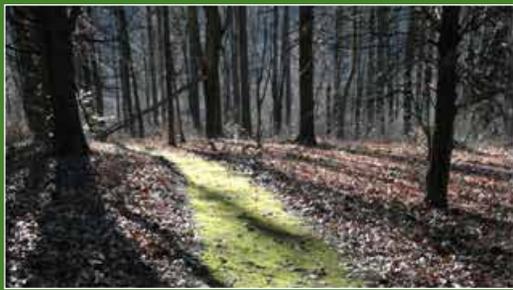




SUSTAINING PLACES



**A Guide to
Environmental
Planning in
Schuyler County**



This Guide is joint effort of Southern Tier Central Regional Planning and Development Board (STC), Schuyler County and our consultant team of Randall + West Planners. This innovative guide was funded by NYSERDA Cleaner Greener Phase II with matching funds supplied by STC and Schuyler County. The guide was pursued as an ongoing effort to engage our Schuyler County municipalities in better planning and better practice.

This guide is to serve as a tool to assist municipalities in making good land use decisions and to support the region's efforts in sustainable, environmentally friendly, smart development. As such, municipalities are encouraged to browse the guide and take from the recommendations. Municipalities can revise the provided model laws to meet their needs.

This guide is not your only resource for assistance. Municipalities within Schuyler County should know about the wealth of committees and agencies working on issues described in this guide. Schuyler County Planning Department is a great place to start when questions arise. STC also provides guidance, direction and technical assistances with a charter to serve all municipalities within Chemung, Schuyler, and Steuben counties. Lastly, other county and state agencies who can be helpful are: Schuyler County Soil and Water District, Schuyler County Environmental Management Council, New York State Department of State, Office of Planning and Development and New York State Department of Environmental Conservation.

The end result of these efforts will be better planned communities that are attractive locations to live, work, and play.

Chelsea Robertson
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INTRODUCTION

Why Environmental Planning?

Planning for the future means thinking as much about what is preserved as what is built. Development decisions influence where people choose to live, how (and if) they are able to get around, what activities are available to them, and how they interact and connect with the people and places around them.

Schuyler County's Countywide Comprehensive Plan,¹ amended and re-adopted in 2015, reflects a desire to retain the County's rural nature while also recognizing the need for growth, but doing so in a manner that is smart and healthy across our eight Towns and four Villages. A key issue identified in every Town and Village in the Countywide Comprehensive Plan is the desire to revitalize downtowns and hamlet centers with new housing and business development that works in concert with a rural, small town context.

This Guide to Environmental Planning examines the context of Schuyler County and the challenges its communities face. It covers land use, housing, farmland and natural resources, transportation and mobility as well as public health and tools for successfully engaging the public in these topics. The Appendices provide the enabling language for Comprehensive Plan and zoning amendments, and other model laws to help communities in Schuyler County retain their unique character and preserve rural landscapes while also attracting new growth and development.

Schuyler County's Rural and Small Town Context

Schuyler County is readily identified as a place of historic Main Streets, beautiful viewsheds, and vast acres of farmland and natural habitat. Growth often occurs at a slower pace in rural places; despite this, impacts can be significant. Because growth happens more slowly, trickling in across the Towns and Villages over time, changes are often not as noticeable and may not seem to warrant as much attention as high-profile development projects. Regardless of the type of growth allowed to occur, it eventually adds up.

Unmanaged growth can cut up the rural landscape, threatening not only the scenic countryside that defines this area, but the livelihood of agriculture, the primary industry in Schuyler County. Historic main streets and downtowns are also threatened if development casually sprawls out everywhere. Schuyler County residents highly value its natural resources and recreational opportunities; how these are protected, enhanced, and linked have a substantial impact on the desirability of living in this rural area.

Rural areas and small towns make up a significant majority of space in the United States even though they host only about 19% of the total population. In recent decades, technological advances have reduced the need for industrial labor, stymying population growth





Planning should build on the natural and cultural assets of Schuyler County and its unique communities.

in rural areas and small towns relative to urban areas. In these regions, productive use of land such as agriculture and forestry continues to be vitally important to the economic well-being of inhabitants.

Schuyler County is the second-least populated county in New York State. As such, it faces many of the same challenges as other rural communities around the country: development encroaching on working farmlands and picturesque landscapes, an aging population with increasing health problems, and slow or no population growth.

In addition, the County's local governments have widely varying levels of staff and technical capacity for policy coordination. About half of Schuyler County's municipalities have no zoning ordinance or site plan controls; a quarter of those municipalities have no Planning Board.

One tool in the fight against economic and population decline is the concept of rural smart growth, a planning principle that can improve both the local economy and environment. For rural communities the economy and environment are often deeply intertwined, given the importance of farming, forestry, and outdoor recreation.

The smart growth approach purposefully encourages development in pre-existing population centers and areas planned for water and sewer service in order to limit the spread of development into valuable farms and natural areas. Implementing the principles of smart growth can help create more dense and sustainable village and hamlet cores that conserve land and preserve the landscapes that are so valuable to rural communities. A compact community encourages and allows its citizens to use sustainable means of transportation such as walking or biking (along with shorter vehicle trips), helping limit air and water pollution that negatively affect

precious surrounding landscapes.

Smart growth can also have significant economic benefits and make fiscal sense for small towns and rural communities. Smart growth practices promote the development of attractive and livable spaces that can draw in new industries and diversify the local economy. Through investment in high-speed communication technology such as the optical fiber backbone, individuals and businesses today have a location choice other than large metropolitan areas. Rural communities seeking to actively attract innovation- and knowledge-based businesses as well as demographic segments of the population seeking a rural (yet connected) lifestyle can do so with reasonable regulations that enhance their existing village and hamlet centers.

Rural communities seeking to actively attract innovation- and knowledge-based businesses as well as demographic segments of the population seeking a rural (yet connected) lifestyle can do so with reasonable regulations that enhance their existing village and hamlet centers.

These village and hamlet centers allow communities to spend valuable tax resources more efficiently by encouraging development in areas with pre existing roads and utilities. This avoids the need for costly infrastructure expansions while getting the most out

of infrastructural investments that have already been made.

Placing homes in closer proximity to educational, business, recreational, and other vital facilities provide opportunities to get around in ways that are healthier and less pollutive than driving. It also provides mobility to those who may not be able to drive, encouraging a more inclusive and vibrant sense of community. Additionally, allowing a range of dwelling types for a variety of budgets, household sizes, and family structures provides a changing American population with much-needed housing choices.

Health is another major concern for rural communities. Less than half of Americans meet the Centers for Disease Control and Prevention's recommendation for physical activity. Enabling the revitalization of village

and hamlet centers – which are inherently compact, walkable, and bikeable communities – makes it easier for people to work physical activity into their daily lives. Putting a mix of uses close together lets people walk or bike to their daily destinations if they choose. That freedom is particularly important to those who cannot or do not drive: children, older adults, those who cannot afford a car, or those who simply prefer not to drive.

At a time when local governments are struggling financially, it makes strong budgetary sense to evaluate different forms of development in terms of their potential for revenue. As local governments derive most of their working capital in the form of property taxes, studies suggest that one of the best fiscal remedies for the future is enabling legislation for the revitalization of compact, mixed-use development in village and hamlet centers.

References

1. Schuylers County. *Countywide Comprehensive Plan* (2014). Available at <http://www.schuylerscounty.us/566/County-Wide-Comprehensive-Plan>.



LAND USE TOOLS

Control over community planning and development falls under municipal authority through implementation of zoning, comprehensive plans, site plan review, and subdivision standards. This authority is perhaps the most significant land use power delegated by the state to municipalities in order to protect the public health, safety, morals, and general welfare of its citizens. Zoning was upheld by the U.S. Supreme Court in the landmark case *Village of Euclid, Ohio v. Ambler Realty Co.* (272 U.S. 365) in 1926. Schuyler County also has some limited powers to help them to guide development and consumption of resources within county limits, but the authority for most binding land use and water quality decisions rests with its towns and villages.

The distinction between villages and towns is important. Villages are smaller municipalities within towns that often have their own governments. However, villages are also part of the surrounding town and their residents pay taxes to and receive services from both the village and the town. Villages typically offer more robust and targeted public services (such as water and sewer) than the surrounding town. Villages also determine their own zoning.

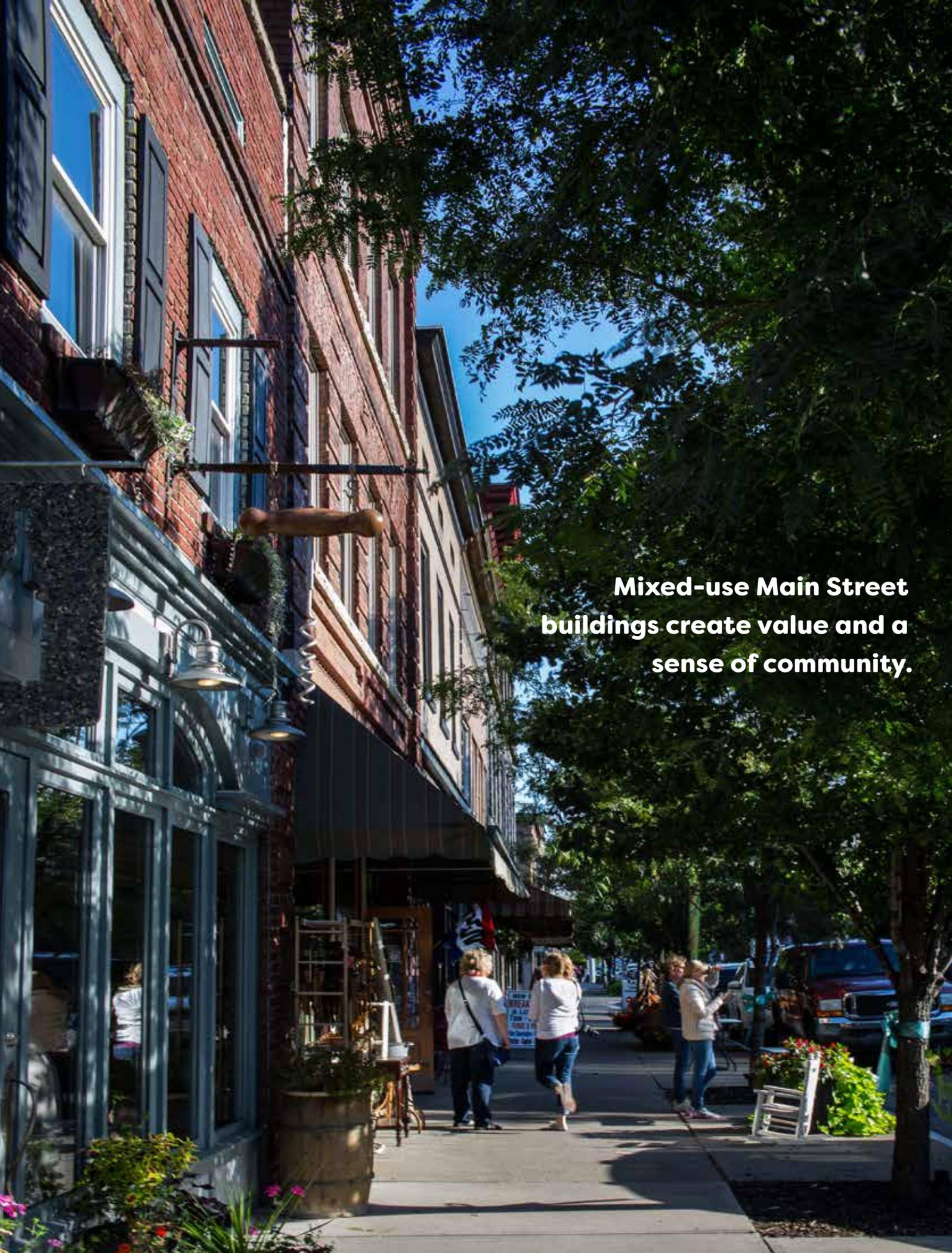
Comprehensive Plans

Comprehensive Plans outline the broad vision for the future of a community. A Comprehensive Plan should use citizen input to develop community goals that reflect the current conditions of a municipality, citizens' hopes for the future, and steps to accomplish the community's goals. A plan should be laid out formally by community decision makers and must be voted on by the local legislative body following a public hearing. That Comprehensive Plan, based on land analysis and achievable goals and objectives, is then the basis for setting the parameters and performance standards in Zoning and Site Plan review. Example Comprehensive Plan amendments to further these goals are located in the Appendix.

Zoning

Zoning should be implemented to reflect and accomplish the goals of the Comprehensive Plan. Zoning regulations may dictate the form, use, siting, and character of development on individual parcels of land. Though existing buildings and their uses are usually grandfathered, zoning dictates the shape and organization of future development to encourage the kind of growth the community would like to see while also preventing harmful patterns of growth. In general, all new construction, including expansions or renovations to existing structures, must conform to the regulations outlined in that local zoning law.

Zoning can also incentivize development on already-developed land, also known as infill development. This approach takes advantage of underutilized structures and existing infrastructure through zoning that encourages the adaptive reuse of buildings that are already standing. This approach is



**Mixed-use Main Street
buildings create value and a
sense of community.**

particularly useful for villages when paired with an economic development strategy, such as the Commercial District Improvement Strategy prepared for the Villages of Odessa and Burdett commissioned by the Schuyler County Partnership for Economic Development (SCOPED).

Failing to implement smart zoning practices can be costly in both the short term and the long term. Smart growth in rural areas provides significant savings on the construction of new infrastructure as well as savings of up to 75 to 80 percent on services.¹ More compact road networks (and less of them) mean fewer taxpayer dollars spent on maintenance and less infrastructure to maintain indefinitely. In addition to acting as stewards of rural character, studies show that farms generate significantly more tax revenue than they require in services, despite the fact that farms are subject to reduced tax assessments. Farms help to offset the heavy tax spending that comes with residential development by requiring a significantly smaller amount of services and creating employment.

Areas that hold particular cultural or natural importance or sensitivity can become protected by a zoning overlay district. Within a place covered by an overlay district, an area maintains its underlying zoning designation while taking on an extra layer of regulation intended to protect the unique or sensitive qualities of the area, such as a historic district, scenic view, wetland, or anything else deserving careful regulation.

Example Zoning amendments to further these goals are located in the Appendix.

Subdivision of Land

Subdivision regulation controls the ways in which land can be divided into smaller parcels. Regulation is necessary to ensure that the division of land parcels for development can always be matched with adequate infrastructure such as streets, open space and utilities. Some examples of subdivision regulation include: distinction between major and minor subdivision; timeline for subdivision of land; a three-stage process for review; and the municipality's right to charge the applicant for expenses incurred as a result of retaining outside consultants.

Subdivision regulations may be implemented separately from municipal zoning, and can even stand alone without zoning. Either way, subdivision regulation can be an effective way to execute the goals of the Comprehensive Plan. Principles that are often important in subdivision regulation and review include:

- Preservation of natural features, trees, and vegetation
- Conservation of imperiled species, ecological communities, and unique natural areas Agricultural land conservation
- Floodplain avoidance
- Minimization of the creation of impervious areas / encourage permeable surfaces
- Limiting parking footprint to no more than 20% of the total development footprint area for all new off-street surface parking facilities, with no individual surface parking lot larger than 2 acres

- Pre-construction, construction, and post-construction Site protections to minimize erosion and runoff (retaining vegetation, sediment fencing, etc.)
- Requiring clustered or conservation subdivision

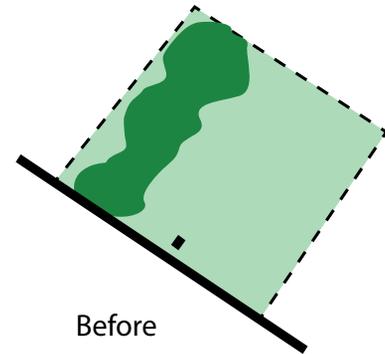
Under Section 278 of New York State Town Law (and Section 7-738 of Village Law), towns and villages can mandate clustered subdivisions that group lots closer together than in conventional subdivisions in order to preserve open space without changing the number of development units. This is an extremely powerful (and underused) tool to mandate increased density and maintain open space that may have value going to other sustainable uses. Clustered subdivisions also allow a municipality to allocate infrastructural resources and services more efficiently, while simultaneously promoting a sense of community. Municipalities may choose to implement applicable parts of the LEED for Neighborhood Development Standard² as a measure of performance for clustered subdivisions as well as infill development.

An example Conservation Subdivision is linked in the Model Laws in the Appendix.

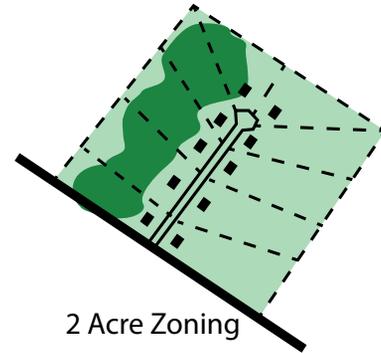
Site Plan Review

Site plan review is a tool (often included in zoning) that allows a municipality to review the layout and design of the development of a single parcel of land. Site plan review is indispensable as a method of looking at development on a case by case basis to evaluate a parcel of land's idiosyncratic qualities or the proposed development's application of intent promoted in zoning law and comprehensive plans. Some examples of such intent may include:

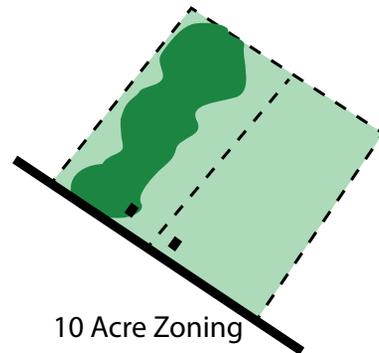
- Promoting environmental sustainability in new development and redevelopment
- Preserving and enhancing neighborhood character
- Achieving compatibility with adjacent development and uses
- Improving the design, function, aesthetics, and safety of development projects and the overall visual and aesthetic quality of the town/village/hamlet
- Mitigating potentially negative impacts on drainage and the landscape
- Removing or reducing minimum parking requirements, reducing the size of parking spaces, and developing parking lot design standards that include grass



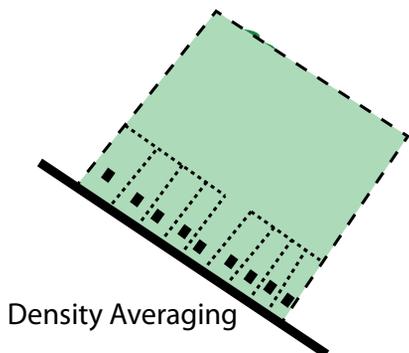
Before



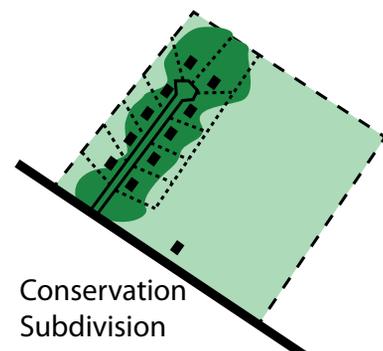
2 Acre Zoning



10 Acre Zoning



Density Averaging



Conservation
Subdivision

areas, filter strips, bioswales, and other types of biofilters for capturing runoff

- Encouraging creative shared parking options between uses with non-competing peak use periods
- Limited site plan reviews for small projects can be conducted at an administrative level by a staff planner or zoning code administrator or code officer
- Site plan approvals may be conditional on other permits and approvals, such as Schuyler County Watershed Protection Agency permitting or Stormwater Pollution Prevention Plans (SWPPP)

Site Plans should display both the existing and proposed features of a land parcel. This includes topography, vegetation, drainage, floodplains, marshes, wetlands, and waterways; open spaces, walkways, means of ingress and egress, utility services, landscaping, structures and signs, lighting and screening devices. Site plans should also show building plans and elevations with planned materials and anything else that might concern the local planning board when approving a site plan.

