years by informed private landowners including the Seven Lakes Council of the Girl Scouts which is headquartered there. Additionally, the Village of Lyons owned a portion of the site and, until recently, used it as a municipal drinking water source.

With the support of Town of Junius Planning Board Members and many conservation groups, New York State purchased property from the Village and an adjacent private landowner, establishing the Junius Ponds Unique Natural Area in 2008. The Unit Management Plan for the Junius Ponds Unique Natural Area is under development. By acquiring land in the area, New York State has established a public commitment to conserving the unique habitats and species at the ponds. As neighboring parcels of interest become available for purchase, state funding should be made available to secure the unique natural resources here. Both the current Planning Board Chair and Town Supervisor have expressed support for protection efforts around the ponds.

Recommendations

- Conserve the unique natural resources of Junius Ponds through public land acquisition and/or conservation easements of the ponds and adequate upland buffer.
- Support further research to better understand the hydrogeology of this site as it relates to long term ground water protection and nearby development. Implement local land use policies to protect the site's groundwater resources.
- Limit public use on that portion of the site which harbors unique natural communities and species to ensure their continued existence.
- Support control of invasive non-native species that threaten the unique biological resources of the site.

Former Seneca Army Depot

Spanning more than 10,000 acres in the towns of Romulus and Varick, the former Depot is the largest contiguous block of land in single ownership within the Finger Lakes Region. It is well known for its unique population of white, white-tailed deer. The site is listed as a priority project in the New York State Open Space Plan and has been designated an Important Bird Area by the National Audubon Society based on the extensive early successional habitats on site and the birds that use them. The land is traversed by tributaries of four streams, contains a 60-acre pond and extensive wetlands. A perimeter fence around the site and management by the United States Army allowed for the establishment and protection of the white, white-tailed deer herd, which is believed to be the largest, single such herd in the world.

In the lead up to World War II, the United States Army acquired private land to establish the Depot as a munitions storage and training facility. The installation was officially closed in 2000 and transferred to the Seneca County Industrial Development Agency for redevelopment. Since then, portions of the Depot have been redeveloped to support private businesses, law enforcement facilities, and residential areas.



“Handsome Hank” is one of nearly 200 white, white-tailed deer living on the former Seneca Army Depot.

Through a planning process led by the Seneca County Industrial Development Agency, about 7,500 acres, including the munitions storage bunkers and a former air field, were designated as a conservation area. However, efforts to transfer the property to public conservation ownership have not moved forward. Numerous proposals to use the Depot have been put forth including a nature tourism business and a biofuels production facility. Some development proposals have met with stiff opposition from groups concerned about maintaining the white deer herd and the large block of early successional habitat. Most recently, the Army leased back a significant portion of the site for summer training with the support of white deer advocates.

The Depot’s extensive system of bunkers and miles of perimeter fence make site management a challenge. During 2009, collaboration between Seneca County, Seneca White Deer, and the U.S. Army demonstrated that expanded seasonal public access could be undertaken in conjunction with expanded seasonal military training at the site. Each of these partners brings different strengths to the partnership and together, they have the potential to craft a successful long-term management plan for the Depot.

Recommendation

- A long-term conservation partnership between Seneca County, Seneca White Deer and the U.S Army should be implemented to provide for enhanced habitat management, expanded seasonal public access, expanded seasonal military training, and permanent conservation of the site’s open space resources.



Grassland Bird Habitat

One environmental benefit of the large agricultural areas in Seneca County is the creation of grassland bird habitat on pastures and hayfields. Large natural grasslands are rapidly disappearing throughout the country. Even where agriculture creates grassland habitat, certain management practices, including high intensity grazing and mowing, can reduce grassland bird nesting success. As a result, many grassland dependent birds are declining nationwide.

Grassland birds can thrive in areas used by people including airport fields, capped landfills, military installations, hayfields and pastures, as long as steps are taken to minimize destruction of nests and young birds during the breeding season. Some of the best grassland bird habitat in Seneca County is in areas with low density grazing, and near small airports. Public lands in Seneca County provide grassland bird habitat at Montezuma National Wildlife Refuge, the Former Seneca Army Depot, and the Finger Lakes National Forest. But, grassland bird conservation cannot happen only on public land. Collaborative efforts among private landowners and public land managers are key to grassland bird survival because the birds recognize neither property boundaries nor political jurisdictions.