Land Use Planning in Schuyler County

	Municipality	Comp Plan	Zoning Ordinance	Subdivision Regulations	Site Plan Review	Planning Board
Catharine	Towns	Yes	Yes	Yes	Yes*	Yes
Cayuta		No	No	No	No	No
Dix		Yes	Yes	Yes	Yes	Yes
Hector		Yes	No	No	No	No
Montour		Yes	Yes	Yes	Yes	Yes
Orange		Yes	No	No	No	Yes
Reading		Yes	No**	Yes*	Yes	Yes
Tyrone		Yes	No	Yes	Yes	Yes
Burdett	Villages	Yes	No	No	No	Yes
Montour Falls		Yes	Yes	Yes	Yes	Yes
Odessa		No	Yes	Yes*	Yes	Yes
Watkins Glen		Yes	Yes	No	Yes	Yes

* in progress

** Land Use Law in effect

SITE PLAN REVIEW CRITERIA

- Location, arrangement, size, design and general site compatibility of buildings, lighting and signs.
- Adequacy and arrangement of vehicular and bicycle traffic access and circulation, including intersections, road widths, pavement surfaces, dividers and traffic controls.
- Location, arrangement, and appearance of off-street parking and loading.
- Adequacy and arrangement of pedestrian traffic access and circulation, walkway structures, and bicycle storage.
- Adequacy of stormwater and drainage facilities, including their landscape elements, such as grass areas, filter strips, and bioswales.
- Adequacy of water supply and wastewater disposal facilities.
- Adequacy, type and arrangement of trees, shrubs and other landscaping constituting a visual buffer between the applicant's and adjoining lands, including the maximum retention of existing vegetation.
- Adequacy of walls or other materials with substantive mass acting as a noise buffer between the applicant's and adjoining lands.
- Adequacy of fire lanes and other emergency zones and the provision of fire hydrants where feasible.
- Special attention to the adequacy and impact of structures, roadways and landscaping in areas with susceptibility to ponding, flooding and/or erosion.
- Preservation of open space, natural features, vegetation and trees.
- Live plant materials and maintenance schedule, including protection of existing mature vegetation, especially trees over twelve inches DBH (diameter-breast-height).
- Minimization of impervious surfaces and the use of permeable materials such as porous asphalt and structural soil.
- Plan compliance with New York Standards and Specifications for Erosion and Sediment Control especially Appendix G – Sample Checklist for reviewing Erosion & Sediment Control Plans
- Construction plan, including haul route, staging area, and stormwater management plan.

References

1. Smart Growth America. *Building Better Budgets: A National Examination of the Fiscal Benefits of Smart Growth Development* (May 2013). Available at <https://www.smartgrowthamerica.org/app/legacy/documents/building-better-budgets.pdf>
2. U.S. Green Building Council, Inc. *LEED Reference Guide for Neighborhood Development*, 2009 Edition (Updated July 2014). Available at: http://www.usgbc.org/sites/default/files/LEED%202009%20RS_ND_07.01.14_current%20version.pdf

PLANNING AND DEVELOPMENT

Traditional Village design principles can be used to reinforce a sense of place, to ensure that any new development improves a community rather than detract from it, and to create and enhance places that people will care about and invest in for decades into the future. While some communities develop stringent design standards or guidelines controlling a wide breadth of stylistic and architectural elements,¹ the most important parts of traditional village urban design can be implemented in a straightforward way that does not impinge on property owner's personal sense of style and expression while still supporting an attractive and functional public realm for the community.

Communities are best developed incrementally and are intended to change and grow over time. Communities often started with inexpensive and quickly-built log or wood frame buildings and over time the neighborhood and village centers were improved with larger, more expensive and more durable buildings and the neighborhoods in walkable proximity were frequently redeveloped into more efficient housing as demand increased. During the late 1800's and early 1900's redevelopment of larger and more durable buildings was commonly the result of frequent fires that were much more common when buildings were lit and heated with gas, oil, coal, wood, and candles.

Most traditional villages and hamlets in Schuyler County were built before zoning was in place and many of the elements that are vital to creating and supporting the traditional community form were outlawed when zoning was adopted. At that time, those traditional building forms were considered dated and out of style in the early and mid-20th century. Yet the traditional design principles that created Schuyler County's population centers are experiencing a resurgence – and it is within the power of local governments to amend their regulations to match their vision. Many municipalities have outdated zoning regulations that inhibit rather than encourage sustainable historic core redevelopment. To move forward in the push for more vibrant, sustainable neighborhoods, municipalities must be sure that regulation facilitates what can at first be an uphill battle to increase density.





Schuyler County's walkable neighborhoods are positioned to attract millennials and retirees over the next decade if the walkable amenities in village and hamlet centers are developed well.

Traditional design principles start with defining different place types in a community. Development within each type of place should support the context of that type of place. The types of places most often found in traditional villages, hamlets and towns range on a spectrum from natural open space, working agricultural lands, village edge neighborhoods, general village neighborhoods and village centers. Regional centers – such as Watkins

to be easily maintained on the ground floor along the sidewalk.

Following this simple traditional pattern architects and owners can execute designs in a wide variety of styles, materials and price points while still contributing to the traditional main street/village center context.



Each of the traditional place types can be created or supported using a few simple traditional design elements.

Glen – serve an area much larger than just the municipality and have a greater density of jobs, amenities, housing units and people. In addition to these traditional mixed-use place types, Schuyler County also includes some modern single-use place types including auto-oriented big box or strip retail, industrial districts, auto-oriented office districts and auto-oriented residential subdivisions and apartment complexes outside of the walkable village or hamlet context.

For example, the design elements of a traditional main street or village center include buildings with front doors on the sidewalk, buildings that are generally deep and narrow, many buildings close together along each block, and minimal curb cuts or street fronting off-street parking lots.

Traditional Main Street buildings are generally 2-4 stories in height, creating space above ground-floor businesses for offices and apartments and creating a sense of enclosure or an “outdoor room” in the public space, the street and sidewalks, between buildings. Traditional main street or village center buildings generally have a large proportion of the ground floor dedicated to large windows and smaller, vertically-oriented windows on upper floors, and generally use materials that are durable enough

Architectural and Design Guidelines

Until the 20th century, architectural design guidelines were largely unnecessary. Architects were trained to create buildings in harmony with the built environment; designs were largely coherent with their surroundings through styles, materials, craftsmanship, and careful proportions.²

As new materials technologies emerged, modern architects began designing structures to showcase their own individual aesthetic, regardless of the building’s harmony with its context or environment. Economic pressures, speculative development, and other changes led to a decline in the attention to aesthetics and historic continuity in buildings. Old buildings in traditional village and hamlet centers fell out of favor as suburban development sprouted in farm fields.

Attention to materials is another essential element of creating visual harmony in a streetscape or neighborhood. Historic structures are often built out of specific variations of wood, brick or stone. Buildings do not necessarily have to be built out of the same materials as those

around them, and slight variations in material can create a pleasant diversity in a streetscape.

The relationship between a building and the street is vitally important. The street is a building's opening into the public world, and the relationship between street and structure can define that structure's relationship to the public realm. Given the importance of this relationship, there are certain guidelines for the form of buildings that can push individual buildings to maximally contribute to a healthy neighborhood.

The historic or traditional way of building that characterized most buildings constructed before the World War II – including many in Schuyler County – can be understood more clearly through a set of principles or standards that guided the design process.

Revitalizing Village and Town Centers

Despite years of disrepair and underutilization, village and hamlet centers are experiencing a comeback thanks to a range of economic, demographic, and environmental conditions.³ Redeveloping historic town centers for compact neighborhood development uses land and

infrastructure efficiently. This reduces inefficient and unsustainable sprawl and low-density development in undeveloped wildlife habitats and farmlands. Meanwhile, residents reap the benefits of shortened commutes, alternative transportation options such as walking and biking, and vibrant and diverse neighborhood communities.⁴

Compact neighborhoods encourage a healthier and more interconnected lifestyle while cutting carbon emissions and preventing inefficient use of other resources. Public features such as sidewalks, trails, minimized parking area, public plantings and parks complimented with a diversity of land use and pedestrian-friendly building facades encourage a lively and interactive community.

A diversity of housing types within a compact community can accommodate a diversity of incomes, ages and physical abilities within a single community. This also ensures that families will not be displaced when their circumstances change.

The decline in town centers that occurred in the second half of the twentieth century has had particularly grave effects on the upper floors of downtown buildings. With sprawl moving



Many Schuyler County villages and hamlets have great bones in a strong walkable center that can be revitalized with minimal investment.

businesses and manufacturing into formerly rural areas, demand for older, higher density space in town and village centers declined across the Southern Tier. While owners of historic structures are often able to rent out first floor spaces due to their street frontage, the demand for upper floor spaces dropped particularly low in upstate New York due to a pattern of sprawl without growth.⁵

Today, in many cases, downtown vacancy and lack of investment has led to declining building conditions, demolitions, and low walkability. In areas without resurging downtown neighborhoods, conditions are particularly poor because of the lack of renter demand.

For many types of people including young professionals, empty nesters, and retirees, downtowns are becoming attractive living spaces for their walkability and overall convenience. Living space in downtown areas is proximal to restaurants, shopping, nightlife, entertainment, and cultural resources. Redeveloped upper floors in downtowns can be creatively adapted into interesting new living spaces. Because of this new demand for urban living in small communities, investment potential in downtowns is becoming increasingly appealing.

Stormwater Management

One of the most serious concerns for Schuyler County is the forecasted increase in incidents of flooding. Because runoff from heavy rains will go somewhere in the area, it is important to maintain drainage ways, natural stream channels, and floodplains in order to make room for water and help Schuyler County communities avoid flood damage.

The ability for high flows to spread out on the floodplain should be maintained so that downstream flooding is not made worse. Projects that utilize natural stream design or other techniques to stabilize stream channels and streambanks can protect property and reduce ongoing maintenance expenses.

Construction activity increases soil sedimentation and erosion a great deal, and pollutants commonly discharged during construction sites include phosphorus and nitrogen, pesticides, oil and grease, and leftovers from concrete truck washouts.

Thus, requiring developers to think about stormwater protections results in better site planning and lessens the likelihood of problems that need to be mitigated by the municipality or other property owners.

Construction chemicals and debris

Residential and commercial construction greater than 1 acre needs a SPDES General Permit (GP-02-01) from the New York State Department of Environmental Conservation. Stormwater runoff from all development sites should be managed to protect against erosion, sediment, drainage, and flooding problems. Purchasers of individual lots can refer to the “Erosion and Sediment Control Plan For Small Homesite Construction” for more information.

A “Larger common plan of development or sale” requires a SPDES General Permit. A larger common plan describes a situation in which multiple construction activities are occurring, or will occur, on a contiguous area.

For individual construction projects located within a larger common plan at least 1/4 mile part, each project can be treated as a separate plan of development or sale – as long as any interconnecting road, pipeline, or utility project that is part of the same common plan is not also being disturbed.

Guidance is available through the Specifications for Erosion and Sediment manual, known as ‘The Blue Book,’ which is used by site developers in preparing their erosion and sediment control plans and by local municipalities in preparing and implementing their soil erosion and sediment control programs. It includes a number of excellent models, including an Erosion and Sediment Control Plan for Small Homesite Construction, an Example Erosion and Sediment Control Plan, and a Sample Checklist for Code Enforcement Officers reviewing Erosion & Sediment Control Plans.

The Rural Stormwater Coalition (made up of Southern Tier Central Regional Planning, DEC, Chemung, Schuyler, and Steuben County agencies and municipalities) leverages funding through grants to create and distribute educational materials and conduct a variety of training

UPPER FLOOR REVITALIZATION

After years of neglect, upper floors of village and hamlet buildings can become very expensive to renovate. Municipalities compound the problem by making redevelopment more difficult, often through unintentionally strict zoning regulations. These are buildings (often historic) with tremendous intrinsic value that have been standing and functioning for over a hundred years, but are technically unusable according to current building codes.

Fortunately, the walkability and historic charm of Schuyler County's downtowns are unique assets that can not easily be mimicked in suburban neighborhoods. Two-to-four-story late 19th-early 20th century buildings with unique architectural details mark many traditional downtowns with a unique charm. Below are two key resources for municipalities seeking to take advantage of renewed interest in mixed use and historic neighborhoods by both residents and visitors.

Residential-Commercial Tax Exemption

New York State allows local governments to provide property tax relief for projects that convert older commercial properties into mixed-use structures under the Section 485-a Real Property Tax Law exemption. After a qualifying project is completed, owners continue to pay taxes on the pre-renovation value of the property for a period of eight years.

Then, between years nine and 12, the assessed value of the property gradually rises to its full market value, giving the property owner time to stabilize tenancy in the building. Any town or village in Schuyler County can enable this by passing a local law. The Schuyler County legislature enacted a law permitting this tax relief in 2006.

Guidebook for Revitalizing Downtown Buildings

The Genesee/Finger Lakes Regional Planning Council in partnership with the Preservation League of New York State (PLNYS) created *Upper Floor Reuse: A Guidebook for Revitalizing Downtown Buildings* in 2015 for the Village of Palmyra.

This Guidebook provides robust guidance on the New York State Existing Building Code and paths to compliance for bringing old buildings back to life as well as a host of financial resources and tax credits available.

The Guidebook is available at <http://www.preservenys.org/uploads/3/1/6/2/31626961/upperfloorsguidebook.pdf>



General Village Neighborhood Character Elements

2-12' Front Setbacks



Small Scale Buildings - Frequent Rhythm Strong Streetwall



Diversity of Buildings: Single Family, Duplex, Small Apartment



Village Edge Neighborhood Character Elements

20-30' or Greater Front Setbacks



Wide lots, homes spaced far apart

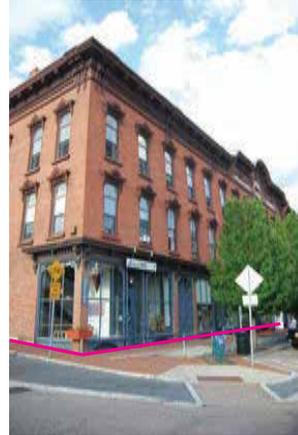


Lacking Strong Streetwall



Village Center Character Elements

Building Fronts Meet the Sidewalk
Buildings Fill Corners
Streetwall Creates Outdoor Room



Human Scale Detail



Rhythm on the Street: Frequent Entries Facing Sidewalk
Narrow and Deep Buildings



programs for code enforcement officers, planning boards, zoning boards, highway departments, contractors, and the general public.

Light Pollution

Light pollution is light that is not being used efficiently, resulting in wasted energy. Light pollution can arise from lights that have no useful purpose or inefficient light sources such as incandescent lamps. Light pollution is an extremely costly waste of resources. To minimize light pollution, local governments can include simple outdoor lighting standards to help prevent problems such as glare, light trespass, visual clutter, and artificial sky glow.

Glare is an intense, blinding light that reduces visibility and comfort. Glare is not desirable or necessary for any night time uses but is sometimes confused for adequate lighting.

Light trespass is the existence of light where it is not necessary or desired and is sometimes intrusive. Stray light from light sources intended to illuminate a street or parking lot may spill into yards or even interior rooms it was not intended to light. Light trespass creates glare, wastes light and energy and can potentially inhibit privacy.

Visual clutter and confusion can be created if there are too many lights that are too bright. One common example of this is lit signage that, if too bright and numerous, can overwhelm the onlooker and confuse a pedestrian or driver. Clutter is a form of visual pollution that can distract or upset the individual.

Artificial Sky Glow occurs mostly due to inefficient lighting that illuminates the night sky unintentionally. Artificial sky glow appears more in areas with concentrated amounts of wasted light resulting in a night sky in which only the moon and a few bright stars can be seen. While this is largely an urban issue, large rural commercial or agricultural developments with inappropriate lighting can also create this problem.

The Regulation of Light

Outdoor Lighting controls can be included in zoning to restrict lighting types, when they can be used, and other concerns related to light pollution. Lighting should be shielded to prevent light trespass and kept to a minimum to prevent glare or energy waste. Lights should also shut off when they are

not necessary. However, lighting ordinances should also consider necessary compromises in situations affecting the safety and security of an individual's property. Modern lighting ordinances usually balances a number of common provisions in order to accomplish these goals.

Lighting zones can accompany land use zones, dividing an area into subsections that relate the the zoning with lighting that is necessary and permissible for that zone. Factors that influence the division of lighting zones include population density and ambient lighting levels. These regulations can be put in place in hopes of reversing a trend in the general public to accept unnecessarily large amounts of night lighting as a norm. Shielding fixtures direct light to the place it is needed and enhance performance, reducing inefficient light use and cutting down on light trespass.

Site Lighting

New developments and redevelopments should include a lighting plan to serve multiple purposes, including good vehicular and pedestrian visibility, safety and security, illumination of activity area, and accent lighting for architectural features and landscaping. Glare and spillage of light into adjacent properties should be avoided.

All new developments and redevelopments should submit plans that show cut-off fixtures that shield adjacent residential neighborhoods and control the direction of light.

The light source is encouraged to be metal halide in areas where light cycling (turning on/off) is minimal, as they have a long warm-up period. LEDs are another reasonable option as they very efficient and can be directed downwards to provide both better lighting and less light pollution. Low noise level lights should be used, especially adjacent to residential areas.

Pedestrian level lighting should be provided along the corridor as well as along pedestrian walkways and links. The light source for all luminaires should not be visible.

Wall packs mounted on buildings should down-light and/or be used as a wall wash only. Incorporate shields so that lamping for wall packs is not visible. Floodlights and spotlights shall not be used for general lighting purposes. All wiring for new site lighting should be underground.

Maximum illuminance shall not exceed 0 foot candles (as measured on a vertical plane) at the property line between new commercial or multi-family development or redevelopments and residential properties. At the property line between new commercial or multi-family developments or redevelopments and existing commercial properties or multi-family developments the illumination shall not exceed 0.5 foot candles as measured at grade. New lighting shall avoid nuisance to neighborhood properties and shall not have adverse effect on the character of the area.

Energy efficiency and renewable energy

Monitoring building practices is one of the most effective measures a municipality can take to promote sustainability.⁶ Buildings account for 39% of the total energy consumption in the United States. In order to limit building-related pollution, it is important to maximize energy efficiency, as energy consumption is likely the largest polluting factor in modern buildings.

Electrical, lighting, HVAC and other building systems can all be designed and optimized to reduce the total energy consumption for buildings dramatically. The first step for municipalities is to benchmark energy performance of municipally-owned buildings to improve building operations and save money. NYSERDA's new Clean Energy Communities Program offers training and incentives; more information is available at <https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Communities/Action-Items> and in Section 7 of this Guide: Measuring Sustainability.

District heating and cooling systems are an example of neighborhood-scale infrastructure that can improve energy efficiency as large plants are typically more efficient than individual equipment at each building. District systems can also take advantage of waste heat from on-site energy generation, improving efficiency.

Micropower generation (sometimes referred to as microgrids) is another energy management strategy for either individual buildings or neighborhood-scale installations. These systems reduce transmission losses, and they may increase power reliability and decrease energy costs by supplementing or replacing utility-supplied electricity. Solar orientation also reduces energy consumption in buildings through passive or active systems.

Solar photovoltaic systems can be scaled up to the size of large solar farms, or individuals and businesses can install on-site systems at a discount through programs like Solar Schuyler.

Buildings also pollute through the large amounts of construction and demolition waste. This can be minimized with the adaptive reuse of existing buildings and their materials. This also cuts down on the extraction, manufacture, and transportation of materials that can also be costly. Reuse also slows the amount of material going into landfills and reduce the cost of construction, overall.

Builders can also use materials made with recycled content. Many basic construction products made from waste materials that would otherwise go to landfills are readily available at little to no additional cost. This also limits the environmentally costly processes of raw material extraction and transportation and landfilling.

New developments in building practices can help to reduce the volume, velocity, temperature and pollutant content of stormwater runoff. By taking steps in the design process to improve stormwater runoff, designers and builders can prevent harmful conventional building practices that alter watershed hydrology and damage local resources and ecosystems.