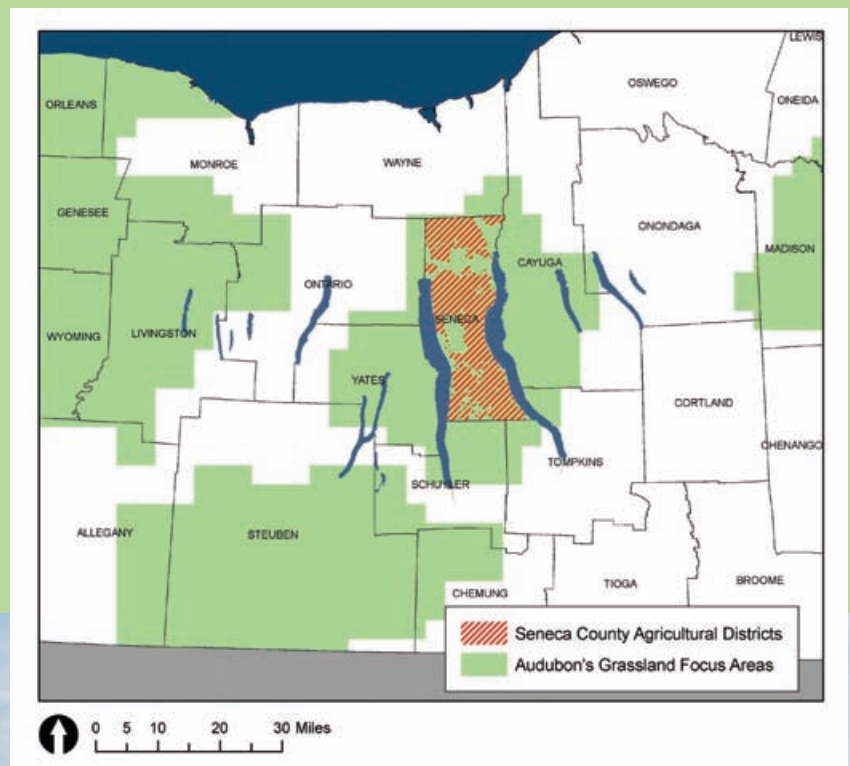
To protect New York's grassland birds, the Department of Environmental Conservation and New York Audubon have developed a grassland bird habitat conservation plan which depends on voluntary partnerships with private landowners. The goal of the plan is to halt and reverse declines in the state's grassland bird populations by offering grants, technical assistance and incentives to private landowners in key areas that still support grassland bird populations. Seneca County lies at the heart of one of eight grassland bird conservation focus areas in New York State. Bird species targeted for conservation efforts in the focus area include Vesper Sparrow, Grasshopper Sparrow, Horned Lark, Savannah Sparrow and Short-eared Owl.



Savannah sparrows are one of several grassland bird species targeted for conservation in the Finger Lakes Region.

Recommendation

- Coordinate grassland habitat management programs between state and federal agencies. Secure funding to increase landowner participation in this effort.



The largely agricultural landscape of Seneca County lies at the heart of one of New York's State's grassland bird focus areas.

Canoga Marsh

Canoga Marsh is unique in the Finger Lakes Region as the only substantial lakeshore wetland not located at either the head or foot of the lake. Located just east of Cayuga Lake Scenic Byway in Fayette, the marsh adds visual interest to views of the lake from the road. The biological importance of the site is not fully documented but many common wildlife species make their home here. The marsh and surrounding upland are used by a variety of birds including the black tern, an endangered bird in New York. The spring fed Canoga Creek and its tributary provide trout habitat. The wetlands support a small population of Shellbark Hickory (*Carya laciniosa*)—a tree uncommon in New York. Sections of the forested creek ravines leading to the wetland include impressive spring wildflower displays.

The collaborative approach to conservation at this site exemplifies the kind of work needed throughout the Finger Lakes Region to protect its natural resources and rural character. Public agencies, private landowners and not for profit groups are working to restore Canoga Marsh and surrounding upland habitat with funding from both the NRCS Wetland Reserve Program and U.S. Fish and Wildlife Service Partners for Wildlife Program. Goals of the restoration effort include increasing native species diversity and improving habitat suitability for wetland animals—including the black tern. The recently established 97-acre Canoga Marsh Wildlife Management Area protects the lower portions of Canoga Creek and the southern end of Canoga Marsh. The owners of most of the northern end of the marsh and nearby uplands entered 47 acres of their land into 30-year term conservation easements and continue to spearhead outreach and conservation efforts.



Recommendation

- Encourage additional participation in the Agricultural Environmental Management program and restoration efforts along with the use of conservation easements by landowners adjacent to Canoga Marsh, Canoga Creek and its tributaries.

Conclusion

Seneca County is blessed with an enviable variety of natural resources: abundant clean water, rich agricultural soils, and plentiful natural areas both large and small. These resources have been the focus of collaborative conservation efforts for many years and have been recognized by numerous agencies and programs as important features in the cultural and environmental landscape of New York State. The agricultural and tourism dollars that are created by these resources are, indeed, the backbone of the Seneca County economy.

However, much work remains to be done to secure their long term viability. Without concerted efforts by local leaders and partnerships between the public and private sector, the status of Seneca County's natural resources will continue to be threatened by the impacts of poorly planned development.

The next section of the report outlines the tools and techniques government agencies, non-profits, and individuals can use to secure the viability of these important natural resources.

CONSERVATION TOOLBOX

There are many tools designed to promote natural resource conservation while maintaining land in private ownership and on the tax rolls including voluntary conservation easements, technical assistance and incentive programs. These tools may be the best solution to maintaining some of the unique resources in Seneca County in the near term. Public policies, including agricultural districting, farmland protection planning, and stronger land use planning can further promote conservation of natural resources.

Conservation Easements

A conservation easement is one of the most flexible tools available for private landowners to permanently protect the rural, undeveloped character of their land. A conservation easement is a voluntary, legally binding agreement between the landowner and a qualified organization. Conservation easements are recorded with the deed and they remain in place as ownership changes.

Conservation easements are based on aspects of real property law that recognize land use rights as separate and divisible from the land itself. A landowner interested in protecting his property from subdivision and development can choose to sell or give those particular rights to either a land trust or governmental body. In exchange, that organization extinguishes the development and subdivision rights and takes on the responsibility to protect the land from those uses. Land under a conservation easement typically remains available for agriculture and other traditional uses including hunting and managed timber harvest.

Conservation easements are an attractive option in communities wishing to maintain both their open rural character and tax base. The reduction in taxable valuation of protected property can be more than offset by the enhanced taxable value of surrounding properties which often command premium prices. Conservation easements can help to limit haphazard development in rural areas. By limiting growth and channeling it toward existing population centers, conservation easements can also help to stabilize property tax rates.

Conservation easements can be either sold or donated. At this time, the primary source of public funding available to Seneca County landowners interested in selling a conservation easement is the New York State Purchase of Development Rights Program.

New York State Dept. of Agriculture and Markets Purchase of Development Rights Program

In New York State, the Department of Agriculture and Markets (NYSDAM) administers Farmland Protection Implementation Grants as part of its Purchase of Development Rights Program. Grants are used to purchase development rights from farmers and establish permanent agricultural conservation easements on productive farmland that is threatened by development pressure. The easements must be held by a qualified organization, such as a non-profit land trust.

Farmland protection grants pay for up to 75% of the development rights and require a 25% match which can be provided through a 'bargain sale' or through public funding from other sources. Landowners who make a bargain sale to the state can receive federal income tax benefits. More information about this program is available at the New York State Agriculture and Markets web site: www.agmkt.state.ny.us