Another common consequence of conventional building practices is the 'heat island effect.' Because of the extensive use of dark, nonreflective materials for horizontal surfaces, sunlight absorption can make paved areas (like large surface parking lots) more than 10 degrees F hotter than undeveloped areas. This increases the amount of electricity consumption and HVAC systems necessary to cool buildings in summer causing environmental and economic inefficiency. It can also have negative impacts on plant and animal life that cannot handle the increase in heat and air pollution.

Green technology in building can also help to conserve water use. Low-flow plumbing fixtures and waterless urinals can reduce potable water consumption. The reuse of wastewater for landscape maintenance as well as careful plant selection for landscape design can significantly reduce outdoor water use. This reduces the amount of water drawn from the natural water cycle, minimizing damage to the permanent water supply for future generations.

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TRANSPORTATION AND MOBILITY

Rural and small town road networks face a number of serious problems due to the lack of ‘complete’ streets – that is, streets that include accommodation for all users: people walking, biking, driving, taking transit, and transporting freight. A majority of traffic fatalities in the United States occur in rural communities despite the fact that these communities are home to only 23% of the population.¹

High speed limits and insufficient accommodations for pedestrians increase the risk of deadly crashes. Rural communities have higher concentrations of older adults and low-income citizens, both of whom are less likely to own cars than the average American citizen. However, there are seldom convenient transportation alternatives available for these groups.

Separation between different uses, automobile dominance, lack of walking options, and development patterns that favor auto-dependent (rather than the traditional auto-optional) residential and commercial development make it harder for older adults and those with disabilities to get around. The 2010 US Census data shows the number seniors is increasing faster than younger populations, raising the nation’s median age from 35.3 in 2000 to 37.2 in 2010. New York is even older with a median age of 38, and Schuyler County is even older than that with a median age of 44.2.² Compared to the rest of the state and nation, Schuyler County is also aging faster as indicated by 5.4 years increase in the median age from 2000 to 2010. These demographic trends have implications for both senior housing and transportation and mobility in Schuyler County.

To support those who cannot drive or do not own cars, local governments can improve access to basic needs by enhancing public transportation, social service vanpools, carpooling, and ridesharing. Demand for public transportation and ridership has increased markedly in rural communities within the last two decades. Because public transportation can rarely provide door to door service, it is also important to enhance sidewalks, bicycle paths, and other tools that maximize accessibility and safety for all citizens of a community.

Enhancing walking and biking options in the community can also have wide reaching health benefits for children. Children living in rural communities are at an increased risk of obesity and related disease. Creating roads where children can safely and comfortably walk and bike helps work against this trend.

Main streets are important economic, social, and cultural centers for small communities. Often these main streets are controlled by the New York State Department of Transportation (NYSDOT). In the past, these main streets were widened or modified to increase travel speeds, in many cases curbside parking was removed to make room for wider driving lanes, increasing average driving





Supporting a network with a variety of transportation options is important to provide access to jobs, services, recreation, health care, and community for all people.

speeds and making it less safe and comfortable to walk or bike on these streets, and unfortunately also making streets more dangerous for people driving cars.

This conversion of local roads into a highway format has had a negative impact on the safety and economic well-being of local communities. In response, Complete Streets Act (Chapter 398, Laws of New York) was signed into law on August 15, 2011. This act requires state, county, and local agencies to consider the convenience and mobility of all users when developing transportation projects that receive state and federal funding. Around the state communities are adopting local Complete Streets ordinances that require consideration of these same attributes for local projects including enforcement mechanisms such as requiring a formal written explanation any time a road is built or improved if the road is not a complete street design, or requiring a set-aside in local capital budgets for pedestrian

and bike-focused safety improvements.

A Complete Street is a roadway planned and designed to consider the safe, convenient access and mobility of all roadway users of all ages and abilities, including pedestrians, bicyclists, public transportation riders, and motorists. The NYSDOT is now working to ensure that its policies and procedures meet the new standards. The law presents an opportunity to expand upon existing programs and collaborate with people who get around by bike, people who walk for transportation, people with disabilities, and seniors to identify best practices and designs for transportation facilities. It is important that the local community is able to express its need for complete streets to the state level to create spaces that are safer, more accessible, and more attractive.

Planning focused on place types and regional patterns of centers and green spaces can:

- strengthen existing village, or hamlet, centers and neighborhoods;
- transform suburban strips or subdivisions into a more walkable, mixed-use neighborhood; and
- preserve continuous natural and agricultural greenspaces.

Before the post-WWII era, urban development was largely focused around the pedestrian, creating compact, walkable neighborhoods that included a majority of the shops and services a person might need in a day within each neighborhood, embedded themselves in nature and preserved most of the natural landscape around them. With the car came a shift to segregated single use neighborhoods: large commercial strips along major thoroughfares surrounded by sprawling single family neighborhoods and large apartment complexes areas. The result was low value development, inefficient taxation, excessive resource consumption, and destruction of the natural landscape. A return to more walkable neighborhoods serves the dual purpose of creating accessibility within the community and preservation and sustainability outside of it.

To build compact, connected communities surrounded by protected and preserved farmland and open space:

- Reinforce existing centers and main streets with new infill buildings and redevelopment;
- Mix uses to promote walking from housing to stores, jobs, parks, schools and civic uses;
- Connect major centers with transit services and other transportation options;
- Locally identify priority growth areas for close-in expansion and conversion of strip districts or subdivisions into new centers.
- Employ a range of protection measures for farmland and natural wildlife areas;
- Adopt policies that support agriculture and rural uses, not suburban residential zoning;
- Plan for continuous greenspace systems, rather than just parcel-based solutions;
- Locally identify priority greenspaces for future

public or private conservation.

Reducing the prevalence of strip commercial zones can be a real challenge for local governments. Many people appreciate strip malls for their large, discount stores and convenience with a car. To maintain the appealing aspects of the strip district without allowing it to divide the community and create sprawl, a few specific steps can be taken.

First, limit further development along highways and restrict current districts to ½ mile in length. Instead, channel growth into the streets behind the commercial strip allowing the center of commerce to grow into a neighborhood rather than expanding down a line. Driving down a strip should be simplified to limit left turns and reduce the number of curb cuts by consolidating parking lots into shared lots accessible from only one or two entrances. These measures reduce the congestion and danger along the strip and begin to open up the potential to establish alternative means of transportation in the area.

Zoning should lead buildings to gradually build up to the curb, with entrances directly on public sidewalks for maximum accessibility. This development will reduce the amount of exposed parking in strip centers along with new landscaping and the establishment of better sidewalks and crosswalks for a complete streetscape. Zoning should also allow for a mix of housing and commercial, converting the neighborhood into a walkable environment where commerce and residential are intertwined with one another.

In many cases, rural roads are being overhauled to meet road standards established in suburbs. This entails widening lanes, destroying vegetation and increasing speed limits. Instead rural roads should be held to unique standards for maximum utility and sightliness.³

Road width should be as narrow as possible except on streets with significant truck traffic. Curbing should be replaced with natural drainage systems and grading and clearing should be limited to the absolute minimum. Access points should be reduced through the encouragement of shared driveways as to improve safety and attractiveness. Natural roadside features like walls or tree lining should be maintained and local scenic roads designations should be established to ensure long term protection. Porous paving or chip seal might be used instead of asphalt and wooden or box beam guides can replace standard galvanized models.

PLANNING CHECKLIST FOR COMPLETE STREETS

Blocks / Alleys	<ul style="list-style-type: none"> All lots should front a street No block should exceed 400 feet without a midblock alley, access easement, or pedestrian pathway. Alleys should provide access to the rear of all lots (Alley dedication is required on interior lots where an alley cannot be included with construction.) Curb cuts should be limited to one every 200 feet along main streets
Buildings	<ul style="list-style-type: none"> All building facades along a street frontage should include a primary entrance on the street. Building facades on opposite sides of a street should follow the same building envelope standards.
Streetscape	<ul style="list-style-type: none"> Street trees should be required along both sides of all streets. Pedestrian scale (less than 15' tall) streetlights should be required along both sides of all streets in village and hamlet centers, spaced 60 feet on center.
Parking	<ul style="list-style-type: none"> Off-street Minimum Parking Requirements are an ineffective method of managing parking supply and demand, essentially requiring a constant parking surplus and stimulating demand for driving and parking at the expense of other land uses and other transportation options On-street parking should be created, preserved, or restored on both sides of all village and hamlet centers On street parking utilization should be tracked; optimal utilization is around 80-85%, which results in approximately one available space per block Where on-street parking utilization exceeds 85%, market-based pricing should be used to allocate spaces, the price should be adjusted to maintain 80-85% occupancy Off-street parking should be prohibited on corner lots Off-street parking should only be allowed behind or to the side of buildings, not between buildings and the sidewalk
Retail	<ul style="list-style-type: none"> The ground floor of village and hamlet main street buildings should be occupied by retail uses The ground floor of hamlet center and neighborhood center streets may be occupied retail uses; residential and office uses may be included as well. The ground floor of neighborhood sites may not include retail uses, except on corners where retail or office uses less than 2,000 sqft should be allowed. Some business uses should require a use permit (e.g., nightclubs, self-storage, automobile service stations).
Historic Preservation	<ul style="list-style-type: none"> Traditional character (that is, almost all development before 1950) is generally better at creating a people friendly street and public space and should be preserved as much as possible. Historic structures and historic facade preservation and reuse should be encouraged, they should be exempted from any parking requirements, some streetscape requirements, and building envelope standards should be modified in order to preserve historic character. Streamlined approvals for projects preserving historic structures or facades, fee reductions, and flexible use requirements can all help incentivize reuse rather than demolition

Walkability, visitability, accessibility

In villages and hamlets, streets should be as narrow as possible, with short setbacks to allow buildings to come up to sidewalks, street trees, and other pedestrian friendly features. Narrow lanes and street trees tend to slow down drivers, both reducing the severity of crashes and allowing passers-by to see what's happening in town. Narrow streets also shorten crosswalks, reduce stormwater runoff, and generally use fewer materials and land.

For an urban center to be successful, people must feel comfortable walking around. Almost everyone, including drivers, must get out and walk to conduct almost any kind of business. Finding a balance between walking and driving is essential for any urban environment. On-street parking should be encouraged and time-limited, both to encourage parking turnover and to create a buffer for pedestrians. Shop owners should consider parking their own vehicles behind their buildings, as frequent turnover of parking spots in front of stores generates higher revenues for businesses.

To establish walkability, decision makers can look at the streets directly, taking photos and videos and analyzing traffic. They should also observe and talk to seniors and children about the ability and convenience of walking around. By mapping all pedestrian features, one can analyze the extent to which pedestrians are accommodated by existing infrastructure. If changes need to be made then public officials should plan meetings with business owners and the general public to establish goals that fit everyone's needs.

Sidewalk Design

- 5-foot minimum width (6-foot wide better); 8 to 15 feet in main street commercial areas.
- 7-foot minimum height clearance.
- Durable materials (Concrete or brick pavers best).
- At least 5 feet (preferably 6 feet) back from the curb to separate walkers from traffic and road spray, allow room for street trees and snow storage, and prevent side slopes at each driveway.
- Meet Americans with Disabilities Act requirements

Sidewalk Location

- Both sides along central circulation streets, in commercial districts, near schools, and in residential areas with more than 4 units per acre.
- At least on one side in residential areas with less than 1 unit per acre.
- Optional one side or wide shoulder in areas with less than 1 unit per acre.

Crosswalks

- As short as possible with small corner radii.
- About 10 feet wide, well lit, boldly marked with bar stripes or textured surface, and at every major intersection and selected higher volume mid-block crossings.
- Extend curbs/sidewalks into parking lanes and shorten crosswalks and increase visibility.

Traffic

- Slow speeds to under 30 mph in centers, preferably under 20 mph in higher pedestrian areas.
- Provide pedestrian signals and eliminate right turn on red at major crossing locations.

Auto-dependence is generally higher in rural communities than it is in urban environments. Because of low density, rural dwellers take much longer trips than their urban counterparts.

Bicycle Infrastructure

Evidence shows that biking can improve health, increase economic opportunity, reduce spending, and lead to a cleaner environment. However, these benefits, both social and personal, are often perceived to be limited only to urban areas. Perhaps surprisingly, rates of bicycling and walking in rural areas do not differ heavily from those of large cities. In fact, biking for both practical and leisurely purposes is generally more common in rural areas than in suburban areas.⁴ This evidence shows promise for the future of bicycling in rural America.

Green Infrastructure

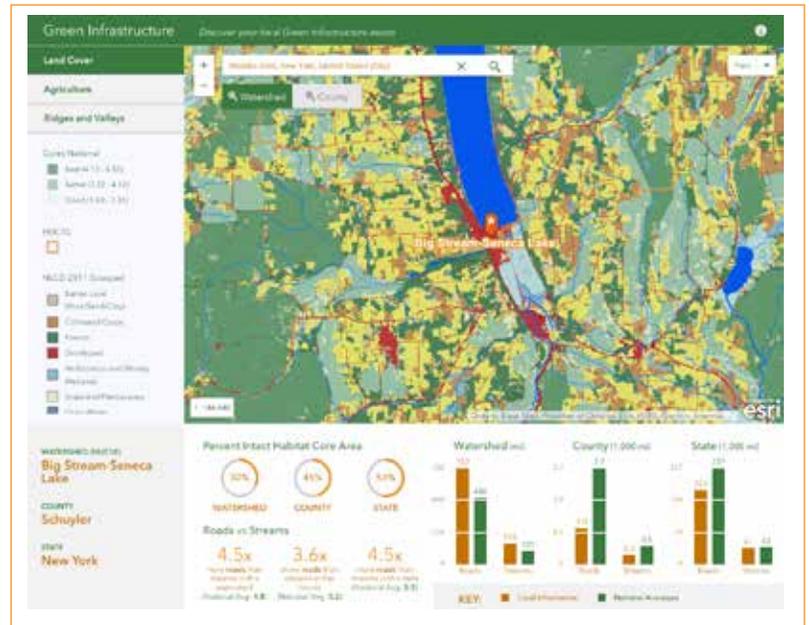
Just as municipalities invest and plans for “grey” infrastructure such as sidewalks and surface roads, they also need to invest in green infrastructure. Green infrastructure is the interconnected network of open spaces and natural areas, such as greenways, wetlands, parks, forest preserves and native plant vegetation, that naturally manages stormwater, reduces flooding risk and improves water quality. A 2015 study by the US EPA on the Flood Loss Avoidance Benefits of Green Infrastructure for Stormwater Management found that green infrastructure can reduce flood losses when applied watershed-wide.

Green infrastructure usually costs less to install and maintain when compared to traditional forms of infrastructure. Rain gardens, landscaping with native trees, green roofs, swales, porous pavement, and greenways are all examples of green infrastructure.

To allocate limited resources to provide as much benefit to the community and the environment as possible, municipalities should evaluate green infrastructure opportunities to identify the most suitable locations. For example, sites with some open space that have moderate to high soil infiltration and flat or moderately sloped topography will likely be the most appropriate for green infrastructure. In addition to site suitability conditions, communities can further evaluate sites for ownership (because public parcels do not require land acquisition or easements) and other local priorities such as history of flooding, long-term climate forecasts, storm drain system capacity concerns, park and open space deficits, and co-location with other planned improvements.

One tool to assist with developing green infrastructure projects is ESRI’s national Green Infrastructure map (shown above right), launched in 2016. The map depicts every intact natural area greater than 100 acres, regardless of ownership or preservation status. The map shows areas of ecological, cultural, and scenic importance, giving users a national and regional overview of the resources and places that are important to conserve before planning development.

That resource is available at <http://esri.com/greeninfrastructure>.



Large parking lots systems and their connecting road networks (such as in industrial complexes and office parks) shed large volumes of runoff because of their impervious surfaces. Water runs off asphalt into a storm gutter or along a curb until it reaches storm sewer drains or road ditches.

Bioswales replace traditional concrete gutter with an earthen one. The vegetation reduces the water’s velocity allowing for treatment and infiltration. Because they behave like a gutter, these trenches are best suited along roadsides or parking lots.



green infrastructure image courtesy US EPA

Electric Vehicle Infrastructure

As consumers and government and commercial fleets begin to adopt all-electric and plug-in hybrid electric vehicles (EVs), these vehicles will become an important part of the transportation landscape.

Schuyler County municipalities can play a role in helping build the charging network of EV infrastructure (known as electric vehicle supply equipment, or EVSE). Anticipated growth in the EV sector creates a need to encourage and allow home, public, and commercial electric vehicle charging stations.

Municipalities wishing to encourage EVs and EVSE may designate these as permissible uses in zoning regulations. This helps clarify zoning text to ensure vehicle battery charging is codified as a use distinct from gasoline filling stations.⁵ While rural driving patterns do not typically favor widespread EV use, visitors to Schuyler County's magnificent parks and gorges are likely to be environmentally-focused. On-street and municipal parking lots and garages as well as hotels, motels, and resorts are prime locations for EVSE placement.

Support is available from NYSERDA for municipalities, stores, office buildings, and parking lot owners to reduce charging station installation costs.

Motorcoach and Tour Bus Management

The compact, historic business districts of the Villages of Montour Falls and Watkins Glen in particular attract crowds in every season. Watkins Glen State Park alone attracted over 900,000 visitors in the summer of 2016.⁶ The County's villages face the challenge of accommodating a

large influx of motorcoaches into a relatively small area, requiring management of adequate and appropriate motorcoach parking, identification of appropriate motorcoach routes and curbside stop locations, and implementation of regulations across municipal and County enforcement agencies.

A tour bus management initiative between the Villages of Montour Falls and Watkins Glen as well as the New York State Office of Parks, Recreation and Historic Preservation and Watkins Glen International, among others, is recommended to identify main areas of concern such as parking, loading/unloading zones, routing, and air pollution.

One example of successful motorcoach management is found in the Village of Cooperstown, New York. There are many similarities between Schuyler County's villages and the Otsego County village; Cooperstown is home to the National Baseball Hall of Fame and Museum along with other popular brewery and outdoor attractions. Since 2013, Cooperstown has designated specific curbside stops and longer-term, off-street trolley and bus parking in their zoning code⁷ and updates that site list periodically as volume warrants.

Site selection should take into account:

- The operational needs of tour operators: site locations accessible to core attractions and associated drop off and pick up locations;
- Opportunities to provide service facilities for drivers and vehicles; and
- Avoidance of preempting higher-value redevelopment opportunities, in accordance with the respective Village's Comprehensive Plan and Downtown Improvement Strategy for identified land parcels.



Seneca Lake tourism image courtesy Hayfield Quality Tours

Highway Department Practices

Highway Departments are on the front lines of the aftermath of serious stormwater issues: floods. Roads and paved developments have the highest coefficient of runoff, making awareness of maintenance conditions affecting public infrastructure makes Highway Departments a key environmental and emergency management partner.

Schuyler County's Highway Departments are a statewide model for the use of shared services. Their willingness to come together across municipal boundaries allows for the most efficient and cost effective means to implement projects. They work directly with the Schuyler County Soil & Water Conservation District on stream stabilization needs for road ditches.

Together they have been able to tackle over 25 municipal projects a year that are focused on water quality improvement and infrastructure protection or repair. Funding is earned on a competitive grant basis. Boards looking for information to review projects or to pursue funding for projects also have access to culvert and sign location datapoints for towns, and county highway to track, plan, and budget road and crossing improvements through the Schuyler County Soil & Water Conservation District, a valuable resource.

Roads, if designed improperly, can contribute unsustainable amounts of pollutants and eroded materials to local waterbodies. Contamination is especially high when surface flow from streets is designed to directly into drainage systems. This can lead to large amounts of sediment, oils and grease, metals, garbage, road salts, pesticides, and other contaminants flowing into vital bodies of water.

By making wise decisions in paving and water management, highway departments can be both more sustainable and more cost effective. For example, a report by the Adirondack Watershed Institute at Paul Smith's College⁸ showed that above 25F, road salt is probably the most cost effective choice for deicing roads, but below that temperature, chloride based deicers are more efficient. This can reduce the amount of material going into waterbeds and reduce the cost of deicing.

Highway departments should follow the guidance of documents provided by NYSDOT such as the NYSDOT Environmental Manual, the NYSDOT Highway Design Manual, and Southern Tier Central Regional Planning's Highway Superintendents Road and Water Quality Handbook.⁹

Bridges and culverts present particular risks when it comes to hydrologic function. If there is no diversion system for runoff, bridges can be a direct direction for pollutants from road to stream. If a bridge is built too small, it can restrict and concentrate the flow of a stream. This may contribute to stream bank erosion and stream incision. Bridges and culverts can also cause debris accumulation, create upstream flooding that may cause property damage, and restrict

wildlife passage and fish movement. On the other hand, if built properly, bridges can offer valuable recreational access to rivers and streams.

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FARMLAND AND NATURAL RESOURCE PROTECTION

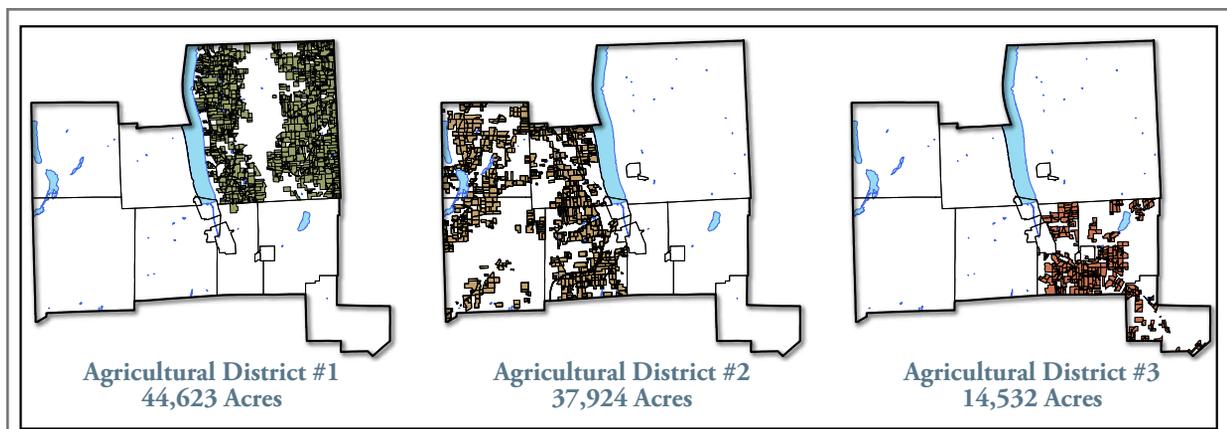
New York State's Agricultural Districts Law, a comprehensive program to protect farms within the state, is one of the first of its kind in the nation. Schuyler County includes three New York State Agricultural Districts encompassing over 97,000 acres of land. While the Agricultural Districts Law is a state program, the Schuyler County legislature and Agricultural and Farmland Protection Board determine which parcels are in the Ag Districts. Individual landowners may request that the County legislative body include (or not include) their property in an Ag district.

The Agricultural Districts Law was conceived in the late 1960's to maintain the farmland that many individuals were converting into non-agricultural uses. One of its important features is the ability to add or subtract land on a local level to ease the maintenance of districts.

While the state sets policy, it is the responsibility of the county to hold public hearings and establish the goals and desires of the people for the Ag district. Strategies of implementing Agricultural Districts can vary by county. Some counties form Ag Districts around community lines. Some counties establish Ag districts on land where no agricultural processes are occurring in order to encourage agricultural growth while others only establish districts for land in active production.

Despite being appointed at the County level, Agricultural Districts have an outsized influence on local land use controls, namely zoning.¹ Local governments can enact many policies that promote and protect agricultural practices locally. This may include land use tools geared specifically towards agricultural land, tax reduction, and policies for farmland protection against unsustainable practices.

The New York State Department of Agriculture & Markets has created *Guidelines for*





*Review of the Local Zoning and Planning Laws*² as a guide for what makes for reasonable planning restrictions in agricultural districts as well as an outline of a streamlined site plan review process appropriate for Ag districts.

The New York State Department of Agriculture & Markets will conduct a review of local law if a landowner petitions that it is unreasonably restrictive and their farm is within an agricultural district. Farm owners still have to comply with local zoning and get building permits if the New York State Department of Agriculture & Markets interprets that local governance requirement to be reasonable.

Municipalities should work to define zoning definitions specifically for agricultural land uses. Any ordinance should be clear, free of vague language that could be interpreted to impinge on the rights of farmers, and should be thoroughly vetted so that no particular farmer is unduly restricted by the proposed change. The best approach is an ordinance that balances the need to uphold public health and safety alongside the needs of farmers to successfully bring livestock and crops to market. For example, a town that wishes to prevent animal waste from entering water bodies may regulate the siting of barnyards (heavy use area) adjacent to a stream and require animals to be fenced out of the stream with all runoff addressed with an appropriate collection and treatment system according to the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) standards.



Agricultural Districts Law is a production-oriented law so a majority of the ingredient or the crops sold have to be raised by the farmer. As of 2007, agriculture in Schuyler county was generating approximately \$35 million in sales per year, representing an 86% increase from agricultural sales ten years before. (These numbers exclude winery sales classified under manufacturing or retail.) Incredibly, the number of farms in Schuyler county increased by 24% in this decade. Total investment in the farm sector in Schuyler County was over \$171 million.³

According to the Bureau of Economic Analysis, \$1 of farm sales in Schuyler County generates \$1.63 for the county as a whole. This economic multiplier is second only to lumber and wood products manufacturing, which generates \$1.71 for the county per dollar. Combined, the three most significant agricultural enterprises – forestry, winemaking, and farming – account for a total economic impact of over \$100 million in Schuyler County.

While it's a phrase often used in jest – 'cows don't attend school' – the economic benefits of productive farmland extend far beyond simply not using tax resources: Farms are revenue-positive and help to offset the government spending that comes with residential development (which in a suburban context is almost always revenue negative) by requiring a small amount of services while creating employment and sales.

Forestry and Silviculture

More than 59% of Schuyler County is forested, for a total of 178,000 acres of timberland and sawtimber. The value of these trees as a crop is often underappreciated because of the extremely low crop rotation and infrequent economic returns.

However, these forests produce high quality hardwood timber and attract tourism to the northeast with fall foliage. According to the U.S. Forest Service, 64% of this timberland is either stocked or overstocked. This is in part due to the particularly low cutting rate of less than 0.4% compared to the state average of 0.8% and 1.3% across New England. Schuyler County's cutting rate is, by many standards, lower than it should be and more timbering would actually create a healthier forest with healthier wildlife in the long run.

Hardwood logging has increased dramatically in the state since 1990. Hardwood value has not been affected as drastically as softwood by cheaper South American imports and hardwood cutting within America is limited by federal law. With hardwoods as a natural resource and an abundance of under harvested forests of high quality wood, Schuyler County should take measures to capitalize on the economic opportunity in forestry, such as the development of manufacturing uses for sawtimber like pallet construction and mulching. Manufacturing wood products with sustainable practices and green certifications could make products uniquely appealing to the urban northeastern market. Additionally, recreational facilities for tourism and leisure in forested areas should be enhanced.



It's important to note that silviculture is considered an on-going practice involving the dedicated and cyclic use of land expressly for the periodic production of timber. The mere harvesting of timber does not constitute silviculture. For example, clear-cutting and the harvesting of timber as a one-time, non-recurring practice, is not considered an exempt silvicultural (or agricultural) activity and is subject to the New York State SPDES General Permit for Stormwater Discharges from Construction Activity if the total land disturbance is one (or more) acres.

Significant Natural Areas, Prime Agricultural Soils

Elevation in Schuyler County ranges from 445 feet to 1,080 feet. Because of this elevation change, the growing season ranges from 108 to 158 days. The average annual precipitation is about 34.4 inches. Roughly 24% of the soil in the county is suitable for agricultural uses. These soils are found primarily along the banks of the major lakes as well as major streams. Soils unsuitable for crops may be used to grow grass for hay or grazing purposes. These statistics represent a solid foundation for an agricultural economy within the county.

Farmland of statewide importance is valuable for the production of food, feed, fiber, oilseed, and forage crops. These farmlands are nearly prime in quality and produce high yields of crops as well. Unique farmland is farmland with special qualities making it ideal for crops like fruits, grapes and vegetables. Such qualities include unique soil quality, location, topography, and growing season. If these lands are converted into non-farm uses they can not be reproduced elsewhere.

Prime Farmland is characterized by level topography, adequate moisture, good drainage, and favorable soil depth and texture. Because of these qualities, prime farmland can produce the most food with the least labor, fertilizer, and energy. It is ideal for row, forage, and fiber crops. When this land is converted into non-farm development, there is pressure to farm less productive and more fragile land.

This pressure can be managed through zoning and subdivision controls that limiting development while balancing the needs of landowners – farmers in particular – to extract value from that land as an asset. Subdivision of large parcels of land and conversion to residential use is a one-way street; once an area is subdivided and taken out of agricultural production (or open space/contiguous habitat), it is nearly impossible to go back. Integrating neighborhoods into working farmlands also creates a number of conflicts between fundamentally incompatible priorities

Agricultural Environmental Management

New York State created the Agricultural Environmental Management (AEM) as a voluntary, incentive-based program that helps farmers make common-sense, cost-effective and science-based decisions to help meet business objectives while protecting and conserving the State's natural resources. Schuyler County boasts 98% participation by Schuyler County farms.

The Schuyler County Soil & Water Conservation District – located at the Lee Harlan Soil and Water Conservation Center on Meads Hill Road in Watkins Glen – coordinates the AEM program.

Farmers work with local AEM resource professionals to develop comprehensive farm plans using a tiered process:

- Tier 1 – Inventory current activities, future plans and potential environmental concerns.
- Tier 2 – Document current land stewardship; assess and prioritize areas of concern.
- Tier 3 – Develop conservation plans addressing concerns and opportunities tailored to farm goals.
- Tier 4 – Implement plans utilizing available financial, educational and technical assistance.
- Tier 5 – Evaluate to ensure the protection of the environment and farm viability.

Schuyler County Soil and Water Conservation District (SWCD) utilizes an overall AEM Strategic Plan for overall direction and prioritization of the AEM program in the county. This plan is updated nearly every year to address the ever changing needs of our community. Farms have to complete through Tier 3, which is the development of a conservation plan with the Soil and Water Conservation District in order for the SWCD to apply for competitive cost share funds for implementation of any best management practices (BMP's) on the farm.

Schuyler County SWCD works diligently to apply for many competitive grants on an annual basis. All of the grant sources for these projects are highly competitive; 40% or less of the projects that apply get funded.

All of these grant sources have one common theme: water quality improvement. The projects, and best management practices applied for must demonstrate a water quality improvement to be eligible. Often grant applications focus on the reduction of sediment and/or nutrients from entering surface or ground water resources.

All of these competitive grant sources become available in March and applications typically close in June. The largest grant source for these projects is the New York State Agricultural Nonpoint Source Abatement and Control program. Schuyler County SWCD has been very successful in obtaining these highly competitive funds to our community.

These funds not only support the practices that are implemented and the farms they are constructed on, but they have a large documented multiplier effect on the region's economy. These projects help to support quarries, trucking companies, supply stores, concrete companies, contractors, engineers, equipment dealers, and many others. Currently the Schuyler County SWCD has \$12,026,576 dollars for 2016- and beyond to be implemented on 455 farms in the region.





of the different landowners with different expectations for how the enjoyment of private property for rural lifestyles and businesses should be accommodated. When residential uses become a dominant force, working farm operations can become more difficult and more expensive, creating a cascade of conversions to residential use and a loss of rural character and farm operations.

To prevent the harmful effects of this practice, local governments can institute farm and open space conservation plans in which pre-approved plans are used to subdivide sites incrementally and reduce harmful sprawl and farm/habitat fragmentation. This ensures the long-term maintenance of contiguous farmable land and open space surrounding developed districts. Of course, this is best done with the full participation of the farming and residential community of a municipality. To that end, New York State Department of Agriculture & Markets provides grants up to \$25,000 or 75% of the cost (whichever is less) for developing a local farmland protection plan through their planning grant program. In addition to creating specific

agricultural protection plans, funds may be used to update local planning documents, including the agricultural section of Comprehensive Plans and zoning ordinances to ensure that these documents contain clear language and policies that are supportive of the local agriculture industry. Example Comprehensive Plan and zoning amendments to further these goals are located in Section 2.

Open space requires fewer municipal services than other land uses.⁴ Residential, commercial, and industrial land uses may bring in tax revenue for a municipality but they also often call for increased services that offset and may exceed the tax revenue they generate. In upstate New York, the conversion of open land into new uses has shown to have negative consequences on adjacent regions.

The increase in land valuation and taxation from converting land to more intensive development can sometimes lead officials to approve projects that allow development outside of preferred development areas where existing services are available with the justification that tax revenue

will increase. In the long run, such decisions can increase demand for services beyond the amount of revenue generated to the extent that taxes must be increased for everyone. Conversely, protected open space that remains on municipal tax rolls can produce a net profit for the municipality when the cost of services consumed by the property is compared with revenues generated.

Nutrient Management

The NYS Conservation Reserve Enhancement Program (CREP) aims to reduce pollution in streams by helping agricultural landowners to voluntarily plant trees, shrubs, and grasses on streambanks to trap sediment, pesticides and fertilizers in runoff.

Larger buffers are most beneficial to water quality, but soil characteristics, hydrology, and types of vegetation also affect how effective a buffer will be in filtering pollutants. In general the most effective buffers are those that are applied to all streams, are at least 100 feet wide and consist of natural forest vegetation.

Landowners are compensated for the loss of productive agricultural land through annual rental payments and upfront incentive payments based on the total acreage dedicated to forested buffers or vegetated filter strips. Contracts can either be 10 or 15 years, during which the buffers must be maintained by the contract

-ed individual. Cost-share funding up to 50% with an additional 40% in incentive payments is available for planting materials, fencing, watering facilities, and stream crossings.

Alternative Energy Strategies

According to the Ag Census' 2009 On-Farm Renewable Energy Production Survey (OREPS), solar panels lead in production of on-farm energy, followed by wind energy. This first-ever nationwide survey released in 2011 looked at renewable energy practices on America's farms and ranches.

Farmers in nearly every state reported savings on their utility bills. Average utility bill savings reported by New York State survey respondents was \$5,067 in 2009.⁵

Southern Tier Central Planning offers assistance to farmers and communities looking to explore renewable energy through their Clean Energy Coordinator. An online Solar Guidebook for Local Government is available from NYSERDA at <https://www.nyserda.ny.gov/solarguidebook>. It contains a wealth of information on a range of solar installation topics important to municipalities, including code enforcement and permitting, impacts to real property taxes, solar land leases, installation and decommissioning of solar systems, and siting solar installations in Agricultural Districts.



agricultural solar installation image courtesy NYREER, LLC

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PUBLIC HEALTH

Schuyler County is currently dealing with public health challenges that are similar to those faced by the rest of New York State and the United States. For Americans, car crashes are the leading cause of death for people 5-35 years old and ranks highly for older people behind heart disease, and other sedentary lifestyle related issues. Motor vehicle traffic injuries are a serious public health problem in Schuyler County; they are the leading cause of injury-related deaths.

Additionally, obesity and diabetes have risen steadily over the last three decades. In the 2013 Community Health Assessment, Schuyler County Public Health identified two areas as particularly crucial for the health of the population: reducing obesity in children and adults, and reducing illness, disability and death related to diabetes countywide.

Roughly one third of Schuyler County adults are obese (BMI of 30 or higher), compared to one quarter of New York State adults. Obesity is a leading cause of preventable, chronic disease. Some obesity-related illnesses include heart disease, stroke, diabetes, and certain types of cancer.¹ Obesity is not only a concern for adults; one third of children in the state are overweight or obese. The local trend has followed that of the state in Schuyler County; in the Odessa Montour Central School District, 36.7% of students (K-12) are overweight or obese, and in the Watkins Glen Central School District, 44.8% of students (K-12) are overweight or obese (Schuyler County Public Health, 2013). Schuyler County has the highest diabetes mortality rate in New York State.²

Healthcare related to obesity, diabetes, and other chronic disease is extremely costly to taxpayers and individuals alike. The health outcomes associated with such diseases can cause disability and illness that lead to a loss of productive years, and death.

Yet these public health issues can be greatly influenced by the built environment. Rural areas like Schuyler County typically struggle with issues of access. Lack of public transit, shortage of health care providers, few opportunities for exercise and a low number of full grocery stores are common barriers to maintaining physical and mental health. However, access to health related and maintaining services can be improved through planning and zoning.





Improving Access through Land Use & Zoning Laws

Smart growth focuses on locating development in urban, village, or hamlet centers that are already more walkable amenities and services as well as existing population, rather than extending development out into rural and suburban areas. Adopting smart growth laws legalizing complete, compact and connected neighborhoods into local zoning can encourage both public and private development where development already exists, reducing sprawl and wasteful land use.

Reducing sprawl enables active-transportation choices (walking, biking, etc.) for many destinations, this can be hugely beneficial to public health. Heavily sprawled areas necessitate the use of automobiles for all travel, limiting residents options. In this situation, if one does not have a car, is unable to drive, or if public transit is not available, traveling to doctor's appointments, the grocery store, or physical activity opportunities can be extremely difficult. If one can easily access preventative care, healthy foods and safe exercise areas, they are more likely to utilize

those services to maintain their health. The elderly and low-moderate income individuals are especially susceptible to experiencing transportation related barriers to healthy living options.

Not only is walking a viable form of transport; it's great exercise, too. In Schuyler County, over 40% of the population reports that they do not regularly exercise.³ Incorporating something as small as walking a few blocks to and from work can add up to significant community wide health benefits.

Backyard & Community Gardening

A healthy diet is one of the most important elements in combating chronic disease. A diet of in-season produce, fresh meats, whole grains and low-fat dairy provides adequate nutrition to young and old alike. Processed foods like those served at fast food restaurants and typically found in convenience stores are laden with sugar, salt, and fat. Fresh, healthy food is often more expensive than heavily processed, unhealthy foods. For those on a tight budget or who cannot easily access a full grocery store, community and backyard gardening can be a low-cost and convenient alternative to traveling to the grocery store.

Municipalities can consider adopting ordinances that support residents in small gardening endeavors. This can include growing fruits and vegetables in a backyard or community garden, as well as keeping backyard chickens and other small livestock (geese, ducks, rabbits, goats, sheep, etc.) depending on what the municipality is comfortable with. Context-sensitive regulations can allow village and hamlet residents to produce their own food while protecting animals by requiring certain living standards for keeping them.



Montour Falls Farmer's Market brings fresh local food and a festive atmosphere within walking distance of hundreds of residents.



Improving Access through Public Transportation

Schuyler County is currently served by Schuyler County Transit, open to the public and operated by The Arc of Schuyler from 7:15am-5:30pm.⁴ It has three regular routes and one seasonal route. There is also a dial-a-ride service for those in remote areas on Mondays and Fridays, only to Watkins Glen and Montour Falls.

While the Schuyler County Transit is a valuable asset, its service is limited. With stops only in the four villages of the county and one town, the entire western half of the county and the Town of Cayuta do not have access to public transit. In addition to a limited range of travel, the limited schedule of 7:15am-5:30pm poses challenges for increasing ridership.

Public Health Impacts

Yet for those who can not drive, public transportation provides critical access to services that help maintain their health. With its aid, they can independently get to the grocery store, doctor's appointments, hospitals, gyms, parks, and other services. However, with its limited scope in Schuyler County, many individuals are unable to access public transit. This leaves them to rely on others to transport them, ceding their independence; or not accessing health-related services at all.