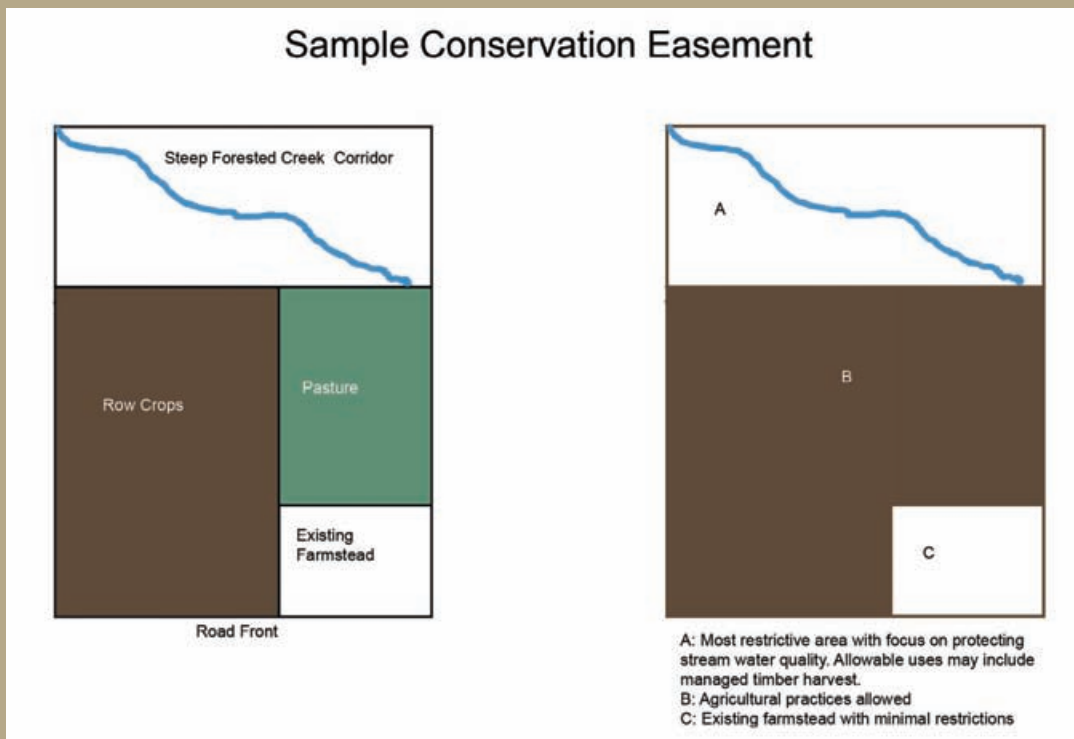
Counties or towns with completed farmland protection plans are eligible to submit applications to the state for funding on behalf of local farmers. Seneca County's farmland protection program is administered by the Agricultural Enhancement Board through the Cornell Cooperative Extension office in Waterloo. At the town level, Fayette, Junius and Lodi are positioning themselves to apply directly to the state for grants by completing and adopting NYSDAM approved farmland protection plans.

This is a highly competitive program. In 2006, the state received requests totaling more than twice the available funds. Grant applications are evaluated based on farm viability, development pressure and whether farmland protection would buffer a significant natural resource. In Seneca County, the state has awarded grants to purchase development rights on two farms in the town of Fayette where farms face pressure from development spilling over from Waterloo and Seneca Falls.

Donating Conservation Easements

Grants for the purchase of development rights are highly competitive and not all landowners are eligible for them. However, conservation minded landowners can work with a private conservation organization to protect their land by donating a conservation easement. Conservation easements allow landowners to retain ownership of the land and most of their land use rights—including limited development rights and rights of private use, farming, hunting, and timber harvesting—while protecting the land from development in the future.

There can be financial benefits to donating a conservation easement. Provided that certain criteria are met, the value of a donated conservation easement can be claimed as a charitable deduction on state and federal income taxes. Also, New York State implemented a Conservation Easement Tax Credit in 2006 to provide property tax relief to qualifying landowners who continue to pay their local town, county and school district taxes. Landowners whose land is restricted by a donated conservation easement can receive an annual, refundable state income tax credit equal to 25% of the combined town, county, and school taxes paid on the land during the previous tax year. The income tax credit is capped at \$5,000 per year for each qualifying landowner. Finally, a conservation easement may reduce estate tax burdens thereby easing intergenerational land transfer costs.



Conservation easements are flexible and can be tailored for individual properties. This example demonstrates how some development rights and current uses can be retained while the bulk of the property is protected from future subdivision and development.

Technical Assistance and Incentive Programs

Technical assistance and incentive programs including the Agricultural Environmental Management Program, Grassland Landowner Incentive Program, Wetlands Reserve Program and the Partners for Fish and Wildlife are available to private landowners through several state and federal agencies. These programs provide a mechanism for improving water quality in the Finger Lakes through implementation of best management practices on agricultural and rural land. Not only does participation in these programs provide environmental benefits, but also, increases the competitive rank of grant applications for Farmland Protection Implementation Grants. Landowner involvement can garner recognition from peers, conservation agencies and citizens groups. The availability of funding for these programs is subject to change. Landowners interested in these options should contact the Natural Resources Conservation Service and the Soil and Water Conservation District for current information.