Preventative health care helps to maintain wellness and monitor health conditions, which is cheaper and more effective than waiting to receive care for a major problem. According to Schuyler County's 2013 Community Health Assessment, a subset of the population in Schuyler County relies on ambulance transportation to

the emergency room for their health care needs.⁵ Additionally, there are few full-service grocery stores in Schuyler County; most are located in Watkins Glen. When people cannot get to a full-service grocery, they may rely on local convenience stores where food is more expensive and healthy choices are limited.

Increasing Access to Public Transportation

Building off of the current public transit services offered in Schuyler County is the best approach to making transportation more accessible for all residents. Currently, riders can access some grocery stores, doctors' offices and hospitals, with stops at Walmart, Tops and CVS in Watkins Glen, and other Watkins stops near Guthrie and Arnot Health Offices. The Schuyler Hospital Complex and Schuyler County Human Services Complex in Montour Falls are also on existing Schuyler County Transit stops.

Extending hours of service and pick up locations throughout the County, particularly in the western half and in the Town of Cayuta, would allow Schuyler County Transit to make an even bigger impact in the lives of its residents, making preventative care and healthy diets literally in reach of residents.

In addition to making villages and hamlets more walkable, smart growth can also make places friendlier to public transit. One hurdle in rural communities for service delivery is that large areas are typically sparsely populated which makes providing service to most areas both expensive and slow.

Transit is most effective and efficient when neighborhoods have a density greater than 7 units per acre and when destinations are clustered together. When population density is very low and destinations are dispersed, transit providers either require huge subsidies or they must severely limit who, what, when, and how often they can provide service. Focusing growth in existing walkable communities throughout Schuyler County by applying smart growth principles to development will help to create hubs where transit service and frequency can be efficiently improved.

Improving Opportunities for Physical Activity through Infrastructure

Regular physical activity is crucial for community health. Increasingly sedentary environments at work and home make it especially important that individuals consciously engage in physical activity. Gyms and health clubs are good options for year-round exercise, but they are not without their challenges. For some, they are cost prohibitive. Without access to public transit or an automobile, it may be difficult to get to the gym. Furthermore, there are a limited number of gyms in Schuyler County. With limited options and barriers in access, it is prudent to consider alternatives.

Pedestrian & Bicyclist Transportation Infrastructure

Many people enjoy outdoor activities such as walking, running and biking. For these activities, all one needs besides good shoes and comfortable clothing (and possibly a bike) is a safe space to do it. Street lights, sidewalks, street buffers, bike lanes and trails are some examples of features that contribute to the safety and comfort of pedestrians and bicyclists.

However, many rural roads such as those in Schuyler County lack such features. Without space dedicated to pedestrians along these roads, they may be unsafe or underutilized. Adding any of these elements, especially on rural roads where all or most are absent, is a positive change in transportation infrastructure.

Not all of these elements will be appropriate in all locations- planning for an improved transportation system requires context sensitive solutions and thinking about the system as a

network rather than discrete individual roads that exist in isolation. Road safety improvements should be planned and prioritized to serve the most important locations and largest population possible considering the limitations of budget and staff resources.

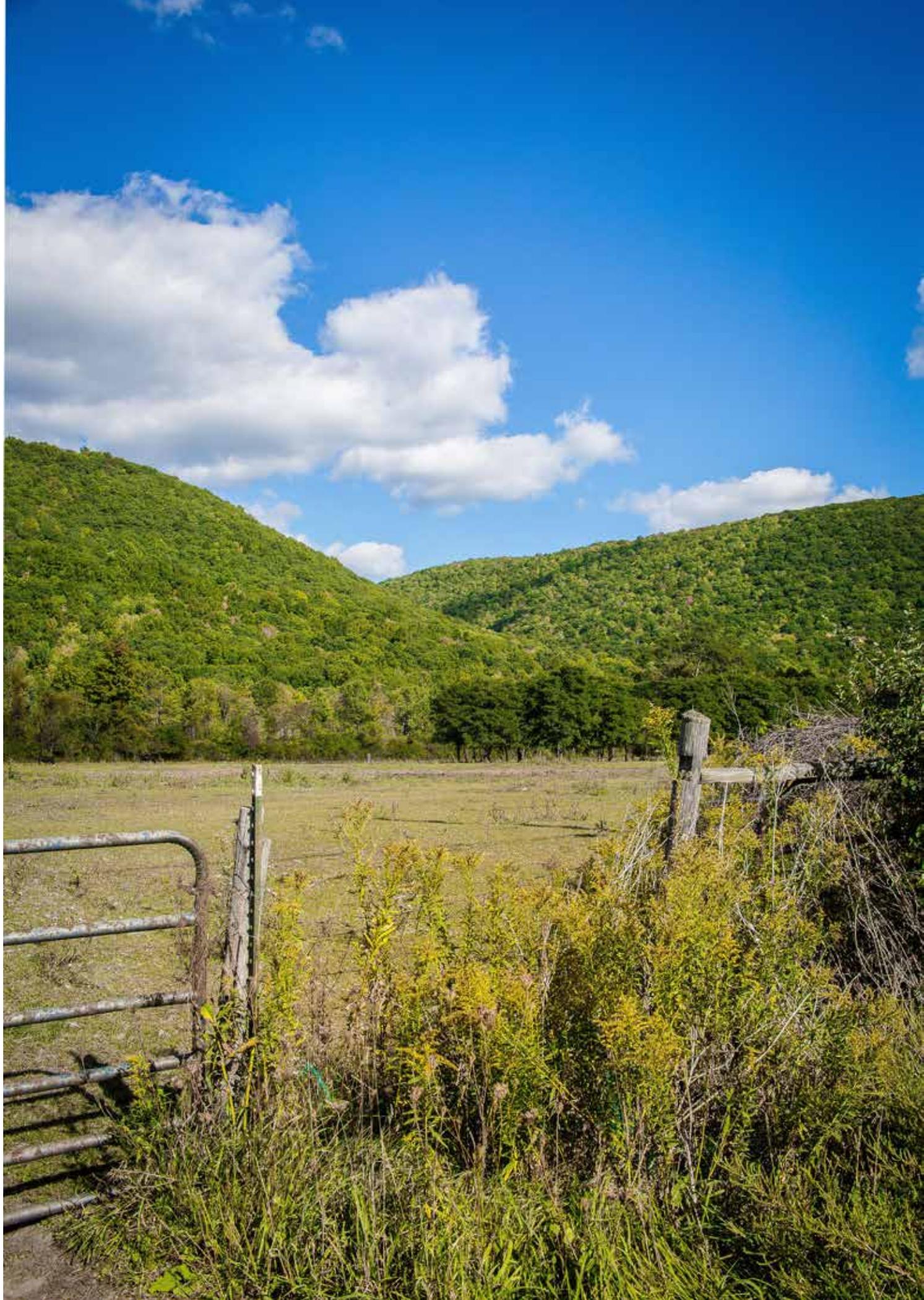
Parks, Open Space & Trails

Parks, open space and trail networks are another alternative for low-cost, easily accessible physical activity. To maximize the utility of parks for people of all ages wishing to use them for physical activity, consideration should be given to equipment and amenities located in the park as well as the park's location. The more people who can walk to a park the more likely it is to be used. Walking trails inside the park and trails that connect neighboring areas to the park provide safe, comfortable and convenient spaces to walk, run or bike.

Upon completion, the Catharine Valley Trail will link Watkins Glen to Horseheads. It passes through a number of towns and villages as it travels south. Motorized vehicles are not allowed on the trail, designating its use entirely to bicycles and foot traffic. Adding connecting trails from local parks, trails and roadways to the Catharine Valley Trail will open up more direct pedestrian routes for accessing the trail, and could encourage its use for recreation or travel within the Finger Lakes region and Southern Tier.

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MEASURING SUSTAINABILITY

Two programs from NYSERDA – the Clean Energy Communities and the Climate Smart Communities – work together to recognize and reward local governments who reduce energy consumption and work towards clean energy use in their communities.

The Climate Smart Communities (CSC) program was created to address the need for more guidance for communities in creating and implementing local climate action plans. A climate action plan is a set of strategies intended to prioritize efforts to deal with climate change vulnerabilities; in Schuyler County, change is projected to come in the form of increased rain and heat.

The past decade has seen increased public interest, financial incentive and environmental need to address climate resiliency. The Climate Smart Communities Program helps municipalities do just that, and reap the social, economic and environmental benefits that come along with it. The program provides assistance to New York State municipalities that wish to reduce greenhouse gas (GHG) emissions, save taxpayer dollars, and advance community goals for health and safety, economic vitality, energy independence, and quality of life. Currently, one-third of New York State’s municipalities (190 in total) across 37 counties have taken the CSC Pledge.¹

In addition to committing to these technological fixes, we can also reduce energy use and greenhouse gas emissions through revitalizing existing driving-optional village and hamlet centers and encouraging any new construction to have smaller units that are attached – whether we’re talking about retail, office or residential.

Climate Change and New York State

In 2011, the New York State Energy Research and Development Authority (NYSERDA) released the first comprehensive assessment of the projected effects of climate change on the New York State’s critical systems and natural resources over the next

century. *ClimAID: the Integrated Assessment for Effective Climate Change Adaptation Strategies in New York State*² was compiled by more than 50 scientists to serve as a useful tool for municipalities, planners, policymakers, farmers, and residents planning for the future.

The ClimAID report provides a comprehensive assessment of climate hazards most likely to affect New York State. The report provides projections of changes in temperature, precipitation, and frequency of extreme events for seven regions of the state. Schuyler County is located in ClimAID Region 3 (Southern Tier), where climate models indicate that intense precipitation events are expected to become more frequent along with more frequent and intense heat waves.³

Advantages of Becoming a Climate Smart Community

Being a Climate Smart Community reflects a commitment on the part of a municipality to work towards environmental, economic, and social prosperity and sustainability. By adopting the CSC pledge, municipalities vow to take enforceable actions with measurable results towards this end.⁴

Advantage #1: Funding and technical support are available to municipalities through the Clean Energy Coordinator at Southern Tier Central Regional Planning & Development Board. Contact STC for more information on how to launch and finance renewable, low-carbon, and efficient energy initiatives. CSC municipalities are at an advantage compared to non-CSC municipalities in accessing this funding from New York State.

Advantage #2: By incorporating the measures laid out in the CSC pledge, municipalities can save taxpayer dollars by increasing the energy efficiency of public infrastructure and services. This involves measures that

decrease energy usage, which can be seen as **Advantage #3** in itself. For example, public buildings that use passive solar heating will cost less to operate, because they generate energy on-site. Another example of municipal efficiency via CSC principles is using climate-smart land use patterns to achieve more efficient delivery of municipal services, reducing the cost of service delivery reflected in residents' taxes.

Advantage #4: increased usage of efficient, renewable energies means decreased reliance on fossil fuels and non-renewable energy. This means more energy independence for municipalities. This is beneficial as municipalities who generate a portion of their own energy, no matter how small, are more insulated from fluctuations in international energy markets.

Advantage #5: Because of decreased reliance on fossil fuels and decreased energy consumption, municipalities will also see their GHG emissions decrease. Lower GHG emissions contribute to an increased quality of life. The chemicals found in GHGs can aggravate respiratory conditions, especially in children and the elderly. On a larger scale, reducing your community's share of GHG emissions, contributes to worldwide GHG reduction, helping to slow climate change.

Advantage #6: CSC municipalities are recognized leaders in New York State in reducing GHG emissions and addressing climate resiliency. Not only can other CSCs serve as a resource, providing advice and inspiration to your community; but your community can serve as a role model to other municipalities in the state.

Advantage #7: CSC communities position themselves for economic growth. A commitment to green infrastructure and operations means adding new, green jobs in order to accomplish those goals. Green jobs are more likely to stay in the local economy than relocate elsewhere, meaning that there will be reliability and longevity

in the jobs created.

Climate Smart Communities in Action

What are CSC municipalities currently doing to make an impact? For the Town of Red Hook, Dutchess County, one of the biggest priorities for residents in adopting climate-smart actions was to avoid waste. Out of this desire, a recycling program was established, with a central drop-off location for recyclables. However, residents have also begun to drop off items to be reused by others: furniture, blankets, small appliances, etc. These "reusables" are things that would have otherwise gone into the trash; both decreasing the amount residents pay to dispose of their garbage and the amount of garbage going into landfills.

There are a number of programs in CSC municipalities that provide financial assistance for homeowners to insulate or otherwise improve the energy efficiency of their homes. Some partner with non-profit organizations, while in others, the municipality may administer the program. The Town of Babylon on Long Island and the Town of Irondequoit in Monroe County have pursued such programs. These programs curb energy usage and save homeowners money.

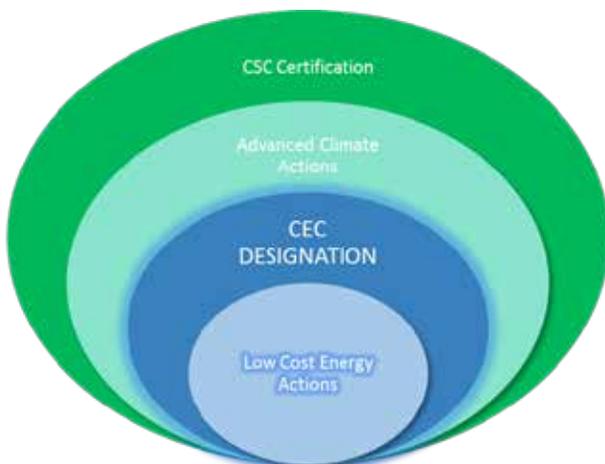
The City of Schenectady has undertaken the significant cost-saving approach of greening municipal operations. Some of their endeavors include replacing standard traffic lights with efficient LEDs and updating the heating system of City Hall. While these investments were larger up front than ones that use conventional energy, they save the city (and thus, taxpayers) approximately \$200,000 a year on energy costs.⁵

Taking the Climate Smart Communities Pledge

To become a CSC, a municipality must first adopt the CSC Pledge. You may change the Model Pledge as necessary to reflect your community's needs, but it should still reflect the 10 elements of the Model Pledge.

After your Board or Council votes to adopt the CSC Pledge, you must inform the DEC of the adoption. Simply email an electronic copy of the certified resolution to climatechange@dec.ny.gov and your municipality will officially join the network of CSCs across New York State.

See References for the link to the Model Pledge.⁶



Clean Energy Communities Actions

Complete 4 of the following 10 High Impact Actions to be eligible to apply for special grant through NYSERDA until September 30, 2019 (or until funds are exhausted):

1. Benchmarking

Adopt a policy to report the energy use of municipal buildings on an annual basis.

2. Clean Energy Upgrades

Achieve a 10% reduction in the greenhouse gas emissions from municipal buildings through energy efficiency upgrades and renewable energy. Everything from municipal headquarters to highway department and public works facilities, fire stations, police precincts, parks facilities, and even water treatment plants are good candidates for upgrades.

3. LED Street Lights

Convert at least half (minimum of ten fixtures) of the municipal cobra-head-style street lights within the jurisdiction to energy-efficient LED technology. By replacing conventional street lights with energy efficient LED technology, communities can reduce street light energy use by as much as 65%, generating cost savings and emission reductions. In addition, LEDs offer improved nighttime visibility and safety through better color rendering, more uniform lighting distributions and the elimination of many dark areas between poles. LED street lights last up to 100,000 hours and require much less maintenance than conventional street lights.

4. Clean Fleets

Install an EV charging station and/or other alternative fuel infrastructure or deploy alternative fuel vehicles in the municipal fleet.

5. Solarize

Undertake a solarize campaign to increase the number of solar rooftops in the jurisdiction through group purchasing, locally-organized community education and outreach, and a limited time offer, currently organized through programs like Solar Schuyler.

6. Unified Solar Permit

Pass legislation to adopt the New York State Unified Solar Permit to reduce costs and delays for solar projects in the jurisdiction.

7. Energy Code Enforcement Training

Train code compliance officers and other municipal officials in best practices in energy code enforcement through training, collaborative plans reviews, and joint onsite inspections of local construction projects.

8. Climate Smart Communities Certification

Earn Climate Smart Community (CSC) Certification at the certified, bronze, silver or gold levels through compliance with this robust, comprehensive rating system.

9. Community Choice Aggregation

Transition to a cleaner, more affordable energy supply by facilitating the aggregated purchase of electric supply for residential and small commercial customers within the jurisdiction. Energy aggregators combine the power load of customers in each utility service area and go to the open market to seek bids—in full compliance with New York State’s public bidding regulation.

10. Energize NY Finance

Allows property owners to pay back the cost of clean energy upgrades to their commercial or non-profit property through a special charge on their property tax bill.

Greenhouse Gas (GHG) Emissions Inventory

No matter how smart we grow, the energy consumed in construction, building operations, and travel remains an outstanding concern. Shaping new development to minimize energy use and the resultant emissions as well as getting a clear picture of how existing buildings measure up is key to managing future emissions. Due to the large amount of electricity that residential and commercial buildings require, these buildings are responsible

for a significant amount of GHG emissions. In New York State, nearly all GHG emissions come from three sectors: residential and commercial buildings (41.87% of total CO₂e), industry (10.7%) and transportation (35.9%).

To inventory GHG emissions, local governments calculate emissions from each sector based on readily available data on electricity use, fuel consumption for buildings and transportation, and the amount of solid waste the community generates. A locality may decide to inventory only emissions attributable to local government activities, or may choose to inventory emissions from both local government and the community at large.

One of the first steps of New York State's Climate Smart Community certification program is for communities to get the full picture on their local greenhouse gas emissions through a GHG inventory. The *Greenhouse Gas Inventory Guide for Local Government Operations*⁷ clarifies this process in a step-by-step guide to identifying emissions sources, organizing these sources by government sector (such as street lights, vehicle fleets, etc.), collecting the data from these sources, and finally calculating the GHG emission totals for the community.

Gathering and compiling inventory data, then analyzing and reporting results, may take a few months to a year. The great news is that municipalities in Schuyler County can utilize the resources of the dedicated Clean Energy Coordinator at the

Southern Tier Central Regional Planning and Development Board. This Coordinator provides outreach and technical assistance in getting started with clean energy planning projects like a greenhouse gas emissions Inventory and becoming a certified Climate Smart Community, opening doors to priority grant funding to advance energy- and money-saving projects.

Natural Resource Inventory (NRI)

Land use planning is instrumental in balancing future growth and development with protection of natural resources. Although municipalities frequently need to make decisions affecting these resources, they often don't have adequate data available to inform those decisions. Often they find themselves reacting to proposed development rather than planning for future growth, or making decisions on development projects without considering the larger context. This narrow approach to planning loses sight of broader-scale issues and goals, such as climate resilience, walkable communities, connected habitats, or watershed management.

By identifying and describing natural resources at the local scale, a Natural Resources Inventory (NRI)⁸ provides communities with a strong foundation for proactive planning and informed decision-making for both Town Boards, Village Trustees, and Planning Boards. NRIs have value not only to communities in rural settings,



but also those in hamlet and village areas. The process encourages participation in identifying and prioritizing natural resources important to the community, and provides information that will support careful land use planning and improved resource protection measures. By incorporating a Natural Resources Inventory (NRI) into planning decision-making, municipalities can make a meaningful contribution toward preserving the natural and agricultural heritage of Schuyler County for future generations.

A natural resources inventory includes maps and an accompanying report with narrative descriptions, supporting data tables, and recommendations. In general, NRIs focus on natural resources and may include land uses and cultural resources. A basic NRI can be completed using general but widely available information about natural and cultural resources and land use. Though the Department of Environmental Conservation's guide to Creating a Natural Resources Inventory is geared towards communities in the Hudson River watershed, the guide is an invaluable resource for communities all throughout New York State interested in seeing the full picture of their community's private and public natural resources.

A community's NRI can be referenced in municipal zoning and subdivision regulations, and use of the NRI for site plan or subdivision review can be required.

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PUBLIC PROCESS

Members of local Planning Boards and Zoning Boards of Appeal have the enormous responsibility of making decisions regarding land use in their communities. These decisions are based upon existing laws, environmental assessments, statistics, expert opinions and, of course, public opinion. The public process is very important to any governmental body, but it is not always an easy one to navigate. This chapter outlines what elements of the public process are legally required by New York State for Planning and Zoning Boards and provide helpful tips for managing public meetings.

What is legally required by New York State?

Meetings

What is a meeting?

A general description of a meeting could apply to a group of parents at a little league game, a book club discussion that includes several planning board members, or a chance encounter in the grocery store by three board members. For that reason, there is a definition of “meeting” provided in the New York State Open Meetings Law.

A meeting is the convening of a public body for the purpose of conducting public business.

First, it must involve a public body. A Planning Board, Zoning Board of Appeals, (as well as a Town Board, Village Board of Trustees, Board of Fire Commissioners, and School Board) are public bodies. Second, the convening of the body must be for the purpose of conducting public business. Thus, several planning board members present at the same book club discussion would not be discussing public business, so that event would not constitute a meeting. However, if a group

of members agreed to meet for breakfast at a local diner to discuss a subdivision application, they would be gathering for the purpose – or intent – of conducting public business. Whether that constituted a meeting would depend on whether a quorum was present.

When can my Board hold a meeting?

A quorum must be present in order for the board to officially meet; that is, a majority of the full membership must be present. A quorum must be present in order to take any action, as well. If a quorum is present, the meeting is subject to Open Meeting Law (OML), as Planning Boards and Zoning Boards of Appeal are public bodies. There is no such thing as executive session other than at a duly convened meeting. However, these Boards may can adopt rules for remote participation at meetings (which would usually require approval by the Town Board, just as Planning Board bylaws and related procedures must be so approved per Town Law § 271(13)), but decision making and actual voting or policy decisions are subject to deliberative rules at public meetings.

If the Board wishes to visit a site before putting an application to vote and a quorum is present, OML is still in effect. However, a site visit by a



board is not a meeting subject to the Open Meetings Law as long as its purpose is not for anything other than to “observe and acquire information” and the visit is not required to be open to the public. Permission to enter private property should be secured in advance of the site visit.

How should my Board advertise its meetings?

OML prescribes how meetings should be advertised. If a meeting is scheduled more than a week in advance, three days notice must be given to the news media, and the notice of meeting should be posted in a conspicuous place. That notice could even cover an entire year’s worth of meetings, so long as the meeting times aren’t later changed.

If the meeting is scheduled a week or less in advance, the media should still be alerted and notice should be posted in a conspicuous place as soon as possible and to the extent practicable. For these meetings with short notice, the easiest way to comply is to notify the media at the same time the members are being notified of the meeting. Meeting notices must be provided to the press but don’t have to be published.

When a public body has the ability to do so, notice of the time and place of a meeting should also be posted on the public body’s website – in addition to other posting requirements. Municipalities may also take the extra step of providing notices of meetings, hearings, and other events to people who register their email addresses.



Who can come to my Board’s meetings?

All public meetings are subject to OML and must accommodate the public. If the space is too small to fit the crowd that shows up, the meeting must be adjourned and reconvened at a spot where everyone can fit. The public must be able to see and hear the meeting, and they are allowed to record. Media must also be accommodated, and may also record.

Video and audio taping procedures may be included in the board’s rules of procedures with a goal of preventing the recording devices from being obtrusive or disruptive of the deliberative process, within reason. For example, the board could require that cameras on stands be set up on the side of the room, instead of the center aisle. They could also require that all cords leading to the recording device be secured to prevent tripping hazards.

What if my Board needs to discuss sensitive information at a meeting?

Executive sessions can be held when the Board needs to discuss sensitive information. Executive sessions must be held as part of a public meeting. The Board must achieve a majority vote in order to convene an executive session. They can then either go in private or clear the meeting hall, and then reconvene the public meeting upon the completion of the executive session. Prior to the session, the matter at hand must briefly be discussed and after the session, the decision made must be briefly reviewed with the public attendees. The

board may allow members of the public into the executive session, but are not required to.

What are accepted reasons for convening an executive session?

Matters which will imperil the public safety if disclosed

Any matter which may disclose the identity of a law enforcement agent or informer

Information relating to current or future investigation or prosecution of a criminal offense which would imperil effective

law enforcement if disclosed

Discussions regarding proposed, pending or current litigation

Collective negotiations pursuant to Article 14 of the Civil Service Law

The medical, financial, credit or employment history of a particular person or corporation, or matters leading to the appointment, employment, promotion, demotion, discipline, suspension, dismissal or removal of a particular person or corporation

The preparation, grading or administration of examinations

The proposed acquisition, sale or lease of real property or the proposed acquisition of securities, or sale or exchange of securities held by the board, but only when publicity would substantially affect their value.¹

Does the public need to be invited to work sessions?

Work sessions allow boards to meet over specific matters, such as discussing a permit application with a prospective applicant before submission or a decision is made. They are generally seen as helpful for the board, applicants or other interests present. As long as a quorum is present, work sessions must adhere to OML, just as all other public meetings do.

When would my Board need to hold a public hearing?

Hearings are required for “...subdivision and special use permit applications, variances appeals to the ZBA and new or revised comprehensive plans or land use regulations” by New York State law (Willis, Church & Hotailing, 2009, p.11). Local law can extend this list to require public hearings for other topics, as well. Hearings are also subject to OML.

How should my Board advertise public hearings?

Five days advance notice must be given for public hearings. This means that a legal notice must appear in the newspaper five days in advance in a newspaper that circulates in the relevant area. Best practices include maintaining an email list, posting notices on social media, physical community sign boards at town/village

hall, mailings, and outreach to community organizations.

Who can attend public hearings?

Anyone interested in speaking must be given the opportunity to do so at a public hearing. This is not limited to those directly affected by the vote, or those who live in the municipality.

Records

What should my Board's records include?

- Meeting minutes
- Applications to the board
- Application materials required of applicant (maps, statistics, studies)
- Related application materials from third parties
- Recommendations by the board

Is there a procedure for keeping meeting minutes?

OML requires that meeting minutes must include all motions, proposals and actions made by the board, and that written minutes are made publicly available within two weeks of the meeting.

What are some helpful hints for working with the public?

Who is in charge of running meetings?

In an effort to maintain established and recognizable order, the chairperson should preside over all meetings. This includes calling the meeting into order, facilitating public input, calling items into discussion, calling motions, calling seconds, calling for votes, etc.

Is it required to adopt procedural rules?

No, but they are helpful for keeping things running smoothly. Robert's Rules of Order is one well-known option.

Is it required to use an agenda?

Agendas are not required by law, but they are useful tools for keeping a meeting on track.

The contents of an agenda are not binding; that is, the presence of an item on an agenda doesn't mean that it must be brought up (likewise if one is absent, it can still be discussed). Adding a 'new business' item to your agenda can accommodate unanticipated discussion. Your agenda may have many items; try to categorize them before the meeting, and determine procedures for how each category will be handled in terms of public input.

Does my Board need subcommittees?

Subcommittees are not necessary, but they are helpful for handling specific matters in detail, which can then be reported back to the board. However, if a subcommittee is established, all meetings of the subcommittee are subject to OML.

Who should take minutes?

Boards are permitted to employ a secretary to take minutes and keep records, at the expense of the municipality. Having a designated person helps to keep things organized, and helps to catch all details of the conversation at meetings. Many groups now record meeting and make a the recording or a transcription available through cable access channels or the internet.

What should be included in meeting minutes?

Minutes need not consist of a verbatim account of what was said at the meeting; minutes of open meetings must include reference to all motions, proposals, resolutions and any other matters upon which votes are taken. Minutes of executive sessions must include any action that is taken by a formal vote, the date of the vote, and the vote thereon. Good minutes should include the content of discussions and the summaries of speakers and their presentations.

There is nothing in the OML that requires that minutes be approved. As a matter of practice or policy, many public bodies approve minutes of their meetings.

What can the Board do to prepare for public attendance?

Don't make it challenging for the public to attend your meeting, or unpleasant for them to be there. Consider their presence as a positive thing; residents are taking an active interest in shaping their community.

Before the meeting...

Be mindful of meeting logistics; is your meeting too late? Too early? Too long? Is your venue appropriate?

If a large crowd is anticipated, a large enough venue to accommodate everyone should be booked.

Situate public seating so that it faces the Board head on.

Microphones should be provided in any room where attendees may have a hard time hearing.

Accommodations should also be made for persons with disabilities and as much as possible for people who need an interpreter.

At the meeting...

Begin the meeting by explaining the purpose and procedure.

Inform attendees where exits, bathrooms, water fountains, etc. are.

Introduce guest speakers such as consultants or other political officials, explaining who they are, why they are there and how they will be participating.

Consider having those interested in speaking sign in, so that they can be called forward and participate in an orderly fashion. Alternatively, your board may find that a less structured, interactive discussion with the public is more comfortable.

Don't be afraid to establish time limits - unless you are holding a hearing.

What can the Board do if comments get out of line or drag on at a hearing?

While it is required that all in attendance of a hearing who wish to speak get the opportunity to do so, the Board is allowed to cut off irrelevant or slanderous comments. The purpose of a hearing is to discuss the matter at hand; it is not a platform for outside business to be hashed out. The chairperson should use his or her discretion in directing comments.

If extensive comments cause the hearing to run very late, the meeting can be adjourned

and reconvened. If the meeting is reconvened at a much later time or postponed, notice must be given to the public in the same way the original meeting provided public notice.

What are some tips for negotiating in heated discussions?

Occasionally, a contentious issue will come before your Board. Attendees may be angry with you, or with others in the room. You may know some of the applicants or commentators. It is important for you, in your capacity as a public official, to remain unbiased. Here are some general tips for you to consider when negotiating or hearing public comments:

Watch your non-verbal communication

Step back from the situation; before you dive right into the matter at hand, assess the situation and do some background research if you have to. Who are the key stakeholders? Is anyone not in the room that should be? Who stands to gain what out of your decision?

Strive to be a good listener. Hear speakers out before you speak yourself, and reiterate their statement back to them so you are sure you understood it correctly.

Use shared objective criteria to make decisions. Will you rely on expert opinion? Is there a threshold that you will be using? Make sure everyone is on the same page. Once objective criteria are in place, you can methodically and transparently arrive at a decision.

Remember that when people are passionate, they are generally driven by a deep care for your community.

References

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MODEL LAWS

This section provides background information on model laws pertaining to emissions and energy use adopted by other municipalities in New York State. These model laws are all referenced in Appendix A: Model Laws and detail what steps can be taken by municipalities to use their planning and zoning authority to allow and encourage alternative energy and reduce emissions. These results can be achieved directly, such as with stricter energy efficiency standards for new or rehabilitated commercial buildings, or indirectly through subdivision regulations that encourage location efficient design. Incentives can encourage residents and businesses to take action, such as by waiving building permit fees for the installation of alternative energy equipment.

This section of this Guide is meant to serve as a tool for Schuyler County municipalities. No municipality is required or mandated to adopt these measures – they are simply a set of references that have a foundation in New York State planning and land use controls. Some of what is outlined in these model laws may be already taking place in your communities; for instance, some homeowners may already be utilizing solar energy. These ordinances allow for a streamlined regulation adoption process in line with municipal vision, goals, and character, especially for municipalities with limited political, administrative, or budget capacity.

Alternative Energy Generation

Solar Energy

Local zoning regulations are often vague or silent on solar requirements, leaving the solar industry, homeowners, and businesses unclear about the regulatory environment. Locally produced renewable energy can create jobs and provide a reliable energy source. Solar energy systems can be mounted on the roof or the wall of a building, or in another location

that has exposure to the sun. Open space and agricultural land can house solar energy installations, providing additional income for farmers and ranchers.

The New York State Model Solar Energy Law toolkit was developed in May 2016 by the NYSolar Smart Program to assist municipalities in clarifying their requirements for the siting of new solar energy projects. This toolkit includes the model law itself as well as background information and clear directions on how to use the law. Also included in the reference tables are two model laws developed regionally; one is tailored to a suburban context (Town of Elmira, Chemung County) and the other to a rural context (Town of Ulysses, Tompkins County).

Municipalities interested in both increasing solar installations and making the permitting process easier for installers may adopt the New York State Unified Solar Permit by simple legislative resolution. Municipal authorities that adopt the unified permit streamline their process while providing consistent and thorough review of small (25kW or less) solar PV permitting applications and installations.



At Schuyler County's latitude, greater sun exposure can be found on south-facing slopes and at the southern face of buildings and lots. Solar energy-generating systems don't generate energy efficiently if they constantly sit in shadow. The best way to ensure that they are not sitting in shadow is to place them in the southern half of a lot, or on the southern side of a building.

The Town of Elmira Code requires buildings to be built on the northern end of lots, and that the tallest buildings sit at the northernmost end of the lot if there are multiple buildings to allow for greater solar access between the solar azimuths of -45° and $+45^\circ$. The Town of Ulysses regulates the siting of solar energy systems through its zoning ordinance, which has detailed requirements for both the installation and decommissioning (abandonment) of minor and major solar collection systems.

Why is it important?

Solar energy is a renewable resource associated with long-term cost savings. Although homeowners may face significant installation costs, there are programs to make solar installation more affordable, such as the NY-Sun Incentive Program offered by New York State Energy Research and Development Authority (NYSERDA). Additionally, New York taxpayers can receive a 25% tax credit for the cost of a solar electric or thermal system, up to \$5,000. Grants are also available from the U.S. Department of Agriculture's through the Rural Energy for America Program (REAP).

In addition to financial benefit to homeowners and businesses, solar energy systems contribute to environmental sustainability. Reduced dependence on nonrenewable energy means lower greenhouse gas (GHG) emissions and increased use of domestic energy products. Solar energy can also be used to heat hot water in homes, and passive solar energy can directly heat buildings.

One argument against large solar farms has been the reduction in active agricultural use on that land. The conversion of active agricultural land to residential or commercial uses is a one-way proposition; once an area is subdivided and taken out of agricultural production, it is nearly impossible to go back. Yet with large solar farms, the arrays can be installed with little to no impact and eventually decommissioned,



returning the land to active agricultural use. Additionally, visual impacts can be mitigated with screening and other visual buffers, a process recommended for larger systems generating energy for off-site consumption.

Wind Energy

Like solar energy systems, wind energy provides locally produced renewable energy; open space and agricultural land can also house wind energy installations, providing additional income for farmers and ranchers. Wind energy conversion systems (WECS) use wind energy to mechanically move the blades of a windmill to produce electrical energy. Small-scale wind energy systems (typically 100 kW or less) have a micro turbine used for microgeneration, such as to power an off-grid home. Industrial-scale wind farms are commercial operations typically sited on hilltops with a consistent flow of 10 mph non-turbulent wind.

As a renewable energy resource there are a number of benefits, and concerns, that come with the addition of WECS to a community. Specifically, there may be fears that windmills could disrupt animal populations, specifically birds and bats; noise concerns for residents living near windmills; interference with communications towers; and that windmills placed on hilltops will alter scenic viewsheds.

The U.S. Department of Energy's (Energy Department's) Wind Program and the National

Renewable Energy Laboratory published a 50-meter height wind resource map for New York. This wind resource map shows the average strength of the wind at 50 meters, with a ranking between 1 (weakest) and 7 (strongest). Most utility wind developers look for areas with steady Class 4 or 5 winds, but Class 2 or 3 winds, which are found across Schuyler County, can power small WECSs.

Large-scale wind maps are a free resource that can help a community understand generally if wind energy potential is likely to exist. To determine the actual wind power generation potential of a given site, a site-specific wind resource assessment by a qualified professional is needed. Site-specific assessments are typically the responsibility of the property owner.

The WECS Law for the Town of Dix (2015) requires site plan review and a building permit to be issued for all WECS in an effort to avoid negative, unintended consequences. It mandates that every effort be made to minimize adverse visual impacts of WECS, including tucking sites behind ridgelines, away from scenic viewsheds seen from public viewing places, etc. All WECS should be located on land that is in compliance with New York State and federal wetland protection laws; locating on previously developed land is also desirable.

Also included in the Town of Dix WECS Law are provisions for entering into a host community agreement (HCA). Given that larger, utility-scale wind development can affect the community as much – if not more – than it impacts the particular private property owners involved in the project, HCAs are a land use tool aimed at mitigating the impact of a proposed development on the community. In the wind energy context, HCAs generally include a schedule of fixed payments based on the total megawatt capacity (sometimes referred to as nameplate capacity) of the project to be made to the municipality over time.

Some host community agreements include provisions for dealing with damage to local roads from the transport of the large, heavy sections of the towers for construction as well as ongoing operation concerns, such as complaint resolution procedures and specific protocols and funding for noise compliance testing. HCAs may also address decommissioning of wind turbines at the termination of the project, and consider the work, funding, and enforcement mechanisms needed to ensure that those facilities are removed rather than simply abandoned. Included in the ‘Sources’

column of the Model Laws table are web links to two comprehensive reports on industrial wind power and host community agreements.

Also included in the Model Laws table are links to two other model WECS laws: a Wind Energy Facility Law from the Town of Hartsville, Steuben County (2006), and a Local Law to Regulate WECS in the Town of Veteran, Chemung County (2007).

Why is it important?

Windmills have been used for thousands of years in varying applications. Wind energy is a source of renewable energy which, like solar, does not rely on the burning of fossil fuels or release greenhouse gasses. New York is the 15th windiest state in the nation. This means that there is an abundance of this dependable and environmentally sound source of energy.

Municipalities also may negotiate with the wind energy developer to secure additional mitigation measures in the form of financial or other benefits, provided those benefits are tailored to offset the impacts of the project, advance accepted zoning objectives, and are not conferred in exchange for preferential treatment.

Like solar energy, wind energy can be produced on a large scale or at the residential scale. Whether you want to build a wind farm or put a windmill on your property for your own personal energy needs, NYSERDA has funds available through December 2018 to defray installation costs of 2 MW or more of wind power.

Other Renewable Energy Systems

Included in the Model Laws table are amendments to the zoning ordinance of the Town of Delaware, Sullivan County, which regulates the placement of geothermal, solar, and wind energy systems through zoning. Since geothermal systems are located underground, special attention must be paid to ensure that property boundaries are not being crossed by the system underground, and that groundwater sources such as aquifers are guarded.

This law stipulates that a geothermal heat exchange system must be contained entirely

on the owner's property, unless an easement is provided by neighboring properties. Systems can be placed in ponds or lakes on an owner's property, but it must be a body of water wholly contained on the owner's property. The system must comply with all municipal and New York State Department of Conservation standards for building and public water supply protection. Systems are subject to site plan review by the local Planning Board.

Why is it important?

Geothermal heating and cooling systems rely on the constant temperature of the Earth to modulate the temperature inside buildings. Geothermal power harnesses the natural force of thermal energy from deep underground, which comes both from residual heat from the formation of the Earth and from heat that is constantly generated by radioactive decay.

Ground loops placed underground take advantage of the Earth's relatively constant temperature of 50-55°F. The ground loops are connected to heat pumps which exchange warm air for cool air in the summer and vice versa in winter. The ground is cooler than the outside air in the summer and warmer than the outside air in the winter, helping to both cool and heat homes.

Strategies to Reduce Emissions & Energy Usage

Cleaner & Fuel Efficient Vehicles

The Fuel Efficient County Fleet Vehicles Law of Rockland County (2006) creates a schedule for replacing older vehicles with fuel-efficient municipal vehicles. The law stipulates that, as municipal light- and medium-duty vehicles are replaced, they be replaced with a hybrid or alternative fuel vehicle. Furthermore, newly-purchased light-duty vehicles should also have increased fuel economy.

Why is it important?

Local governments can lead by example. By phasing in cleaner and more fuel efficient vehicles, Schuyler County and its municipalities can make reducing emissions that decrease quality of life and harm the environment a priority. The chemicals and particulate found in motor vehicle exhaust can contribute to or

exacerbate respiratory illnesses such as asthma and chronic obstructive pulmonary disease (COPD). In addition to being harmful to human health, the greenhouse gases (GHG) released in exhaust from motor vehicles contribute to global climate change, and acid rain, while oil and gasoline runoff from pavement can impact soil and water quality.