Planning and Land Use Regulation

Local planning, policies and standards can serve to protect natural resources important to public health and the quality of life by guiding development patterns. Seneca County is participating in several planning efforts. First adopted in 1995, Seneca County's Comprehensive Plan is slated for update this year. The county drafted an Agricultural Enhancement Plan allowing it to apply for New York State's Farmland Protection Implementation Grants. The county's agricultural districts were updated in late 2008 providing tax incentives and protections for agricultural practices to farmers. Finally, representatives from several county agencies provided strong support of and participation in developing this greenprint. Governmental planning and land use regulation can meet with opposition in small rural communities. The towns in Seneca County are no exception. Each town in Seneca County has proceeded at its own pace toward planning and regulation, each wrestling with their unique set of circumstances and local interests. Common themes among plans in Seneca County include an appreciation for the quality of life afforded by the natural environment in rural communities and the importance of agricultural land uses.

Because New York State is governed by 'home rule' the responsibility for planning and land use regulation rests with town governments. The process of developing a comprehensive plan and subsequent land use regulations is a crucial step for towns to take toward determining their own futures in an ever changing world. Towns can manage growth pressures by adopting zoning regulations, minimum lot sizes, subdivision regulations and site plan review standards.

Sometimes this process is difficult—where no planning or zoning exist, it is viewed as new, unfamiliar and an attempt to remove property rights from individuals. However, input from local residents and other stakeholders is a crucial ingredient to a successful planning process. Without local planning and regulation, the people who determine the future of the scenic Finger Lakes Region may have little or no connection to the area and what makes it special.

The Seneca County Department of Community Planning and Economic Development can provide technical assistance and help towns obtain grant support for their planning efforts. Currently, Farmland Protection Planning Grants are available from New York State's Department of Agriculture and Markets. Planning grants are often used by towns to hire consultants experienced in facilitating community involvement and to develop a plan based on local consensus and vision.

Geographic Information Systems (GIS) is a powerful computer program that can be used to map and analyze important landscape features. This information can then be used to efficiently direct development and conservation efforts. The staff resources do not exist in Seneca County to fully utilize this technology. Most planning consultants include GIS technology among their tools. Whether through the county or other means, it is important that local communities take advantage of this tool.

Recommendation

- Local communities should implement stronger land use planning policies that maintain and enhance the environmental quality and character of their towns. Development should be guided to areas where services can be provided efficiently and where the loss of productive agricultural, scenic and natural resources is minimized.

Profile in Conservation: Farmland Protection Planning in Lodi

The Town of Lodi, located in the southwestern corner Seneca County, hosts portions of the Finger Lakes National Forest, stunning views over Seneca Lake, world class vineyards along with a robust grain and dairy agricultural community. At present, Lodi does not have a comprehensive plan nor does it have land use controls leaving it susceptible to unplanned growth that could diminish the town's character and vitality.

Over the course of 2008-2009, the town of Lodi made significant progress toward securing its rural character into the future. Using a planning grant from New York State's Department of Agriculture and Markets, a committee of local farmers worked with a consultant and the Seneca County Planning Department to develop a town-wide farmland protection plan. The committee sought input from local residents through surveys, public workshops, and conversations among key stakeholders.

Lodi's farmland protection plan aims to secure the future of farming in the town on productive soils, diversify the local economy and protect the town's rural and scenic character especially where pressures to non-agricultural use are greatest along the Route 414 corridor. One component of the farmland protection planning process included discussions with one of the town's largest, and for some, controversial landowners—the United States Forest Service.

The planning process provided venues for farmers, other residents and public officials in Lodi to have conversations that promoted mutual understanding of goals and objectives. It is hoped that regular communication among these groups can lead to collaborative efforts on issues of mutual interest.

Lodi residents listen intently during a public meeting for farmland protection planning.



Resource Contacts

Finger Lakes Land Trust (FLLT)

202 East Court Street

Ithaca, NY 14850

Phone: 607-275-9487

Web site: www.fllt.org

Since 1989 FLLT has protected more than 10,000 acres of the Finger Lakes Region's lakeshore, forests, wetlands, farmland and gorges through the acquisition of land or conservation easements and by providing technical support and educational assistance to local governments, landowners and the public.

New York Agricultural Land Trust (NYALT)

P.O. Box 121

Preble, NY 13141

Web site: www.nyalt.org

NYALT was established in 2006 as an organization qualified to hold farmland conservation easements in New York. The organization is lead by farmers and others dedicated to farmland conservation.