Also included is a link to the step-by-step guide to creating a green municipal fleet, as improved fuel economy of municipal vehicles means decreased transportation costs incurred by the municipality. No matter how small those savings, they are a welcome relief to tight budgets.

LEED Building Standards for Municipal Buildings

The Green Building Standards local law from the Village of East Aurora (2007) regulates energy efficient building standards for municipal buildings only. It requires new municipal buildings conform to Leadership in Energy and Environmental Design (LEED) standards. Also included is a link to Tompkins County's Green Building Policy, which directs the County's Planning Department and Building Division to use green building standards (either LEED or another equivalent accredited certification program) for all new construction and major renovations of County-owned buildings.

The internationally recognized LEED standards developed by the U.S. Green Building Council seek to reduce the energy use and environmental impact of the built environment. Buildings receive a score based on energy savings, water efficiency, carbon dioxide emissions reduction, improved indoor environmental quality, and stewardship of resources. LEED ratings start at 'certified' and go up to silver, gold, and platinum. Building to LEED standards improves worker safety, reduces harm to the environment, and reduces municipal energy expenditures for the lifetime of public buildings.

Why is it important?

The principal method of achieving energy efficiency in new building construction and the substantial renovation of buildings is through the building code. The New York State Building Code contains minimum standards for the design, construction, and

installation of the building shell or “envelope,” and mechanical, lighting, plumbing, fire prevention, and electrical systems.

LEED BD+C (Building Design and Construction) enhance these standards, guiding the design and implementation of sustainable features and construction materials of new development and major renovations. Strengthening requirements to add newly-evolved building science technologies can make new buildings extraordinarily efficient. The requirement to meet LEED Certification or its equivalent is especially important for municipalities to consider as the cost of utilities continues to rise. Reducing spending on municipal energy costs frees up space in the budget for other necessary and important items.

Building Standards for Commercial Buildings

The Green Building law in the Town of Babylon requires new commercial buildings, offices, industrial buildings, multiple residences, and senior citizen multiple residences to meet LEED standards. All building permit applications for such construction must also include a LEED checklist that meets enough criteria to be awarded LEED Certified status in order to receive a building permit. Once the building is completed, a building inspector must confirm that it meets LEED Certified standards before a Certificate of Occupancy will be given.

Why is it important?

Compliance with building, plumbing, electrical, fire, and energy codes is a prerequisite for obtaining a building permit and a certificate of occupancy (CO) from local governmental agencies empowered to regulate development. The CO is the end point in the local land use regulatory process. It signifies compliance with all land use regulations, with all conditions imposed on a project’s approval, and with applicable building codes. Architects and engineers are typically engaged to draw plans for new commercial buildings. Once a development proposal is determined to comply with zoning and site plan standards, these professionals draw plans for the construction of the buildings themselves, and these plans must incorporate and comply with every standard contained in applicable codes.

New York Energy Law 11-109 authorizes municipalities to adopt local energy conservation construction

codes that are more stringent than the New York State code, including but not limited to requirements for mandatory energy efficiency testing and ratings.

LEED criteria for certification are numerous and flexible. Developers can select what elements are most appropriate for the space being designed and constructed, based on its use. For example, developers may select a site for a commercial building near public transportation, eliminating the need for excessive parking. A residential development, however, may need more parking spaces for residents, but could prioritize other LEED criteria in its construction.

In addition to being somewhat customizable to the specific building project, LEED buildings tend to be more energy efficient in the long run, minimizing energy consumption and thus utility bills. These savings are passed onto occupants. Further, LEED standards can create healthier living environments for occupants; one example is maintaining good indoor air quality by choosing low VOC-paint.

Property Tax Exemption for Green Buildings

The Schuyler County Legislature may adopt Section 470 of the NYS Real Property Tax Law, which would allow for a 7-10 year exemption from County tax (depending on the LEED certification achieved by the property) for the increase in assessed value of new construction. The exemption may apply to county, town, village, and school district taxes.

If allowed by local option, construction of improvements may be specified in local law; construction which is certified as meeting one of three levels of energy efficiency and environmental standards is partially exempt from taxation but liable to special ad valorem levies and special assessments. Partial exemption is measured as the value added to the property by the improvements, and varies according to the level of certification standard which is met.

Recognizing the financial and political reality that divides the attention of policymakers between regulation and the provision of incentives, the Town of Babylon (2013) adopted this state-enabled real property tax exemption to property owners who make improvements

to real property that meet or exceed their LEED certification standards. Buildings can either be newly-built or renovated to meet LEED standards, or the standards of another green building rating system as determined by the municipality. After there is proof of meeting said standards, property owners will be eligible for property tax exemptions at different rates in accordance with the LEED certification status achieved by the construction.

The maximum period of exemption is 10 years, and construction must be \$10,000 or greater to qualify. For qualifying construction, the exemption will not be more than \$250,000 of increased market value.

Why is it important?

Providing incentives is a frequently-used way to encourage development we'd like to see in our communities. Tax abatements have long been provided to new businesses for opening their doors in downtowns. Just as new business is desirable, so are green buildings. They contribute to the health of the neighborhood and their occupants. They reduce energy spending and rely less on non-renewable energy. They are innovating and inspiring to fellow property-owners.

Other Model Laws

Downtown Form-Based Code

This model zoning law from the Town of Babylon provides a form-based code for the downtown area of a town or village. It sets forth development, thoroughfare, architectural and green building standards to guide development in the downtown area. Form-based codes place a larger focus on the physical form of development in contrast to its use.

Why is it important?

Euclidean zoning is what exists in most of the United States today; its focus on land use, or what the activity happening on a parcel. The result of this has been a separation of uses which has contributed to sprawl; for example, removing traditional upper floor residences from traditional downtowns removed an affordable and location-efficient choice from the housing marketplace.

Form-based codes focus on the form of a development, in addition to the land use. While

many form-based codes include the allocation of specific land uses to specific areas, these codes also establish guidelines for the physical form desired in a place. The result – if calibrated correctly, based on the conditions a municipality would like to achieve in its built environment – are more traditional downtowns that allow mixed-use centers. These spaces are more accessible to pedestrians and users of mass transit; more aesthetically pleasing; and less wasteful of land and resources. All of these things are important for the sustainability and vitality of downtown areas, be they rural or urban.

Stream Buffer Ordinance

The Town of Hornby, Steuben County, simply added two sentences establishing a 50-foot setback for buildings and requiring site plan review for other activities within this corridor (including removal of vegetation).

For communities looking for more robust stream protections, a good model is the Town of Ithaca's amendment to zoning in 2012, requiring buffers at least 100 feet from the top of streams with large drainage areas. Stream setbacks are required for streams that have upstream drainage areas equal to or greater than 35 acres. A drainage area is the total surface area, upstream of a point on a stream, where the water from rain, snowmelt, or irrigation (which is not absorbed into the ground) flows over the ground surface, back into streams, to finally reach that point.

It's important to consider drainage areas in planning and zoning as it reflects the raw physical power of that stream; creating buffers from streams not only protects the stream but protects life and property. Stream buffers have financial benefits as well: they minimize property damage, reduce municipal investment, increase property values, and reduce maintenance costs. Agricultural uses are exempt from this ordinance, as are developments that pre-date this ordinance and are grandfathered.

Why is it important?

Establishing stream buffers is important for the health of the stream and its ecosystem. Runoff from development can contribute to soil erosion, flooding and pollution. Stream buffers mediate flooding risks by stabilizing

the soil with vegetation and absorbing storm water runoff before it reaches the stream. The vegetation in the buffer can help to absorb and filter the toxins in runoff from development (e.g. oil and gasoline from cars parked on pavement). Furthermore, vegetation provides shade and living space to the plants and animals in the stream's ecosystem, contributing to its overall health.

Conservation Subdivision

As a rural community with a robust local agricultural economy, the Town of Cazenovia, Madison County, adopted these subdivision regulations to protect farmland. The Town of Cazenovia incorporated conservation subdivision regulations into their code and also made it the preferred subdivision methodology in all cases of new subdivisions and resubdivisions.

Why is it important?

Conservation subdivision (sometimes referred to as cluster subdivision) helps prevent development from unnecessarily consuming large amounts of land which can divide wide open spaces into fragments that are useless for agriculture, wildlife habitat, or other rural open space purposes. Rather than clear many acres of land, scrape off the topsoil for sale, and then divide a tract of land into equal parts to be developed each one, a conservation subdivision requires development to be concentrated to certain sections while the additional land that would have been allocated to individual lots is left as preserved open space.

Conservation subdivision is best implemented upon completion of a basic Natural Resource Inventory (see 'Environmental Inventory' chapter), though subdivision proposals brought before a Planning Board can be required to provide the equivalent information to proceed with the subdivision design process.

Light Pollution Reduction

In order to minimize light trespass from project sites, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction, and reduce adverse effects on wildlife environments, this model law from the Town of Brookhaven (2006) requires that all lights that are replaced or repaired in the municipality by home and business owners adhere to standards set forth in the ordinance, requiring fixtures that contain or reduce light emission. This can be done

by considering elements such as placement, illumination level, type of light fixture, etc. This ordinance also sets a curfew on businesses for turning their lights out after closing.

Why is it important?

Excessive lighting wastes energy and causes light pollution. Light pollution can have a number of negative effects that include excessive glare, which is dangerous to motorists; ecosystem disruption; potential interference with human circadian rhythms; and skyglow. Reducing the amount of light emitted from exterior lighting reduces wasteful energy consumption and the risk of human or environmental harm. Not to mention improving neighborly relations; no one wants their bedroom illuminated by their neighbor's flood light.

RESOURCES

In this Guide to Environmental Planning in Schuyler County, we've distilled many planning concepts into a booklet for your municipality's legislature and Planning Board to help with long-term decision-making in line with your community and Schuyler County's goals and vision for the future. This Guide provides a broad overview to kick-start local conversations on the future of our towns, villages, and hamlets.

Planning for the people of Schuyler County is what we do. We plan for the places we call home – where we live, work, and recreate – and the legacy we leave are all fundamentally impacted by planning.

As our wineries, cideries, distilleries, and forestry and agricultural enterprises achieve national renown we are planning for both our economic and environmental future. Anticipating and adapting to change is good business.

The Schuyler County Planning Department and the Southern Tier Central (STC) Regional Planning & Development Board serve every municipality in Schuyler County with planning and technical assistance with land use, transportation, water resource and flood mitigation concerns as well as mapping and data services. SCOPED (the Schuyler County Partnership for Economic Development) and Community Development Corporation provide economic development assistance.

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APPENDIX A: MODEL LAWS MATRIX

Alternative Energy Generation & Use

Topic	Location	Law	Link	Notes	Sources	Sources	Sources	Sources
New York State Model Solar Energy Law	statewide	model	http://www.cuny.edu/about/resources/sustainability/f-gpoirts/NYS_Model_Solar_Energy_Law/lookit_FINAL_final.pdf	The toolkit contains three parts: 1. The Model Solar Energy Law 2. Background information on zoning for solar as well as clear directions on how to use each section of the model law. 3. Additional considerations when zoning for solar with citations to resources regarding each option discussed.	NYS Solar Smart Program	http://www.albanylaw.edu/centers/government-law-center/about/expertise/renewable/Documents/Siting%20Solar%20Panel%20Under%20NYS%20Zoning%20Laws3.pdf#search=siting%20solar%20pa		
Solar Energy	Town of Elmira	Zoning Law: 217-73, Solar Energy Systems & Solar Access	https://law.resource.org/pub/us/code/city/ny/Elmira.html#14381157	Includes guidelines for new development that maximizes the amount of solar exposure buildings receive	http://ny-sun.ny.gov/	http://www.dec.ny.gov/energy/43231.html		
Solar Energy	Town of Ulysses	Local Law 3-2015 amending Zoning Law: 212 Solar Energy Systems	http://www.ecode360.com/documents/UL3512/source/LF867145.pdf#search=solar	Regulates the siting of solar energy systems and includes detailed requirements for both the installation and decommissioning (abandonment) of minor and	http://www.ulysses.ny.us/pdf/Ulysses%20Solar%20LL_FINAL_AMENDED-10-26-15.pdf			
Wind Energy	Town of Dix	L.L. No. 1-2015- establishes regulations for wind energy converting systems	http://www.townofdix.com/LL-ZoneAmend-WECs%20adopted%205-28-151.pdf		http://www.dec.ny.gov/energy/40956.html	http://www.nyserda.ny.gov/Funding-Opportunities/Current-Funding-Opportunities/PON-2439-On-Site-Wind-Turbine-Incentive-Program		
Wind Energy	Town of Veteran	L.L. No. 1-2007- establishes regulations for wind energy converting systems	http://www.stcplanning.org/qluser/Program_Areas/Local_Plans_Laws/Local_Law_s/Veteran%20Windmill%20Local%20Law.pdf		https://www.researchgate.net/publication/228164346_Host_Community_Agreements_for_Wind_Farm_Development	https://cardi.cals.cornell.edu/sites/cardi.cals.cornell.edu/files/shared/documents/ResearchPolicyBriefs/03-2010-RPB.pdf		
Wind Energy	Town of Hartsville	L.L. No. 1-2006- establishes regulations for wind energy converting systems	http://www.stcplanning.org/qluser/Program_Areas/Energy/Wind/Hartsville%20Wind%20Energy%20Facilities.pdf					
Renewable Energy Systems	Town of Delaware	Zoning Law: 618 Renewable Energy Systems	http://www.townofdelaware-nj.us/Files/NewZoning/del%20zoning%20law%202013%20current.pdf	Sets regulations in an attempt to encourage business and residential use of renewable energy, including wind, solar and geothermal	http://www.dec.ny.gov/energy/43303.html	http://www.nyserda.ny.gov/Cleantech-and-Innovation/Power-Generation/Geothermal-Heat-Pumps		

Zoning, Subdivision, Flood Protection, Stormwater Management and Stream Buffer Ordinances

Topic	Location	Law	Link	Notes	Sources	Sources	Sources	Sources
Downtown Form-Based Code	Town of Babylon	Town of Babylon Code: Chapter 213, Article XIII	http://rombasedcodes.org/Content/uploads/2014/01/nyandfbc.pdf	http://plannersweb.com/2014/12/fbc/				
Model Stream Buffer ordinance	Town of Hornby	Town of Hornby Zoning Ordinance	http://www.steplanning.org/us/ProgramAreas/LocalPlans/HornbyZoningLaw/FinalDecide/number2003.pdf					
Model Stream Buffer ordinance	Town of Ithaca	Stream Setback Law L.L. 8-2012, amended zoning	http://www.town.ithaca.ny.us/stream-setback	http://water.epa.gov/dollwaste/npdes/wbmp/Riparian-Forested-Buffer.cfm	http://www.westchestergov.com/planning/environmental/bronxriver/westchester%20County%20Water%20Resource%20Buffer%20 brochure%20FINAL%20for%20e-mail1.pdf	http://www.steplanning.org/us/ProgramAreas/Water/ProgramResources/StreamProcessesGuide.pdf		
Conservation Subdivision ordinance	Town of Cazenovia	L.L. No. 8-2009, amended zoning	http://ecode360.com/printCA0021?guid=13974820&childItem=true	The purpose of these regulations is to achieve a balance between well-designed residential development, meaningful open space conservation, and natural resource protection in the county/side by requiring conservation subdivisions instead of traditional subdivisions.				
Zombie and Abandoned Properties Law	Village of Montour Falls	Vacant Property Registration Ordinance		New York State amended the Real Property Tax Law in December 2016 aiming to help municipalities mitigate problems caused by abandoned residential properties by imposing requirements for the maintenance of properties by a mortgagee or its loan servicing agent through a vacant property registration.	Contact Montour Falls Clerk at (807) 535-7367			
Sample Local Law for Stormwater Management and Erosion & Sediment Control with Additional Provisions for Community Resiliency	New York State model law	Local Law for Stormwater Management and Erosion & Sediment Control	http://www.dec.ny.gov/docs/water_pdf/samplelawresilicy.pdf	A local stormwater law is another tool that communities can use in combination with the basic land use tools described above. A stormwater law provides regulations for new development and redevelopment that require control of stormwater to reduce its negative impacts and take advantage of the use of clean stormwater as a resource, recharging local groundwater supplies, lakes, ponds and wetlands.				
Floodplain Management	New York State model law	Local Law for Flood Damage Prevention	NYS Department of Environmental Conservation, Elmira Office, 607-792-2214	Adoption and enforcement of minimum federal standards for floodplain development is required to enable the availability of federal flood insurance.	Optional language for model law: http://www.steplanning.org/us/ProgramAreas/FloodMitigation/Floodplain%20Management/Dir_Proposed_FP_Reg_Update.pdf	Optional higher standards for inclusion in NYS model law: http://www.steplanning.org/us/ProgramAreas/FloodMitigation/Floodplain%20Management/Thoise%20Proposed_FP_Standards.pdf	Fact sheets and resources for floodplain management: http://www.steplanning.org/index.asp?pageid=108	

**APPENDIX B:
COMPREHENSIVE
PLAN
AMENDMENTS**

Comprehensive Plan amendments

This appendix (B) provides definitions of the best practices for the principles, processes, and attributes based on the Comprehensive Plan standards framework for sustaining places from the American Planning Association¹ and tailored to Schuyler County based on the Countywide Comprehensive Plan and the Schuyler County Hazard Mitigation Plan. The are organized into five sections: (1) Land Use, (2) Transportation and Mobility, (3) Housing and Development; (4) Energy efficiency and renewable energy; and (5) Hazard mitigation.

In addition, the Schuyler County Planning Department is committed to being a resource for each local municipality seeking to adopt or amend their Comprehensive Plan. Towns and villages may seek assistance with data collection and analysis, public outreach efforts, plan content and layout, as well as guidance for the formal review and adoption process.

(1) Land Use Goals

1.1 Plan for mixed land-use patterns that are walkable and bikeable.

Mixed land-use patterns are characterized by residential and nonresidential land uses located in close proximity to one another. Uses can be separated within the same building based on New York State Building Code standards. Mixing land uses and providing housing in close proximity to everyday destinations (e.g., shops, schools, civic places, workplaces) can increase walking and biking and reduce the need to make trips by automobile.

Mixed land-use patterns should incorporate safe, convenient, accessible, and attractive design features (e.g., sidewalks, bike street furniture, bicycle facilities, street trees) to promote walking and biking.

1.2 Encourage design standards appropriate to the community context.

¹ https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/sustainingplaces/compplanstandards/pdf/scoringmatrix.pdf

Design standards are specific criteria and requirements for the form and appearance of development within a neighborhood, corridor, special district, or municipality as a whole. These standards serve to improve or protect both the function and aesthetic appeal of a community. Design standards typically address building placement, building massing and materials, and the location and appearance of elements (such as landscaping, signage, and street furniture). Design standards also encourage development that is compatible with the community context and that enhances sense of place. While the design standards will not be specified in the comprehensive plan itself, the plan set the direction and objectives that detailed standards should achieve.

1.3 Identify funding sources for plan implementation.

Coordinating public and private funding sources—including federal, state, and foundation grant programs— facilitates implementation of priority Comprehensive Plan goals.

A Comprehensive Plan that has consistent, clearly presented goals, objectives, and action priorities, backed by demonstrated community support, puts the community in a strong position to secure external funding for implementation. The Schuyler County Planning Department and Southern Tier Central Regional Planning & Development Board can assist municipalities with leveraging resources for achieving planning goals and are familiar with funding resources available for planning and capital improvements.

(2) Transportation and Mobility Goals

2.1 Plan for multimodal transportation.

A multimodal transportation system means people may use a variety of transportation modes – walking, biking, driving, as well as transit – where possible. These options reduce dependence on automobiles and encourages more active forms of personal transportation, improving health outcomes and supporting those who cannot drive or do not own cars (such as children, persons with disabilities, and the elderly). Fewer cars on the road also translates to reduced air pollution and greenhouse gas emissions with associated health and environmental benefits.

2.2 Delineate designated growth areas that are served by transit.

A designated growth area is an area depicted in an adopted Comprehensive Plan where higher density development is permitted or encouraged and urban services—including public transportation (where feasible)—are (or are scheduled to be) available.

The purpose of a designated growth area is to accommodate and focus projected future growth (typically over a 20-year timeframe) within a municipality, county, or region through a compact, resource-efficient pattern of development. Ensuring that new growth areas are served by transit improves residents' access and mobility and helps reduce dependence on personal automobiles.

2.3 Plan Long-range for transit (especially in Watkins Glen, Montour Falls, Burdett, and Odessa).

Transit-oriented development (TOD) is characterized by a concentration of higher-density mixed use development along Schuyler County Transit routes, such that the location and the design of the development encourage transit use and pedestrian activity.

This approach allows communities like Watkins Glen, Montour Falls, and Odessa to focus new residential and commercial development in areas that are already connected to public transit. This enables residents to more easily use transit service, which can reduce single-occupancy vehicles and fossil fuels consumed and associated pollution and greenhouse gas emissions. It can also reduce the need for personal automobile ownership, resulting in a decreased need for parking spaces and other automobile-oriented infrastructure.

2.4 Coordinate regional transportation investments with job clusters.

Continued coordination with Schuyler County Transit to provide service to areas of high employment densities can foster both transportation efficiency and economic development. This is important for creating and improving access to employment opportunities, particularly for populations without easy access to personal automobiles.

2.5 Provide Complete Streets serving multiple functions.

Complete Streets are streets that are designed

and operated to include accommodation for all users: people walking, biking, driving, taking transit, and transporting freight. Streets that serve multiple functions can accommodate travel, social interaction, and commerce to provide for more vibrant neighborhoods and more livable communities.

2.6 Provide accessible public facilities and spaces.

Public facilities play an important role in communities and they should be able to accommodate persons of all ages and abilities. Public facilities and spaces should be equitably distributed throughout the community. Schuyler County Planning Department is available to assist municipalities with site selection for public projects. They should be located and designed to be safe, served by different transportation modes, and accessible to visitors with mobility impairments.

(3) Housing and Development

3.1 Provide a range of housing types.

A range of housing types is characterized by the presence of residential units of different sizes, configurations, tenures, and price points located in buildings of different sizes, configurations, ages, and ownership structures. Providing a range of housing types accommodates varying lifestyle choices and affordability needs and makes it possible for households of different sizes and income levels to build real estate wealth or age in place.

3.2 Plan for infill development and Upper Floor revitalization.

Infill development is characterized by development or redevelopment of undeveloped or underutilized parcels of land (such as surface parking lots) in otherwise built-up areas in village or hamlet centers, which are usually served by or have ready access to existing water, sewer, road, and other infrastructure and services.

Focusing development and redevelopment on infill sites takes advantage of this existing infrastructure while helping to steer development away from productive farmland, which is more expensive to serve with infrastructure and services. Village and hamlet Upper Floor spaces were traditionally used for many types of development: housing, office space, small manufacturing and commercial (as well as storage for these uses). This Comprehensive Plan amendment should be followed by a

review of the municipality's zoning regulations to identify any regulatory barriers to upper floor reuse as well as a physical assessment of key properties for possible repair and renovation to make them usable again.

(4) Energy efficiency and renewable energy

4.1 Implement green building design and energy conservation.

Green building designs that meet the standards of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) or similar rating system are energy and resource efficient, reduce waste and pollution, and improve occupant health and productivity. Energy conservation refers to measures that reduce energy consumption through energy efficiency or behavioral change. Together these approaches reduce energy costs and improve environmental quality and community health. They can be implemented through strategies such as code requirements, regulatory incentives, and investment programs (such as through grants to homeowners for energy upgrades of their homes through NYSERDA's Home Energy Efficiency Programs).

4.2 Enact policies to reduce carbon footprints.

The term "carbon footprint" is used to describe the amount of carbon dioxide and other greenhouse gases emitted by a given entity (such as an individual, company, or town) in a certain time frame. It provides a measure of the environmental impact of a particular lifestyle or operation, and encompasses both the direct consumption of fossil fuels as well as indirect emissions associated with the manufacture and transport of all goods and services the entity consumes.

Policies designed to reduce the carbon footprint benefit the environment and have associated benefits on air quality and health. Because these policies are often associated with energy conservation, they can also have positive economic benefits for local governments and community members.

4.3 Provide for renewable energy use.

Renewable energy sources, which are derived directly or indirectly from the sun or natural movements and mechanisms of the environment—are local sources of energy that are naturally regenerated over a short timescale and do

not diminish. Use of renewable energy reduces reliance on coal-fired energy plants and other sources of fossil fuels.

4.4 Encourage solid waste reduction.

Solid waste is garbage or refuse resulting from human activities. While most communities in Schuyler County provide source-separated or single-stream recycling, residents may be unaware of the monthly Household Hazardous Waste, Electronics, and Tire Collection Day. These items can be diverted from the waste stream and recycled into new products. Additionally, the Town of Hector provides free electronics recycling every Saturday morning at Town Hall for disposal of computers, televisions and monitors, keyboards and mice, fax machines, scanners and printers, VCRs, DVRs, DVD players, portable music players, cable or satellite receivers, video game consoles, and cell phones.

(5) Hazard mitigation

The goals and objectives identified in a comprehensive plan should include a reference to the community's responsibilities to enhance safety and protect property. The plan can also reference the Schuyler County Hazard Mitigation Plan for a more detailed discussion of local hazards. Mitigation recommendations relevant to the municipality should be included in the comprehensive plan.

5.1 Discourage development in hazard zones.

A hazard zone is an area with a high potential for damage from natural or human-caused events, most notably flash floods and severe storms. The soils and topography of Schuyler County make it very susceptible to flash flooding. When thunderstorms, tropical storm systems, or other weather patterns produce intense rainfall or rapid snowmelt, water rushes down the hillsides into drainage ditches and streams. Schuyler County is located in ClimAID Region 3 (Southern Tier), where climate models indicate that intense precipitation events are expected to become more frequent.

Priority hazards are identified in the Schuyler County Hazard Mitigation Plan and technical assistance is available through Southern Tier Central Regional Planning & Development Board to identify areas of greatest hazard concern. Comprehensive Plans should include maps showing hazardous areas, particularly floodplains, and discourage development in these areas. Discouraging development in hazard zones protects the natural environment,

people, and property.

5.2 Maintain streams, drainage ways, and drainage structures to minimize the potential for bank erosion and obstruction of flow.

Establishing routine inspection and maintenance protocol is needed to keep debris (including beavers/beaver dams when necessary) from blocking drainage ways and stream channels. Obstructed flow can destroy roads, buildings, and other development. Additional care must be taken not to disrupt natural stream processes in a manner that unintentionally causes further instability and increased erosion.

The ability for high flows to spread out on the floodplain should be maintained so that downstream flooding is not made worse. Projects that utilize natural stream design or other techniques to stabilize stream channels and streambanks can protect property and reduce ongoing maintenance expenses. The Schuyler County Soil & Water Conservation District offers training and technical assistance for stream inspections and assessment (and access to funding) to municipal officials, highway workers, planning boards, and code enforcement officers.

5.3 Restore, connect, and protect natural systems and sensitive lands.

Natural landscape features—such as wetlands, stream corridors, and woodlands—can mitigate the impacts of natural hazards, particularly flooding, erosion, heat waves, and drought. In addition, disturbance of steep slopes, alteration of natural drainage patterns, pavement (which prevents water from soaking into the ground), and other changes can contribute to increased flood risks. Protection of natural features and restoration of natural functions are thus useful strategies for reducing risks, while also protecting habitat, recreational opportunities, scenery, and the rural character of communities.

5.4 Encourage development that respects natural topography.

Sensitive natural topography includes features such as hillsides, ridges, steep slopes, or lowlands that can pose challenges to development. Comprehensive plans should include maps showing the locations of streams, lakes, wetlands, floodplains, steep slopes, and other important natural features. Taking these features into account during the Planning Board's Site Plan Review of private development and public infrastructure can reduce construction costs,

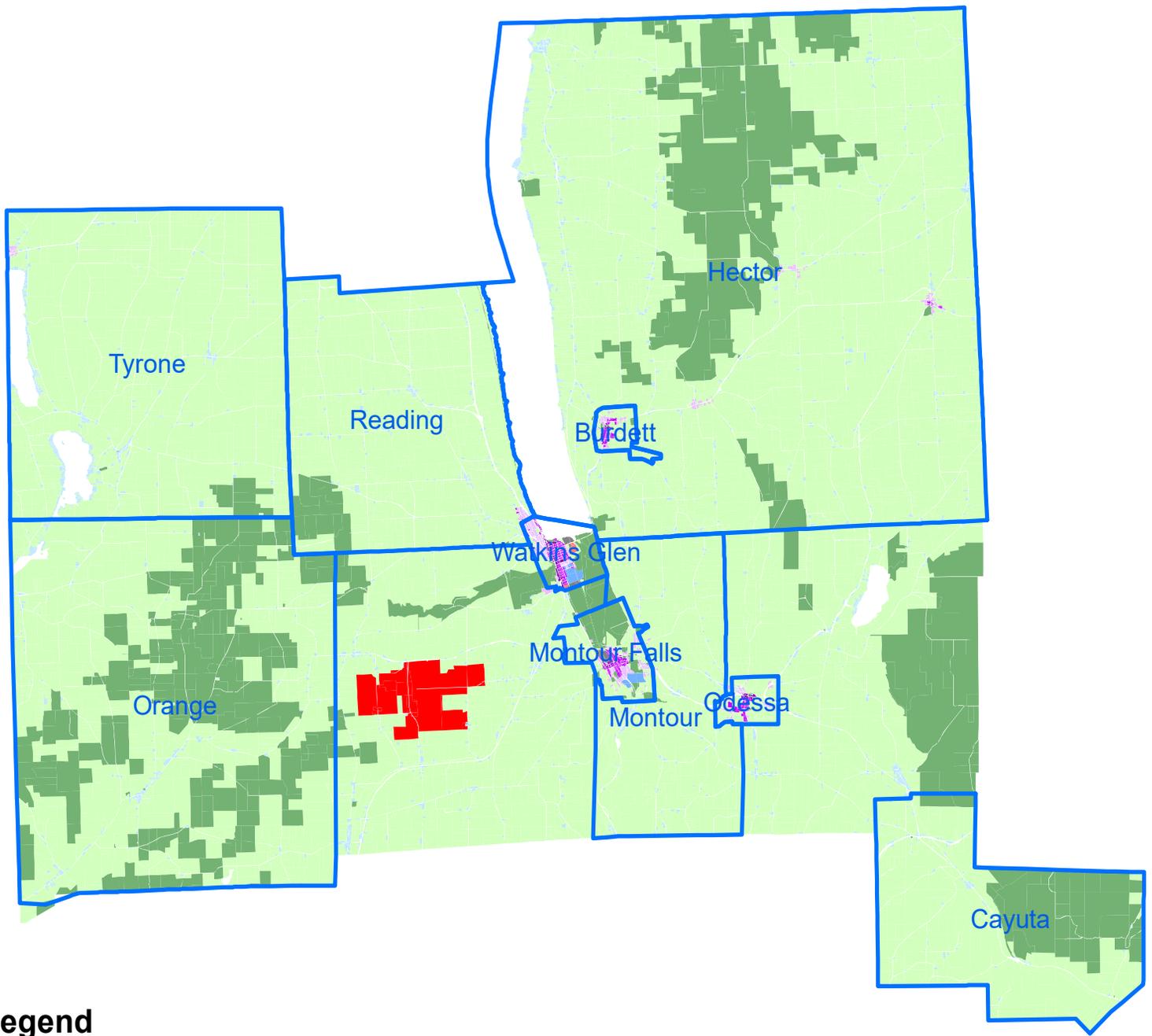
minimize natural hazard risks from flooding or landslides, and mitigate the impacts of construction on natural resources, including soils, vegetation, and water systems.

Because runoff from heavy rains will go somewhere, it is important to maintain drainage ways, natural stream channels, and floodplains in order to make room for water and avoid flood damage. When development does occur in hazardous or sensitive areas, additional protective measures may be needed. Stormwater runoff from all development sites should be managed to protect against erosion, sediment, drainage, and flooding problems.

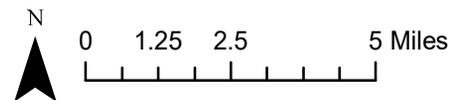
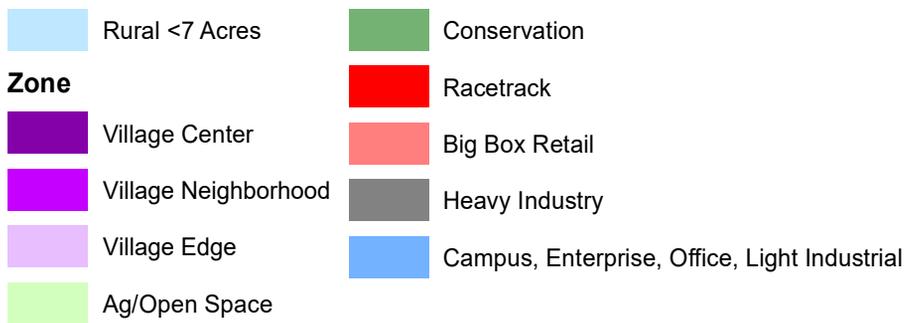
5.5 Encourage climate change adaptation. Adapting to climate change involves adjusting natural and human systems to projected increased frequencies of extreme weather events as well as long-term shifts in precipitation levels, growing season length, and native vegetation and wildlife populations.

Agriculture is the key sector in the Schuyler County economy, and is highly dependent on climate. Schuyler County is located in ClimAID Region 3 (Southern Tier), where climate models indicate that intense precipitation events and heat waves are expected to become more frequent, which threatens livestock and crop production. Preparing adaptation strategies for farming operations, including livestock operations, cideries, and wineries, for more extreme temperature and precipitation, increased prevalence of parasites and weeds reduces community vulnerability and minimize adverse effects on the environment, economy, and public health.

**APPENDIX C:
ZONING
AMENDMENTS**



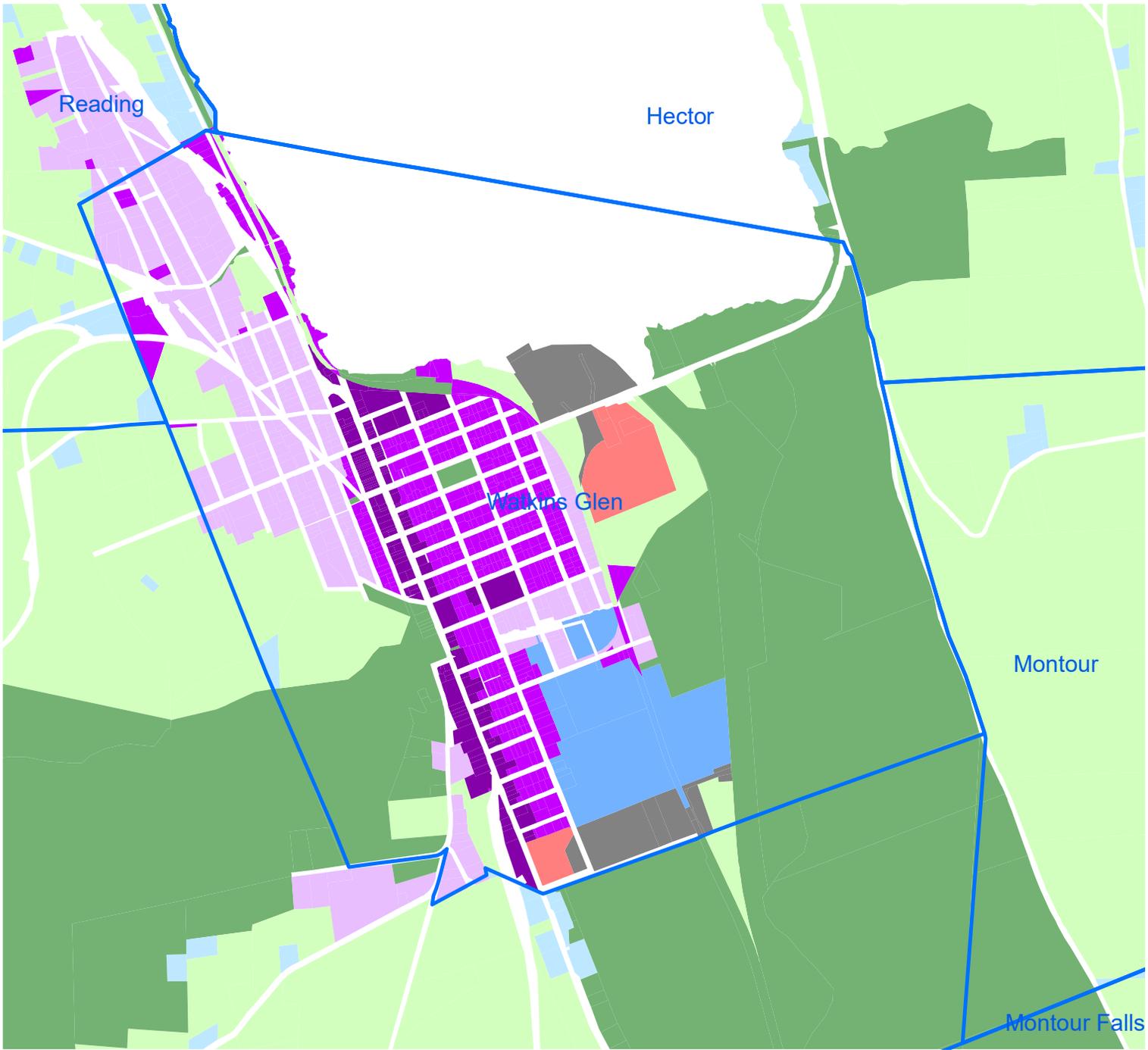
Legend



Zones in Detail

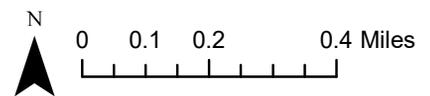
Character Zones are organized based on intensity from the most natural to the most urban. Each zone includes standards that encourage diversity similar to that of organically evolved settlements. These standards overlap, reflecting the successional transition between biological communities in nature. To predictably regulate such a diverse community this code defines a range of allowed zones, each with context specific requirements. The Character of the Zone is enhanced by appropriate building types, scales, uses, densities, and detailing.

- The **Ag/Open Space Zone** consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.
- The **Conservation Zone** is intended to permanently protect areas from development that would damage the contiguity, quality, character, and ecological function of natural areas. Development is only allowed by Variance and must support natural use (i.e., a visitor center for a park, or access amenities for trails). Recreational trails may provide pedestrian connectivity to other Transect Zones.
- The **Rural <7 Acres Zone** consists of sparsely settled lands in open or cultivated state. These include woodland, agricultural land, and grassland. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.
- The **Village Edge Zone** consists of low density residential areas, adjacent to higher zones that allow some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.
- The **Village Neighborhood Zone** consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.
- The **Village Center Zone** consists of higher density mixed use building that accommodate retail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks. It consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings set close to the wide sidewalks. Typically only large villages have a Regional Center Zone.
- **Special Districts** – such as the Watkins Glen International automobile race track, Big Box Retail, Heavy Industrial, or Campus, Enterprise, Office, and Light Industrial – consist of areas with buildings that by their Function, Disposition, or Configuration cannot (or should not) conform to one or more of the Transect Zones.



Legend

- | | |
|---|--|
|  Rural <7 Acres |  Conservation |
| Zone |  Racetrack |
|  Village Center |  Big Box Retail |
|  Village Neighborhood |  Heavy Industry |
|  Village Edge |  Campus, Enterprise, Office, Light Industrial |
|  Ag/Open Space | |



Share your thoughts!

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