American Farmland Trust (AFT)

112 Spring Street, Suite 207

Saratoga Springs, NY 12866

Phone: 518-581-0078

Web site: www.farmland.org

The American Farmland Trust's Guide to Local Planning for Agriculture in New York is an excellent reference document for communities looking to develop legislation, implement policies and execute programs that keep farmers on their land and protect the environment.

Natural Resources Conservation Service (NRCS)

Ron Vanacore, District Conservationist

Academy Square

12 North Park Street

Seneca Falls, NY 13148-1422

Phone: 315-568-6346

NRCS administers technical and financial assistance programs including the Wetlands Reserve Program, Grassland Reserve Program, Conservation Reserve Program, Conservation Stewardship and Biomass Assistance Programs.

New York State Department of Environmental Conservation (NYS DEC)

NYSDEC Bureau of Wildlife

625 Broadway

Albany, NY 12233-4754

Phone: 518-402-8942

Web Site: www.dec.ny.gov/pubs/32891

NYS DEC administers the Grassland Landowner Incentive Program which targets habitat management for grassland birds through financial and technical assistance for private landowners.

Seneca County Cornell Cooperative Extension

308 Main Street Shop Center

Waterloo, NY 13165

Phone: 315-539-9251

Seneca County Cornell Cooperative Extension coordinates the Agricultural Districting Program and administers the New York State Department of Agriculture and Markets Farmland Protection Incentive Grant Program for the County.

Seneca County Soil and Water Conservation District (SWCD)

Phil Griswold, District Manager

Academy Square

12 North Park Street

Seneca Falls, NY 13148-1422

Phone: 315-568-4366

Website: senecacountyswcd.org

SWCD provides technical and financial support for conservation through many programs including the Agricultural Environmental Management Program.

U.S. Fish & Wildlife Service

Carl Schwartz, New York State Coordinator

3817 Luker Road

Cortland, NY 13045

Phone: 607-753-9334

The USF&WS administers the Partners for Fish and Wildlife Program which provides financial and technical assistance for habitat restoration for target species on private lands.



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Marion Balyszak, Finger Lakes Institute, Director

Shawn Bossard, Seneca County Cornell Cooperative Extension, Executive Director

Jim Eckler, New York State Department of Environmental Conservation Region 8, Wildlife Biologist

Fred Gaffney, Seneca County Chamber of Commerce, Executive Director

Phil Griswold, Seneca County Soil and Water Conservation District, District Manager

Harriet Haynes, Seneca County Department of Community Planning and Economic Development Planner

Tom Jasikoff, United States Fish and Wildlife Service, Montezuma National Wildlife Refuge, Refuge Manager

Brice June, New York State Department of Environmental Conservation Region 8, Private Lands Forester

Mike Liu USDA Forest Service, Finger Lakes National Forest, District Ranger

Zachary Odell, The Nature Conservancy, Director of Land Protection

Meg Schader, New York Agricultural Land Trust, Trustee

Lynn Schnurr, New York State Office of Parks, Recreation and Historic Preservation, Finger Lakes Region

Keith Tidball, Cayuga Watershed Network, Board Member and Cornell Department of Natural Resources

Ron Vanacore, USDA Natural Resources Conservation Service, District Conservationist

Andrew Zepp, Finger Lakes Land Trust, Executive Director

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END NOTES

- ⁱ Sprawl without Growth: The Upstate Paradox. 2003. Rolf Pendall. Brookings Institute Center on Urban and Metropolitan Policy Survey Series.
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- ^x Pers. Comm. Fred Gaffney, Executive Director, Seneca County Chamber of Commerce
- ^{xi} Ibid
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- ^{xvi} Robert Seem, Tyre Planning Board Chairman
- ^{xvii} Pers. Comm. Ron McGreevy, Tyre Town Planning Board Secretary

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The Finger Lakes Land Trust is a membership supported not-for-profit land conservation organization protecting those lands that define the character of the Finger Lakes region. Founded in 1989, the Land Trust works to conserve the beautiful, wild, and working landscapes of the 12-county region by establishing nature preserves and conservation areas which are open to the public, holding voluntary conservation easements on private lands, educating for responsible stewardship, and providing technical assistance to local governments and landowners.

Please consider becoming a member of the Finger Lakes Land Trust and supporting the Land Trust's efforts. If you are interested in learning more about the Land Trust or becoming a member visit www.fllt.org or call 607-275-9487.

